March 16, 2020

Dear Partnership Advisory Group, New Hanover County Board of Commissioners, and New Hanover Regional Medical Center Board of Trustees:

Thank you for the opportunity to respond to your request for proposal for a strategic partnership with New Hanover Regional Medical Center (NHRMC). We have long admired the quality care NHRMC provides for the citizens of southeastern North Carolina and your reputation for excellence.

The partnerships UNC Health and NHRMC have fostered over many years have been productive for both of our systems and allowed each of us to further serve our missions. We have enjoyed learning in more detail about your organization through this RFP process. NHRMC’s co-workers, leaders, physicians and your community should be very proud of your health care system.

To better understand NHRMC’s goals, we have attended your Partnership Advisory Group meetings and reviewed the materials provided to all respondents. After many discussions among our system leaders and our Board of Directors, we believe we understand NHRMC’s current situation and your desire to ensure your continued success for future generations. We would like to share our vision of how UNC Health could serve as a long-term partner. Our proposal reflects what we believe to be the best approach to meet the needs of NHRMC, your patients and your community.

UNC Health proposes that we start our journey together through a significantly enhanced educational and research partnership, which we will refer to as our “academic partnership,” as well as a strengthened clinical partnership. This enriched relationship can evolve and expand over time, as NHRMC’s needs change. Please note, if management services and/or capital support are among your top requirements for a strategic partner, UNC Health has the necessary resources and is open to exploring those options. We have a successful history of partnering with hospitals via management services agreements, allowing for many benefits of UNC Health to be extended to our partners without a significant financial relationship or impact to local governance. We also participate in several equity partnerships ranging from minority partnerships, to joint ventures, to full ownership models. If you require a partner that can provide a significant capital infusion, UNC Health has the means and is prepared to offer such a partnership model.
Who is UNC Health?

UNC Health is a not-for-profit, integrated health care system owned by the State of North Carolina and based in Chapel Hill. Like NHRMC, we are a proudly public entity. The System was established by the Legislature in 1998 through N.C.G.S. 116-37, and was originally comprised of UNC Hospitals in Chapel Hill and the clinical patient care programs of the UNC School of Medicine (SOM).

Today, UNC Health spans the state from Hendersonville to Jacksonville with 13 hospitals, hundreds of clinics, thousands of providers and more than 33,000 co-workers. We are North Carolina’s health system, caring for millions of patients from all 100 NC counties and beyond our state borders. We leverage the world-class research and education conducted at the UNC SOM in Chapel Hill and other campuses, translating those innovations to life-saving and life-changing therapies.

Through our base within the UNC SOM, UNC Health maintains strong educational and clinical ties to the other health affairs schools including the UNC Adams School of Dentistry, the UNC School of Medicine Department of Allied Health Sciences, the UNC Eshelman School of Pharmacy, the UNC Gillings School of Global Public Health, and the North Carolina Health Education Centers (NC AHEC), among others.

Mission and Values of UNC Health

We believe UNC Health’s mission and values align well with those of NHRMC. Our mission is simple, but encompassing: Improve the health and well-being of North Carolinians.

We are similar to NHRMC in that we foster a patient-first culture ensuring outstanding quality, compassion, and affordability for the patients we serve. We take a consumer-centric approach to improve access, convenience, and experience for patients and their families.

As an innovative system, UNC Health is committed to our co-workers and our patients, and ensuring that our workforce is as diverse and talented as the communities we serve. We work to continuously develop innovative models to transform how we provide care. We understand that healthcare is constantly evolving, challenging us to always evaluate how we provide care and anticipate the future needs of our patients.
Our Organizational Values are:

- **Carolina Care** – We care holistically about patients and each other; it is our privilege to serve the people of North Carolina; and we demonstrate kindness and compassion in every interaction.
- **One Great Team** – We are better together than apart; our effective collaboration is key to providing quality care; we are building an inclusive and equitable culture.
- **Leading the Way** – We make a difference by improving lives every day and training the next generation of leaders; our research is changing the world; we provide innovative care.
- **It Starts with Me** – Each of us takes ownership of, and accountability for, doing the right thing; we empower and trust each other to step up; we support each other and hold each other accountable in our work.

UNC Health and NHRMC share cultures of transformation and readiness to move boldly into the future. In serving the people of North Carolina we each have an over-arching desire to ensure that all individuals we serve receive outstanding care and achieve the best health possible.

**ONE UNC Health**

UNC Health worked with our Board and our co-workers to redesign our organization via a new statewide strategy, operating model, and unified culture aimed at creating a more responsive, integrated health system. We call this new strategy “ONE UNC Health.” While we have much to offer through a proposed partnership, we also recognize that there is much to learn from an outstanding organization such as NHRMC. We welcome the opportunity to partner with NHRMC on this journey to improve the health and well-being of all North Carolinians.

**What differentiates UNC Health?**

We believe that UNC Health is a unique organization, bringing attributes to partnerships unmatched in North Carolina or beyond. Our prestige in public medical and health professional education, combined with a desire to collaborate with an established, well-regarded health system in southeastern North Carolina, makes us an ideal partner for NHRMC.

UNC Health’s statewide footprint and our commitment to serve the people of North Carolina are unlike that of other potential partners. We bring an excellent national reputation paired with outstanding quality and performance in patient care, patient experience and provider engagement. We are also recognized as one of the state’s top employers.

UNC Health shares our reputation for innovation and creativity with our partners. At the same time, we commit to maintaining local control through the governance of NHRMC and enhancing leadership development. We have a proven track record of protecting and expanding access to care in the communities we serve and pay careful attention to the wellbeing of our co-workers and providers.
UNC Health’s Proposed Strategic Partnership with NHRMC

Let us first acknowledge that this proposal is not the traditional approach UNC Health has used with past partnership offers. Based on our evaluation of the data and information provided, as well as what we learned at your Partnership Advisory Group meetings, we believe NHRMC is in an enviable position, which presents a unique opportunity for a nontraditional approach to partnership.

UNC Health tailors all of its partnerships to meet the needs of the individual organization and the community it serves. We do not take a one-size-fits-all approach, but rather recognize the unique needs of our large and small partners throughout the state. Our partnership models include full ownership, joint ventures, management agreements, and partnering with both private not-for-profit and public county-owned hospitals. We believe that local entity leadership and boards should remain empowered and maintain local control, as they are best positioned to understand the needs of the local community. We value partnering with local leadership to achieve common goals in the best interest of the communities we serve.

NHRMC is strong and capable of meeting the near-term challenges that face all health care organizations. Therefore, we believe the best current course of action is for NHRMC to remain independent and not pursue a sale, extensive management services agreement, or any other significant equity partnership that may require other terms or commitments that are less desirable right now. Our belief is based on what we know from the information made available and without any in-depth due diligence or discussions with NHRMC leaders and county leaders at this early stage in the process.

From our perspective, the best approach to meet your Strategic Partnership goals is to rapidly expand and strengthen NHRMC’s academic and clinical partnerships with UNC Health. If it becomes necessary, we could then transition into a more integrated partnership arrangement over time. If the time comes when NHRMC requires material integration into a larger system, UNC Health will have earned the chance to be your chosen partner based on the foundation we have built through our expanded academic and clinical partnership.

In addition to helping NHRMC and your community meet stated strategic goals, our proposed partnership would also have a positive economic impact on southeastern North Carolina. UNC Health engaged a third-party economic development consultant. Based on that firm’s analysis, the proposed partnership between UNC Health and NHRMC could generate $34 million in new total economic output in the region, $12 million in additional earnings, and support over 250 new jobs. The full analysis is included in the appendix of our proposal.

UNC Health has a great deal of expertise partnering with hospitals, health systems and provider practices across North Carolina employing different models to meet specific needs. We are confident UNC Health can develop a strong, mutually beneficial relationship with NHRMC as an
integrated operational partner when the time is appropriate. This would be built on our shared successes in educational, research, and clinical interactions. We would be happy to discuss all of our capabilities and timing in more detail as this exploration progresses. As stated previously in this letter, while UNC Health has the ability to offer capital support and/or management services to NHRMC, we encourage you to take your time before pursuing this type of significant integration with any partner.

**Academic Partnership**

At a high level, our proposed academic partnership includes the creation of a local enterprise that will recruit, train, and develop the health profession workforce needed to serve southeastern North Carolina and extend the clinical research infrastructure and capabilities of UNC Chapel Hill and the UNC SOM to NHRMC. The key components include:

- Rapid and substantial growth of the Wilmington SOM branch campus;
- Expansion of residency and training programs;
- Expansion of the UNC SOM Wilmington branch campus to include other health profession schools;
- Program partnerships with University of North Carolina Wilmington (UNCW);
- Furthering NHRMC’s clinical research capabilities and access to grant funding to provide the nearly 500,000 residents of southeastern North Carolina access to the cutting edge research at UNC SOM.

**Growth of UNC SOM Wilmington Campus, Inclusion of Other Health Profession Schools, and Program Partnerships with UNCW:**

The UNC SOM Wilmington branch campus launched in 2016 with just three medical students. In our proposed partnership, we intend to expand the UNC SOM accredited branch campus from 18 students per class, scheduled for 2021, to 30 students per class by 2023. Following 2023, we will work together to expand the class size appropriately over time.

We would also bolster the UNC SOM Wilmington branch campus through branch campuses of the UNC Health Affairs schools such as the Adams School of Dentistry, the Eshelman School of Pharmacy, the Gillings School of Global Public Health, and SOM Department of Allied Health Sciences. We can also build upon relationships with UNCW health sciences programs to the benefit of all local students and the community. This partnership would expand faculty research opportunities, faculty development, and enhance training programs. As partners, we would develop an MD/MBA dual-degree track for some UNC SOM Wilmington campus students who will earn their MBA at UNCW.

Similar to what we have done with the Mountain Area Health Education Center (MAHEC) in Asheville, we envision a branch campus model for each health profession school. UNC SOM and other Health Affairs schools would aid in deploying pipeline programs for potential students from the region with the goal of expanding both the reach and number of community health
workers in southeastern North Carolina. This would develop a comprehensive and expert health profession workforce to serve the region well into the future.

**Expanded Residency and Fellowship Training:**
In parallel to growing the UNC SOM Wilmington branch campus, we will work with NHRMC to enhance residency and fellowship training to include a wide variety of opportunities for Wilmington-based medical residents. First, we could increase the number of residency spots in partnership with NHRMC. Next, we would deploy the FIRST program (Fully Integrated Readiness for Service Training) along with the Innovative Health System Science curriculum for Internal Medicine, General Surgery, Family Medicine, and OB/GYN residencies to both fast-track and attract students to enter these residency programs. We would also fund additional positions in the Rural Scholars Program each year at NHRMC.

UNCs SOM would assist in the development of new residency programs in Psychiatry, Pediatrics, and surgical disciplines. We could also develop subspecialty resident (traditional fellowships) in desired disciplines such as critical care, neonatology, and other subspecialties important to southeastern North Carolina and the state, for example the creation of a branch of the UNC Geriatrics Fellowship at NHRMC. We would also continue to work with NC AHEC to develop Physician Assistant residencies in specialty areas.

**Furthering Clinical Research Capabilities:**
A partnership between NHRMC and UNC Health would advance clinical research and attract grant funding to NHRMC medical providers, who would be able to leverage the infrastructure and resources at UNC Chapel Hill to submit grants through UNC SOM or other health affairs schools.

Some examples of our research infrastructure include the Sponsored Programs Office (grants submissions), Clinical Research Support Office (administrative office supporting all human subject research studies), Office of Sponsored Research (grants submission and grants administration), Office of Clinical Trials (clinical trials administration), and Office of Human Research Ethics (human subjects research regulatory oversight). The UNC SOM faculty have more than $500 million in grant and contract funding, speaking to the success of the research enterprise and opportunities for the UNC SOM branch faculty to engage in successful research and gain funding for those projects.

UNC Health would also collaborate on clinical trials and population health studies run jointly by UNC SOM and UNC Health investigators with NHRMC providers. Our clinical research spans the fields of cancer, diabetes, neurosciences, cardiovascular, immunology, infectious diseases, and many others, crossing all demographics and yielding many opportunities.
Clinical Partnership

Our goal at UNC Health is to provide the highest quality clinical care as close to home as possible for the people of North Carolina. Our proposed partnership with NHRMC would further the achievement of this goal. In addition to the academic components of our proposed partnership, we would continue to enhance existing and develop new clinical partnerships with NHRMC. The Pediatric Specialty Clinics and the UNC Liver Clinic are great examples of our successful clinical partnerships to-date and models for what we can accomplish together. Going forward we will work with NHRMC to enable higher levels of care to be provided locally by developing new clinical programs and providing access to UNC Health sub-specialists.

As our partnership continues to evolve, we would be delighted to offer further collaborations around population health. UNC Health is committed to excellence in value-based networks and population health. Our large clinically integrated network, UNC Health Alliance, and its supporting population health infrastructure, serve as our vehicle for effectively transitioning to value-based care and promoting physician engagement. UNC Health Alliance has developed robust value-based and risk-based contracts with employers and insurance payers, which now account for approximately 25% of UNC Health’s payer contracts. Our achievements speak to our level of focus and expertise in this area. UNC Senior Alliance was recently ranked No. 1 nationally in clinical quality among all Pay-for-Performance Next Generation ACOs.

The Path Forward

We believe the residents of southeastern North Carolina would benefit from an expanded and strengthened educational, research, and clinical partnership between NHRMC and UNC Health. The collective strengths of our organizations will improve the health and wellbeing of all residents, position NHRMC to thrive well into the future, strengthen the region’s economy without relinquishing local control, and reaffirm NHRMC as a statewide leader in health care.

We believe strongly in the benefits of this proposed journey as partners. However, if you choose to embark with another partner, it is likely that our education and clinical presence would significantly diminish. The reality is that new health system partnerships sometimes compromise existing educational partnerships. That was demonstrated with the upcoming closure of the UNC SOM branch campus in Charlotte.
We genuinely appreciate the opportunity to respond to the RFP and be considered for a strategic partnership with NHRMC. It is our sincere hope that we can continue to strengthen and grow what has been a very important and successful partnership between NHRMC and UNC Health over many years. We believe our proposal affords the opportunity, guided by our collective vision and leadership, to elevate the health and wellbeing of North Carolina. We look forward to discussing next steps in greater detail.

Sincerely,

A. Wesley Burks, MD
CEO, UNC Health
Dean, UNC School of Medicine
Response to Request for Proposal for Strategic Partnership with New Hanover Regional Medical Center

March 16, 2020
1. Improving Access to Care and Wellness Programs

1.1. Describe what impact, if any, Respondent's Proposed Strategic Partnership would have on NHRMC's ability to further develop ambulatory and other outpatient and wellness program access points in the communities it serves. Also address how and whether Respondent's Proposed Strategic Partnership will facilitate capitalization and growth of care and wellness sites across the Service Area, including beyond New Hanover County, understanding the current debt limitations for NHRMC that preclude this regional health care system from borrowing to build outside of the County.

UNC Health’s proposed partnership with New Hanover Regional Medical Center (NHRMC) is built around a shared mission of providing accessible, high quality, affordable health care to all North Carolinians. In many affiliate hospital primary and secondary service areas, we have enhanced primary and specialty care access through expansion of existing or new clinics as part of the UNC Health effort to keep care local and address access to care. Models for access point development include low, mid-range and large partner investment options, depending upon the strategic importance of locations and buildings, and the desired partner investment. Our deepened clinical partnership and reputation facilitated by the proposed partnership would help strengthen your clinical capabilities locally. UNC Health would welcome the opportunity to enhance our partnership with NHRMC over time to further develop ambulatory and other outpatient and wellness program access points. As referenced in our cover letter we are also willing to explore the option of being a capital partner with NHRMC in such endeavors where it is deemed necessary.

1.1.1. Discuss Respondent's position on NHRMC's current plans to expand ambulatory and other outpatient and wellness program access points in the Service Area.

We agree that access to outpatient care, including virtual care, is key to improving population health and value. UNC Health experts committed to excellence in population health and ambulatory care access support similar work in our various partnership models. See 1.5 and related subsections for more details related to our proposed expansion of clinical service lines and programs in the Service Area. As our partnership progresses and should a need arise for NHRMRC to receive additional support in these areas, UNC Health is open to enhancing our partnership to address such priorities directly.

1.1.2. Describe the scope and timing of Respondent’s commitment to adding ambulatory and other outpatient access points in the Service Area.

As stated in 1.1.1, UNC Health is eager to work together with NHRMC to determine how a more integrated future partnership can help you address adding ambulatory and other outpatient access points in the service area.
1.1.3. Describe how Respondent and/or any of Respondent’s strategic partners used the same or similar strategic partnership to improve ambulatory and other access points in the communities served by Respondent and its affiliate or partner hospitals.

UNC Health offers customized support to our affiliates across the state, depending on each partner’s level of need and the legal structure of the agreement. We are proud of the results we have generated in rural and urban areas in need of our support, especially our success in keeping appropriate care in local communities. UNC Health is impressed with NHRMC’s commitment to ambulatory patient access, and we look forward to future conversations.

1.2. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on improving access to primary care services in NHRMC’s Service Area.

Access to care is one of UNC Health’s most important areas of focus and work that we consider central to providing high quality and high value care. The proposed partnership would help to attract and train a health care workforce to southeastern North Carolina equipped to meet both primary care and specialty care physician needs. Section 5 provides additional details on these partnership opportunities. Expansion of the FIRST (Fully Integrated Readiness for Service Training) program, the Kenan Rural Scholars program, existing residency programs and the creation of new residency and fellowship programs will all serve to improve access to primary care services in NHRMC’s Service Area well into the future. In addition, we propose to launch fellowships for Advanced Care Providers (NPs, PAs), which will help enhance access in several specialty areas in your community.

1.2.1. Discuss your organization’s approach to staffing primary care clinics, including leveraging providers with team-based care.

UNC Health primary care clinics function as certified patient-centered medical homes with standardized team-based staffing and care. Primary care clinicians manage their patients with the support of an embedded care team, which includes Registered Dieticians (RDs), Licensed Clinical Social Workers (LCSWs) and Nurse Care Managers. By basing team structure on practice needs as opposed to a one-size-fits-all approach, our model allows all team members to perform at the top of their scope. This model creates value, increases access, and addresses social drivers of health outcomes to improve health equity.

UNC Model of Team-Based Primary Care

- LCSWs provide integrated behavioral health visits in a brief intervention model to support improving access, reducing behavioral health stigma, and supporting primary care clinicians
- RDs target patients with obesity, diabetes mellitus and other nutritional needs
- Nurse Care Managers focus on high risk patients in need of additional support and intervention
• Nurse Care Managers and LCSWs fund visits through performing and billing Annual Wellness Visits focused on quality gap closures and Advance Care Planning for individuals with Medicare or Medicare Advantage Plans.

Primary care providers are supported clinically with Certified Medical Assistants (CMAs) and options of a scribe either as a function from a second CMA or as a stand-alone scribe. Advanced Practice Providers work in extender roles supporting busy primary care clinicians with access and acute care as well as primary care provider roles supporting their own patient panels.

To enhance team performance, UNC Health deployed the 5 Dynamics tool in primary care clinics to help individuals learn their own energy, communication styles, and preferences as well as the energies and communication preferences of their team. We implemented this tool in 2018-2019 to good effect with improvements in team work, increasing the effectiveness of the teams that exist across our primary care clinical enterprise.

As our partnership progresses and should a need arise for NHRMC to receive additional support in this area, UNC Health is open to enhancing our partnership to help NHRMC address these priorities.

1.2.2. Describe how Respondent would identify and resolve any gaps in primary care coverage in the Service Area.

To identify gaps, UNC Health would leverage the community needs assessment and knowledge of NHRMC leaders. Through the proposed partnership, we would collaborate with NHRMC to develop education and training programs that would meet the healthcare workforce needs of southeastern North Carolina. Additional details are provided in response to question 1.2 and the questions in Section 5.

1.2.3. Provide examples of how Respondent improved both primary care access and operational efficacy (improved quality, improved patient safety, improved patient satisfaction, lower cost) in communities served by Respondent and its affiliate or partner hospitals.

UNC Health employs many tactics to improve primary care delivery in communities across our geographical footprint. While we do not propose to employ this model at NHRMC at this stage in our proposed partnership, an example we feel demonstrates our collaborative approach in working with affiliate hospitals is our primary care strategy in Wayne County. In partnership with managed affiliate hospital leadership at Wayne UNC Health Care, we have increased primary care access, quality, and operational and clinical efficiency.

This was accomplished through collaborations with physicians, operations, and quality coaches to develop care teams. This team-based approach enhanced patient experience including improving the rooming process, allowing patients more time with their provider while utilizing
team members working at the top of their license. We also redesigned practice workflows, resulting in better throughput for patients, introduced a scribe program, offered online scheduling to patients, and redesigned the care team to include LCSWs, RDs, and RN Case Managers. All of these allow physicians more efficiency in addressing the medical needs of patients.

Within two years of implementing Carolina Care®, UNC Health’s multi-faceted approach to patient experience, patient satisfaction improved an average of 19 percentile points in national Press Ganey ratings. We engaged physicians in patient satisfaction efforts, providing education and training around empathy, focusing on improving feedback metrics around patients and staff willing to refer their friends and family. Improvements in patient safety were achieved through competency training, expanded training on existing and new medical equipment, and the promotion of just culture, where co-workers can report safety issues without fear of repercussion. Finally, in our model, regional clinical leaders facilitate education, training, remediation, and preceptorship specific to the needs of the region.

As expected, improving experience, safety and quality led to a positive impact on value. In Wayne County, primary care practice operations costs decreased by 13%. Further, the redesigned care teams allowed for optimal staffing ratios and for all team members to perform at the top of their license, which gained both operational efficiency and cost savings. In addition, care teams were trained to use Epic@UNC to the fullest extent, supporting our ability to monitor and utilize quality data to lower the cost of care and to drive quality improvement. Importantly, the Wayne County ambulatory practices are exceeding UNC Health organizational goals, including screening rates for breast cancer, colorectal cancer, and cervical cancer, in addition to outperforming metrics related to advance care planning, controlling high blood pressure, lowering hemoglobin A1c and ensuring eye exams for patients with diabetes.

1.3. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC’s ability to further develop and enhance NHRMC’s home care services within the Service Area.

UNC Health owns and operates Home Health services in many markets, and understands the importance of bringing care into patients’ homes for improving health and patient experience, and reducing costs. UNC Health partners with affiliated hospitals and clinics across the state to ensure home care services are appropriately utilized in each service area. We would welcome the opportunity to grow into such a clinical partnership with NHRMC over time.

1.4. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC providing care for the elderly in both urban and rural settings in the Service Area. Describe any programs that could be introduced at NHRMC (e.g., adult day care, geriatric urgent care services).

UNC Health has extensive experience in bridging the challenges and complexities unique to the rural and urban elderly populations. Through the proposed partnership, as has been discussed in response to prior questions and in response to questions in Section 5, UNC Health is
committed to working with NHRMC to train the healthcare workforce necessary to meet the needs of the citizens of southeastern North Carolina, including the elderly in both urban and rural settings. One specific initiative that could be employed is to create a branch of the very successful UNC Geriatrics Fellowship at NHRMC.

UNC Health has also become a national leader in the creation of high-value geriatric appropriate emergency departments (GEDs). Although reduction of the need for emergency department care is an important priority, elderly patients will always need access to high quality emergency services. The ED at UNC Hospitals Hillsborough was the first in North Carolina to achieve Geriatric ED Accreditation through the American College of Emergency Physicians Geriatric ED Accreditation program. If desired, our team could assist in helping NHRMC create a high value, medically integrated, patient centered nationally accredited geriatric emergency department as well as creating innovative care models utilizing telehealth and urgent care to improve acute unscheduled care for older adults.

In addition to our focus on clinical services for the elderly population, efforts are underway to provide non-clinical care (“private duty services”) in conjunction with Home Health to allow the elderly to remain in their place of residence and to reduce the care burden on family members. This will serve to reduce utilization of SNF services and simultaneously reduce caregiver burnout for families. We would gladly share this knowledge and related operational best practices as part of our proposed partnership.

### 1.5. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on further developing access to service lines at NHRMC, existing or new, including but not limited to:

UNC Health is proud to share strong relationships with many NHRMC clinicians. We have a history of providing compassionate, quality tertiary and quaternary care to patients from New Hanover and its surrounding communities. Our proposed partnership would expand current collaboration through:

- Sharing clinical care protocols and pathways (example: inpatient diabetes care and Sepsis)
- Extending access to clinical trials and research protocols
- Collaborating to recruit physicians, including recruiting to join UNC School of Medicine Faculty with part-time or full-time practice in Wilmington and as teachers from UNC SOM students (see 5.1.1)
- Providing peer-to-peer consultations, including e-Consults and video or phone-based conferences to help NHRMC clinicians manage inpatients and outpatients with complex and/or rare conditions (e.g., amyloidosis, infectious diseases, vasculitis)
- Providing video consults or non-synchronous e-consultations from Chapel Hill directly to NHRMC inpatients and outpatients who have highly specialized needs normally requiring a trip to a subspecialist at UNC or another medical center
• Establishing in-person clinics at NHRMC where UNC specialists could evaluate and manage patients with complex and/or rare conditions, such as end stage liver disease (already established) or severe heart failure
• Developing clear pathways and workflows to seamlessly refer or transfer patients from NHRMC to Chapel Hill for services that are not available locally and cannot be provided remotely, such as cystic fibrosis, hemophilia, pulmonary hypertension, severe sickle cell disease, and advanced cancer care (e.g., CAR-T immunotherapy and bone marrow transplantation)

1.5.1. Pediatric specialties and sub-specialties

Existing Partnership

UNC Health has a proven record of supporting pediatric sub-specialty care, including Hematology/Oncology, Endocrinology, Cardiology, Neurology, Neurosurgery and Pulmonology, in Wilmington through partnerships with the South East AHEC and NHRMC. Prior to the establishment of local children’s specialty expertise, inpatients at NHRMC with sub-specialty needs were often transferred to UNC Health. Over the past 10 years, NHRMC and Coastal Children's Services have developed one of the largest groups of children’s specialty physicians outside of academic centers within North Carolina. UNC Health worked in tandem with NHRMC and Coastal Children's Services to support growth and ultimately improve access for families. Through this collaboration, NHRMC remains one of the top 5 pediatric volume-transferring hospitals to UNC Health, but with an increasing proportion of tertiary/quaternary patients as its sub-specialty care has broadened.

UNC Health supports further expansion of local specialty expertise in Wilmington:

• In 2017, we transferred the practice of a UNC pediatric cardiologist to Coastal Children’s Services
• We continue to provide onsite Endocrinology, Pulmonology, Cardiology, Neurosurgery and Hematology/Oncology specialty care (UNC Health has a presence 7 full days total, seeing approximately 150 children per month)
• Pediatric Neurology also provides support for EEG inpatient interpretation
• In collaboration with South East AHEC, NHRMC, and Coastal Children’s, we are working to further expand UNC specialist services to include Pediatric Urology, Pediatric Rheumatology, and Pediatric Nephrology as new monthly clinics and we are supporting Coastal Children’s recruitments in Pediatric Genetics/Metabolism and Pediatric Cardiology

Future Partnership

UNC Health’s pediatric strategic plan highlights the importance of improving access across the state, emphasizing the collaboration with NHRMC and Coastal Children’s Services. We are committed to supporting NHRMC and affiliated groups to develop full spectrum children’s specialty care in Wilmington and southeastern NC. UNC Health would provide some telephone
call support, provide respite for vacations for NHRMC pediatric specialists and allow specialists in Wilmington to identify as part of a larger group of specialists at NC Children’s Hospital.

Our goal would be assistance with recruitment and program development so that children are able to see every specialty without leaving Wilmington. A significant portion of UNC Health’s pediatric inpatient and outpatient care involves children from Southeastern NC. Ideally, these children would be cared for in a UNC Health affiliated location in Wilmington instead of traveling to Chapel Hill. We are also committed to expanding care through telemedicine to decrease travel. UNC Health has consistently demonstrated our commitment to partner with NHRMC, and we would accelerate that through the proposed partnership.

1.5.2. Adult specialties and sub-specialties (e.g., cardiovascular, neurosciences, geriatrics, orthopedics, oncology, etc.)

The ability to expand adult specialty care access and advance the value of care requires a collaborative care delivery approach that includes the clinical integration of physicians within key medical specialties. A key initiative to realize clinical integration goals involves the development of specialty programs that aim to foster collaboration, develop a unified strategy, improve quality and standardization of care, and share best practices within specialty groups. The proposed partnership with NHRMC would allow for novel collaboration. UNC Health initiatives that could expand adult specialty care access at NHRMC include:

- Strategic placement of subspecialty clinics for complex and/or rare conditions staffed by UNC Health specialists
- Development of workflows to allow for the efficient referral and/or transfer of patients from NHRMC to other sites of care within UNC Health
- Expansion of clinical research opportunities in NHRMC service areas
- Co-development of clinical care protocols/pathways and quality metrics to improve clinical outcomes
- Implementation of virtual care opportunities using peer-to-peer and physician-to-patient encounters
- Joint recruitment of physicians and advanced practice providers at NHRMC

1.5.3. Women’s specialties and sub-specialties

UNC Health’s proposed partnership would leverage existing relationships with NHRMC and provide additional access to women’s specialty services, research collaborations, and educational opportunities. UNC Health has a strong relationship with NHRMC through AHEC endeavors, and clinical consultations across several sub-specialties.

The UNC Health Department of OB/GYN offers clinical expertise across all sub-specialty services including Maternal Fetal Medicine, Gynecologic Oncology, Female Pelvic Medicine and Reconstructive Surgery, Complex Family Planning, Minimally Invasive Surgery/Pelvic Pain and Reproductive Endocrinology and Infertility. UNC Health’s Department of Psychiatry was also a national leader in developing brexanolone to treat women’s mood disorders. In addition, strong
ties exist between the UNC Horizons program and the Tides program in Wilmington, focusing on substance abuse and opioid dependence treatment programs for pregnant and/or parenting women. A partnership with UNC Health would increase the ability to share technical advice and collaborate on research endeavors that address the opioid crisis. Given the strengths of UNC Health’s research portfolio (#3 in NIH rankings for OB/GYN departments), tremendous opportunities exist to engage NHRMC in research initiatives, including serving as a clinical research site.

This proposed partnership would further develop educational resources for trainees and continuing medical education. Ultimately, our partnership would build upon existing relationships, strengthen AHEC initiatives, provide additional research and educational opportunities, and enhance access to expertise in women’s sub-specialty care.

1.5.4. Psychiatric specialties and sub-specialties

The proposed partnership would allow NHRMC to expand access and the scope of mental health services offered locally. UNC Health would collaborate with NHRMC to determine the most effective options to expand access to psychiatric care in southeastern NC. The following programs are well-poised for partnership and expansion through provider sharing and tele-psychiatry:

- **Tele-psychiatry**: UNC Health is growing our tele-psychiatry program and can further support the needs of NHRMC to deliver high quality psychiatric care through virtual care.
- **Perinatal Psychiatry**: The UNC Center for Women’s Mood Disorders is nationally recognized for our perinatal psychiatry program and receives many referrals from NHRMC. This clinical program can expand by adding a Wilmington clinical site to serve the needs of pregnant and postpartum women with perinatal psychiatric disorders.
- **Child and Adolescent Psychiatry**: The prevalence of adolescent mood disorders and suicide has seen an enormous national increase. This crisis requires a robust response in expanded services for children and adolescents suffering with psychiatric disorders. UNC Health can expand the reach of our Division of Child and Adolescent Psychiatry to provide services at NHRMC.
- **Severe and Persistent Mental Illness**: The Center of Excellence for Community Mental Health provides outstanding care to the people of North Carolina suffering from psychotic disorders or others forms of chronic and persistent mental illness. We are well-poised to expand this program to NHRMC to serve the needs of the Wilmington community.
- **Expanded Consultation-Liaison Psychiatry Services**: UNC Health’s Consultation-Liaison psychiatry team has great expertise in providing the highest quality care for medical and surgical patients with comorbid psychiatric illness. This team can consult with NHRMC providers and expand the scope of the program to serve more patients at NHRMC.
- **Interventional Psychiatry**: UNC Health’s expertise as physician-scientists in delivering brexanolone (Zulresso), neuromodulation (rTMS), deep brain stimulation and intranasal
ketamine could be extended to NHRMC. This is in addition to the longstanding history of administration of ECT.

1.6. **NHRMC’s most recent provider needs assessment has been provided to Respondent in the Data Room. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on further developing access by addressing key provider needs (e.g., geriatricians, psychiatrists) as indicated in the assessment.**

UNC Health is actively engaged in aiding our partners across NC in developing customized plans based on Community Health Needs Assessments and medical staff development planning. Our UNC Health Physician Recruitment Office and its pipeline to our own UNC physician and advanced practice provider trainees is an important component of the success of our provider recruitment for both urban and rural areas of our state. Responses to prior applicable questions in **Section 1** as well as questions in **Section 5** address how our proposed partnership would help NHRMC meet the healthcare workforce needs of their Service Area.

1.7. **Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC aligning with employers in the Service Area to provide wellness and healthcare services to local employees (e.g., occupational health programs; walk-in occ-health services at urgent care center; health clinics located on-site at employers).**

UNC Health has achieved success in partnering with public and private, large and small employers across North Carolina. In each situation, we developed an offering that matches the health care needs of the employees, the goals and considerations of the employers, and the clinical expertise of UNC Health. Employers seek partners that can offer not only occupational health but also turnkey solutions to deliver primary care, urgent care, and related health care services.

Examples of UNC Health’s work with employers includes relationships with Cisco Systems in Research Triangle Park (RTP), a large financial services company in RTP, the Town of Chapel Hill, Caterpillar Inc. (Johnston County), the Clayton Fire Department (Johnston County), and several manufacturers in Caldwell County.

We would welcome the opportunity to grow into a partnership with NHRMC over time that address the needs of southeastern NC employers.

**1.7.1. Discuss Respondent’s position on developing NHRMC’s programs to align with local employers.**

Please refer to **1.7.**
1.7.2. Describe the scope and timing of Respondent’s commitment to expanding and improving upon NHRMC’s programs with local employers.

Please refer to 1.7.

1.7.3. Provide examples of the successful implementation of occupational health or other employer-based programs with employers in communities served by Respondent and its affiliate or partner hospitals.

Please refer to 1.7.

1.8. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC’s ability to add patient-friendly, consumer-facing programs that provide added convenience (e.g., call centers, online scheduling, other digital offerings) and that anticipate a continued transition to value-based care and population health management along with increased patient engagement in understanding the financial costs of healthcare (e.g., pricing transparency).

UNC Health believes that health care providers must dramatically innovate the customer experience to develop the close provider-patient partnerships that are key to improving health. We have invested heavily in consumer-facing programs as well as other services supporting the transition to value-based care and population health management. We support this work across our various partnership models. We believe that NHRMC is well-equipped in the near term future to continue to address many of these concerns without significant integration with a larger system. As our partnership progresses and should a need arise for NHRMC to receive additional support in these areas, UNC Health is open to enhancing our partnership to address such priorities directly. We are proud of our achievements in patient access and population health. UNC Senior Alliance, our Next Generation ACO was recently ranked number 1 out of 34 similar ACOs nationally by the Centers for Medicare & Medicaid Services.

1.8.1. Discuss how Respondent supports and engages patients to make informed healthcare decisions (e.g., using cost transparency tools, providing patient education, etc.).

UNC Health has expertise in this area and a history of supporting this work across our various partnership models. We believe that NHRMC is well-equipped in the near term future to continue to address these concerns without significant integration with a larger system. As our partnership progresses and should a need arise for NHRMC to receive additional support in these areas, UNC Health is open to enhancing our partnership to address such priorities directly.
1.8.2. Describe the scope and timing of implementing any of Respondent’s initiatives at NHRMC and/or within the Service Area.

As mentioned in 1.8.1, we are open to discussing how an enhanced partnership in the future may impact these priorities at NHRMC. UNC Health partners with affiliated hospitals and clinics across the state and could extend these services and expertise to NHRMC in the future should the need arise.

1.8.3. Provide examples of the successful implementation of such initiatives in communities served by Respondent.

UNC Health offers customized support to our affiliates across the state, depending on each partner’s level of need and the legal structure of the agreement. We are proud of the results we have generated in rural and urban areas in need of our support. UNC Health looks forward to future conversations if and when there is a mutually identified need for additional support in these areas.

1.9. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC’s ability to further enhance telehealth programs (e-visits and consults; remote specialty monitoring such as eICU) and similar digital health platforms and capabilities.

Question 1.5 and subsections within it address some of the ways our proposed partnership would impact NHRMC’s ability to further enhance telehealth programs. As our partnership progresses and should a need arise for NHRMC to receive additional support in these areas, UNC Health is open to enhancing our partnership to make more services available.

1.9.1. Discuss Respondent’s strategy to receive a reasonable reimbursement for these services.

UNC Health is actively committed to addressing telehealth payment parity, advocating on behalf of all of our affiliate partners and other hospitals and health systems across the state. We have engaged with members of the legislature and organizations such as the NC Healthcare Association and the American Telemedicine Association to advocate for payment parity for virtual visits and services. These efforts remain a priority because telemedicine services in North Carolina are not likely to expand unless services are reimbursed, despite clear improvements in access and value for patients, or until opportunities through capitation or other value contracts include the option to use telemedicine appropriately for patient care.

1.9.2. Describe the scope and timing of implementing any of Respondent’s initiatives (for both urban and rural populations) at NHRMC and/or within the Service Area.

As mentioned earlier, question 1.5 and subsections within it address some of the ways we propose to impact these areas.
1.10. **Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC’s ability to establish a Command Center to monitor data from the health system and use it to improve efficiency, quality and safety and to manage inpatient referrals for advanced care.**

UNC Health has invested significant resources in similar functions, and has experts committed to excellence in Command Center functionality, with patient access and experience at the center of our strategy. As our partnership progresses and should a need arise for NHRMC to receive additional support in this area, UNC Health is open to enhancing our partnership to address such priorities directly.

1.10.1. **Briefly discuss Respondent’s experience fostering collaborative relationships that establish regional and national systems.**

UNC Health is experienced both in strengthening existing regional systems as well as creating new opportunities for collaborative relationships through our partnerships and integration efforts across the state. Throughout North Carolina, we are proud to foster collaborative regional partnerships, utilizing both UNC Health resources and outside partnerships to promote access to high quality health care in local communities. UNC also has several nationally ranked programs including our School of Medicine, the UNC Adams School of Dentistry (top 10 nationally) and the UNC Eshelman School of Pharmacy (#1 nationally), and the UNC Gillings School of Global Public Health (#1 ranked public health school in the country), and the School of Nursing (#1 public nursing school in the country). Through these programs, UNC has a broad impact on national best practices as well as serves as a resource to other top-performing academic medical systems throughout the country.

1.10.2. **Describe the scope and timing of implementing a Command Center at NHRMC.**

UNC Health would welcome an opportunity to partner with NHRMC on the establishment of a Command Center as our partnership grows over time. We welcome the opportunity to discuss your priorities and how our partnership could evolve to meet your identified needs.

1.11. **Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC’s ability to facilitate care delivery and wellness services in rural areas.**

UNC Health has a successful record of partnering in rural markets, building on the strengths of existing medical and community relationships, and enhancing care delivery. The UNC School of Medicine has a deep commitment to improving rural health. The Center for Health Equity Research brings together collaborative, multidisciplinary teams of stakeholders to improve health in North Carolina communities, including a commitment to rural health equity. Through **UNC Rural**, the University is also working on a broader collaboration to improve the well-being of those that live in rural communities.
UNC Health is deeply committed to the communities we serve. In 2018, UNC Health entered Rockingham County as a result of the bankruptcy acquisition of Morehead Memorial Hospital (now UNC Rockingham Health Care), the only North Carolina health system to bid on the hospital. UNC Health successfully partnered with existing medical staff and community resources to stabilize primary care and add resources like registered dieticians and behavioral health services. In addition, UNC Health’s Department of Orthopaedics worked with the ambulatory practices to support an orthopaedic fellowship program for a Nurse Practitioner (NP). This program allowed the NP to enhance her skills to better support the region’s orthopedic surgeon. UNC Health was also proud to return Cardiology and Oncology services to the market, both of which had closed when other health systems exited the community. Additionally, UNC School of Medicine Maternal Fetal Medicine faculty specialists are now supporting UNC Health OB/GYNs who have been serving Rockingham County and the surrounding areas for decades.

UNC Health is proud to say that today we are operating seven specialty practices, one primary care practice, and one urgent care center to serve patients in the UNC Rockingham Health Care service area. The primary care practice has become a leader in quality across UNC Health and was recently recognized for the commitment with which they have embraced quality improvement in their culture.

Similar processes and results occurred in Lenoir and Wayne Counties as UNC Health entered the market and augmented services, building on the strengths of local communities to enhance value in key strategic areas and support keeping care close to home.

UNC Health is committed to recruiting, training, and retaining a health profession workforce prepared to serve North Carolina. We offer pipeline programs that inspire students from rural communities to pursue careers in health professions from an early age. Through the Kenan Primary Care Rural Scholars Program and FIRST (Fully Integrated Readiness for Service Training) program, medical students receive an accelerated medical education and are encouraged to practice in rural North Carolina. Rural fellowships are also available allowing clinicians funding for up to one day a week to enhance the skills needed for rural practice during their first year practicing in that setting. UNC Health implemented a recruitment model that supports a resident financially during residency in exchange for a commitment by the resident to practice in a rural UNC Health location following training.

1.12. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC’s ability to prepare for, respond to and recover from natural disasters with specific detail on hurricane, tropical storm and storm surge preparedness, response and recovery.

The UNC Hospitals Center Emergency Management Program is the oldest of its kind in the state. UNC Health maintains a comprehensive Healthcare Preparedness, Response, and Recovery Program which serves an integral role in the state-wide Coastal Regional Evacuation and Sheltering Plan, among other strategic statewide initiatives. This Program is based upon the phases of the emergency management cycle and has the logistical and operational capacity
to support NHRMC in preparation for, and throughout the life cycle of, any storm impacting North Carolina.

UNC Health’s university affiliation allows access to the other UNC campuses and a multitude of resources, including the ability to leverage the single ‘Coastal Resiliency Center of Excellence’ in the nation, through the UNC School of Government. Additionally, UNC Gillings School of Public Health offers the nationally recognized Community Preparedness Disaster Management (CPDM) certificate program which helps to build networks and broaden emergency management education and preparedness across our state, and beyond.

UNC Health is actively engaged in and leads multiple initiatives and planning at the state level. We are a member of the North Carolina Healthcare Association Emergency Management Council, and our outcomes are far-reaching, including: we are engaged in statewide interoperable communications action teams and a statewide logistics team, serve as a host site for SPICE, the statewide program for infection control and epidemiology, are recognized as the only hospital participating in the statewide transportation workgroup, and co-led the statewide patient movement taskforce and development of a framework that outlines the initial placement of patients requiring de-risking or evacuation beginning within the affiliated healthcare system. Our proposed partnership would provide NHRMC a higher level of situational awareness and timely communication, as well as access to our experts for shared learning.

UNC Health is geographically situated for optimal support to the coastal region. The positioning of the unique Shared Services Center (SSC) in Morrisville, NC provides a primary point of distribution with the ability to rapidly push resources. The SSC also houses a compounding pharmacy, home health resources, and a Durable Medical Equipment (DME) office that has served a critical role in recent sheltering operations. UNC Health can serve as the main logistical center which was demonstrated during recent hurricanes, also utilizing our robust and ever-growing Critical Incident Stress Management (CISM) program, which recognizes the value and importance of addressing emotional and behavioral health needs resulting from disaster. We have demonstrated effectiveness with multi-county coordination and recovery efforts.

As our partnership progresses it would allow for integration into our network that is dense with biomedical research, real-time event (weather) planning, coordination, response, and recovery operations. We have the necessary infrastructure, experience and clinical expertise in areas related to chemical, radiation, burn, trauma, high consequence infectious disease, mental health and pediatric care. UNC Health is a charter member of the C-RAC radiation oncology work group and is also an active participant in the Radiation Treatment Injury Network (RITN).

Finally, our Patient Logistics Center and Central Command serve as coordination points for patient movement and situational awareness during times of disaster. This was central to our work during Hurricanes Matthew, Florence and Dorian regarding receiving and placing patients within the UNC Health system as well as from other entities within the state.
2. Advancing the Value of Care

2.1. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC’s ability to maintain and improve high-quality care while controlling the cost of healthcare delivery.

UNC Health is committed to the providing the highest quality care while making health care more affordable and improving how our patients and providers experience our health care system. We see value based care delivery and payment models as the future of healthcare and our path to improve the health and decrease suffering of North Carolinians. UNC Health has invested in the right infrastructure and built a learning health system to successfully navigate the path to value. This approach is embedded into our clinical education philosophy across our School of Medicine and other health professions schools, which will improve overall provider competencies in these areas and expand a well-positioned workforce for the future.

The academic partnership with UNC allows NHRMC, a high functioning health system, to partner with leaders on the cutting edge of health services research and health systems science curriculum. The academic curriculum will bring emphasis on value based care, quality improvement, interprofessional practice, leadership, and other topic areas essential for today’s health care leaders, but underrepresented in the training of the past. UNC will not only train the clinicians of the future with this forward-focused mindset but will provide faculty development for the clinicians currently practicing in Wilmington.

2.1.1. Describe Respondent’s innovative strategies to help control out-of-pocket costs, including those for patients with high-deductibles and copays as well as self-pay patients.

UNC Health understands that affordability is fundamental to care access and we are sensitive to the economic impact on individuals and families with serious illnesses. We are committed to serving all patients regardless of their ability to pay, and have a variety of resources available to patients struggling to cover the cost of their care including a system-wide charity care program and sliding scale for out of pocket expenses for the uninsured or self-insured. As our partnership with NHRMC progresses, we would look forward to future conversations if and when there is a mutually identified need for additional support. Please refer to question 3.1.3 for more details on financial assistance policies.

2.1.2. Describe any health plan owned or joint ventured by Respondent. Discuss the rationale for this “vertical” strategy and how it furthers the goals and objectives of Respondent’s organization.

Currently UNC Health does not own or joint venture any insurance product. UNC Health’s Managed Care experts are committed to embracing new approaches in various markets as they evolve and become valuable to the populations we serve. As our partnership progresses, UNC Health is open to enhancing our partnership to jointly address such strategies directly.
2.1.2.1. Comment on Respondent’s position on continuing NHRMC’s efforts to establish, own and operate a Medicare Advantage health plan.

UNC Health understands that “New Hanover Health Advantage” is the health plan that NHRMC launched January 1, 2020, and that this Medicare Advantage health plan is a partnership with FirstCarolinaCare Insurance Company, a subsidiary of FirstHealth of the Carolinas. Further, our understanding is that this plan is currently only open to residents of New Hanover County in the initial year and that functions related to operating this health plan are being split between local NHRMC oversight and a close partnership with FirstCarolinaCare.

Given NHRMC’s current 44% Medicare payer mix and the predicted demographic and population growth trends over the coming years that indicate a growing Medicare aged population, it is clear this segment will remain an important component of NHRMC’s patient population. The Medicare Advantage segment is a key growth market for the major national payers, and is increasingly competitive as those larger plans battle to gain membership. NHRMC’s decision to follow the trend of establishing a provider sponsored Medicare Advantage health plan is not surprising. Gaining greater ability to control the full premium dollar is a logical goal, and Medicare Advantage is an attractive segment for such a pursuit. It is also our belief that this segment will only see increasing competitive pressures from the national Medicare Advantage payers, but that there will be a place for a locally controlled provider sponsored plan option to succeed under the right conditions.

To fully comment on this venture, it would be important to better understand the partnership model and division of responsibilities in greater detail, but at a high level this venture appears to be a prudent path toward ownership and operation of a Medicare Advantage health plan in NHRMC’s market. UNC Health would look forward to future conversations on this topic if and when there is a mutually identified need for additional support in this area, and should these conversations be appropriate given the partnership structure in place.

2.1.2.2. Describe how any health plan affiliated or partnered with Respondent could enhance NHRMC’s efforts to lower cost and improve access in the Service Area.

Within all areas of managed care/payer relationships, UNC Health would look forward to future conversations on this topic if and when there is a mutually identified need for additional support in this area, and should this collaboration be appropriate given the partnership structure in place.
2.1.3. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC’s ability to establish and further participate in value-based provider networks (e.g., ACO and CIN) and/or value-based care initiatives.

As mentioned previously, UNC Health has seen great success in value-based provider networks through the UNC Health Alliance, our clinically integrated network, and UNC Senior Alliance, our Next Generation ACO (ranked number 1 out of 34 similar ACOs nationally by the Centers for Medicare & Medicaid Services). NHRMC is well-equipped in the near term to continue to address value-based care initiatives. However, as our partnership progresses, UNC Health would be eager to discuss additional integration into our population health resources should NHRMC need this additional support and integration.

2.1.3.1. Discuss Respondent’s approach to NHRMC’s existing value-based networks, including any opportunities to expand or improve upon these networks.

As mentioned in earlier responses, UNC Health experts committed to excellence in value-based networks and population health support this work across our various partnership models. We would welcome the opportunity to grow into such a partnership with NHRMC over time.

2.1.3.2. Describe any operational or strategic synergies that may be captured by combining Respondent’s value-based networks with NHRMC affiliated or partnered networks.

Should NHRMC find additional support or integration is required in these areas, we would be open to enhancing our partnership to evaluate opportunities and address potential value generated to inform how our partnership may evolve over time. We look forward to a conversation around potential synergies to be realized between our networks.

2.1.4. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC’s capabilities in value-based care contracting models (e.g., bundles, shared savings, capitation, etc.) with commercial insurers, employers and governmental health programs.

Within all areas of managed care/payer relationships, UNC Health would look forward to future conversations on this topic if and when there is a mutually identified need for additional support in this area, and should this collaboration be appropriate given the partnership structure in place.
2.1.4.1. Discuss Respondent’s outlook on the timing and materiality of future value-based arrangements.

Within all areas of managed care/payer relationships, UNC Health would look forward to future conversations on this topic if and when there is a mutually identified need for additional support in this area, and should this collaboration be appropriate given the partnership structure in place.

2.1.4.2. Discuss how Respondent could help NHRMC enhance value-based care contracting efforts. Describe specific programs and plans that Respondent would implement at NHRMC.

Within all areas of managed care/payer relationships, UNC Health would look forward to future conversations on this topic if and when there is a mutually identified need for additional support in this area, and should this collaboration be appropriate given the partnership structure in place.

2.1.5. Provide detail on how cost and quality and patient safety were impacted at hospitals and health systems that have recently affiliated or partnered with the Respondent. Please rely on the examples provided in response to section 6. Driving Quality of Care Throughout the Continuum and 8. Ensuring Long-Term Financial Security.

UNC Health’s professional quality improvement efforts are anchored to our Quadruple Aim: improving clinical quality, provider/staff work life, our patients’ care experience, and eliminating waste/reducing costs. We target measures that balance provider and co-worker needs, priorities of the organization, and have a positive impact on our patients while managing measures and improvements across four domains of care: clinical quality, access to care, patient engagement, and patient experience.

UNC Health is a proven leader in quality improvement and care redesign, committed to these efforts whether under fee-for-service, pay for performance, or value-based care. In 2019, UNC Senior Alliance Ranked #1 nationally in Clinical Quality among 34 Pay-for-Performance Next Generation Accountable Care Organizations with financial performance better than benchmark. We have established programs and deep experience in reducing the cost of care, in partnership with our affiliates. For example, Johnston Health, a longstanding UNC Health affiliate, has seen lowering of total cost of care and operating costs of their ambulatory clinics by 22% between 2017 and 2019

UNC Health partners with affiliated hospitals and clinics across the state in each of these important areas, and would welcome the opportunity to grow into such a partnership with NHRMC over time.
2.2. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have in developing and/or enhancing NHRMC’s patient satisfaction programs, including monitoring and using feedback to make improvements in the patient experience.

UNC Health offers customized support in patient experience to our affiliates across the state, depending on each partner’s level of need, using our nationally recognized Carolina Care® patient experience program as a foundation for all interactions. We are proud of the results we have generated in rural and urban areas in need of our support. UNC Health has been impressed with NHRMC’s success in achieving high patient satisfaction and we would look forward to future conversations if and when there is a mutually identified need for additional support.

2.2.1. Discuss how Respondent could help NHRMC enhance patient satisfaction. Describe specific programs and plans that Respondent would implement at NHRMC.

In an effort to improve and sustain patient experience measures, UNC Hospitals developed its own care delivery model in 2009, Carolina Care®. Each of our affiliate hospitals has an interdisciplinary governance and accountability model for deploying consistent patient centered behaviors that are expected for each co-worker, regardless of their role in the organization. Carolina Care® is engrained in the culture, emerging as one of our four system values of UNC Health.

Carolina Care® was first implemented at the flagship academic UNC Hospitals (Chapel Hill, NC), improving our Press Ganey (PG) overall scores from the 20th percentile at the commencement of Carolina Care® (2007) to consistently performing above the 80th percentile during a time of marked improvement in the national PG database. The program spread across the continuum of care to the ED and outpatient settings and continues to expand to other care settings across the system. Cultural transformation impacting patient experience scores does not happen overnight; Carolina Care® is an ongoing effort that is embedded in the organizational operating model.

Carolina Care® is launched at each new UNC Health affiliate hospital. Support for implementation is resourced and supported centrally, while governance, operationalization and accountability all remain at the local hospital level. Ongoing reinforcement of Carolina Care® and patient experience best practices occurs regularly through monthly system CNO Roundtable calls, monthly Patient Experience leader calls and two system patient experience conferences each year. The system CEO Roundtable has also focused on Carolina Care®, demonstrating executive leader support.

The implementation of Carolina Care® throughout UNC Health was recognized as a Press Ganey Success Story Award® recipient at the 2015 PG National Client Conference. Carolina Care® has also been cited as an exemplar by Press Ganey executives including mention in the 2018 book authored by the Press Ganey Chief Nursing Officer (Dempsey, Christina. The
Antidote to Suffering. New York: McGraw-Hill, 2018). Additionally, UNC Hospitals has received the Vizient Patient Centeredness award since its inception in 2011 and has consistently ranked in the top 12 of Vizient academic medical centers including #1 (2011,2013) and #2 (2019). UNC Hospitals has also been recognized with the Healthgrades Outstanding Patient Experience Award™ each year since its inception (2015-2019). The award recognizes the top 15% of national hospitals with the highest overall patient experience scores. UNC REX Healthcare and Johnston Health were also recognized.

UNC Health would be eager to discuss how Carolina Care® could help support your already high performance in these areas, and would share our resources and expertise with NHRMC leadership to further our shared priority of excellence in patient experience.

2.2.2. Provide detail on patient satisfaction for hospitals and health systems that have recently affiliated or partnered with the Respondent.

As mentioned in question 2.2, we are proud of the improvement we have seen in hospitals and clinics that have partnered with UNC Health. Implementation of Carolina Care® has shown significant improvement in patient experience ratings, correlating to improved Medicare star ratings. We have also shown that there is a high correlation between improved patient engagement and improved staff satisfaction. As mentioned previously, we would look forward to assisting with NHRMC’s patient experience priorities as our partnership evolves and determining how Carolina Care® may enhance your approach to sustaining excellent patient experience.

2.3. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have in developing and/or enhancing how NHRMC coordinates patients within the continuum of care, both within the system (e.g., using patient care coordinators) and outside the system.

UNC Health partners with affiliated hospitals and clinics across the state in care coordination. We would welcome the opportunity to grow into such a partnership with NHRMC over time.

2.3.1. Describe any current or planned initiatives by the Respondent that would improve patient care coordination in the communities it serves.

UNC Health offers customized support to our affiliates across the state to assist with care coordination, and we are proud of the results we have achieved in rural and urban areas. UNC Health would look forward to future conversations if and when there is a mutually identified need for additional support for NHRMC in this area.

2.3.2. Describe any enhancements to patient care coordination that Respondent can introduce to NHRMC.

We believe NHRMC is well-equipped in the near term future to continue to improve in these areas without significant integration into a larger system. As our partnership progresses and
should a need arise for NHRMC to receive additional support in care coordination, UNC Health is open to enhancing our partnership to address these priorities directly.

2.3.3. **Discuss how Respondent could help NHRMC establish or further develop partnerships with public and private social service organizations in the Service Area to drive value (e.g., Department of Health).**

As with care coordination, we believe NHRMC is well-equipped in the near term to continue to improve in these areas without significant integration into a larger system. As our partnership progresses and should a need arise for NHRMC to receive additional support in developing partnerships in the service area, UNC Health is open to enhancing our partnership to address these priorities directly.

2.3.4. **Discuss how the Respondent would help NHRMC establish or further develop partnerships with community providers to coordinate care (e.g., independent physicians, post-acute care providers, etc.).**

As mentioned previously, we believe NHRMC is well-equipped in the near term future to continue to improve in these areas without significant integration into a larger system. As our partnership progresses and should a need arise for NHRMC to receive additional support in all areas related to care coordination, including partnerships with community providers, UNC Health will remain open to growing our partnership to address such needs.

3. **Achieving Health Equity**

3.1. **Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC’s ability to maintain and enhance charity care and financial assistance in the communities it serves and to expand coverage for uninsured and underinsured individuals.**

As mentioned previously, UNC Health believes that affordability is a critical component to care access and the wellbeing of our patients. We are committed to leading in this area, and support expansion of these policies across our various partnership models. As our partnership progresses and should a need arise for NHRMC to address these concerns in a more concerted way, UNC Health is open to enhancing our partnership to provide the support needed.

3.1.1. **Describe the Respondent’s philosophy and approach to charity care, financial assistance, debt collection and debt forgiveness policies. Provide examples of approach used in various communities.**

As mentioned previously, UNC Health believes that affordability is a critical component to care access and the wellbeing of our patients. We are committed to leading in this area, and support expansion of these policies across our various partnership models. Please see 3.1.3 for more detailed information related to our philosophy and approach. As our partnership progresses and
should a need arise for NHRMC to address these concerns in a more concerted way, UNC Health is open to enhancing our partnership to provide the support needed.

3.1.2. Explain the process of how Respondent would maintain or modify NHRMC’s charity care, financial assistance, debt collection practices and debt forgiveness policies.

As mentioned previously, UNC Health believes that affordability is a critical component to care access and the wellbeing of our patients. We are committed to leading in this area, and support expansion of these policies across our various partnership models. Our proposed partnership would not have an immediate impact on NHRMC’s policies, however, as our partnership progresses and should a need arise for NHRMC to address these concerns in a more concerted way, UNC Health is open to enhancing our partnership to provide the support needed.

3.1.3. Provide detail on how charity care, financial assistance, debt collection practices and debt forgiveness policies were impacted at hospitals and health systems that recently affiliated or partnered with the Respondent. Describe any changes to policies as well as any changes to the dollar amounts of care/assistance provided.

We are committed to leading in this area, and support expansion of our policies across our various partnership models. As our partnership progresses and should a need arise for NHRMC to address these concerns in a more concerted way, UNC Health is open to enhancing our partnership to provide the support needed. Details regarding our financial assistance policies are available online: https://www.uncmedicalcenter.org/uncmc/patients-visitors/billing/financial-assistance-programs/.

3.2. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC’s ability to maintain and enhance community outreach programs, including health education, free health screenings, wellness programs and other community health programs, as well as general engagement in a community as a contributing “corporate citizen” in the Service Area.

UNC Health continually seeks new and innovative ways to offer the highest quality care and connect with the people of North Carolina. A partnership with NHRMC would positively enhance and extend current outreach and corporate citizenship efforts. Investing time to build, maintain and evaluate opportunities for collaboration with businesses, non-profit organizations, foundations, chambers of commerce and elected officials is an integral component of our commitment to community.

If selected, we would partner closely with UNCW and Cape Fear Community College to enrich existing community partnerships and identify new ways to engage more broadly in outreach, including health education and other community health programs. As we invest in the UNC SOM Wilmington campus, we would anticipate partnering closely with you to evaluate areas of greatest need and are open to new and creative approaches to partnering with the community.
The learner presence cultivated by a partnership with UNC would also provide a cohort of ready volunteers for community engagement. UNC SOM students in Wilmington already participate actively in health outreach programs. This would only expand with an increased presence. Similarly, UNCW and local community college students would have the opportunity to work, learn, and engage alongside UNC-CH students from NC and beyond. The UNC SOM Office of Rural Initiatives would expand that outreach into the rural communities of southeastern NC.

3.2.1. Specifically, discuss how Respondent works with local departments of health, public schools, indigent care clinics, federally qualified health care centers and other agencies and providers in addressing the health needs of communities. Detail any current or future population health initiatives done in conjunction with municipalities, counties or any other units of local government, or with other agencies or providers aimed at addressing health issues and improving access to necessary health services, including:

UNC Health partners with diverse agencies and providers in the many communities we serve. We would aim to work closely with NHRMC leadership, community leaders, UNCW and Cape Fear Community College to determine where our enhanced partnership could be of the most value. We have extensive experience to bring, however, we recognize the need for these initiatives to be customized to and led by the local regions they serve.

3.2.1.1. Any approach to and previous success with impacting social determinants of health;

Social determinants of health are complex community problems that require more than access to health services. Food, housing, transportation, interpersonal safety, education, employment, and many other important factors impact the health of a population. As a leader in translational research in health disparities, UNC Health collaborates with the UNC Gillings School of Global Public Health, UNC School of Social Work and UNC School of Nursing, and pursues interventions to address disparities in health outcomes throughout rural and urban North Carolina. We have developed targeted initiatives to actively reduce disparities, increase access to primary and preventive care for underrepresented populations, and facilitate health care system and community organization engagement. An enhanced academic partnership with UNC Health would allow NHRMC to engage in and benefit from these research efforts, as well as benefit from the training of UNC SOM students, residents, and fellows, who would be part of NHRMC’s catchment areas, in social determinants of health.

We are also creating an entity within UNC Health to coordinate and focus initiatives intended to improve community health and social determinants of health across the state. We are forming this entity to coordinate and kick start our focus on social determinants and community needs, aligning with other UNC Health affiliated entities to leverage our impact. This entity will apply experiences and past successes to high-need communities where we have a partnership presence, will help us partner with community leaders and stakeholders to address local needs, and provide central and local resources to leverage success and spread learnings.
Like NHRMC, UNC Health knows that we cannot fulfill our mission without addressing unmet needs in rural and under-resourced areas, including some pockets in urban communities. As the state’s health system, it is our imperative to serve the most vulnerable populations. Moreover, these investments will improve the economic competitiveness of the state, as they will support rural hospitals and health providers as key employers in our communities, and encourage more business investments in thriving, healthy communities.

We believe that a healthier North Carolina will reduce the burden on government programs and taxpayer support, and are confident that UNC Health’s platform for investment in social determinants of health is a key foundational element to how we partner across North Carolina. Through local partnerships, we seek the highest degree of collaboration possible with diverse groups of stakeholders, maintaining continuous communication with local leadership while simultaneously addressing established community health needs and strategic business goals. Working together offers the greatest opportunity to improve quality metrics and enact meaningful change.

In our proposed partnership with NHRMC, we would be eager to work together to address social determinants of health in southeastern NC, and could together become the state’s leader in health equity. We see NHRMC as a fitting partner to lead innovative health equity work, ideally as the southeastern hub of our internal entity. Important work led by experts in your community in partnership with UNC Health providers, researchers and supporting resources, could be disseminated across North Carolina to the benefit of all 100 counties.

3.2.1.2. Treatment and prevention strategies in addressing drug and alcohol addiction or abuse, including tackling the opioid epidemic; and

UNC Health began Opioid Stewardship initiatives many years ago. Changing clinician practice patterns around opioids is a critical strategy to reduce opioid dependence and effective opioid treatment is an equally important strategy. Our approach and tactics are transferrable to NHRMC, and we could find economies of scale by expanding and/or partnering services in southeastern NC.

UNC Health Programs and Partnerships:

UNC Health’s systematic and comprehensive approach to opioid use and misuse has resulted in markedly reduced opioid prescribing equivalent to ~500,000 fewer pills per year.

The Addiction Medicine Program (AMP): This comprehensive, multidisciplinary, multi-professional program is designed to bridge clinicians and researchers across departments, professions, specialties, and schools, providing a much-needed platform for clinical trials, implementation science and public health initiatives.

- In July 2018, the AMP established a Hub and Spoke model for addiction treatment as a method to expand access to treatment for underserved populations. AMP serves as the
Hub via the Substance Treatment and Recovery (STAR) clinic and accepts patients with substance use disorders from inpatient settings. Patients are stabilized in 4 – 12 weeks at the STAR clinic Hub and transitioned to the community (Spokes) for maintenance treatment.

- In spring 2020, the Hub and Spoke model will expand to key sites across NC, creating Regional Addiction Medicine Programs (RAMPs). The RAMPs will serve as (1) a Hub site for providing addiction treatment to high acuity populations; and (2) education centers, providing technical assistance and staff development to community practices for behavioral health and addiction treatment integration. Development of a RAMP in southeastern NC will provide the infrastructure to expand capacity for addiction treatment in an area of the state with great need.

Adult Substance Abuse Program (ASAP): This program includes stand-alone clinical services as well as embedded services in primary care, hepatology clinics, and OB/GYN settings to proactively address substance use in high-risk populations. Embedded services treat patients and upskill primary care teams in screening for and treating substance use disorders. Pilots have extended into inpatient settings to actively manage substance use, including alcoholism, through provider education, EMR-based standing orders for medication treatment (naltrexone) and therapy consults, and coordinated transitional care to local ambulatory treatment services.

Opioid Stewardship team: Through the voice of the patient, this team developed standard opioid prescribing guidelines to steer providers toward the appropriate quantity of opioids to prescribe for acute pain conditions. Their efforts have resulted in decreased opioid prescribing by 30 – 35% in many patient populations (equal to 300,000-400,000 fewer doses per year prescribed to surgical populations alone at UNCMC in 2018 and 2019).

The overarching mission of UNC Health’s Opioid Stewardship team is to align all system efforts and ultimately decrease opioid misuse. We are achieving this mission via four clear initiatives:

1. Precision opioid prescribing guidelines (SOPS) for over 80 surgical procedures and patient scenarios with acute pain disorders, with more in development.
2. Developed tools for Patient and provider education.
3. Processes for safe storage and disposal of opioid and other similar medications.
4. Deployable program for substance use disorder screening and treatment in EDs and through an in-patient addiction consult service.

Additional work to further research and continuing education around addiction includes:

- UNC Health faculty serve as hub experts for the UNC Extension for Community Healthcare Outcomes for Rural Primary Care Medication Assisted Treatment (UNC ECHO for MAT) project. This program brings together diverse groups of primary and specialty care practices to build internal expertise and capacity to provide MAT for their patients. The ECHO sessions, in which participants and clinical experts engage in
conversation about real cases and share knowledge, provide a structure for spreading expertise to practices across the state, and is easily scalable to southeastern NC.

- UNC Health Department of Family Medicine has established a group visit model, which is an innovative concept that could be implemented in practices. The model yields significant results, with marked reductions in Emergency Department utilization and inpatient admissions for patients undergoing MAT.

- UNC Health’s Horizons, a nationally recognized program for innovative, effective management of expectant mothers with substance use disorders (SUD), has proven results with improved birth outcomes.
  - TIDES, a non-profit treatment program that receives funding from NHRMC and New Hanover County, is based on the Horizons model and offers integrated prenatal care and SUD treatment.
  - Our Proposed Strategic Partnership would strengthen the relationship between Horizons and TIDES. It would expand the Horizons NIH research portfolio to our partners in Wilmington. Our databases and outcomes could be combined allowing us to answer important questions more quickly and robustly. The synergies created would enhance the education and training of students and residents in perinatal addiction medicine and provide a firm foundation for establishing fellowships for OB/GYNs, psychiatrists, and nurse practitioners in this crucial but underserved area.

- For more than 35 years, UNC Health’s Bowles Center for Alcohol Studies (CAS) has been a leader in the search for the causes and prevention of alcoholism, working to improve intervention and treatment. CAS is one of 20 national Alcohol Research Centers funded by the National Institute on Alcohol Abuse and Alcoholism. CAS faculty members speak at state, national, and international conferences, and our scientists have received NIH MERIT and Career Awards. UNC Health continuously advocates for public policy supporting state legislation around drunk driving laws, treatment for the state prison population, and other substance abuse related matters.

- UNC Health’s Tobacco Intervention Program has built a strong research base to influence local, state, and federal legislation around tobacco products, primary and specialty care for nicotine dependence, and training for learners across the spectrum of care providers. Our research programs on treatment, prevention, and policy are supported by Federal, State, and Foundation grants and contracts of over $800,000 annually for the last decade. Our tobacco-use treatment intervention programs reach more than 6,000 tobacco users annually, with sustained cessation at one year of 22%. We have shown a 16% reduction in readmissions through our inpatient program. Our work in the UNC Cancer Hospital was cited as the impetus for the recent National Cancer Institute Moonshot Initiative, a $20 million expansion in tobacco-use treatment in cancer centers around the country. Our leadership resulted in the establishment of the Duke-UNC Tobacco Treatment Certification Program, whereby we train 150 providers annually across NC and the Southeast, on evidenced-based and value-based approaches to tobacco-use treatment.
3.2.1.3. Inpatient and outpatient behavioral health services.

UNC Health has invested in innovative behavioral health clinical models, advanced population management solutions for patients with affective disorder and substance use disorder, and has committed to training the next generation of care teams. These models, particularly those supported by technology, can be extended across the state. A basic tenet is meeting patients where they are and where they routinely receive care to capitalize on established trusting relationships.

UNC Health Integrative and Collaborative Psychiatry Ambulatory Care Models

1) Collaborative care: UNC Health piloted and scaled multiple collaborative care initiatives in primary care. Current work leverages embedded behavioral health specialists, primary care providers, and consulting psychiatrists to screen for affective disorder, begin and titrate evidence-based medical treatment, engage patients in therapy, and collaboratively review complex cases with a psychiatrist as needed. Targeted outreach and ongoing remote care is managed using Epic registries for depression and engages the broader care teams. Two sites have used new care management codes to help financially support this model of care.

2) Psychiatry Consultation Lines: UNC Health has Pediatric and Maternal Mental Health consultation lines that serve the State. Similar consultation models can be created in other areas of expertise through our Proposed Strategic Partnership with NHRMC.

3) Virtual Care: UNC Health developed Tele-psychiatry programs to provide expert tele-psychiatry services to primary care and other settings. This included the successful launch of remote, virtual cognitive behavioral therapy services for rural counties.

4) Integrative Care: UNC Health has many models of integrative care including in primary care and OB/GYN settings to address maternal mental health needs. Extending the WakeBrook Integrative Care Clinic as described below can increase reach across the state.

WakeBrook Integrative Care Clinic:

The Integrative Care Clinic at WakeBrook is a collaboration with Wake County. This “psychiatric medical home” provides high quality medical care to persons with severe and persistent mental illness. Core features include a smaller patient panel for family physicians and close collaboration with psychiatrists. This approach has led to improved psychiatric care for patients as well as improved medical outcomes, reduced emergency room visits and medical admissions, and significant cost savings. This model is transformative for the complete care of persons with severe and persistent mental illness and will become the standard for patients enrolled in Tailored Plans as part of Medicaid Transformation.

Adult Substance Abuse Program (ASAP): See question 3.2.1.2 for more information about this substance abuse prevention and treatment program, which has been established in ambulatory practices and is being extended to inpatient setting pilots as well.
3.2.2. Is the Respondent committed to expanding NHRMC’s programs and financial outlays for community outreach and engagement?

UNC Health has been impressed with NHRMC’s commitment in this area. We are committed to improving on these priorities statewide, and we are open to enhancing our partnership to support NHRMC’s goals in southeastern North Carolina directly.

3.2.3. Discuss any enhancements to NHRMC’s levels of community outreach and engagement in the Service Area (e.g., new programs; leveraging programs proven successful in other markets) that the Respondent could introduce.

As previously discussed, we have substantial experience in these areas through our population health programs. As our partnership progresses and should a need arise for NHRMC to receive additional support in this area, UNC Health is open to enhancing our partnership to address these priorities together.

3.2.4. Discuss the process for how the Respondent would make changes to NHRMC community outreach and engagement programs. How would such decisions be made?

As previously discussed, as our partnership progresses and should a need arise for NHRMC to receive additional support in this area, UNC Health is open to enhancing our partnership to address these priorities together. We believe that community outreach and engagement is best led locally by those who know the community best, and we would be eager to explore how an enhanced partnership could support goals you have specific to southeastern NC and your service area.

3.3. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC’s ability to equip employees with the knowledge and training needed to support health equity (e.g., diversity training).

Every UNC Health hospital has signed the American Hospital Association’s #123forEquity pledge, with an Executive Champion at each entity. The pledge asks hospital and health system leaders to take actions to accelerate progress in eliminating health disparities and improving quality of care for all patients. Since signing the pledge, hospitals have focused on enhancing diversity, equity, inclusion and cultural competence education. These ideas are shared across the system during our Equity of Care Pledge quarterly meetings with the Executive Champions.

We have a Diversity Leader Certificate Program that is open to all employees, regardless of their role in the organization. We believe that everyone has the ability to be a diversity leader who supports equitable and inclusive behaviors. One of the core courses in the program, Dealing with Differences, is a prejudice reduction workshop modeled after the National Coalition Building Institute’s Welcoming Diversity workshop. Participants spend 25 classroom hours studying up to 11 different topics/courses including Dealing with Differences, Diversity Awareness in Healthcare, Diversity/Inclusion in Patient Care, Diverse Teams in Healthcare,

The UNC Health Office of Diversity, Equity, and Inclusion has partnered with UNC School of Medicine to offer unconscious bias training (Everyday Bias for Leaders). The office has also developed a partnership with UNC Chapel Hill's LGBT Center to offer Safe Zone training. This partnership has resulted in 6 employees becoming certified to facilitate the training which will increase learning opportunities across the system.

UNC Health offers customized support in health equity and diversity training to our affiliates across the state. We are proud of the results we have generated in rural and urban areas in need of our support as a result of our health equity initiatives. UNC Health has been impressed with NHRMC’s commitment to health equity and diversity, and would welcome an opportunity to partner on initiatives to benefit both organizations as our partnership progresses.

4. Engaging Staff

4.1. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC’s capabilities in building and maintaining a high-performing employee team, specifically those programs related to (i) employee recruitment (including addressing critical shortage areas such as nursing), (ii) retention (e.g., engagement programs; structuring incentive compensation and employee benefits), (iii) career development (management and clinician training), (iv) health and wellness programs and (v) leadership training.

Aspects related to provider recruitment, retention, and training are addressed under the applicable questions in Section 5. As our partnership progresses, we would welcome an opportunity to more fully understand NHRMC’s goals related to employee engagement. We admire you for your highly engaged workforce, and we believe you are well-equipped in the near term future to realize continued success in this area. As our partnership progresses and should a need arise for NHRMC to receive additional support in these areas, UNC Health is open to enhancing our partnership appropriately to address these priorities. Our proposal would aim to have the NHRMC leadership team and Board continue their strong leadership over these Human Resources functions well into the future. Our goal is that as our integration increases over several years we are able to address any concerns as appropriate based on your local need and within the bounds of any legal partnership agreement in place.

4.1.1. Discuss how Respondent would enhance NHRMC’s efforts relative to employee recruitment, retention, career development and leadership training.

See question 4.1.
4.1.2. **Discuss any community and educational institution engagement or training programs supported or maintained by the Respondent, including partnerships or other collaborations with others that could assist NHRMC’s recruiting for healthcare-related jobs.**

UNC Health’s academic roots, both as a teaching facility and as an employer to graduating students from 63 healthcare degrees, creates pipelines for many healthcare professions across the system. Collaboration and partnership with technical schools, other colleges and universities, and career focused programs (HOSA/STEM) further enhances health care program pathways to ensure a ready workforce.

4.1.3. **Discuss how Respondent would support or improve current staffing models at NHRMC.**

See question 4.1.

4.1.4. **Discuss how Respondent would support or improve current health and wellness programs for NHRMC staff, including NHRMC’s fitness center.**

See question 4.1.

4.1.5. **Provide detail on how employee recruitment, retention, leadership training and career development was impacted at hospitals and health systems that have recently affiliated or partnered with the Respondent.**

See question 4.1.

4.2. **Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on the retention of existing NHRMC employees.**

See question 4.1.

4.2.1. **Will the Respondent make a commitment not to make any material changes to NHRMC’s employee base and staffing commitments without the approval of the NHRMC Board?**

UNC Health places a high value on local governance. The proposed partnership model would not impact NHRMC’s employee base and staffing commitments. Should our partnership progress to a more meaningful management services or equity partnership, all material staffing decisions would be made together with the NHRMC Board and leadership team.
4.2.2. How would Respondent plan to minimize the potential for employee disruption and turnover in any transition resulting from the Proposed Strategic Partnership?

See question 4.1.

4.3. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on the compensation and benefits, including current pension plan, currently provided to NHRMC employees.

See question 4.1.

4.3.1. Describe the Respondent’s plans related to maintaining or enhancing current salaries and discuss how Respondent’s employee compensation is set and how it would impact compensation for NHRMC staff.

See question 4.1.

4.3.2. Discuss how Respondent’s benefits, including pension plan and other retirement benefits, compare to those offered by NHRMC, particularly with regard to contribution rates and how those might be impacted under the Proposed Strategic Partnership.

See question 4.1.

4.3.3. Please describe the Respondent’s plans related to addressing accrued benefits for length of service and pension plan matters for the employees of NHRMC.

See question 4.1.

4.3.4. Discuss what type of retirement (pension or 403b/401k) package Respondent offers and how the Proposed Strategic Partnership would impact retirement plans for NHRMC staff and retirees.

See question 4.1.

4.4. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on employment (adding or detracting) in the communities in which NHRMC operates.

UNC Health’s reputation and long-standing commitment to North Carolinians has enabled positive integration into the communities we serve. UNC Health has expanded services, thereby increasing employment in communities in which we have a presence. Further, we expect our
investment in education and medical career pipelines would have a longstanding positive impact on the communities in which NHRMC operates.

UNC Health engaged an outside consultant, TXP (Austin, TX) to complete an objective economic impact assessment of our proposed investment in the UNC School of Medicine Wilmington branch campus. The full report can be found in Appendix A. At a high level, the expansion is expected to have significant economic implications for southeastern North Carolina. Based on TXP’s calculations, our investment could generate a total of $34 million in total regional output, $12 million in earnings and 269 new jobs.

4.4.1. Would the Respondent make a commitment to base certain corporate services for its entire system in the Service Area?

See question 5.2.

4.4.2. Provide detail on how local employment was impacted at hospitals and health systems that have affiliated or partnered with the Respondent.

See question 4.4.

4.5. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on furthering and preserving the mission, vision, values and culture of NHRMC.

We embrace the local mission, vision, values, and culture of each community hospital partner that joins UNC Health. We understand that these aspirations, values, and cultural norms are often rooted in the long-standing history of the community. To that end, the proposed academic partnership will help you achieve your strategic priorities in a way that maintains and enhances NHRMC’s mission, vision, values, and culture. At UNC Health, our mission is to improve the health and well-being of North Carolinians and others we serve. One of our core values is “One Great Team”, meaning effective collaboration is the key to providing quality care. Our core system values align closely with NHRMC’s values of Ownership, Teamwork, Communication, and Compassion:

UNC Health’s Core System Values include:

One Great Team

- We are better together than we are apart.
- Our effective collaboration is key to providing quality care.
- We are building an inclusive and equitable culture that encourages and supports the diverse voices of our patients and each other.
Carolina Care

- We care holistically about patients and each other.
- It is our privilege to serve the people of North Carolina.
- We demonstrate kindness and compassion in every interaction.

Leading the Way

- We make a difference by improving lives every day and training the next generation of health care leaders.
- Our research is changing the world.
- We provide innovative care.

It Starts With Me

- Each of us takes ownership of, and accountability for, doing the right thing.
- We empower and trust each other to step up.
- We support each other and hold each other accountable in our work.

4.5.1. Discuss similarities that the Respondent sees between the Respondent’s organization and NHRMC’s mission, vision, values and culture.

We see strong alignment in our shared vision, mission, values, and organizational culture. We believe that NHRMC and UNC Health align in a number of important areas that are core to our identities as leading health systems, including:

- Our patient-first culture that ensures outstanding quality, compassion, and affordability
- Our consumer-centric approach that improves access, convenience, and experience for patients and their families
- Our focus on developing new and innovative care models to transform how we provide care
- Our commitment to building a diverse and talented workforce that reflects that communities we serve
- Our cultures of transformation and readiness to move boldly into the future
- Our shared mission to ensure that all individuals in the community and across the state of North Carolina have an opportunity to pursue outstanding health

4.5.2. Provide detail on how organizational mission, vision, values and culture were preserved at hospitals and health systems that have recently affiliated or partnered with the Respondent.

Our priority is to help our community hospital partners achieve their strategic priorities in a way that maintains and enhances their mission, vision, values, and culture. Over time, we work closely with local management teams to align on shared goals and bring together the best of our
cultures and values in areas where it both strengthens the health system and improves care in that local community.

As part of UNC Health, all of our network hospitals maintain their longstanding mission, vision, and values, and we proudly champion the unique perspectives and heritage that each brings to UNC Health. Our commitment to preserving local identity dates back to UNC Health’s acquisition of Rex Healthcare (now UNC REX Healthcare) in 2000. To this day, UNC REX Healthcare maintains a distinct mission, vision, and set of values above and beyond our shared system values that connect the hospital to an over 100-year history that is treasured by residents in Wake County and across the region.

4.5.3. Discuss impact, if any, Respondent’s Proposed Strategic Partnership and Respondent’s tax status (exempt or taxable) would have on furthering and preserving NHRMC’s charitable mission and the County’s commitment to public interest.

Our proposed partnership would support NHRMC’s existing charitable mission and the County’s commitment to public interest.

4.6. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC’s commitment to being an inclusive organization, supporting anti-discrimination efforts and building and maintaining a diverse workforce.

At UNC Health, one of our system values is One Great Team. This system value states that “we are better together than we are apart”, “our effective collaboration is key to providing quality care”, and “We are building an inclusive and equitable culture that encourages and supports the diverse voices of our patients and each other”. This commitment to being an inclusive organization is supported by leadership system-wide. We have policies and practices in place which support an equitable, inclusive, non-discriminatory environment. Examples of such policies are: Equal Employment Opportunity, Patient/Family Policy on Non-Discrimination Against Providers and Staff, and Harassment Free Workplace. The Health Care System EEO/ADA Director provides guidance and support to ensure a non-discriminatory and harassment-free workplace.

We have diversity in our workforce and are focused on increasing diversity in leadership. We have developed a standard sourcing list for executive director level and above positions and conduct structured behavior based interviews. We have a redacted resume pilot in progress and are developing a 5-year strategic plan for increasing diversity in leadership.

Our response to question 3.3 provides additional details regarding our efforts in diversity, equity, and inclusion.
4.6.1. Is the Respondent committed to continuing NHRMC’s inclusion, anti-discrimination and diversity programs?

Yes, UNC Health leadership has made diversity, equity, and inclusion (DEI) an organizational priority as evidenced by the creation of the Office of Diversity, Equity, and Inclusion. The office is committed to creating a welcoming, respectful environment for all patients, family members, visitors and employees. In addition, the system values support the DEI strategy.

Please see responses to questions 3.3 and 4.6 for additional details.

4.6.2. Describe any enhancements to NHRMC’s inclusion, anti-discrimination and diversity programs that could be introduced by the Respondent based on its experience in running similar programs for its affiliated or partnered hospitals and health systems.

See question 4.1.

4.7. Discuss how the Proposed Strategic Partnership would impact access to student loan forgiveness programs for any or all NHRMC employees and describe any impact Respondent’s Proposed Strategic Partnership could or would have on the ability of certain NHRMC employees to achieve student loan forgiveness by virtue of their work for NHRMC as a nonprofit organization.

See question 4.1.

5. Partnering with Providers

5.1. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC’s capabilities in recruiting providers into the Service Area.

Stability of the medical staff and outpatient physician network is important for the health of any community. To better serve communities statewide, UNC Health has a tenured and collaborative, system-level, Physician Recruitment Office to source, screen, and aid in recruitment of physician and advanced practice provider candidates. Our affiliated hospitals and employed and independent community practices consistently name the Physician Recruitment Office and our results as a valuable service. One unique area for our recruitment group is the development and maintenance of a pipeline of recruits from our training programs beginning with our talented medical students and our residency and fellowship trainees. Our partners have also seen a boost in provider recruitment due to their association with UNC Health and UNC School of Medicine’s well-respected national brand.

Collaboration with the UNC SOM clinical departments is extremely important for the pipeline development. The clinical department chairs also engage in the recruitment process and often develop strong ties to recruitment and retention of community based specialists. Our time to
recruit is well below the national average for primary and specialty care. The recruitment team also works closely with our hospitals and practices to develop approaches to retain providers. To date, 97% of outpatient and inpatient providers recruited have been retained. We share NHRMC’s focus on building a diverse and inclusive workforce and have success in diversifying medical staffs and community networks as part of our system level commitment to equity of care. The Physician Recruitment Office also oversees recruitment for physician administrative roles such as chief medical officers, vice president of medical affairs, and higher level medical directors. The UNC Health Physician Recruitment Office will be available to work collaboratively with NHRMC in its recruitment efforts.

5.1.1. Specifically, discuss how the Respondent would work with NHRMC’s existing provider recruitment staff.

Given an appropriate legal level of partnership, our UNC Health Physician Recruitment Office could establish an active collaboration very early in a relationship with NHRMC to draw on the strengths of NHRMC physician and APP recruitment efforts and those of the UNC Health Physician Recruitment Office. Most of our hospital affiliates join UNC Health with some recruitment resources and staff. The recruitment office engages with these site specific resources and collaborates with the on-site team to be certain that the important element of local recruitment efforts is maintained while adding resources from the UNC Health physician recruitment efforts. This immediately provides access to both the provider pipelines available to UNC Health and our efforts at the state, region and national levels. We would expect this to expand NHRMC’s regional and national visibility and while enhancing the scope and breadth of sourcing for the NHRMC provider needs.

One of the early efforts in the partnership would be to identify recruitment priorities with the leaders at NHRMC and the community. This allows a rapid collaborative response, drawing on resources from both UNC Health and NHRMC. As a product of our extensive investment in provider recruitment and sourcing resources we have been able to provide recruitment services at a cost less than commercial recruitment services from vendors.

Finally, based on the diverse needs of our hospitals and providers networks statewide, we are adept at balancing the efficiencies of centralizing some resources while being well attuned to local recruitment needs. Within the system, we have fostered a community of recruiters statewide, and we welcome the opportunity to collaborate with NHRMC’s provider recruiters.

5.1.2. What enhancements and improvements to physician recruiting would Respondent commit to making for NHRMC?

Given an appropriate legal level of partnership, UNC Health would immediately commit supplemental recruitment resources to support and enhance NHRMC’s current efforts. Example enhancements include:

- Representation at recruitment and career fairs regionally and nationally;
• Campaign development for challenging or time sensitive recruitments to include advertising and sourcing resources;
• Commitment of senior physician recruiters to significantly increase the amount of sourcing per recruitment;
• Representing NHRMC within the UNC SOM residency and fellowship programs to identify providers in their final phase of training who may be ideal for NHRMC opportunities; and
• Collaborating to evaluate and further develop candidate experience across the full recruitment cycle.

The UNC SOM also has many programs in place to encourage clinicians to care for the underserved. For example, the Kenan Primary Care Medical Scholars provides scholarship funds for people who will work in rural areas of NC (https://www.med.unc.edu/ori/programs-opportunities/rumsp/). Also, as previously mentioned, the FIRST program creates a specific pipeline for high need disciplines. This program can be launched at New Hanover in partnership with UNC.

5.1.3. What enhancements and improvements to advanced practice provider recruiting would Respondent commit to making for NHRMC?

Based on the variety of community and hospital-based care models present across UNC Health, we have a dedicated and continuous focus on advanced practice provider recruitment. We consider this focus an area of strength that could provide an immediate benefit to NHRMC. At UNC-Chapel Hill’s number one ranked public school of nursing, we train nurse practitioners in a variety of subspecialties (e.g., psychiatry, gerontology, primary care, pediatrics). We also train physician assistants within the UNC SOM in a dedicated PA training program. UNC Health is uniquely positioned to offer these learners and advanced nurses with community-based exposure as a pipeline development effort in specific markets. In addition, we have partnerships with two other advanced practice training programs in the state of North Carolina. As a result, we have a large number of advanced practitioners in our pipeline who are ready to place in sites with needs. We also collaborate with our affiliated partners to develop training and mentoring programs for newer advanced practice providers and work with UNC SOM departments and physician networks to develop specialized training in sub-specialties for advanced practitioners in areas such as orthopedics, neonatology, and multiple other disciplines.

Our system is committed to building a community of advanced practitioners across UNC Health and we respect and empower the advanced practice providers as members of the health care teams. Our system has also developed technical skill and procedural workshops for advanced practitioners to enhance clinical skills and improve patient care. We believe NHRMC would be a strong partner in helping to evolve the roles of advanced practice providers. The corollary of these efforts is a strong positive impact on retention and job engagement/satisfaction.
5.1.4. Provide detail on how provider recruitment was improved at hospitals and health systems that have affiliated or partnered with the Respondent.

UNC Health has partnered with local leadership teams to identify provider need and recruit high quality physicians to our rural and urban areas. Our physician recruitment team outperforms national benchmarks including the time it takes to fill an open position. With an enhanced partnership as proposed in this document, UNC Health would be motivated to collaborate with NHRMC to evaluate how our physician recruitment resources may be beneficial to you.

5.1.5. Discuss how an affiliation or partnership with the Respondent would enhance recruitment and retention of or access to specialists and subspecialists not currently, or adequately, available in the region.

As described in in 5.1 and 5.2 UNC Health has expertise in recruiting to all primary and specialty care types with depth in building new community and hospital based programs. Of particular importance is the pipeline of residency and fellowship trained specialists and subspecialists is a unique option for recruitment and retention with placements of these individuals. Since launching our internal physician recruitment function in 2016, we have a 97% retention across our non-medical center physicians including specialists and subspecialists. This demonstrates a link between a sound recruitment methodology and strong retention over time.

Also, because UNC Health has significant breadth in statewide outreach, we partner with hospitals and medical practices to target gaps in their local offerings and help our partners close gaps in care through partnership with specialists and sub-specialists through outreach clinics or in some situations telemedicine to bridge the delays with recruitment. Our relationships with NHRMC in areas including Pediatric Specialists provided from UNC Hospitals, have allowed more care to remain local while bridging the time until local providers could be hired. Our early focus in a partnership would be to identify gaps in the NHRMC medical staff development plan, understand current barriers to recruitment, and develop coverage plans if needed while recruitment is enhanced.

5.2. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on developing and/or enhancing NHRMC’s medical education, residency and fellowship programs, as well as nursing education and other provider training programs.

Our vision is to utilize the expertise and resources of UNC Health and the UNC SOM to create a local enterprise that will recruit, train, and develop the health profession workforce needed for NHRMC and southeastern North Carolina. After more than 40 years of partnership through the AHEC system, the UNC School of Medicine opened an accredited branch campus at NHRMC in 2016. What began as a pilot program with only three medical students completing their core clerkships in Wilmington, has increased to a class size of 18 medical students scheduled for 2021. We would anticipate continued growth should our proposal be accepted.
Importantly, UNC cannot ensure continued growth or even sustainment for its current branch campus in Wilmington if another health system partner is selected. Unfortunately, as illustrated in Charlotte recently where the successful UNC SOM branch campus must close, health care system partnerships sometimes compromise existing educational partnerships. It would be disappointing and wasteful if the burgeoning programs had to close at this point.

Currently, UNC School of Medicine collaborates with NHRMC, SEAHEC, and UNC Wilmington (UNCW) to provide comprehensive clinical education for UNC medical students, including interprofessional learning opportunities for UNCW students. In partnership with the Cameron School of Business at UNCW, all UNC SOM medical students on the Wilmington campus also get a certificate in health care leadership. This unique program is a draw for recruiting students and creates a quality improvement mindset in these future leaders. These educational relationships not only better prepare the clinical workforce but also benefit UNCW by bringing in top quality medical students to engage on campus.

We would also envision working with you to develop a MD/MBA dual degree track for some UNC School of Medicine Wilmington Campus students (MBA through UNCW). With careful planning, there is a special opportunity to develop this program to be completed in only four years, which would be a unique draw for enterprising students to that campus.

Discussions are underway with the UNC Adams School of Dentistry and the UNC Eshelman School of Pharmacy to develop collaborative branch campuses for other health profession training in Wilmington in the event of a partnership between UNC Health and NHRMC. The UNC Adams School of Dentistry is ranked in the top 10 nationally and the Eshelman School of Pharmacy is ranked #1. The Eshelman School of Pharmacy holds the only Rural Pharmacy Health Certificate program in the country and is a partner in the Harvard Macy Foundation’s Rural InterProfessional Health Initiative. We will also explore advanced partnerships between the UNC Gillings School of Global Public Health (#1 ranked public health school in the country) and UNCW public health programs. Dual degree (MD/MPH or DDS/MPH) options for southeastern campus students could be made available.

Similar to MAHEC in Asheville, UNC-Chapel Hill leaders would envision a Wilmington branch campus model for each health profession school that prepares a comprehensive and expert health profession workforce. The General Assembly has been so convinced of the success and cost-effectiveness of this model that they have invested more than $10M annually in UNC Health Sciences at MAHEC. A partnership between UNC Health and NHRMC would establish the foundation for a similar argument for the necessity of financial support of the educational partnership in Wilmington.

The high quality medical students at UNC engage with the communities of southeastern NC to provide service. For example, medical students provided 24 hour 7 day per week care at the medical shelter established at Coddington Elementary School after Hurricane Florence. Other students volunteered at a migrant farm worker clinic in Pender County. All UNC SOM graduates are credentialed to prescribe medication-assisted treatment for patients with opioid use disorders upon graduation and licensing with our innovative student training program.
The UNC name attracts top students and the branch campus system allows us to place them into communities where they can engage and grow roots, match into local residency training programs, and practice long term. UNC Health commits to continue to expand upon community outreach programs and community partnerships to focus on and advance health equity.

In addition to exceptional health profession education, the UNC Health education programs focus on producing the workforce that North Carolina needs. Recognizing the short supply of physicians in rural areas adjacent to Wilmington, UNC SOM launched the acclaimed Kenan Rural Scholars program on the Wilmington campus in 2017. This program, a public private partnership with support of the Kenan Charitable Trust and the General Assembly of NC, provides at least $80,000 of scholarship support for medical students committed to rural service. UNC SOM also provides these students enhanced curriculum to better prepare them for rural service, and they are celebrated in a likeminded cohort to provide social support for their commitment. Students are launched into their journey through community engagement projects the summer after the first year of medical school. The first cohort of these scholars, trained on the campus in the Western part of the state, is finishing residency training in 2020 and each rural scholar is entering practice in Western NC. We would anticipate similar results in southeastern NC as the program at New Hanover matures.

To prepare students to enter the health profession programs that UNC Health will make available in Wilmington, we also commit to deploying pipeline programs for potential students from that region toward the goal of expanding the reach and number of community healthcare workers to improve health in underserved communities. Our nationally recognized pipeline programs provide academic enhancement and mentorship for health profession program entry. We will consider specific workforce needs, and we will develop a plan specific to nurse recruitment and other key shortage professionals. With a focus on cultivating a diverse applicant pool, we strive to eliminate demographic disparities in healthcare outcomes throughout the region. More than 130 physician alumni of UNC SOM currently live in Wilmington. With a partnership to recruit, prepare, train and retrain more, we can dramatically expand that number. We pledge to continue to engage with the community and local educational institutions to develop careers in healthcare for local residents via training and talent pipelines. Growth of these educational programs would enhance economic development by providing diversified industry growth and opportunities for employment growth in the region.

Training in the community setting where we encourage these graduates to serve after residency allows for the continued provision of cost-effective, high-quality care. Additionally, research indicates that graduates are more likely to practice in the communities where they complete their training. Finally, given our interprofessional curriculum on Health System Science, learners together would expand depth and breadth of care management and coordination capabilities to reduce clinical variation.
5.2.1. Discuss how an affiliation or partnership with the Respondent would impact existing medical education programs at NHRMC, including the affiliation with UNC. Does the Respondent commit to maintaining and enhancing all of these programs unless otherwise decided by the NHRMC Board?

If selected, UNC Health would commit to maintaining and enhancing all of these programs, and has a clear vision of developing a health profession education enterprise for southeastern North Carolina to cultivate the workforce needed to sustain health care delivery for the future. Importantly, UNC cannot ensure continued growth or even sustainment for its current branch campus in Wilmington if another health system partner is selected. Unfortunately, as illustrated in Charlotte recently where the successful UNC SOM branch campus must close, health care system partnerships sometimes compromise existing educational partnerships. It would be disappointing and wasteful if the burgeoning programs had to close at this point.

5.2.2. Will the Respondent commit to developing and enhancing NHRMC’s existing medical residency programs in Internal Medicine, General Surgery, Family Medicine and Obstetrics and Gynecology?

Yes, UNC Health would continue and enhance these programs through deployment of several initiatives, including the FIRST program in each discipline, and deployment of the innovative Health System Science curriculum. Nationally, UNC is one of only eight entities awarded a Reimagining Residency grant ($1.8M) from the AMA Accelerating Change in Medical Education Consortium. With this grant, in addition to expanding FIRST (Fully Integrated Readiness for Service Training, details in 5.2.4), we are implementing a Health System Science curriculum for UNC residents. We designed this curriculum to optimize training for population health management and other demands of modern health care delivery. We would also make Kenan Rural Fellowships available for residency graduates to provide enhanced training for those staying in the New Hanover system and serving a rural population. Finally, we would be open to a discussion of re-branding residencies as UNC residencies to enhance recruitment of top applicants if desired.

5.2.3. How would Respondent expand or develop current and future residency and fellowship training programs?

New training programs would improve access for service lines in need of further development, including women’s, geriatric, neonatal, and pediatric services. UNC would commit to collaborating with NHRMC to develop, if desired, new residency training programs in both psychiatry and pediatrics, as well as surgical disciplines. We could also jointly explore expanding FIRST into these disciplines as well. We can also develop traditional fellowships in desired disciplines such as critical care, neonatology, or various subspecialty disciplines. Specifically, we could create a branch of the very successful UNC Geriatrics Fellowship at NHRMC.
Additionally, UNC SOM supports rural fellowships in the high need disciplines of family medicine, OB/GYN, general surgery and psychiatry with support of the Kenan Trust, as discussed in 5.2. This fellowship funding not only provides enticement to serve a rural community but also allows the clinician to develop capabilities in emerging methods of providing care (e.g., telemedicine).

We are also working with AHEC to develop Physician Assistant Residencies, with a specific focus on providing primary care in rural settings.

5.2.4. Discuss how an affiliation or partnership with the Respondent would support new programs or the implementation of Respondent's current programs in the following education and training programs at NHRMC, 5.2.4.1. Graduate Medical Education

UNC Health would enhance the medical education and resident/fellow mentorship programs, including the development of additional Graduate Medical Education programs. With partnership, there would be an option of re-branding to capitalize on the well-recognized UNC name to assist in recruitment of top candidates. The UNC SOM Wilmington Campus has been very attractive to medical students and similarly may help to attract a national applicant pool for trainees. Partnership allows collaborative training with the Chapel Hill campus used as a resource site for the few essential elements of training not available in Wilmington. For example, if desired a pediatrics training program could be developed with residents receiving education in quaternary care essentials on visiting rotations in Chapel Hill where housing is already available. The educational expertise at UNC, with its >800 residents in >70 programs, will allow for growth in training opportunities as desired.

UNC Health will deploy an innovative UNC medical school to residency training to practice pipeline program called FIRST to efficiently produce physicians in high need disciplines (Family Medicine, General Surgery, Psychiatry, OB/GYN, and other primary care) in Wilmington. FIRST (Fully Integrated Readiness for Service Training), is an expedited medical school experience with graduation in only 3 years for mature medical students willing to commit to training in a high need discipline, and subsequently serving through practice in North Carolina upon training completion. This expedited pathway creates a workforce intended to serve the region and ensures that programs fill residency slots with UNC SOM graduates, as part of the expectation in the program is that the graduate will match for residency in the site of their student training to benefit from continuity. UNC SOM developed and piloted this innovative curricular model successfully in Chapel Hill. The program recently received $1.8M in funding due to UNC being one of eight national awardees of the AMA Reimaging Residency Initiative. New Hanover will be a sight for this investment unless partnership with a different health system demands re-evaluation of the possibilities. FIRST is one of many targeted initiatives to close gaps such as increased primary care access for minorities and seniors.

UNC could assist New Hanover in developing a psychiatry residency. That, in addition to broad training with an emphasis on mental health care, would lead to increased access to behavioral health services in the region. Such a program could be bolstered by our strong interprofessional
education model of integrative health by including other disciplines such as Rehabilitation Counseling, Physician Assistants, and Occupational Therapy as part of the components of a larger mental health care training program.

UNC Health can also develop traditional fellowships in desired disciplines such as critical care or various subspecialty disciplines, as described in 5.2.3. Additionally, UNC SOM supports rural fellowships in the high need disciplines of family medicine, OB/GYN, general surgery and psychiatry thanks to the Kenan Trust. These fellowships provide funding for one day per week of additional training time during the physicians’ first year in practice in a rural setting. This fellowship funding not only provides enticement to serve a rural community but also allows enhanced skill development typically in ultrasound care, telemedicine training, or other skills to optimize rural service.

5.2.4.2. Nursing Education

In the proposed partnership, nursing education can be expanded through partnerships with local and system training entities, in particular the UNCW School of Nursing, Cape Fear Community College, UNC-Chapel Hill School of Nursing (UNC-CH SON) and UNC Health nursing professional development programs. Each of these entities produce a robust health profession workforce prepared for collaborative interprofessional practice and the delivery of high quality, high value care.

UNC Hospitals has a robust and well-developed relationship with the UNC-CH SON, as well as with more than 30 other schools of nursing and serves as a local and regional site for preceptorships for nursing students. UNC Health affiliate hospitals have access to lower rates for the multitude of ongoing continuing educational clinical and professional development offerings, as well as on-line learning platforms for new graduates and experienced nurses. UNC Health hospitals work collaboratively to define competency guidelines, policies, and training.

In addition to traditional and innovative nursing education programs, UNC Health would also launch fellowships for Advanced Care Providers (NPs, PAs) for specialized training in disciplines that benefit NHRMC and southeastern NC, creating workforce pipeline programs. These fellowships in high need areas serve as concurrent training and recruitment experiences for potential team members.

5.2.4.3. Allied Health Education

The UNC SOM includes a nationally-recognized Department of Allied Health Sciences. This program has the key mission of developing the workforce for NC via excellent educational programs in the health professions and strong community outreach. The Department includes outstanding programs in Physical Therapy (#15 in the country), Occupational Therapy (#9 in the country), Speech and Hearing Sciences (#12 Speech and Language; #4 in Audiology), Rehabilitation Counseling (#9 in the country), and a newly developed Physician Studies Program. Further, the Department maintains one of the few Clinical Laboratory Science programs in the state, the only Radiologic Science Program, and the Neurodiagnostic Sleep
Science Program (a collaboration with UNC-Charlotte). All of these programs have been key contributors to the state workforce infrastructure, with over 75% of graduates remaining in the state for employment following graduation.

With respect to the partnership with NHRMC, it is important to note that all of these programs are poised for significant growth in the coming years, and expansion of the training programs into the southeastern region of the state would be bolstered by a strong partnership. In fact, such a partnership would increase the number of students enrolled and at the same time permit an extension of the UNC-CH campus to NHRMC. Further, clinical placements from all of these programs into clinical sites in the NHRMC region would increase, particularly in surrounding rural areas, and subsequently facilitate hiring of these students into practices in these settings once they complete their respective program. The Department also maintains a number of residencies in Physical Therapy, with current plans to develop residencies for Physician Assistants to serve rural regions. In partnership with AHEC, the residency training model is designed to not only provide advanced training in primary care to clinicians to serve rural regions of the state, but also to develop their mentoring and teaching capabilities so that they can become well-rounded contributors to their practices, the regional AHEC, and the university. More generally, through branch campus development and/or partnerships with UNCW and surrounding NHRMC practices, these training programs could expand and provide a strong complement to existing training infrastructure in the southeastern region of the state.

5.3. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC’s ability to effectively deploy advanced practice providers in healthcare delivery teams.

Through the proposed partnership, UNC Health would support NHRMC in efforts to deploy advanced practice providers (APPs) in healthcare teams through shared experience, care team models, and education and training. APPs are highly valued care team members who contribute to direct patient care as well as initiatives focused on care coordination, clinical quality, and operational efficiency. UNC Health currently has 1,761 credentialed/privileged APPs across the system, including 553 at UNC Hospitals in Chapel Hill and 458 at UNC Rex in Raleigh. A strategic partnership would allow for sharing of best practices in multiple areas including structured APP systems and resources, optimization of APP utilization across a variety of specialties/subspecialties, APP student placement, Human Resources policies governing APPs and processes/workflows including credentialing and privileging.

The UNC SOM Department of Allied Health Sciences includes a Physician Assistant Studies Program and the UNC School of Nursing offers degree options including Family Nurse Practitioner, Adult-Gerontology Primary Care Nurse Practitioner, Pediatric Nurse Practitioner, and Psychiatric Mental Health Nurse Practitioner. Additionally, UNC Health physicians have experience with various care models that incorporate APPs into inpatient and outpatient settings and could share clinical and operational expertise with colleagues at NHRMC. The combination of physician and APP leadership at UNC Health (see 5.3.1), as well as exposure to NHRMC through the UNC Schools of Medicine and Nursing training programs, would improve NHRMC’s ability to recruit and retain qualified APPs to the NHRMC service area.
5.3.1. Discuss the Respondent’s approach and experience in the use of advanced practice providers.

As expressed in 5.3, UNC Health considers APPs to be an integral component of care delivery teams, increasing access to care, helping care teams advance value of care and partnering with other care providers and community resources to achieve health equity. Flexibility is required to ensure appropriate utilization of APPs within any medical environment. UNC Health acknowledges the critical role of APPs in inpatient and outpatient settings and understands that the specifics of APP utilization must be carefully designed by each physician practice to maximize the success of these valued care team members.

Given the high value placed on APPs, as well as widespread presence across UNC Health, UNC Hospitals and UNC Rex have established Advanced Practice Provider Centers to provide support, guidance and recognition to existing and emerging practices of APPs. These Centers provide coordination and improved integration of APPs across the inpatient and ambulatory settings. This commitment allows APPs an opportunity to provide leadership and contribute to enhanced patient experience, improved clinical quality and reduced cost of care. In addition to traditional APPs (physician assistants and nurse practitioners), UNC Health also values the role of care team members such as clinical pharmacists, nurse anesthetists, nurse midwives, dieticians and clinical psychologists.

Incorporation of APPs into the care delivery team expands access by providing increased options for routine and same day appointments and enhancing care delivery and physician efficiency. Further, the availability of APPs as accessible care team members reduces emergency department referrals by allowing for same day visits and readmissions through improved care transitions. Utilization of APPs, as well as other allied healthcare providers, also enhances the ability of medical practices to promote wellness and connect with community resources to reduce unnecessary barriers to care and improving health equity.

5.4. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC’s approach to working with community physicians.

Partnering with providers statewide is part of the fabric of UNC Health. We have brought our passion for collaboration with community physicians to bear in New Hanover County in collaboration with NHRMC and hope to continue these efforts in a much more significant way in a future partnership.

For example, NHRMC and UNC Health have worked together closely over the years in an effort to establish more services in the NHRMC community as a means to keep care local and improve access to more specialized services. These efforts have primarily been in pediatrics with a goal of partnering with community physicians to share in the care of children in the local region, materially impacting access to care, reducing time away from work for parents, and reducing school absences for children with complex disease.
UNC Health has also made ongoing efforts to invest in specialized services in the county such as partnering with local nephrologists and gastroenterologists caring for transplant candidates and patients who are also under the care of specialists at UNC Hospitals. Our Wilmington clinics allow transplant patients to receive the majority of their care and evaluation locally to better support those patients and their families and ease care access. These developments of local transplant care also support NHRMC and community physicians as ancillary and physician practice revenue remain local.

UNC Health is focused on improving the health of North Carolinians in their local communities whenever possible. The above examples speak to our intent to invest in the NHRMC community and find creative ways to broaden the spectrum of services provided locally. Our overall process in a future partnership would be to further expand the current NHRMC approach to working with community physicians. UNC Health would align with current NHRMC strategic goals in access, value, and health equity and dedicate resources and innovation toward those existing goals. We likely have a parallel effort to your strategic goal of strengthening the primary care network through expanding geographic reach with the recent recruitment of 30 new primary care providers in one quarter. We would aim to bolster your efforts in this geographic development effort.

In our proposed partnership, NHRMC physicians and other affiliated community physicians would have the opportunity to become teaching faculty as well. It is well-documented that mentoring students provides improved wellness scores and prevents burnout, which are also shared priorities between NHRMC and UNC Health.

Thus, we could partner with NHRMC in a broad and significant way as we have experience in engaging with community providers in everything from value arrangements, joint ventures, ownership models, virtual and digital innovation, shared care programs, physician wellbeing and engagement initiatives, research, leadership development, and many more options. NHRMC’s current plan could drive the efforts, and we expect immediate and ongoing enhancement and investment in community physicians as we have realized improved engagement with community providers in every community where we have partnered.

5.4.1. Describe any programs offered by the Respondent that could be rolled-out at NHRMC in order to more closely align with and support independent physicians and medical groups (e.g., management services organization and providing EMR access to small practices and other clinical points of care).

As mentioned previously, UNC Health has partnered with independent physicians and physician practices in a broad way ranging from improving care via access to our health record (currently 10,000 physician users statewide) to entering value arrangements together. We have a broad range of integration and service options. We also manage and operate physician practices from solo providers to large multidisciplinary groups. We are adept in joint venture and investment opportunities in partnership with physicians, and we also offer a group practice model that allows physician practices to have more autonomy while still benefitting from the management,
managed care contracts, quality improvement, and population health services of UNC Physicians Network. We also have an option for physician practices to adopt Epic@UNC via Epic Connect and share the UNC Health electronic health record and receive the full support of information services at UNC Health.

5.4.2. What is the Respondent’s approach to partnering with independent physicians and medical groups in joint ventures and clinically-integrated programs?

UNC Health has achieved success in improving access to care, advancing the value of care, and achieving health equity through flexibility and customized partnerships with independent physicians and medical groups. Through UNC Health Alliance, North Carolina’s largest integrated network, independent physicians actively participate in network governance, data sharing, and gainsharing arrangements through value based contracts. Regional collaborations between independent physicians, acute care facilities, and employed provider groups has resulted in marked reductions in unnecessary utilization and reduced total cost of care for key chronic conditions like Chronic Obstructive Pulmonary Disease, Congestive Heart Failure, and Atrial Fibrillation. See C.3i for more information about UNC Health Alliance.

While UNC Health Alliance serves as an important vehicle for alignment with physicians and medical groups wishing to maintain full independence, other partnership vehicles are also successfully utilized. For example, joint ventures with independent physicians have been utilized in a variety of cases, including UNC Health’s conversion of outpatient surgery operations in Cary into a freestanding ambulatory surgery center in conjunction with 33 independent surgeons. In addition, UNC Health developed an orthopedic surgery center in Wake County through partnership with 21 independent orthopedic surgeons. We also have a history of successful joint ventures with independent groups, including a recent agreement with a large independent radiology group, which reduced the cost of care for patients while maintaining excellent quality.

Partnership options with independent physicians and medical groups offer a range of affiliation options. For example, a newly opened Medical Office Building in Wake County allows independent physicians to practice in the MOB with access to convenient ancillary services such as lab and radiology while maintaining practice independence. Alternatively, Professional Service Agreements with medical groups allow UNC Health to lease physicians, staff, space, and equipment while operating the practice for a period of time. This gives each party the opportunity to explore a relationship without permanently relinquishing independence. Finally, UNC Health offers a group practice employment model that allows physicians to be compensated by the profits of the practice. Those physicians have the highest level of autonomy with our system.

Partnerships outside of joint ventures and co-management have also helped improve coordination of care via clinically-integrated programs that include independent physicians and medical groups. For example, UNC REX Cancer Care hosts weekly multidisciplinary cancer conferences that include the active participation of employed and independent physicians,
improving coordination of care for patients. Additionally, independent and employed physicians are working together in Ear, Nose & Throat and Urology to strategically incorporate sub-specialty care in Wake County with the goal of providing expanded service offerings to patients closer to home. Such arrangements include co-location of services in which employed physicians rent space from independent physicians to enable improved coordination of and access to sub-specialty care.

5.4.3. Discuss how an affiliation or partnership with the Respondent would impact existing (and developing) hospital-based provider contracts, joint ventures and other physician contracts and agreements. Does the Respondent commit to maintaining all of these relationships unless otherwise decided by the NHRMC Board?

UNC Health understands the success of any health care system is built upon relationships. It is not in UNC Health’s or NHRMC’s best interest to disrupt current or developing relationships once an expanded partnership structure is established unless it is the desire of NHRMC leadership and the Board in order to solve an issue or challenge. Our approach is to first seek to understand the nature of existing relationships, what is working well or not working well with each, and ensure that contracts are aligned with our compliance standards.

Our approach to evaluating existing provider relationships and contracts generally follows these steps:

- Develop a deep understanding of NHRMC’s existing and developing relationships to gauge impact to NHRMC;
- Conduct a legal and compliance review of existing key provider contracts;
- Share with NHRMC’s leadership team and NHRMC Board any recommendations or opportunities for UNC Health service offerings to positively impact NHRMC operations and finances or improve compliance; and
- UNC Health and NHRMC leadership and Board collaboratively prioritize service enhancements to implement based on a timeline that is advantageous and least disruptive to NHRMC.

5.4.4. Describe the Respondent’s approach to the use of non-compete and cost share provision clauses in physician contracting.

Our proposed partnership would not have an immediate impact on physician contracting at NHRMC, including cost share provision or non-compete clauses. If NHRMC requires support or advice in these areas, or should our integration and clinical partnership grow to a point where such issues need to be addressed jointly by UNC Health and NHRMC, we will discuss our approach with appropriate leadership.
5.4.5. **What is the Respondent’s approach to working with independent physicians who have built practices in the community? Describe what impact, if any, the Proposed Strategic Partnership would have on NHRMC’s approach to and relationships with independent physicians.**

As detailed in 5.4, UNC Health has a track record of partnering with community providers of all types. We support independent providers on our medical staffs as well as community providers across the state in counties where we do not have a facility. Many of our community hospital medical staffs are comprised largely of independent providers. We are focused on supporting those independent providers which includes a system level focus on their wellbeing and engagement as well as developing models to effectively share care and partner together in innovative business endeavors.

Our partnership with NHRMC would support your current approach and offer additional models and resources where necessary and applicable.

5.5. **Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC’s approach towards medical group practice operations for its employed physician base.**

UNC Health has an employed physician base of over 2,600 across our various partnership models in North Carolina. UNC Health recognizes that several approaches are needed in order to meet the needs of the community and our physicians serving within those communities. UNC Health offers a variety of models depending on the unique partnership arrangement at a given entity. For this proposed agreement, we do not estimate a significant impact on NHRMC employed physicians, though your practices would benefit from our physician recruitment resources and leveraging resources related to our enhanced clinical and educational partnership. Should our partnership progress to include management services or integration into our Clinically Integrated Network or UNC Physicians Network, UNC Health could offer a host of services to NHRMC to help achieve your objectives (lower cost of services, increase performance results).

5.5.1. **How does the respondent view the NHRMC medical group relationship with Atrium and would that be continued? If not, what is the alternative and how does it compare to the current state?**

Under our proposed partnership, UNC Health would allow the NHRMC Physician group to continue management through Atrium. However, if NHRMC would like to explore medical group operations through UNC Health as part of a more integrated partnership, we have a proven track record in practice management. UNC Physicians Network (UNCPN) successfully delivers practice management services to several hospitals’ medical groups across the state. Under such an enhanced partnership, UNC Health could collaborate with NHRMC leadership to understand the advantages of a medical group relationship.
Ultimately, it would be NHRMC’s decision whether to transition its medical group to UNCPN or remain with Atrium.

5.5.2. **What enhancements to medical group operations could Respondent offer to NHRMC?**

Should NHRMC choose to pursue additional support for medical group operations through a more integrated partnership in the future, we are confident we could enhance your performance. We have a substantial support system for such functions, which would allow the NHRMC medical group full access to our shared service offerings. UNC Health would be open to discussing the details of what is included in these offerings and determine together with NHRMC leadership which elements of our practice management functions would be beneficial.

5.6. **Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on local medical staff governance at NHRMC. Address any material shifts or changes in policy and procedure regarding privileging, credentialing, quality and safety that the medical staff may anticipate as a result of such partnership.**

UNC Health recognizes the importance of local medical staff governance. This creates local “ownership” and meets regulatory requirements. In general, medical staff governance remains intact for our affiliated hospitals. There are a number of opportunities to streamline privileging, credentialing, and improve quality through highly-organized collaborative work across UNC Health.

Of high value to our affiliated hospitals is our centralized support for medical staffs when such support enhances patient care, physician satisfaction or efficiency. UNC Health has a well-established Central Credentialing Office (CCO). The CCO offers system-wide standardization and is useful to enhance our compliance with regulatory and payer requirements, streamline credentialing processes, support Epic@UNC and other system needs, and render support to the affiliated hospital Medical Staff Offices. Should NHRMC and UNC Health grow into a more integrated partnership in the future, these same services could be offered to you.

5.7. **Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on physician retention at NHRMC by discussing:**

5.7.1. **Medical education and training programs for physicians;**

Our Proposed Strategic Partnership would bolster NHRMC residency programs. Based on the needs of the NHRMC physician shortage areas along with the Community Needs Assessment, expansion of the residency program would have a positive impact on developing a pipeline for physicians as a recruitment pool. See question 5.2 for details about these plans.

Key factors in physician recruitment and retention are the residency training site and integration of the physician and family into the community. Of secondary importance is the medical student training site. Both students and resident trainees generally feel integrated into the medical community, and greater community, in which they train. For these reasons, attention to medical
student experience and residency training programs are important to developing a pipeline of providers for NHRMC. Another opportunity impacting physician engagement and retention is the opportunity to have faculty appointments for NHRMC providers who teach for the UNC SOM. Teaching practices have lower turnover due to the personal reward clinicians feel in passing knowledge on to future generations.

As described in question 5.7.3, the UNC Office of Faculty Affairs and Leadership Development provides ongoing programs for leadership development at all levels. UNC Health would pledge to use resources from the University to provide faculty development for local faculty on the following topics, in addition to others as requested locally: teaching techniques, research skills, leadership skills to support provider leadership development offerings, sub-specialty clinical training and skills work in new technologies (e.g., ultrasound). Additionally, weekly Grand Rounds in each clinical department could be shared using remote access to not only advance the opportunity for learning and obtaining continuing education credits but also for feeling connected to the larger community of physicians.

5.7.2. Programs to enhance physician satisfaction and to prevent physician burnout;

UNC Health can consult for and advise NHRMC on physician satisfaction and burnout prevention programs through our proposed partnership. UNC Health recognizes that in order for our care teams to take excellent care of our patients, we must first take care of our physicians and co-workers. We are proud to offer all co-workers a nationally-recognized, comprehensive wellness program, which measures workplace stress levels, provides mental health resources when needed, and has influenced care team redesign to improve workflows and better support our physicians.

We set goals around physician well-being to ensure we are making progress in this important area. The most senior executives at UNC Health also have annual goals related to physician and staff well-being. We design, implement, and iterate our systems of care using the Stanford Model of Professional Fulfillment. This model highlights three areas that organizations must emphasize in order to maximize well-being: Efficiency of Practice, Culture of Well-being, and Personal Resilience.

Efficiency of Practice:

- Documentation support through scribes and two CMA models to minimize documentation burden for clinicians.
- Workflow Assessment and Intervention teams work to enhance function and optimize workflow. UNC Health has a current grant with the American Medical Association to evaluate this program and its direct impact on physician burnout.
- Our Human Factors Engineering team assesses efficiency of processes and systems to find opportunities to improve systems of care and efficiency of practice.
Culture of Well-being:

- Our Critical Incident Stress Management Team provides trained group-focused and individual support to physicians experiencing critical incident related stress after a traumatic event. Trained volunteers meet with those directly involved in the event to talk about what occurred, their feelings about the event, and coping skills needed to recover from the related stress.
- The Peer Support Program connects physicians and other care providers with trained peer support volunteers. Individuals can receive 1:1 peer support after adverse patient events or events with serious unanticipated patient outcomes.
- Our Human Resources Well-being Programs are designed to promote team based community and healthy living activities.

Personal Resilience:

- Our Taking Care of Our Own Program recognizes that UNC Health physicians may need help from time to time to cope with the challenges of their professional journey. This program provides education, confidential support, advice, and if appropriate, professional referral for individual mental or physical help that meets the specific needs of the physician.
- Our Employee Assistance Program is a confidential service designed to help UNC Health co-workers resolve personal problems before they disrupt their personal or work life. The program is aimed at early detection and referral of personal problems including alcohol/drugs, family/marital issues, mental health concerns, and stress.
- Our Human Resources Well-being Programs reward individual employees for taking steps to improve personal, professional, and financial wellbeing.

Examples of outputs from these programs include:

- Hospitalist program improvement of workflows and team relationship building to enhance well-being.
- “Top to Bottom” program in ambulatory clinics, which is improving the time outside of work our primary care clinicians spend in the electronic health record (EHR).
- Integration of EHR data around clinician time in EPIC and efficiency, allowing UNC Health to target interventions, prioritizing those who need the most help first.
- Deployment of 5 Dynamics, an assessment tool for teambuilding focused on communication to improve team culture in ambulatory practices. During this implementation, practices saw a >40 point jump in physician engagement scores.
- Recognition of critical role for Certified Medical Assistants in ambulatory care. UNC Health developed a “CMA ladder” to improve development and retention of CMAs.
5.7.3. Programs to train physician executives and further physician leadership; and

UNC Physicians, our umbrella physician organization, is proud to have pathways for professional advancement tailored to both academic and community physicians. With a faculty of over 1,500 in Chapel Hill, UNC School of Medicine is a leading expert in faculty development. The Faculty Affairs and Leadership Development office provides ongoing programs for career and leadership development at all levels. Through our proposed partnership, UNC Health would provide faculty development for local faculty in southeastern NC on the following topics, in addition to others as requested:

- Teaching techniques and research skills
- Leadership skills to support provider leadership development offerings
- Sub-specialty clinical training
- Skills work in new technologies such as ultrasound
- Grand Rounds content using remote access
- Health disparities causes and solutions - we will continue to engage co-workers in the organization’s efforts to achieve health equity
- Wellness campaigns that support a sustainable, engaged professional workforce and address root causes of burnout

To facilitate the development of local physician leaders within our system, UNC Health has sponsored new hospital CMOs’ participation in a national leadership program. The first cohort of five CMOs will complete this 18-month program in March 2020. In addition, UNC Health has offered a larger group of physician leaders a 4-day course, focusing on core physician leadership skills. The UNC Health Operational Efficiency Department also offers improvement training for physicians focusing on Lean and Six Sigma improvement methodologies.

The following outlines the community physician leadership development programs:

<table>
<thead>
<tr>
<th>Population</th>
<th>Content Level</th>
<th>Goals</th>
<th>Delivery Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Physician Development</td>
<td>Practice Wide Content</td>
<td>Support in exceptional care delivery</td>
<td>Intranet/ LMS/ practice specific; Annual Meeting Content</td>
</tr>
<tr>
<td>Emerging Physician Leaders</td>
<td>Leadership Specific and project based</td>
<td>Build additional frontline leadership capacity &amp; identify talent for promotion</td>
<td>Annual Leadership Academy series for 20-30 clinicians</td>
</tr>
<tr>
<td>Emerging Operations Leaders</td>
<td></td>
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<tr>
<td>Formal Physician and Operational Leaders</td>
<td>Leadership Specific</td>
<td>Continued development and improved performance</td>
<td>Bi-annual use of usual meeting times devoted to leadership content</td>
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<td>----------------------------------------</td>
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<tr>
<td>Vanderbilt Promoting Professionalism content</td>
<td>Crucial Conversations, Narrative Leadership</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior Leaders</td>
<td>Leadership Specific</td>
<td>Lead leaders</td>
<td>Customized, individualized, specific, targeted development in content and coaching</td>
</tr>
</tbody>
</table>

5.7.4. Finally, discuss Respondent’s experience with physician retention at hospitals and health systems that have affiliated or partnered with the Respondent.

Physician retention across UNC Health is crucial for operations and growth. Based on our experience, UNC Health believes that working with local medical staff and leadership to retain the important local identity and institutional loyalty while slowly introducing best practices is the best approach to maintaining physician engagement during any period of transition.

UNC Health’s internal physician recruiting team is important for initial clinician recruitment and long-term retention in the community. Potential candidate screenings include a strong focus on fit for the position and location. The internal physician recruiting team plays an active role in candidate recruitment visits with two areas of focus:

1. Fit and integration of the physician candidate into the medical community starts with the initial recruitment visit.

2. Of equal or greater importance, is assuring the fit and integration of the candidate’s significant other and/or family into the greater community.

Although these steps may seem obvious, they require a very intentional process. UNC Health and our network hospitals dedicate continued attention over the first months and years of service to assure the physician and family have integrated into the community. We strive to pair the physician with a local peer and their significant other with a friend to help assimilate into the community. Likewise, standardized approaches to recruitment processes including signing bonuses, loan repayment, moving stipends, salary support, and other elements of an offer at all UNC Health entities is important in balancing the fit of candidates to the positions rather than a sole focus on reimbursement.

Over the past two years, internal physician recruiting sourced more than 6,000 candidates from national, regional, and local sources. More than 250 providers joined UNC Health in this period,
including in often difficult to recruit rural communities. As mentioned previously, UNC Health is proud of our 97% retention rate of physicians hired through our central Physician Recruitment Office.

Finally, physician retention requires continued attention to and intervention in workflow processes that are inefficient, rapidly changing, or leading to clinician burnout. See question 5.7.2 for more detail about enhancing physician satisfaction and preventing burnout. The attention to clinician well-being is critical and must be visible so that providers will recognize their individual importance in the larger system, impacting loyalty and retention.

6. Driving Quality of Care and Patient Safety Throughout Continuum

6.1. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC’s ability to improve and measure quality of care and patient safety.

UNC Health partners with affiliated hospitals and clinics across the state to improve and measure quality of care and patient safety. We have the capabilities to help NHRMC make progress in these areas, and propose addressing those steps as we grow into a more integrated partnership over time.

6.1.1. Are there programs offered by Respondent that could enhance NHRMC’s outcomes?

See question 6.1.

6.1.2. Describe how the Respondent’s quality and patient safety assurance efforts would be integrated with NHRMC’s existing quality and patient safety assurance infrastructure.

We do not anticipate any material change to NHRMC’s existing quality and patient safety assurance infrastructure through this proposed partnership. It seems very likely that we will learn from each other to improve quality and patient safety structures in both of our organizations. Over time, should NHRMC and UNC Health mutually agree that additional support and integration would be beneficial, the details of how to integrate these critical functions would be discussed and agreed upon.

6.1.3. Describe how the Respondent’s care management and coordination efforts would be integrated with NHRMC’s existing programs.

UNC Health offers care management and coordination support across each of our affiliated hospitals, however we believe NHRMC is well-equipped in the near term future to continue to oversee care management without additional integration into a larger system. As our partnership progresses and should a need arise for NHRMC to receive additional support in
care management and coordination, UNC Health is open to enhancing our partnership to address such needs directly.

6.1.4. Provide detail on how quality of care and patient safety was impacted at hospitals and health systems that have recently affiliated or partnered with the Respondent.

UNC Health offers customized support to our affiliates across the state in addition to central leadership and coordination of quality and patient safety. We are proud of the results we have generated in rural and urban areas in need of our support, and have been impressed with NHRMC’s success in several areas of quality and patient safety. We look forward to conversations if and when there is a mutually identified need for collaboration in these areas, and believe such enhancements would be beneficial to both systems in the future.

6.2. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on adherence to preventive care guidelines, evidenced-based protocols, quality of care and patient safety initiatives within the organization and in partnership with community providers.

In addition to 6.1.4, UNC Health is experienced in partnering with unaffiliated community providers to positively impact care coordination and patient safety initiatives. Should NHRMC need additional support in these areas, we would be open to discussing an enhanced partnership to address these needs.

6.3. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC’s ability to engage and empower nurses to be leaders in achieving excellence in quality and patient safety (e.g., Magnet Recognition Program).

UNC Health is committed to excellence in nursing, and is proud of our Magnet certification at UNC Hospitals and UNC REX Healthcare. We believe NHRMC is well-equipped in the near term future to continue to be a leader in nurse empowerment and nursing excellence in North Carolina without integration into a larger system. As our partnership progresses and should NHRMC require more support in these areas, UNC Health is open to enhancing our partnership to address these needs directly.

6.4. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on enhancing or developing performance excellence programs at NHRMC (e.g., Baldrige, Lean, Six Sigma, High-Reliability, Just Culture, etc.).

UNC Health holds several of these performance excellence programs as core tenants to our commitment to continuous quality improvement. We offer customized support in these areas to our affiliates across the state, depending on each partner’s level of need and local resources available. We are proud of the results we have generated, and are also impressed with NHRMC’s success in these areas. We would look forward to future conversations to determine
how further integration may benefit performance excellence programs at both NHRMC and UNC Health.

6.5. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC’s access to emerging technologies that have been successful in addressing patient safety and enhancing the provision of high-quality care (e.g., analytics to identify quality and safety gaps, artificial intelligence/machine learning to support medical decision-making, patient engagement platforms, etc.).

UNC Health has invested heavily in these areas, and partners with our affiliated hospitals and clinics across the state to trial and expand their access to emerging technologies. We would welcome the opportunity to grow into such a partnership with NHRMC over time.

6.5.1. Provide detail on how access to these emerging technologies was impacted at hospitals and health systems that have recently affiliated or partnered with the Respondent, including detail on the time and disruption associated with implementation.

UNC Health has implemented emerging technologies, including our full Information Technology platform, in all but three of our affiliate hospitals and clinics (with plans to bring up two of those programs in the coming months). We have been very pleased with the results of our IT deployment and the limited disruption to local operations. Should New Hanover be interested in additional support in these areas, a more in-depth conversation related to Epic@UNC and other platforms within UNC Health IT Shared Services would be required to identify the most appropriate process going forward with a goal of limited disruption during implementation.

7. Improving the Level and Scope of Care

7.1. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on growing NHRMC clinical service lines based upon Respondent’s experience at other affiliated or partnered hospitals.

UNC Health provides access to its extensive and experienced strategic planning and market intelligence resources to affiliated entities evaluating new or expanded service lines. This is done on a regular proactive basis as market intelligence data is provided in a dashboard format to the leadership teams at each affiliated entity to aid them in decision making, as well as by request from our affiliates. Once a decision is made to move forward with the implementation of a new or expanded service, UNC Health’s Physician Recruitment Office can provide assistance with recruitment services.

In our proposed partnership, we would work together with NHRMC to determine which clinical service lines would be best suited for additional growth in models ranging from on-site support (similar to what we have currently used for the Liver Clinic) or more substantial integration (similar to our partnership model in pediatrics). Moreover, through our enhanced education and
training programs, we anticipate more clinical resources being available particularly in sub-specialty areas in your community, including access to clinical trials.

7.1.1. How would Respondent approach service-line planning for NHRMC?

As mentioned in 7.1., we have a well-established process for service-line planning led by our strategic planning and market intelligence resource. We believe NHRMC has done an excellent job identifying priority areas for service line growth, and we would work together to evaluate how our proposal to enhance education, training opportunities, faculty-supported clinical services and access to research could best support these needs.

7.1.2. What commitments would Respondent make to enhancing NHRMC’s service lines?

UNC Health is committed to enhancing NHRMC’s service line planning, related market and environmental assessment, and tactical approaches. We have demonstrated this commitment with every affiliate in our system and have a proven track record of expanding and growing service line programs across the state. Furthermore, UNC Health’s physician leaders are committed to conducting outreach across the state in support of local service line growth efforts and this would be extended to NHRMC. UNC Health is also committed to supporting NHRMC with provider recruitment, consulting with faculty leaders on program development, assessing existing programs and making recommendations for optimization. We can also provide consultation with experts in facility design and planning, programmatic and business development, regulatory issues, education or site visits to other facilities, and connections to peer organizations.

7.1.3. Will the Respondent make a commitment not to downsize or discontinue any existing NHRMC service line unless otherwise decided by the NHRMC Board? If so, for how long?

Our proposed partnership is focused on increasing services available with the goal of keeping as much care in the local community as possible, and downsizing or discontinuing service lines would not be recommended unless the NHRMC leadership felt it would in some way make better use of resources or improve efficiencies of care. The current structure of our proposed partnership would not give UNC Health any authority over NHRMC’s decisions to downsize or discontinue any existing service lines. As with other decisions integral to your business and community, these decisions would remain under the authority of the NHMRC management and Board, informed by UNC Health’s content experts. Should our partnership progress to a more substantial equity partnership or management services agreement, we would make these types of sensitive decisions together with NHRMC leadership and the Board, understanding that local leaders have the best understanding of the needs of the community.
7.1.4. How would Respondent approach the distribution and location of services in the Service Area? Describe the Respondent’s philosophy around what services should be available throughout the Service Area vs. what services should be centralized.

NHRMC and UNC Health have a longstanding academic and clinical care relationship, demonstrating how we might centralize certain quaternary services. During the 12-month period ending in July of 2019, NHRMC transferred approximately 400 patients in need of quaternary care in areas such as complex subspecialty pediatrics and heart and vascular to UNC Hospitals in Chapel Hill. We would look to build upon these established relationships, improving NHRMC’s access to sub-specialists and quaternary-level care available at our Triangle-based hospitals only when it is needed.

7.2. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC’s ability to improve the timing in securing patient transfers for quaternary services not offered by NHRMC.

Requested transfers to UNC Health’s tertiary and quaternary centers are triaged and prioritized by the Patient Logistics Center. While a bed may not always be available, patients requiring the same services and level of care coming from UNC Health’s affiliated entities are given priority over those arriving from non-affiliated entities. If NHRMC becomes an affiliated entity of UNC Health this same prioritization would apply. Physician liaisons from UNC Health’s Network Development team meet regularly with leaders from our affiliated entities to ensure the referral and transfer process is working well and to develop solutions to any challenges.

Work is underway to combine the Patient Logistics Centers at UNC Hospitals and UNC REX Healthcare. This work will be completed by mid-2020. The aim is to not only achieve more efficient operations, but more importantly to facilitate coordinated and timely patient placement across the system and ensure that patients are placed in the most appropriate care environment with UNC Health providers. UNC Hospitals has historically had a strong working relationship related to patient transfers with NHRMC, which would only be strengthened through enhancing our partnership.

7.2.1. Provide detail on how referrals and transfers for quaternary services are coordinated with hospitals and health systems that have recently affiliated or partnered with the Respondent.

All referrals and transfers to UNC Hospitals are coordinated by the Patient Logistics Center. The Patient Logistics Center is staffed by clinical personnel who assist in directing referring providers to the most appropriate service to care for their patient. As mentioned in response to question 7.2, in 2020, UNC Hospitals and UNC REX Healthcare will combine their Patient Logistics Centers to offer a single point of entry for all hospital transfer requests. This will allow for greater efficiency and alignment of capacity to facilitate more timely transfers and appropriate patient assignment for referrals and transfers to affiliated and non-affiliated entities alike.
7.3. Describe what impact, if any, the Respondent’s Proposed Strategic Partnership would have on NHRMC EMS and critical care transport services.

UNC Health has a strong history of partnering with local EMS in addition to critical care transport services across our affiliated hospital partners. Each of these arrangements are somewhat unique and we do not have enough information to fully address the question. We would welcome the opportunity to grow into such a partnership with NHRMC over time if the need should arise.

7.4. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on developing innovative care solutions and technology that further supports service line growth at NHRMC.

UNC Health has invested heavily in innovation and technology to support our hospitals and clinics throughout the state, helping them to keep more care local. In addition, cutting edge technology and innovative care platforms are critical components to educating tomorrow’s health professionals. Our top-tier students in the School of Medicine and other health professions schools value the opportunity to learn using the newest technology, and it is imperative we are able to provide those resources to our students. We expect that through the proposed expansion of our Wilmington campus, NHRMC would also benefit from early adoption of such technology by virtue of our partnership in education and training programs.

7.4.1. Discuss any new medical technologies that could be rolled-out at NHRMC.

As mentioned in question 7.4, we are proud of our commitment to utilizing new medical technologies at our affiliated hospitals across the state, and support this effort additionally by imbedding new technologies into our medical education. Should NHRMC have the need for additional medical technologies, UNC Health would be open to exploring which options are most appropriate and could be implement locally. As our partnership progresses, it may be important for NHRMC to join the Epic@UNC/UNC Health Information Technology shared services to take full advantage of the breadth of medical technologies we support as a system.

7.4.2. Discuss any genomic medicine programs offered by the Respondent and how such programs could be introduced at NHRMC to advance NHRMC’s current efforts to expand this service area.

UNC Health has clinical expertise and clinical research programs in this area. We would be open to future conversations if and when there is a mutually identified specific need for NHRMC to receive additional support in genomic medicine programs.

7.4.3. Discuss what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC’s Innovation Center

The UNC Center for Health Innovation and NHRMC’s Innovation Center have many similarities, and we envision many ways these groups could collaborate to the benefit of both institutions.
UNC Health would encourage a conversation to determine how these two efforts could collaborate to produce more value for the communities we serve and further support our proposed partnership.

7.5. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC’s ability to further clinical research or participate in grant funding.

The UNC School of Medicine (SOM) supports a rich array of outstanding basic, clinical, and population research programs, centers, and resources across the translation spectrum. The infrastructure and opportunities for collaboration support highly innovative research that would positively impact the health of patients and serve the interests of UNC Health, NHRMC and the state of North Carolina. Please also see responses to questions in Section 5 to more completely address clinical research and grant funding.

The proposed partnership between NHRMC and UNC Health would enhance the ability of NHRMC to further clinical research and grant funding. NHRMC would be able to leverage the infrastructure and resources at UNC Chapel Hill (UNC-CH) to submit grants through UNC SOM as long as the principal investigator has an affiliation with UNC-CH (discussed further in 7.5.2).

The UNC SOM grants administration office and the UNC Office of Clinical Trials could assist with collaborative submissions. Together, the UNC-CH and UNC SOM grants administration offices oversee a portfolio of over $940M ($511M in the SOM) in external funding from the NIH and other federal sources as well as corporate and foundation entities. The UNC SOM has a more than 40% success rate for obtaining competitive funding proposals.

Twelve of the UNC SOM clinical departments are ranked in the top 30 for NIH funding and all of the UNC SOM basic science departments are ranked in the top 10 for NIH funding. US News and World Report also ranks UNC SOM #1 in Primary Care. The UNC SOM is home to 20 clinical departments, 8 basic science departments and more than 55 centers, institutes, and programs that support cutting-edge, interdisciplinary research. This includes a new Program in Precision Medicine in Health Care supported by UNC Health, which has the primary goal of translating genomic technologies and data analytics into clinical care for patients.

Research is further bolstered by access to more than 56 innovative biomedical research cores in the UNC SOM supporting animal, biochemistry, clinical, genomics and imaging research. These include a first in class Biomedical Research Imaging Center, Human Pluripotent Stem Cell Core, High Throughput Genomic Sequencing Facility, Biospecimen Processing and Tissue Procurement Facilities, and the Advanced Cellular Therapeutics facility supporting GMP production of immune cell-based therapies for cancer.

UNC SOM is also home to the NC Translational and Clinical Sciences (NC TraCS) Institute. The NC TraCS Institute is supported by a Clinical and Translational Science Award (CTSA) from the NIH and offers infrastructure and programs to accelerate clinical and translational research from health science to discovery to dissemination to patients and communities. A
A combination of research and training resources support the full range of clinical and translational research, from basic science to clinical application to policy change, in order to benefit patients across the state and nationally through the CTSA Consortium.

Should a partnership formalize between UNC Health and NHRMC, the significant research infrastructure at UNC SOM and UNC-CH would be available to NHRMC collaborators. Infrastructure in the Sponsored Programs Office (UNC SOM grants submissions), Clinical Research Support Office (UNC SOM administrative office supporting all human subject research studies), Office of Sponsored Research (campus wide grants submission and grants administration), Office of Clinical Trials (clinical trials administration), and Office of Human Research Ethics (human subjects research regulatory oversight) support the success of grants and contracts funding.

The recently launched UNC SOM Clinical Research Support Office (CRSO) is the school entity responsible for: standardizing and clearly defining clinical research processes; coordinating with UNC research administrative offices and UNC Health to improve efficiency; developing and disseminating guidelines, tools, templates and resources; developing, standardizing, and disseminating training and education; evaluating processes and outcomes and reporting to stakeholders; and bolstering and supporting research infrastructure (including the Clinical Trials Management System).

The Office of Clinical Trials is the central entity responsible for: conducting post Institutional Review Board (IRB) approval of clinical studies through the Clinical Trials Quality Assurance (CTQA) program; ensuring correct clinical trial billing of research subjects through the Research Billing Compliance Program; ensuring compliance with the ClinicalTrials.gov registration results reporting; ensuring compliance by reviewing the billing coverage analysis, fully executed agreement and IRB approved consent form for congruency and accuracy; coordinating the Scientific Review Committee and serving as a resource for protocol development for the research community; serving as the point of contact for questions or issues related to clinical trials; developing and implementing programs and initiatives to enhance the quality of clinical research and support regulatory compliance.

The CRSO, Office of Clinical Trials and the UNC NCTraCS Institute are valuable resources for our clinical trial investigators and staff for education, consultation and guidance on the conduct of clinical trials.

7.5.1. Discuss any clinical trials or other research programs that could be introduced at NHRMC.

Expanding access to clinical trials is a priority at UNC Health. We would collaborate on clinical trials and population health studies run jointly by UNC SOM and UNC Health investigators with NHRMC providers. As discussed further in 7.5.2, we have modeled several successful collaborations with Nash UNC Health Care and UNC REX Healthcare.
UNC SOM has many trials that we could open at NHRMC with interested NHRMC providers who would provide local management. Our clinical research spans the fields of cancer, diabetes, neurosciences, cardiovascular, immunology and infectious diseases, yielding many opportunities.

UNC SOM currently has 1,035 active human studies open with the UNC IRB. In FY19, UNC received $32.4M in external funding for 686 clinical trials. The Department of Medicine, Department of Pediatrics and the UNC Lineberger Comprehensive Cancer Center administer a large number of multi-site trials and high-profile NIH funded studies. A cornerstone of the UNC SOM strategic plan is to increase clinical research funding from federal and industry partners. The UNC SOM has launched a new Clinical Research Support Office (CRSO) that will provide additional support for SOM units to improve efficiencies, rigor, compliance and standardization of procedures for clinical research. The CRSO will work with campus offices and NC TraCS staff to identify areas for improvement and implement changes and education across all clinical trial units in the SOM. This will be facilitated by the implementation of OnCORE, a Clinical Trial Management Software that will provide clinical research data, safety, budget, effort, and task management. The UNC SOM is also currently in the planning phases for creating an Academic Research Organization (ARO) to increase our capacity for multiple site clinical research.

With the above in place, the UNC SOM expects to grow its clinical research programs across UNC Health, leveraging local expertise and patient populations to advance clinical care across North Carolina.

7.5.2. Provide detail on how clinical research and/or access to grants was impacted and the type, scope and depth of current research programs/grant participation at hospitals and health systems that have recently affiliated or partnered with the Respondent.

One of UNC Health’s goals is to lead in research by pushing the boundaries in our research and expanding access to clinical trials. Toward this goal UNC Health, UNC Chapel Hill (UNC-CH), and UNC School of Medicine (SOM) have recently purchased a clinical trials management system, OnCore. The UNC SOM’s strategic plan led to the development of the Clinical Research Support Office to increase efficiencies and best practices for clinical trials across all departments with the end goal of increasing clinical research and trials with industry partners. Through the proposed partnership NHRMC would be able to leverage the infrastructure within our departments and strong interdisciplinary centers including the Lineberger Comprehensive Cancer Center, the Institute for Global Health and Disease, and the Biomedical Research Imaging Center.

There are many examples of successful research collaborations between UNC Health and affiliated entities. Our Research Leadership Training Academy enhances leadership and organizational capacity of participants to plan, participate in, and/or conduct research to address local problems through partnership with UNC Health and communities across the state. Our first location in Rocky Mount (Nash UNC Health Care) trained sixteen participants.
UNC-CH and Nash UNC Health Care successfully obtained federal funding to support a range of projects in disciplines from cardiology to oncology to emergency medicine by leveraging the range of resources available to affiliates of UNC Health. Examples include:

- NIH R01 grant assessing the longitudinal heterogeneity of psychological symptoms after an acute myocardial infarction event (cardiology)
- NIH/NIDA EMBED clinical decision support tool via electronic medical record for suboxone treatment/referrals (emergency medicine)
- NCI Carolina Senior Registry to gather information about older patients with cancer that may help the study of cancer in the future (oncology)
- Agency for Health Care Research and Quality (AHRQ) grant for electronic questionnaire implementation in routine care (E-QUIRC)
- NIH grant Aromatase Inhibitor Arthralgia Management though Exercise (“AIME”) – an AIAA intervention in diverse community-based clinics
- CDC Special Interest Project to improve genetic counseling referrals for early onset colorectal cancer

UNC REX Healthcare leveraged the research infrastructure and support available through the Lineberger Comprehensive Cancer Center to initiate eleven clinical trials with collaborators at both entities. The partnership also yielded funding from the NCI and the Breast Cancer Research Foundation for two oncology grant collaborations.

A partnership between UNC Physicians Network and UNC Hospitals secured funding from the Patient-Centered Outcomes Research Institute (PCORI), the CDC, and the NIH for projects in disciplines as diverse as endocrinology, geriatrics, and primary care.

Finally, the Lineberger Comprehensive Cancer Center, Nash UNC Health Care, and UNC Lenoir Health Care obtained support from the NIH for a joint project to address cancer-related financial toxicity in rural oncology care settings.

8. Ensuring Long-Term Financial Security

8.1. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on ensuring future access to capital for growth at NHRMC. Also address how and whether Respondent’s Proposed Strategic Partnership will facilitate capitalization and growth of facilities and other sites of service across the Service Area, including beyond New Hanover County, understanding the current debt limitations for NHRMC that preclude this regional health care system from borrowing to build outside of the County.

As stated in our cover letter, we believe that NHRMC is strong and capable of meeting near-term challenges that face all health care organizations without integration into a larger health system through a sale, extensive management services agreement, or any other significant equity partnership that may require other terms or commitments that are less desirable right
now. We would hope, however, that if the time comes that NHRMC does require material integration into a larger system that UNC Health will have earned the chance to be your partner of choice based on the foundation we have built and will continue to develop through this proposed expanded academic and clinical partnership. As referenced in our cover letter we are also willing to explore the option of being a capital partner with NHRMC when and where it is deemed necessary. UNC Health has the resources to address NHRMC’s capital needs for growth in its service area.

8.1.1. Describe Respondent’s current capital capacity and its ability to access capital.

Details of capital capacity and ability to access capital can be discussed if relevant as our partnership progresses. As stated previously, we do not believe NHRMC needs to enter into such a partnership imminently. However, as referenced in our cover letter we are also willing to explore the option of being a capital partner with NHRMC where it is deemed necessary and if it is a requirement of a strategic partnership.

8.1.2. Describe the Respondent’s budgeting, capital budgeting and capital allocation processes.

Details of our budgeting, capital budgeting and capital allocation process can be discussed if relevant as our partnership progresses.

8.1.3. Discuss how capital is advanced to Respondent-affiliated or partnered hospitals and health systems.

The process for providing capital support to our affiliated hospitals varies depending on need and legal structure of the partnership. Details of this process can be discussed if relevant as our partnership progresses. As referenced in our cover letter we are willing to explore the option of being a capital partner with NHRMC where it is deemed necessary and if it is a requirement of a strategic partnership.

8.1.4. Describe Respondent’s obligated group. Would NHRMC be made a part of the obligated group of Respondent?

NHRMC would not be made part of the obligated group as part of our current proposal. If our partnership progresses into a legal and/or capital relationship that would require such changes, these would be clear and mutually agreed upon by UNC Health and NHRMC.

8.1.5. Discuss how Respondent’s existing financial policies and practices would impact NHRMC in the short-term (1-5 years post-affiliation or partnership) and the long-term.

Our financial policies and practices would have very limited impact, if any, on NHRMC in the proposed partnership. It is possible as our partnership matures and our clinical integration
becomes more substantial that some policies and practices would need to be shared across NHRMC and UNC Health. This would depend upon the legal and financial elements of the partnership model pursued.

8.1.6. Does the Respondent anticipate any issues with obtaining capital necessary to fulfill any financial obligations connected to the Proposed Strategic Partnership?

The General Assembly has been so convinced of the success and cost-effectiveness of our satellite medical campus model that they have invested more than $10M annually in UNC Health Sciences at MAHEC. A partnership between UNC Health and NHRMC would establish the foundation for a similar argument for the necessity of financial support of the educational partnership in Wilmington. Aside from requesting this parallel funding to support our efforts in southeastern NC, we do not need to obtain any capital to fulfill the services in our current academic, research and clinical proposal. Additional details related to our capital process and capabilities can be discussed if relevant as our partnership progresses and should NHRMC identify a more urgent need for such resources from a partner. As stated before, we do not believe NHRMC needs to enter into such a partnership imminently. However, we are willing to explore the option of being a capital partner with NHRMC where it is deemed necessary and if it is a requirement of a strategic partnership. UNC Health the capital resources to do so.

8.1.7. Will the Respondent guarantee or otherwise backstop all of the existing long-term debt of NHRMC?

Our current proposal would not have any impact on NHRMC’s long-term debt obligations. Additional details related to our capabilities and willingness to backstop long-term debt can be discussed if relevant as our partnership progresses and should NHRMC identify a more urgent need for such resources from a partner. As stated before, we do not believe NHRMC needs to enter into such a partnership imminently, however, we would appreciate the opportunity to discuss specific needs and timeline with NHRMC as our partnership progresses.

8.1.8. NHRMC’s capital budgets and other estimates of long-term strategic capital have been provided to Respondent in the Data Room. Will the Respondent commit to fulfilling these capital investments by ensuring NHRMC’s future access to capital?

We have reviewed NHRMC’s capital budgets and estimates of long-term strategic capital in the data room. As stated in our cover letter and elsewhere in our response, we remain of the opinion that NHRMC is strong and capable of meeting near-term challenges without integration into a larger health system through an extensive management services agreement, lease or sale. We are open to exploring the option of being a capital partner with NHRMC where it is deemed necessary to help NHRMC achieve its goals and if it is a requirement of a strategic partnership.
8.1.9. **Discuss the Respondent’s avenues of access to financial and capital structures, and how they might apply and help structure NHRMC capital needs.**

Details of our ability to access financial and capital structures can be discussed if relevant as our partnership progresses and should NHRMC identify a more urgent need for such resources from a partner. As stated before, we do not believe NHRMC needs to enter into such a partnership imminently, however, we would appreciate the opportunity to discuss specific needs and timeline with NHRMC as our partnership progresses or if it deemed a requirement for strategic partnership.

8.2. **Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on any existing cash and investments held by NHRMC at the time of affiliation or partnership.**

We anticipate no impact on NHRMC’s existing cash and investments as a result of our proposed partnership. It is possible as our partnership matures and our clinical integration becomes more substantial that this may change, however, this would depend upon the legal and financial elements of the partnership model pursued. Separately, UNC Health is planning a significant investment in growing clinical services, training programs and our Wilmington branch campus as part of this proposed partnership.

8.2.1. **Does the Respondent commit to allowing existing cash and investments to be utilized by NHRMC as directed by the NHRMC Board for capital and strategic investment in the Service Area and/or allowing the distribution of existing cash to New Hanover County given its ownership of the healthcare system operated by NHRMC?**

The current structure of our proposed partnership would not give UNC Health any authority over NHRMC’s decisions to utilize existing cash and investments. As with other decisions integral to your business and community, these decisions would remain under the authority of the NHMRC Board. Should our partnership progress to a more substantial equity partnership or management services agreement, we would make these types of sensitive decisions together with NHRMC leadership and the Board, understanding that local leaders have the best understanding of the needs of the community.

8.3. **Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on continuing and enhancing the NHRMC Foundation (the “Foundation”).**

We anticipate very limited impact, if any, on the NHRMC Foundation in the proposed partnership. As with many other areas of NHRMC’s operations, we have been impressed with your Foundation’s work. It is possible as our partnership matures and our clinical integration becomes more substantial that there would be opportunities for partnership between NHRMC and UNC Health in sharing best practices and other approaches for success, but we anticipate
your Foundation will continue to run independently and funds would remain allocated for the benefit of NHRMC.

8.3.1. Does the Respondent offer corporate development and other services that could enhance the Foundation’s operations and fund-raising efforts?

See question 8.3.

8.3.2. Describe the Respondent’s commitment for the Foundation to remain a sole supporting organization of NHRMC and for any existing Foundation funds, whether donor restricted or not, remain allocated for the benefit of NHRMC.

See question 8.3.

8.4. Will the Respondent make a commitment to maintain NHRMC’s material payer contracts and agreements without disruption?

Our current proposed partnership would not have a material impact on NHRMC’s payer contracts and agreements. Should we have the opportunity to grow into a more substantial equity or management services agreement, our support in these areas could be enhanced if so desired.

8.5. Describe what synergies, if any, NHRMC may have in accessing Respondent’s corporate services and programs based upon the Proposed Strategic Partnership.

Our current proposed partnership offers limited access to UNC Health corporate services and programs at its foundation, however, UNC Health is open to discussing inclusion of various corporate services or management services should NHRMC identify specific areas of need.

8.5.1. Discuss Respondent’s approach for integrating administrative and corporate or other shared service programs at NHRMC.

UNC Health offers customized support to our affiliates across the state, depending on each partner’s level of need and the legal structure of the agreement. We are proud of our ability to integrate administrative and corporate services across our many entities in both urban and rural areas. We have been impressed with NHRMC’s corporate functions, and we would look forward to future conversations if and when there is a mutually identified need for further integration in these areas.
8.5.2. How does Respondent allocate corporate overhead to its affiliated or partnered hospitals and health systems?

UNC Health offers customized support to our affiliates across the state, depending on each partner’s level of need and the legal structure of the agreement. As such, cost allocations for such services are dependent upon level of service and legal structure of the partnership. Should NHRMC identify a need for enhanced corporate services, UNC Health would partner with local leadership to identify the appropriate scope and structure for such an agreement, and share pricing for any services in a transparent way for leadership and the Board.

8.5.3. Discuss how Respondent proposes to introduce corporate overhead charges to NHRMC.

In our current proposed partnership, we do not anticipate introducing any corporate overhead charges to NHRMC. Should additional equity or management services be required, any impact on corporate overhead charges will be discussed at that time.

8.6. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC’s ability to access grant-funding.

NHRMC’s ability to access grant funding would considerably increase through a partnership with UNC Health on both federally- and industry-funded projects as long as there are NHRMC investigators and physicians who have an interest in collaborating on large, multi-site studies with UNC. Please see detailed responses to questions 7.5 and 7.5.2.

8.6.1. Describe what impact, if any, the Respondent’s Proposed Strategic Partnership would have on existing grant-funded programs and services and other funding sources tied to NHRMC’s tax-exempt status that rely on NHRMC remaining a non-profit organization.

There would be no effect on existing grant-funded programs. NHRMC is a separate legal entity and grants awarded to it would continue without any interference.

8.6.2. Should the Proposed Strategic Partnership alter NHRMC’s ability to access funding tied to NHRMC’s tax-exempt status, provide detail on alternate forms of funding that would be available to replace current funding.

A partnership with UNC Health would not impact NHRMC’s tax-exempt status, as NHRMC would remain a separate legal entity. As such, there would be no impact to NHRMC’s existing grant-funded programs.
9. Strategic Positioning

9.1. Describe what strategic priorities, if any, for southeastern North Carolina the Respondent maintains and how a strategic relationship with NHRMC fits into the Respondent’s overarching strategy based upon the Proposed Strategic Partnership.

Strategically partnering with like-minded organizations is key to achieving UNC Health’s mission of improving the health and well-being of North Carolinians. In recent years, we have added several highly-valued partners, strengthening our capabilities and broadening our ability to meet the needs of all North Carolinians, including those in southeastern North Carolina. To this end, a strategic partnership between NHRMC and UNC Health provides an exciting opportunity to transform health and well-being in southeastern North Carolina and complement current efforts with even higher level services.

Our existing collaborations with NHRMC present a strong foundation from which we can continue to grow together. This includes our current partnership at the Nunnelee Pediatric Specialty Clinics, which provides patients in the Wilmington and surrounding areas with access to UNC School of Medicine (SOM) faculty specialized in pediatric neurosurgery, hematology oncology, and other children’s services. Additionally, the UNC Liver Clinic provides all of southeastern North Carolina residents with access to UNC SOM providers with expertise in liver transplantation. These two examples demonstrate how UNC Health and NHRMC can both expand care locally and ensure access to enhanced clinical capabilities and highly sub-specialized care at a nationally renowned academic hospital. Our fundamental premise is that care should remain local whenever possible, and we look forward to exploring expanded collaborations with NHRMC to enhance heart failure, stroke, women’s and children’s, oncology, and other services across southeastern North Carolina.

Our research and teaching enterprise is a key component of our overarching strategy that enables us to lead the way in clinical innovation and extend this innovation to communities across North Carolina. NHRMC and the UNC SOM have a longstanding history of providing an exceptional learning environment for clinical rotations. Our Wilmington-based SOM campus trains students across a full range of clinical clerkships, including internal medicine, family medicine, surgery, obstetrics and gynecology, pediatrics, neurology, psychiatry, and other specialties. Students also have an opportunity to complete a Physicians Leadership Certificate Program through the Cameron School of Business at UNC-Wilmington. Through an expanded strategic partnership, we envision continued exploration of new medical education opportunities that benefit learners, the local community, and the state. Please see responses to 5.2 and the corresponding sub-questions for more details on our vision for this aspect of a Strategic Partnership between UNC Health and NHRMC.

We also believe there is a significant opportunity to bring to bear the strengths of our research mission to transform the practice of medicine for the nearly half-million individuals who live in southeastern North Carolina. Collectively, UNC-Chapel Hill conducts over $1 billion in sponsored research activity annually. The UNC SOM received $511 million in federal funding in...
fiscal year 2018, an incredible 22% increase over the past 5 years. Our goal is to bring this nationally renowned and life-changing research to new patient populations across the state. To accomplish this, we collaborate with hospitals, providers, and industry partners across the state to expand patient access to cutting-edge clinical trials and accelerate precision medicine: the application of basic, clinical, and translational research into clinical practice.

9.2. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on maintaining or revising NHRMC’s strategic plans and how consistent (or inconsistent) NHRMC’s strategic planning documents are with the Respondent’s overarching strategy.

NHRMC’s strategic focus areas, Value, Access, and Health Equity, are core elements of our own “ONE UNC Health” strategy and foundational to all that we do.

ONE UNC Health embraces our mission to improve the health and well-being of North Carolinians and others we serve. This unified system strategy seeks to create a more effective, responsive, and transformative integrated health system ensuring patients remain at the center of all that we do. Our goals, which complement NHRMC’s strategic direction, are to: (1) integrate and excel clinically, to maximize value, access, patient experience, and operational excellence; to (2) transform patient care and health through development of new value-focused capabilities and care redesign; and to (3) lead in research and education, to ensure continued excellence across our tripartite mission and enhanced academic integration across our clinical enterprise.

The proposed partnership would serve to enhance NHRMC’s strategic plans, particularly the “Access” focus area, as a more significant relationship with the UNC School of Medicine will enable the increased recruitment and training of providers with a desire to serve your community.

9.2.1. Will the Respondent make a commitment to maintain the existing Management Services Agreement and Clinical Affiliation with Pender Memorial Hospital?

UNC Health supports NHRMC’s existing and future endeavors related to and the Pender County community. As North Carolina’s health system, UNC Health has an extensive and successful history of partnering with community hospitals across eastern North Carolina through management services agreements. UNC Health’s longstanding approach is to align with the organization’s current goals, maintain local control and governance, and minimize disruption to the local community. We seek the highest degree of collaboration possible with a diverse group of stakeholders, maintaining continuous communication with local leadership, and simultaneously addressing established needs and strategic goals.
9.2.2. Discuss the Respondent’s position on continuing any other contractual relationships NHRMC has with hospitals in the Service Area.

We support NHRMC’s other contractual relationships with hospitals in the service area including Dosher Memorial Hospital.

9.3. Describe which of Respondent’s system-wide strategic initiatives, if any, would be introduced at NHRMC as part of Respondent’s Proposed Strategic Partnership.

Heavy investment in our Wilmington campus and the training of future medical providers in southeastern NC is a primary system-wide strategic initiative that would be introduced as part of our proposed partnership.

In addition, as referenced in our cover letter, UNC Health worked with our Board and our co-workers to redesign our organization via a new statewide strategy, operating model, and unified culture aimed at creating a more responsive, integrated health system. We call this new strategy “ONE UNC Health.” While we have much to offer through a proposed partnership, we also recognize that there is much to learn from an outstanding organization such as NHRMC. We welcome the opportunity to partner with NHRMC on this journey to improve the health and well-being of all North Carolinians.

10. Governance

10.1. Describe what impact, if any, Respondent’s Proposed Strategic Partnership would have on NHRMC current governing structures, including:

10.1.1. The authority of the NHRMC Board post-affiliation or partnership (and the authority of Respondent’s board vis-a-vis NHRMC);

Our current proposed partnership would not impact the authority of the NHRMC Board nor would it impact the authority of the UNC Health board vis-à-vis NHRMC.

10.1.2. The composition of the NHRMC Board post-affiliation or partnership including any new directors appointed by the Respondent on that board;

Our current proposed partnership would not impact the composition of the NHRMC Board.

10.1.3. The process by which NHRMC Board members will be nominated and appointed; and

Our current proposed partnership would not impact the process by with NHRMC Board members are nominated and appointed.
10.1.4. The extent and duration of any reserve powers held by legacy NHRMC Board and/or any decisions of the NHRMC Board that would be subject to further approval by the County.

Our current proposed partnership would not impact the extent and duration of any reserve powers held by legacy NHRMC Board and/or any decisions of the NHRMC Board that would be subject to further approval by the County.

10.2. If applicable to the Respondent’s Proposed Strategic Partnership, discuss any proposed representation from NHRMC (or residents of the Service Area) on Respondent’s parent or system board of directors or any of such board’s committees.

Our current proposed partnership would not include any changes in representation on UNC Health’s Board.

10.3. Will the Respondent make a commitment to allow local control and decision-making on hospital-based provider contracts, joint ventures and other physician contracts and agreements?

As mentioned previously, our proposed strategic partnership would not alter the local control and decision-making currently held by the NHRMC board and leadership. Given the extent of the clinical and education partnership proposed, it may be beneficial to both UNC Health and NHRMC to discuss the merits of various provider contracts, joint ventures and other physician contracts to ensure we are maximizing value both for NHRMC but also for the substantial local investment in education, training and research. Moreover, we would want to be sure any such contracts protect our shared goal of enhancing access to high-quality care close to home for southeastern NC residents.

11. Proposed Strategic Partnership Structure(s)

11.1. Transaction structure and type of legal arrangement.

UNC Health has extensive experience partnering with hospitals and health systems under an array of various structures and legal arrangements. In our system currently, we have managed, joint venture, and fully owned affiliates. Each of those partnerships was structured to best meet the needs of the affiliating entity. While we are open to discussing any and all options for a partnership structure, for the purposes of this RFP response we are proposing an academic partnership between the UNC Health and NHRMC, which will require a legal agreement.
11.2. The key business and legal terms of that transaction structure, including:

11.2.1. Financial terms, as applicable, including any (a) purchase price based upon fair market value of operating assets, (b) financial contributions to the County or an independent, local foundation whose general charter would be to benefit the local community, (c) lease payments, (d) funds to support ongoing or planned capital projects (i.e., capital commitments), (e) funds committed to strategic growth and expansion, (f) any other financial commitments.

Subject to discussion as mutually agreed by the parties, depending on the affiliation agreement or structure that NHRMC ultimately chooses and UNC Health’s ability to meet NHRMC’s needs. As stated in our cover letter, we are open to exploring the option of being a capital partner with NHRMC where it is deemed necessary and if it is a requirement of a strategic partnership. UNC Health has the capital resources to do so.

11.2.2. Discuss with specificity any assets or liabilities that would be excluded from the proposed transaction.

Subject to discussion as mutually agreed by the parties, depending on the affiliation agreement or structure that NHRMC ultimately chooses and UNC Health’s ability to meet NHRMC’s needs.

11.2.3. Note and estimate the value of any other specific financial commitment to the County, such as payment of property taxes, sales taxes or commitment to directly fund a community health need.

Subject to discussion as mutually agreed by the parties, depending on the affiliation agreement or structure that NHRMC ultimately chooses and UNC Health’s ability to meet NHRMC’s needs.

11.2.4. Post-closing commitments of the parties as outlined by the Respondent in its proposal.

Subject to discussion as mutually agreed by the parties, depending on the affiliation agreement or structure that NHRMC ultimately chooses and UNC Health’s ability to meet NHRMC’s needs.

12. Deal Process and Transaction Timing

12.1. If Respondent’s Proposed Strategic Partnership is ultimately selected by the PAG and the Boards, describe the scope and timing for the following:

12.1.1. Confirmatory due diligence review of NHRMC;

A maximum of 90 days is anticipated for due diligence if the decision is made to move forward with the proposed partnership.
12.1.2. Obtaining financing for any financial commitments related to the Proposed Strategic Partnership;

The General Assembly has been so convinced of the success and cost-effectiveness of our satellite medical campus model that they have invested more than $10M annually in UNC Health Sciences at MAHEC. A partnership between UNC Health and NHRMC would establish the foundation for a similar argument for the necessity of financial support of the educational partnership in Wilmington. Aside from requesting this parallel funding to support our efforts in southeastern NC, we do not need to obtain any capital to fulfill the services in our current academic, research and clinical proposal. Our proposed partnership is not dependent on obtaining financing for any commitments made.

12.1.3. Obtaining Respondent’s corporate approvals (e.g., approval by its board of directors); and

The UNC Health Care Board of Directors meets five times per year. The scheduled meeting dates for the remainder of 2020 are May 18, July 20, September 21, and November 16. Special meetings of the Board can be called as necessary to facilitate prompt approvals.

12.1.4. Other contingencies or approvals identified by Respondent.

No additional contingencies or approvals are required in the current proposed partnership.

12.2. In any definitive agreement entered into by Respondent to orchestrate the Proposed Strategic Partnership, discuss Respondent’s position to the following terms:

12.2.1. All NHRMC and County representation and warranties will expire at the closing, a representation and warranty policy will be obtained by Respondent and will be Respondent’s sole recourse under the agreement, and there will be no claw-back or recovery provisions for any financial consideration provided by Respondent to NHRMC and the County;

Not applicable in the Proposed Strategic Partnership.

12.2.2. Remedy for any material breach of Respondent’s post-closing commitments will include a repatriation of NHRMC and/or transfer of certain or all assets to NHRMC and/or the County, as applicable per model; and

Not applicable in the Proposed Strategic Partnership.
12.2.3. For any Respondent, including any for-profit corporation (or other taxable legal entity), the Respondent will agree to all of the following North Carolina statutory requirements:

12.2.3.1. The Respondent shall continue to provide the same or similar clinical hospital services to its patients in medical-surgery, obstetrics, pediatrics, outpatient and emergency treatment, including emergency services for the indigent, that the hospital facility provided prior to the lease, sale or conveyance. These services may be terminated only as prescribed by Certificate of Need Law prescribed in Article 9 of Chapter 131E of the General Statutes, or, if Certificate of Need Law is inapplicable, by review procedure designed to guarantee public participation pursuant to rules adopted by the Secretary of the Department of Health and Human Services.

UNC Health agrees with this statement.

12.2.3.2. The Respondent shall ensure that indigent care is available to the population of the Service Area served by NHRMC at levels related to need, as previously demonstrated and determined mutually by NHRMC and the Respondent.

UNC Health agrees with this statement.

12.2.3.3. The Respondent shall not enact financial admission policies, or engage in debt collection practices, that have the effect of denying essential medical services or treatment solely because of a patient's immediate inability to pay for the services or treatment.

UNC Health agrees with this statement.

12.2.3.4. The Respondent shall ensure that admission to and services of the facility are available to beneficiaries of governmental reimbursement programs (Medicaid/Medicare) without discrimination or preference because they are beneficiaries of those programs.

UNC Health agrees with this statement.

12.2.3.5. The Respondent shall prepare an annual report that shows compliance with the requirements of the lease, sale or conveyance related to the Proposed Strategic Partnership.

Not applicable in the Proposed Strategic Partnership.
12.2.3.6. The Respondent shall further agree that if it fails to substantially comply with these conditions, or if it fails to operate the facility on 17th Street in Wilmington, North Carolina as a hospital open to the general public and free of discrimination based on race, creed, color, sex or national origin unless relieved of this responsibility by operation of law, or if the Respondent dissolves without a successor corporation to carry out the terms and conditions of the lease, agreement of sale or agreement of conveyance, all ownership or other rights in the hospital facility, including the building, land and equipment associated with the hospital, shall revert to the County; provided that any building, land or equipment associated with the hospital facility that the Respondent has constructed or acquired since the sale may revert only upon payment to the Respondent of a sum equal to the cost less depreciation of the building, land or equipment.

Not applicable in the Proposed Strategic Partnership.
Exhibit C

C.1. Address of Headquarters

The University of North Carolina Health Care System
101 Manning Drive
Chapel Hill, NC 27514

C.2. Designated contact for communications from NHRMC

Chris Ellington
President, UNC Health Network Hospitals
1025 Think Place (4A16)
Morrisville, NC 27560
Phone: 984-974-3530
Email: Christopher.Ellington@unchealth.unc.edu

C.3a. System Profile - Background and history

UNC Health is a not-for-profit integrated health care system owned by the state of North Carolina and based in Chapel Hill. Originally established November 1, 1998, by N.C.G.S. 116-37, UNC Health currently comprises UNC Hospitals and its provider network, the clinical programs of the UNC School of Medicine, a clinically integrated network, and eleven affiliate hospitals across the state.

Our History:

1947: The N.C. General Assembly appropriates funds for the construction of North Carolina Memorial Hospital.

1952: N.C. Memorial Hospital opens and welcomes the first students of the newly expanded program at the School of Medicine.

1989: N.C. Memorial Hospital is renamed UNC Hospitals, a unifying organization created by an act of the North Carolina General Assembly to govern its constituent hospitals.

1995: N.C. Neurosciences Hospital opens in Chapel Hill.

1998: UNC Health Care system is established by the North Carolina General Assembly with the passage of NCGA 116-37. Its stated purpose is to provide patient care, educate physicians and other health care professionals, advance research and promote the health and well-being of the citizens of North Carolina.

2002: N.C. Women’s Hospital and N.C Children’s Hospital move to a new free-standing facility in order to provide high-quality care in a family-friendly environment.

2008: Chatham Hospital joins UNC Health Care and moves into a new 25-bed facility in Siler City.

2011: Pardee Memorial Hospital in Hendersonville enters into a 10-year management agreement with UNC Health Care.

2013: High Point Regional Health system joins UNC Health Care. As part of the agreement, UNC Health Care agrees to commit $150 million for capital improvements and $50 million for the establishment of a community health fund.

2013: Pardee Hospital and UNC Health Care strengthen their partnership by extending the terms of their management agreement from 10 years to 25 years.

2013: Caldwell Memorial Hospital joins UNC Health Care.

2014: Johnston Health Care and UNC Health Care finalize a joint venture partnership. The partnership includes capital investment intended in part to expand the Johnston Medical Center in Clayton.

2014: Nash Health Care joins UNC Health Care under a management services agreement.

2015: Wayne Memorial Hospital joins UNC Health Care.

2016: Lenoir Memorial Hospital joins UNC Health Care.

2018: Morehead Memorial Hospital joins UNC Health Care. UNC Health Care and Wake Forest Baptist Medical Center agree to transfer High Point Regional Health to Wake Forest Baptist Medical Center in September 2018.

2019: Onslow Memorial Hospital joins UNC Health Care.

**C.3b. System Profile – Mission, vision and values**

**Our mission** is to improve the health and wellbeing of North Carolinians and others whom we serve. We accomplish this by providing leadership and excellence in the interrelated areas of patient care, education, and research.

**Our vision** is to be the nation's leading public academic health care system.
Our core system values are:

One Great Team
- We are better together than we are apart.
- Our effective collaboration is key to providing quality care.
- We are building an inclusive and equitable culture that encourages and supports the diverse voices of our patients and each other.

Carolina Care
- We care holistically about patients and each other.
- It is our privilege to serve the people of North Carolina.
- We demonstrate kindness and compassion in every interaction.

Leading the Way
- We make a difference by improving lives every day and training the next generation of health care leaders.
- Our research is changing the world.
- We provide innovative care.

It Starts With Me
- Each of us takes ownership of, and accountability for, doing the right thing.
- We empower and trust each other to step up.
- We support each other and hold each other accountable in our work.

C.3c. System Profile – Description of Facilities

UNC Hospitals (Founding Entity)

Academic Medical Center in Chapel Hill with outpatient services across North Carolina.
UNC Hospitals Hillsborough

Community hospital in Hillsborough opened July 2015 and Medical Office Building opened in 2013.

WakeBrook

Behavioral health facility located in Raleigh, NC operated by UNC Health Care as of 2013. 12 crisis and assessment beds; 16 residential facility-based crisis beds; 16-bed residential alcohol and drug detoxification unit; 28 inpatient psychiatric beds; primary care clinic.
UNC REX Healthcare (Fully Owned)

Community hospital in Raleigh, outpatient services across Wake County

Chatham Hospital (Fully Owned)

Critical access hospital in Siler City serving Chatham County

Caldwell UNC Health Care (Fully Owned)

Community hospital in Lenoir serving Caldwell County
UNC Rockingham Health Care (Fully Owned)
Community hospital in Eden serving Rockingham County

Pardee UNC Health Care (Management Services Agreement)
Community hospital in Hendersonville serving Henderson County

Nash UNC Health Care (Management Services Agreement)
Community hospital system in Rocky Mount serving Nash County
Wayne UNC Health Care (Management Services Agreement)

Community Hospital in Goldsboro serving Wayne County

UNC Lenoir Health Care (Management Services Agreement)

Community Hospital in Kinston serving Lenoir County

Onslow Memorial Hospital (Management Services Agreement)

Community hospital in Jacksonville serving Onslow County
Johnston Health Smithfield (Joint Venture; Management Services Agreement)

Community hospital in Smithfield serving Johnston County

Johnston Health Clayton (Joint Venture; Management Services Agreement)

Community hospital in Clayton opened in January 2015; expansion of existing outpatient facility.

Holly Springs Hospital (Fully Owned; Under Construction)

Community hospital in Holly Springs to open in December 2020
UNC Health and its affiliated partners employ approximately 33,000 individuals, including approximately 2,600 physicians, 920 medical residents, 650 Advanced Practice Providers, and 4,750 nurses.
### C.3f. System Profile – Number of Providers on hospital medical staffs

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<th>Affiliated Entity</th>
<th>Active Medical Staff</th>
<th>Allied Health Professional Staff</th>
<th>Total Staff</th>
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<tr>
<td>Caldwell UNC Health Care</td>
<td>195</td>
<td>90</td>
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<td>Chatham Hospital</td>
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<td>Johnston Health</td>
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<td>UNC Lenoir Health Care</td>
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<td>Pardee UNC Health Care</td>
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<td>Onslow Memorial Hospital</td>
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<td>Nash UNC Health Care</td>
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<td>Wayne UNC Health Care</td>
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<td><strong>2,113</strong></td>
<td><strong>7,375</strong>*</td>
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*The total number includes 1,092 providers who have privileges at multiple affiliates. There are 6,283 unique providers.*
## C.3g. System Profile – Number of Employed Providers

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<th>Active Medical Staff</th>
<th>Allied Health Professional Staff</th>
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<td>Chatham Hospital</td>
<td>96</td>
<td>22</td>
<td>118</td>
</tr>
<tr>
<td>Johnston Health</td>
<td>225</td>
<td>85</td>
<td>310</td>
</tr>
<tr>
<td>UNC Lenoir Health Care</td>
<td>22</td>
<td>14</td>
<td>36</td>
</tr>
<tr>
<td>Pardee UNC Health Care</td>
<td>72</td>
<td>35</td>
<td>107</td>
</tr>
<tr>
<td>Onslow Memorial Hospital</td>
<td>9</td>
<td>18</td>
<td>27</td>
</tr>
<tr>
<td>Nash UNC Health Care</td>
<td>33</td>
<td>13</td>
<td>46</td>
</tr>
<tr>
<td>UNC REX Healthcare</td>
<td>334</td>
<td>239</td>
<td>573</td>
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<tr>
<td>UNC Rockingham Health Care</td>
<td>24</td>
<td>6</td>
<td>30</td>
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<tr>
<td>UNC Hospitals</td>
<td>1,299</td>
<td>612</td>
<td>1,911</td>
</tr>
<tr>
<td>UNC Physicians Network</td>
<td>343</td>
<td>171</td>
<td>514</td>
</tr>
<tr>
<td>Wayne UNC Health Care</td>
<td>39</td>
<td>31</td>
<td>70</td>
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<tr>
<td><strong>UNC Health Totals</strong></td>
<td><strong>2,571</strong></td>
<td><strong>1,313</strong></td>
<td><strong>3,884</strong>*</td>
</tr>
</tbody>
</table>

*The total number includes 691 providers who have privileges at multiple affiliates. There are 3,166 unique employed providers.

## C.3h. System Profile – Description of any health plans

UNC Health does not operate any health plans at this time. UNC Health, like NHRMC, is one of the twelve North Carolina health system owners of North Carolina Provider Owned Plans, Inc. This health plan is not yet operational in North Carolina.
C.3i. System Profile – Description of ACOs/CINs

UNC Health’s strategic transition to value-based care began in 2015 with the creation of the UNC Health Alliance (UNCHA), UNC’s clinically integrated network, and UNC Senior Alliance, a Next Generation Medicare ACO. Currently more than 220,000 patients are aligned to both organizations through attribution to value-based arrangements. Our goals are to improve health outcomes, improve the lives of North Carolinians, and make health care more affordable and accessible.

Both organizations are physician-led with governing Boards independent from UNC Health. Board representation is designed to mirror network composition and provides perspective from independent physicians, employed physicians, and UNC Health executives. The UNCHA network has 6,000 providers across 48 counties in North Carolina, one-third of whom are community-based, independent primary and specialty care practices working in partnership with UNC Health employed and affiliated providers and hospitals.

UNC Health Alliance was created to catalyze UNC Health and North Carolina’s transition to value. To that end, we developed a portfolio of value-based contracts, or alternative payment models (APMs) across payer segments including CMS ACO and episodic-based payment models, commercial ACO and alternative payment models, Medicare Advantage APMs, and direct to employer contracting. UNCHA is the largest network within Blue Premier, BCBSNC’s statewide alternative payment model. We are ready to engage with Medicaid Managed Care or Medicaid ACO models when North Carolina transitions the Medicaid program. This experience has created an organization with the expertise to develop new APMs with willing payers, particularly specialty-specific APMs, and an ability to execute these contracts across a network. Shared savings distribution is favorable to providers and is designed to incent clinical quality improvement and care redesign, reducing total cost of care.

Our population health care model supports providers and practices to meet unique barriers across populations. Our infrastructure supports data exchange, interface among various Electronic Medical Records, and clinical quality improvement including expert quality improvement teams. Using advanced analytics based on claims, clinical, demographic, and other available utilization data, teams identify high-impact populations for intervention, clinical care gap closure, preventive visit scheduling, and risk coding education and refresh. Data drives our priorities and our analytics team supports operational and clinical services through automated reports, real-time dashboards, risk stratification algorithms, and other resources to realize operational efficiencies.

Additional components of this successful model include engaging community programs, such as community resource coordination, non-emergency medical transportation programs, in-home paramedic services and health workers, remote monitoring, virtual care, and food banks, all of which are designed to improve health outcomes and reduce unnecessary acute care utilization. For example, our focus on regional, coordinated care redesign has resulted in transformed care for COPD in rural areas with improved patient outcomes and subsequent 40% reduced unnecessary Emergency Department visits.
### C.4a. Legal organization chart

See Appendix B

### C.4b. Management organization chart

See Appendix C

### C.4c. Biographies of the leadership of your organization and those that would be directly involved in and responsible for the ongoing relationship with NHRMC

See Appendix D

### C.4d. Role of physicians in governance and strategic leadership

UNC Health places great emphasis on utilizing a collaborative approach to care delivery. Within our governance structure, the physician perspective is highlighted at the most senior level. As is shown in the graphic below depicting our governance structure, clinical care delivery is overseen by the Care Delivery Council (CDC), chaired by Dr. Wesley Burks, UNC Health CEO and Dean of UNC School of Medicine. Reporting directly into the CDC are two key physician led bodies, the System Physician Executive Committee and Quality Improvement Oversight Committee.

<table>
<thead>
<tr>
<th>Board of Directors</th>
<th>Executive Council (EC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Council (AC)</td>
<td>Crysty Page</td>
</tr>
<tr>
<td>Small team of SOM leaders who set strategy, allocate capital/resources, and oversee the SOM operations</td>
<td></td>
</tr>
<tr>
<td>Department Chairs Leadership Committees</td>
<td>Matt Mauro, MD and Blossom Damania, PhD</td>
</tr>
<tr>
<td>Executive Leadership Committees</td>
<td>Julie Byerley, MD</td>
</tr>
<tr>
<td>Research Leadership Committee</td>
<td>Blossom Damania, PhD</td>
</tr>
<tr>
<td>Diversity and FALD Leadership Committee</td>
<td>Julie Byerley, MD</td>
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<tr>
<td>Dean's Advisory Committee</td>
<td>Crysty Page, MD</td>
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<tr>
<td>Faculty Physicians Executive Committee</td>
<td>Matt Mauro, MD</td>
</tr>
<tr>
<td>System Physician Executive Committee (SPEC)</td>
<td>Matt Ewend, MD</td>
</tr>
<tr>
<td>Triangle Operating Committee (TOC)</td>
<td>Steve Burris</td>
</tr>
<tr>
<td>State Operating Committee (SOC)</td>
<td>Chris Ellington</td>
</tr>
<tr>
<td>Quality Improvement Oversight Committee (QIOC)</td>
<td>Matt Ewend, MD</td>
</tr>
<tr>
<td>Business Development Committee (BDC)</td>
<td>Amy Higgins</td>
</tr>
</tbody>
</table>

- **Oversees Clinical & Basic science departments to support the tripartite mission**
- **Oversees education across UHS, GME, pipeline programs, IPE, Allied Health, and CME**
- **Oversees strategic operational efforts for diversity, equity, and inclusion, faculty affairs and leadership development**
- **Oversees research efforts across the SOM and HCS spectrum including basic science, translational, and clinical research**
- **Fosters the development of Clinical, Basic, Science, Centers, and health system goals, advising the Dean on SOM administrative matters**
- **Oversees faculty physicians clinical and financial operations to support the tripartite mission**
- **Oversees physician practice across FP, PJ, REX Physicians, community physicians, and UNCMA**
- **Oversees quality improvement efforts across UHC Health**
- **Facilitates strategic business development (e.g., M&A, partnerships)**
The System Physician Executive Committee (SPEC), chaired by System Chief Clinical Officer, Matt Ewend, MD, was established as a means to provide system-level leadership to our many physician groups. In our structure, the key physician leadership committee sits at the same level on the organization chart as the key operating committees (triangle, state). SPEC membership includes senior physician leaders from UNC Health physician entities. Importantly, community physicians are heavily represented in SPEC, which is in contrast to many Academic Health Care Systems, where the dominant or sometimes only voice is that of the traditional academic physician. SPEC is accountable directly to Dr. Burks through the Cared Delivery Council (CDC). CDC, as the major decision-making body for clinical issues, is populated equally with physicians and operational leaders. SPEC is tasked with key functions for the physician enterprise, including:

- Participating in System-level processes for strategy, resource allocation, and other decision-making
- Approving goals, metrics, and priorities for the Physician Enterprise across UNC Health, in line with system strategy
- Recommending physician budgets for entities and Specialty Programs (service lines) for approval by the Board
- Ensuring environment and culture fosters world-class research and education

The Quality Improvement Oversight Committee (QIOC) is charged by Dr. Burks to lead all UNC Health efforts for improving clinical quality. Over the past few years, QIOC has lead the way by establishing and setting quality goals as a cohesive system, developing common quality infrastructure, moving to a common quality platform, and by launching and scaling multiple successful clinical initiatives. It is led by physicians, and its membership includes physician quality leaders.

In addition to SPEC and QIOC, physician leadership is represented in the membership of the Triangle Operating Committee, State Operating Committee, and Business Development Committee.

C.5a. Information on charges, services, debt collection protocols and indigent care at facilities owned or operated by the Respondent

Our proposed partnership would not impact these functions at NHRMC. Should NHRMC require additional support or collaboration in these areas, UNC Health is open to enhancing our partnership to include such services and/or guidance.

C.5b. Three-year history of community benefit programs

Through continued investment in community benefits, UNC Health exhibits its commitment to providing essential health care services to the people of North Carolina, regardless of their ability to pay. UNC Health proudly offers one of the most generous charity care programs in the state. This applies to insured, for liability after insurance, and uninsured patients. In the last three years, UNC Health owned entities of UNC Hospitals, Caldwell UNC Health Care, Chatham
Hospital, UNC REX Healthcare and UNC Rockingham Health Care have provided more than $364M in community benefit. This includes bad debt, or unpaid obligations from a patient who could pay for health care services rendered.

<table>
<thead>
<tr>
<th></th>
<th>FY17</th>
<th></th>
<th>FY18</th>
<th></th>
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<td>$6.1M</td>
<td>Not Available</td>
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1Source: North Carolina Hospital Community Benefits Report (www.ncha.org/community-benefits-listings)

NOTE: Significant change in Charity Care amount for UNC REX Healthcare from FY17 to FY18 is reflective of an accounting change.
C.5c. Approach to and processes for engaging with community partners, including governmental and non-governmental social service organizations

UNC Health is extensively engaged with a wide range of statewide and community organizations, as well as other non-profit partners. Our mission necessitates this level of engagement across the state and our External Affairs function provides coordination to help us execute. External Affairs at UNC Health consists of:

- Governmental Affairs (Local, State and Federal)
- Communications, Marketing, Consumerism and Corporate and Community Affairs
- UNC Health Foundation (Philanthropy)
- Board Relations
- Strategic Initiatives - Public Policy Affairs
- University Relations

External Affairs is a key member of our leadership structure, as everything we do focuses on serving the people of the entire state of North Carolina and its communities making us unique among other large health systems.

Legislative and local community public policy agendas are developed on an annual basis by our Government Affairs team and executed with various governmental bodies. Our Corporate and Community Affairs team works with community-based organizations to assist them with their local needs, including working to assist counties with their Community Needs Assessments. We also regularly work with other non-profit health related entities across the state to assist them in providing the best care possible to their patients. The coordinated approach employed by our External Affairs function allows us to establish collaborative and value-added partnerships with communities across the state.

C.6a.i. – C.6a.iv.4 Operational trends / key performance indicators

We are proud of the support we have provided to our affiliated hospitals across the state, including supporting substantial improvements in operational and financial performance. Should NHRMC or any of its affiliated entities require such support, UNC Health is open to enhancing our partnership to address such needs directly.

C.6b. Patient satisfaction survey indicators - breakout by each major facility and highlight history for recently affiliated hospitals/health systems

UNC Health offers customized support to our affiliates across the state to support patient satisfaction, using our Carolina Care® patient experience methodology as a foundation. We are impressed with NHRMC’s success in patient satisfaction, and we would look forward to future conversations if and when there is a mutually identified need for additional support in this area.
C.6c.i – C.6c.iii.4 Quality improvement processes, approach and scores

UNC Health offers customized support to our affiliates across the state to support quality improvement, in addition to system-level coordination and leadership related to shared goals and priorities. We are impressed with NHRMC’s success and commitment to continuous quality improvement, and we would look forward to future conversations if and when there is a mutually identified need for additional support in this area.

C.6d.i. Past hospital and health system acquisitions: Executive summary of all acquisitions in the past 10 years discussing transaction type and the operational and financial commitments made by Respondent to the acquired organization

See response to C.6e.i.

C.6d.ii. Past hospital and health system acquisitions: Operating trends / key performance indicator history for each acquired organization

See responses to C.6.a, b, and c.

C.6e.i. Corporate affiliations, joint ventures and other relationships: Executive summary of all corporate affiliations, joint ventures and other relationships with hospitals or health systems in the past 10 years discussing strategic partnership type and the operational and financial commitments made by Respondent to the partner organization

UNC Health has expanded significantly over the last ten years. In 2011, we established network expansion as a strategic priority for our system. Since 2011, UNC Health has affiliated with hospitals across the state of North Carolina. Hospital affiliations include:

**Pardee UNC Health Care** joined UNC Health via a long-term management services agreement in 2011. UNC Health provides management services to Pardee UNC Health Care as well as key corporate shared services including ISD, Supply Chain, Legal, Compliance, Pharmacy Administration, Financial Planning, Accounting, Decision Support, Market Intelligence, Marketing & Communications, Physician Credentialing, Hospital Quality & Innovation, Care Management & Physician Advisor, Reimbursement, and Revenue Cycle.

**Caldwell UNC Health Care** joined UNC Health via a member substitution in 2013. It is a private, not-for-profit community hospital located in Lenoir, North Carolina. UNC Health owns and operates Caldwell UNC Health Care as a fully integrated affiliate and made a capital commitment to consummate the transaction.

**Johnston Health**, based in Smithfield, joined UNC Health via a long-term management services agreement in 2013. In 2014, UNC Health purchased a minority equity interest in Johnston Health and is currently exploring an expanded affiliation. UNC Health provides management services to Johnston Health as well as key corporate shared services including
ISD, Supply Chain, Legal, Compliance, Pharmacy Administration, Financial Planning, Accounting, Decision Support, Market Intelligence, Marketing & Communications, Physician Credentialing, Hospital Quality & Innovation, Care Management & Physician Advisor, Reimbursement, Hospitalists, Physician Recruitment, and Revenue Cycle.

**Nash UNC Health Care**, based in Rocky Mount, joined UNC Health in 2014. UNC Health provides management services to Nash UNC Health Care as well as key corporate shared services including ISD, Supply Chain, Legal, Compliance, Pharmacy Administration, Financial Planning, Accounting, Decision Support, Market Intelligence, Marketing & Communications, Physician Credentialing, Hospital Quality & Innovation, Care Management & Physician Advisor, Reimbursement, Physician Recruitment, and Revenue Cycle.

**Wayne UNC Health Care**, based in Goldsboro, joined UNC Health via a long-term management services agreement in 2016. UNC Health provides management services to Wayne UNC Health Care as well as key corporate shared services including ISD, Supply Chain, Legal, Compliance, Pharmacy Administration, Financial Planning, Accounting, Decision Support, Market Intelligence, Marketing & Communications, Physician Credentialing, Hospital Quality & Innovation, Care Management & Physician Advisor, Reimbursement, Hospitalists, Physician Recruitment, and Revenue Cycle.

**UNC Lenoir Health Care**, based in Kinston, joined UNC Health via a long-term management services agreement in 2016. UNC Health provides management services to Nash UNC Health Care as well as key corporate shared services including Supply Chain, Legal, Compliance, Pharmacy Administration, Market Intelligence, Marketing & Communications, Physician Credentialing, Hospital Quality & Innovation, Care Management & Physician Advisor, Physician Recruitment, and Reimbursement.

**UNC Rockingham Health Care**, based in Eden, joined UNC Health in 2018. Previously operating as Morehead Memorial Hospital (Morehead), UNC Health purchased the assets of Morehead out of bankruptcy and re-launched the operations. UNC Health owns and operates UNC Rockingham Health Care as a fully integrated affiliate and purchased these assets to consummate the transaction.

**Onslow Memorial Hospital**, based in Jacksonville, joined UNC Health via a short-term management services agreement in 2019. UNC Health provides management services to Onslow Memorial Hospital along with select corporate shared services including Supply Chain, Legal, Compliance, Market Intelligence, Hospital Quality & Innovation, Reimbursement, Physician Recruitment, and Executive Recruitment.

**C.6e.ii. Corporate affiliations, joint ventures and other relationships: Operating trends / key performance indicator history for each corporate affiliation, joint venture or other relationship with a hospital or health system**

See responses to **C.6.a, b, and c**.
C.6e.iii. Corporate affiliations, joint ventures and other relationships: Summary of any corporate affiliations, joint ventures and other relationships excluding those with hospitals or health systems provided in e.i.

UNC Health has developed many affiliations over the years in furtherance of our strategy. Examples include exploration of large-scale health system mergers and affiliations, pursuit of smaller hospital acquisitions and affiliations, physician group acquisitions and joint ventures, partnerships with early-stage health care companies, employers, other providers (e.g., ancillary providers), etc.

Representative, publicly available examples of affiliations include:

Raleigh Orthopaedic Clinic – UNC Health has a long-standing partnership with Raleigh Orthopaedic Clinic (ROC), a very reputable, large, independent orthopaedic group in Raleigh. UNC Health has a joint venture with ROC in a large ambulatory surgery center in Raleigh.

Wake Radiology – UNC Health developed a joint venture with Wake Radiology to combine imaging assets in the Research Triangle Park (Triangle) to create a new offering to provide greater access to affordable imaging services to residents in the Triangle.

Alliance HealthCare Services – UNC Health partnered with Alliance HealthCare Services (Alliance) in 2018 to develop a joint venture to offer statewide mobile imaging services (PETCT).

Alignment Healthcare – UNC Health partners with Alignment Healthcare to offer a narrow network Medicare Advantage plan in Wake County. Alignment Healthcare is a growth-stage company based in California with significant experience working with Medicare Advantage and other government-sponsored payers.

Cisco Systems – UNC Health has a partnership with Cisco Systems (Cisco), a large, multinational technology company with a significant presence in the Triangle, to operate an onsite health center on Cisco’s Triangle campus.

Blue Cross Blue Shield of North Carolina – UNC Health partners with Blue Cross Blue Shield of North Carolina (Blue Cross NC) on the Blue Premier and Blue Value programs. Blue Premier is a value-based program launched by Blue Cross NC in 2019 to transform health care in North Carolina. UNC Health partnered with Blue Cross of NC in 2019 to be the sole health system partner in the Triangle for Blue Value, Blue Cross of NC’s only product offered on the ACA market.

C.6f. Hospital Accreditation agency and most recent report for each major facility

UNC Hospitals, UNC REX Healthcare, Chatham Hospital, Caldwell UNC Health Care, Wayne UNC Health Care, UNC Lenoir Health Care, Nash UNC Health Care, Johnston Health, and Onslow Memorial Hospital are all accredited by The Joint Commission. Current status for all Joint Commission accredited facilities is available on Quality Check at
https://www.qualitycheck.org/. Pardee UNC Health Care and UNC Rockingham Health Care are accredited by DNV (Det Norske Veritas Healthcare).

In addition, UNC Hospitals programs are accredited and recognized by a variety of national organizations, including:

- Bariatric Center of Excellence by the American College of Surgeons
- Bone Marrow Transplant by the Foundation for the Accreditation of Cellular Therapy
- Center for Transplant Care designated as a CMS approved Transplant Center, and UNOS member in good standing
- Ventricular Assist Device Program Certification by Joint Commission
- Advanced Comprehensive Stroke Center Certification by Joint Commission
- Chest Pain Center Accreditation by the Society for Cardiovascular Care
- Level 4 Epilepsy Center by the National Association of Epilepsy Centers (highest designation)
- American College of Surgeons Commission on Cancer Accreditation: NCI-designated Comprehensive Cancer Center by the American College of Surgeons Commission on Cancer Accreditation
- Adult and Pediatric Level I Trauma by the American College of Surgeons
- Verified Burn Center by American College of Surgeons
- Commission on Accreditation of Medical Transport Systems
- Inpatient medical rehabilitation program by the Commission on Accreditation of Rehabilitation Facilities
- Residency Training Program by the Accreditation Council for Graduate Medical Education
- Occupational Therapy Residency Programs by the American Occupational Therapy Association
- Physical Therapy orthopedic, neurology, and pediatric residency programs by the American Physical Therapy
- Specialty Pharmacy by the Utilization Review Accreditation Commission
- Pharmacy residency program by the American Society of Health System Pharmacy
- Clinical, anatomic pathology and special purpose laboratories accredited by the College of American Pathologists
- Transfusion Medicine, Blood Donation Center, Apheresis and Hematopoietic Progenitor Cell (“HPC”) Laboratory are accredited by the American Association of Blood Banks
- Apheresis Unit is a National Marrow Donor Program collection approved site and along with the HPC Laboratory are accredited by the Foundation for Accreditation of Cellular Therapy
- Histocompatibility Laboratory is accredited by the American Society of Histocompatibility and Immunogenetics
- Bone Marrow and Stem Cell Transplant program is accredited by the Foundation for the Accreditation of Cellular Therapy
- Peripheral Vascular Laboratory and Cardiac Ultrasound are accredited by the Intersocietal Accreditation Commission (with certifications in extracranial
cerebrovascular, peripheral arterial, peripheral venous, visceral vascular and transthoracic echocardiography)

- Radiology programs specializing in nuclear medicine, magnetic resonance imaging, positron emission tomography, mammography, ultrasound, and computer axial tomography procedures accredited by the American College of Radiology

C.7a.i. Major information technology platforms and capabilities: EMR(s)

The centerpiece of the UNCHC IT solution offering is the Epic@UNC EHR system, providing an integrated patient record across our entities and care settings with our vision of “1”: 1 patient ID, 1 problem list, 1 med list and 1 patient bill.

With a full integration of IT services and solutions, our Epic@UNC EHR system streamlines workflows, enhances reporting capabilities, centralizes patient portal information, increases patient engagement opportunities, and, most importantly, improves patient safety and outcomes.

Since 2014, UNC Health ISD has implemented Epic@UNC and associated applications, infrastructure, and support structures across our system sites of care, including 10 hospitals, over 800 ambulatory practices, 23 urgent cares, 7 Hospice & Home Health facilities, and 3 ambulatory surgical centers. Over 5,000 providers use Epic@UNC to care for over 5 million patients, spanning more than 2 million patient visits annually.

Safety and outcomes are improved by making clinical information (e.g., labs, allergies, medications, patient history, etc.) across the care continuum more easily accessible and readily available to surgeons and providers so they can make the best decision(s) for their patients.

In 2018 UNC Health won the prestigious HIMSS Davies Award, which recognizes the “outstanding achievement of Organizations that use health IT to improve outcomes and create value”.

UNC Health’s information services division has partnered with subject matter experts and leaders from all of our entities to co-create a feature rich electronic record solution tailored to meet clinical and business goals. We are currently live with 40+ Epic modules, plus another 3 in active implementation, and 5 being planned for the roadmap.

UNC Health received 7 of 10 Stars in Epic’s “Gold Star” Program, which measures an organization’s ability to adopt and optimize their environment. Only 14% of all health care systems on Epic have achieved this level of performance.
In addition to the gold stars, we also achieved *Magna Cum Laude* status in Epic’s “Honor Roll” Program. This award highlights our ISD team’s successful deployment of advanced capabilities across the following domains:

- Patient Engagement
- Health Information Exchange
- Infrastructure
- Ease of use for physicians
- Leveraging the latest Epic capabilities

**C.7a.ii. Major information technology platforms and capabilities: Integrated business applications covering core processes (financial management, operations data, supply chain)**

UNC Health’s IT shared services include many industry-leading business and revenue cycle applications such as Infor Supply Chain and Financials, Stratajazz for cost accounting and financial planning, Enterprise Document Management system Hyland On-Base, Optum HIM/Coding application suite, Epic Grand Central, Cadence and Resolute HB/PB for admitting, scheduling, billing and receivable management functions, as well as others.

Many of UNC Health’s business and revenue cycle systems integrate with Epic@UNC and with each other to ensure consistency of data across all platforms and to create a seamless experience for end users. For example, Stratajazz is integrated with Epic@UNC, Infor and Hyland On-base.

UNC Health IT provides easy, self-service access to integrated, authoritative and decision ready information with powerful, highly available BI and Analytics platforms to drive innovative patient-centered care, institutional decision making, and accelerate clinical research.

UNC Health’s state-of-the-art Enterprise Data Warehouse powered by SAP’s HANA platform houses over 5 million unique patient records with rich data sets spanning all care continuums. In addition to clinical data, a variety of quality, financial and operational data stores enrich end users’ reporting experience through powerful data virtualization that drives easy query access and rapid turn-around time. In 2018 we received the NC TECH award for innovative use of data & analytics to improve care and operations. UNC Health was the only health care delivery organization nominated.

Multiple national, distinguished organizations have recognized our ISD IT solutions, advanced reporting and analytics, and our ability to leverage these capabilities to enable improved care, increased revenue capture, and efficient operations.

UNC Health ISD has over 700 highly knowledgeable, experienced, and dedicated professionals supporting the full-spectrum IT services and solutions. Tracy Parham, Chief Information Officer
and leader of the nationally recognized Information Services Division of UNC Health, is a two-
time (2016 & 2018) recipient of the Triangle Business Journal's CIO Award. Tracy has over 36
years with UNC Health and an extensive background in nursing, IT and Clinical Informatics.

The below statistics serve to summarize and highlight our exceptional IT capabilities and
tremendous expertise:

- Diverse IT team with not just information technology professionals, but medicine,
nursing, respiratory therapy, radiology, quality and safety, rev/cycle expertise. There are
  many nurses and physician “builders” on our IT team actively engaged in all of our
  projects and supporting our end users.
- We participate in over a dozen Health Information Exchanges (HIEs) across the state
  and the country including NC Health Connex, U.S. Department of Veterans affairs and
  Department of Defense, and the Social Security Administration. Since 2014, we have
  exchanged millions of patient records across many hospitals and clinics.
- There are over 6 million unique patient records in our data warehouse, supporting a
  broad range of clinical research, performance improvement, and enterprise analytics
  initiatives.
- We have an impressive amount of patients with active MyChart patient portal accounts.
  This number continues to grow daily demonstrating our strong track record in patient
  engagement.
- UNC Health employs a multi-layered structure with sophisticated applications covering
  every level of the information security defense. Threat intelligence is used to
  continuously enhance and enrich our defenses against malicious threats.

C.7b. Please provide a summary of your organization’s shared corporate service
resources that NHRMC could access:

C.7b.i. Purchasing/supply chain

Our current proposed partnership does not address purchasing/supply chain integration, but we
would welcome a conversation to enhance our partnership to include such services should
NHRMC identify the need.

C.7b.iii. Strategic planning

Our current proposed partnership does not address strategic planning support beyond that
provided to our School of Medicine service lines and clinicians, but we would welcome a
conversation to enhance our partnership to include such services should NHRMC identify the
need.
C.7b.iv. Business development

Our current proposed partnership does not address business development support, but we would welcome a conversation to enhance our partnership to include such services should NHRMC identify the need.

C.7b.v. Accounting

Our current proposed partnership does not address accounting support, but we would welcome a conversation to enhance our partnership to include such services should NHRMC identify the need.

C.7b.vi. Treasury functions (e.g., cash and investment management, debt issuance and management, accounting)

Our current proposed partnership does not impact or depend upon Treasury functions, but should our partnership grow to require such support or integration, we would gladly share any required information.

C.7b.vii. Employee benefit administration and programs

Our current proposed partnership does not include employee benefit administration and programs, but we would welcome a conversation to enhance our partnership to include such services should NHRMC identify the need.

C.7b.viii. Risk management programs (purchase of liability and other insurance)

Our current proposed partnership does not include broad risk management programs, but we would welcome a conversation to enhance our partnership to include such services should NHRMC identify the need.

C.7b.ix. Legal and compliance services

Our current proposed partnership does not include legal and compliance services, but we would welcome a conversation to enhance our partnership to include such services should NHRMC identify the need.

C.7b.x. Any additional shared or corporate services that may benefit NHRMC

Our current proposed partnership does not include additional shared or corporate services not specifically stated. UNC Health offers a customized approach for our affiliated entities, depending on their level of need and the legal structure of our agreement. Should NHRMC need additional shared or corporate services as our partnership grows, we will share the scope, capabilities and pricing for any services under consideration.
C.8a. Financial performance including audited financial statements for the last three (3) completed fiscal years and year-to-date financial statements

See Appendix E

C.8b. Recent Appendix A from bond offering

See Appendix F

C.8c. Most recent rating agency reports

See Appendix G
Appendix A

Economic Impact Analysis
Current Impact of NHRMC
As one of the largest employers in southeastern North Carolina, New Hanover Regional Medical Center (NHRMC) reaches far beyond New Hanover County. For Fiscal Year 2019, NHRMC reported $1.3 billion in operation revenue, paid almost $500 million in wages and benefits, and directly employed 7,000 people.

Using the Regional Input-Output Modeling System (RIMS II) produced by the Bureau of Economic Analysis (BEA) for the Wilmington, North Carolina Metropolitan Statistical Area (MSA), it is possible to estimate the total impact NHRMC has on the region. Economic modeling depicts how an initial change in economic activity results in other rounds of spending. The impacts are typically expressed in terms of output (sales), earnings, and employment (full- and part-time jobs) on all industries in the regional economy. The following table highlights the current annual economic impact NHRMC has on the community.

Table 1: Economic Contribution of NHRMC to the Wilmington MSA Economy

<table>
<thead>
<tr>
<th></th>
<th>Output</th>
<th>Earnings</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct</td>
<td>$1,164,389,000</td>
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<td>7,000</td>
</tr>
<tr>
<td>Indirect + Induced</td>
<td>$768,846,057</td>
<td>$141,386,222</td>
<td>5,971</td>
</tr>
<tr>
<td>Total</td>
<td>$1,933,235,057</td>
<td>$637,037,222</td>
<td>12,971</td>
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</table>

Source: TXP, Inc., RIMS II

Expanded UNC School of Medicine Wilmington Branch Campus
The UNC School of Medicine and NHRMC have a longstanding relationship that began in the 1970s. Currently, the UNC School of Medicine Wilmington Branch Campus hosts 12 students per class. The current annual budget for the program is about $1 million. To support these students, there are over 130 teaching faculty and staff.

An expanded UNC School of Medicine Wilmington Branch Campus would have a noticeable positive economic impact on the community. The UNC School of Medicine Asheville Campus provides a good example for how the Wilmington program might grow and offer new programs over the next decade. Additional financial support from the state legislature and the UNC system would be required for the Wilmington Campus to achieve its full potential.

The UNC School of Medicine Asheville Campus receives about $10 million a year in funding from the state. It is reasonable to assume that over the next few years the Wilmington Campus might receive a similar level of funding. If this occurs, the total annual direct impact of the expanded UNC School of Medicine Wilmington Branch Campus could exceed $11 million.
By 2025, the estimated total economic output impact related to an expanded medical school is approximately $18 million. The increase in regional spending should support 157 total jobs with earnings in excess of $6 million.

Potential Impact of NHRMC (based on an expanded relationship modeled on Asheville)

Table 2: Estimated Economic Impact of the expanded UNC School of Medicine Wilmington Branch Campus by 2025

<table>
<thead>
<tr>
<th></th>
<th>Output</th>
<th>Earnings</th>
<th>Employment*</th>
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<tr>
<td>Direct</td>
<td>$11,000,000</td>
<td>$4,350,510</td>
<td>108</td>
</tr>
<tr>
<td>Indirect + Induced</td>
<td>$6,787,000</td>
<td>$1,702,790</td>
<td>49</td>
</tr>
<tr>
<td>Total</td>
<td>$17,787,000</td>
<td>$6,053,300</td>
<td>157</td>
</tr>
</tbody>
</table>

Source: TXP, Inc., RIMS II
* Full- and part-time faculty and staff

Communities with a strong presence in academic medicine enjoy additional benefits beyond the quantifiable economic impacts described above. Studies have found, for example, that educating medical students locally is a significant factor in keeping doctors within the region. An expanded medical campus in New Hanover County would build a community of future health professionals dedicated to southeastern North Carolina (ex. medicine, pharmacy, dentistry, nursing, and allied health). Increasing the pipeline of talented health professionals between the UNC Schools and training programs in Chapel Hill and Wilmington also strengthens the area’s Pharma/CRO economic development industry cluster.

Stemming the Leakage

The UNC Health estimates that over $120 million a year in hospital-related patient spending leaves New Hanover, Brunswick, and Pender Counties to seek care at hospital facilities other than NHRMC. Assuming that a partnership with UNC Health can expand the array of local clinical offerings, enable or compel more patients to receive care locally, and/or more patients may be referred to UNC Health facilities, NHRMC and UNC Health together could potentially recapture up to 10% of this patient activity, leading to $10 million per year in new activity at NHRMC. This translates to a 1% increase in annual NHRMC revenue. The following table depicts the economic impact of this recaptured patient spending.

Potential Impact of Associated with Recapturing a Modest Share of Medical Tourism Outside Wilmington

Table 3: Recapture of $12M in Patient Spending at NHRMC

<table>
<thead>
<tr>
<th></th>
<th>Output</th>
<th>Earnings</th>
<th>Employment*</th>
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</thead>
<tbody>
<tr>
<td>Direct</td>
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</tr>
<tr>
<td>Indirect + Induced</td>
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</tr>
<tr>
<td>Total</td>
<td>$16,603,000</td>
<td>$5,471,000</td>
<td>111</td>
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</tbody>
</table>

Source: TXP, Inc., RIMS II
* Full- and part-time faculty and staff
**Economic Development in the Life Sciences**

According to *2018 Evidence and Opportunity: Impact of Life Sciences in North Carolina*, prepared by TEConomy Partners, the state has established one of the nation’s leading life science industry clusters, characterized by steady, long-term growth and establishment of a diverse blend of industry, technology, and market strengths and niches. The industry employs more than 75,000 North Carolinians in jobs that pay, on average, over $91,000 annually, or nearly twice the wages of the average state private sector job. Among the five major life science industry subsectors, North Carolina has a significant employment concentration in three of the five—drugs and pharmaceuticals; research, testing, and medical labs.

New Hanover County and the City of Wilmington have already identified the Pharma/CRO sector as a target industry for economic development. Wilmington-based PPD anchors a regional cluster of more than 30 CROs and 60+ support companies that create a concentration in research and testing sector. Major firms in the region including Alcami, Quality Chemical Laboratories, Quintiles, INC Research, Modoc Research, Chiltern, Novella Clinical, and Wilmington Pharmaceuticals.

The Pharma/CRO sector most closely matches NAICS 5417 Scientific Research and Development Services. In 2018, the average wage for this NAICS sector in the Wilmington MSA was nearly $100,000 versus the average county wage of $44,000. Since 2000, total employment in this sector has increased by 32% and annual wages have risen by $10,000.
While Wilmington has already developed a strong concentration in Pharma/CRO, other opportunities in the life sciences could be enhanced by the presence of academic medicine. Most of the other ingredients are in place for growth, including an expanding population, a skilled work force, laboratory space, medical infrastructure, private investment capacity, and a desirable quality of life. UNC School of Medicine supports a rich array of outstanding basic, clinical, and population research programs, centers, and resources across the translation spectrum. The infrastructure and opportunities for collaboration support highly innovative research that would positively impact the health of patients and serve the interests of UNC Health, NHRMC and the state of North Carolina. Should an expanded educational, research, and clinical partnership formalize between UNC Health and NHRMC, the significant research infrastructure at UNC School of Medicine and UNC Chapel Hill would become available to NHRMC collaborators.

For example, one of UNC Health’s goals is to lead in research by pushing the boundaries of existing research and expanding access to clinical trials. Through partnership NHRMC would be able to leverage the infrastructure within UNC’s departments and strong interdisciplinary centers including the Lineberger Comprehensive Cancer Center, the Institute for Global Health and Disease, and the Biomedical Research Imaging Center.
Conclusion
An expanded UNC School of Medicine Wilmington Branch Campus could have significant economic implications for southeastern North Carolina. Based on TXP’s calculations, the combination of a larger academic partnership plus stemming the leakage of patient dollars could generate $34 million in total regional output, $12 million in earnings, and support 269 new jobs in the region.

Traditional economic development has focused on attracting and retaining new production facilities and company headquarters. While this remains important, many communities recognize the role that other factors play in the modern economy – namely, a highly capable workforce, innovation and entrepreneurship, clusters in knowledge industries, and superior quality of life. Healthcare is a key part of the equation, as the range and scope of the local healthcare industry is an important consideration in choosing where to live and work. At the same time, Wilmington already has established a strong foothold in the life sciences around research and testing; to the extent that academic medicine can leverage existing assets to broaden regional economic development in this area, the benefits are multiplied. Taken together, it seems clear that academic medicine offers tangible and prospective economic benefits to New Hanover County.
Appendix B

UNC Health Legal Organization Chart
Appendix C

UNC Health Management Organization Chart
Dr. A. Wesley Burks is CEO of UNC Health Care, Dean of the UNC School of Medicine, and Vice Chancellor for Medical Affairs at the University of North Carolina at Chapel Hill.

Dr. Burks oversees UNC Health Care’s statewide network of affiliate hospitals and health systems, and leads the UNC School of Medicine, a national leader in medical research and education.

Dr. Burks has spent more than 30 years taking care of patients, conducting research, helping to educate trainees, and leading institutions. He joined UNC-Chapel Hill in 2011 as physician-in-chief of the North Carolina Children’s Hospital and was named chair of the department of pediatrics in 2012, as well as the Curnen Distinguished Professor of Pediatrics. In 2015, he was named executive dean of the UNC School of Medicine, during which he oversaw the school’s focus on rural health initiatives, diversity in admissions, and primary care education, which is now ranked first in the country.

Dr. Burks also leads a research team focusing on identifying the molecular signatures of allergens in specific foods, such as peanuts, to gain a better understanding of why some people have adverse reactions. Dr. Burks and colleagues lead several immunotherapy clinical studies, and his initial work on peanut allergies is cited as the basis for potential peanut allergy treatment regimens currently under FDA review.

Dr. Burks is a past chair and member of the NIH Hypersensitivity, Autoimmune, and Immune-mediated Diseases study section and is Past President of the American Academy of Allergy, Asthma and Immunology.

He graduated from the University of Central Arkansas and then the University of Arkansas for Medical Sciences. He completed a pediatric residency at the Arkansas Children’s Hospital and a fellowship in allergy and immunology at Duke University Medical Center. He served on the faculty at the University of Arkansas for Medical Sciences and Arkansas Children’s Hospital and Duke University Medical Center before joining the UNC School of Medicine.
Cristen P. Page, MD, MPH
Executive Dean
UNC School of Medicine

Dr. Cristen P. Page, MD, MPH, is the Executive Dean and William B. Aycock Distinguished Professor at the UNC School of Medicine. She is also a member of the UNC Health Care Board of Directors and a Professor in the Department of Family Medicine, where she previously served as Chair.

A native of Wilmington, Dr. Page came to UNC as a Morehead Scholar before going on to complete her Medical Doctorate, Master of Public Health, family medicine residency, chief resident position, and faculty development fellowship in Chapel Hill.

A faculty member of the School of Medicine since 2006, she served as Program Director for the top-ranked UNC Family Medicine Residency Program prior to her role as chair. She is founder and CEO of Mission3, an educational non-profit organization that improves resident education and faculty development through technology-based approaches.

Working closely with a team of Vice Deans, Dr. Page oversees education, faculty affairs and leadership development, the clinical faculty practice, and diversity at the School of Medicine.

Dr. Page has dedicated her career to expanding care to North Carolina’s underserved and rural populations.

She is Chair of the Advisory Board for the UNC Sheps Center for Health Policy Research and leads the Health Resources and Services Agency (HRSA) Rural Residency Planning and Development Program Technical Assistance Center, a national cooperative of the HRSA Bureau of Health Workforce and the HRSA Office of Rural Health Policy.

As Residency Director, Dr. Page led the creation and launch of the original Family Medicine Rural and Underserved and created the FIRST Scholars program, a UNC School of Medicine initiative designed to accelerate and enhance the training of family physicians to benefit NC’s underserved populations. During her tenure as Chair of Family Medicine, she grew the department’s research division, initiated the development of a second underserved track paired with the launch of a maternity care center in a critical access hospital, established a second Family Medicine center in Durham County, and founded the first system-wide service line for primary care.

Dr. Page is committed to diversity initiatives, with a strong focus on recruitment of under-represented minority faculty and residents. She believes that department learners, physicians and staff should reflect the diversity of the community and advocates for inclusion with respect to all identities and experiences.
Dr. Julie Byerley, MD, MPH, is the Vice Dean for Academic Affairs and Chief Education Officer for the UNC School of Medicine. She oversees the UNC School of Medicine’s educational enterprise and the Office of Faculty Affairs and Leadership Development.

Byerley has served as a senior leader within the School of Medicine since 2013 when she was named Vice Dean for Education. Under Dr. Byerley’s leadership, the UNC School of Medicine has made significant enhancements to medical education, including the introduction of the TEC curriculum, the creation of the Office of Rural Initiatives, the establishment of the Wilmington branch campus, and planning a new medical education building. She is co-primary investigator of the $1.8M AMA Reimagining Residency grant to UNC.

Dr. Byerley is a professor of pediatrics and practices as a general pediatrician in the inpatient setting at UNC Hospitals with a clinical focus on diagnostic dilemmas and the care of patients with complex conditions.

She earned a BA in Physics at Rhodes College. Before attending medical school at Duke University, she worked as a high school science teacher. Dr. Byerley completed her Pediatrics Residency and Chief Residency at UNC and earned a Master’s of Public Health at UNC in Maternal and Child Health. She has been a member of the UNC faculty since 2002. Her early career was focused in Pediatric Education, first as a clerkship director and then as Pediatrics Residency Program Director.
Chris Ellington, MBA,
President. Network Hospitals
UNC Health Care

Chris Ellington is the President of UNC Health Care Network Hospitals. Along with his statewide focus, Ellington served concurrently as the executive vice president and chief financial officer for UNC Hospitals from 2008 to 2020. He has been listed in Becker’s Hospital Review as a “CFO to know” annually since 2013. He has also been named a top CFO by the Triangle Business Journal and Business Leader magazines.

Before joining UNC in 2008, Ellington was vice president of fiscal services and chief financial officer for Appalachian Regional Healthcare in Lexington, Kentucky. He has also worked in similar executive positions for multi-entity healthcare systems in Kentucky, West Virginia, Alabama and Texas.

Ellington serves on the boards of the North Carolina Healthcare Association (NCHA), Carolina Dialysis, UNC’s Health Alliance and Senior Health Alliance, as well as UNC Health Care affiliated entities in Johnston, Caldwell and Rockingham. He is an advanced member of the Healthcare Financial Management Association. Ellington earned his B.S. in accounting from Clemson University and his MBA from the University of Phoenix.
Dr. Matthew Ewend is the Chief Clinical Officer of UNC Health Care & President of UNC Physicians. In this role, he has responsibility for the overall physician enterprise of the UNC Health Care System, a statewide network of 13 hospitals and more than 3,200 employed physicians across 700 affiliated practices.

In addition, he oversees the quality program, the value program, and the partnership of UNC Physicians with the system’s hospitals.

Dr. Ewend is also a practicing neurosurgeon at the UNC School of Medicine, specializing in neuro-oncology. He served as Chair of the Care Department of Neurosurgery from 2010 until 2019, stepping down to assume the CCO role with UNC Health. He joined the faculty in 1997 after completing medical school, neurosurgery residency, and a brain tumor fellowship at The Johns Hopkins School of Medicine.

Dr. Ewend’s clinical interests center on endoscopic and minimally invasive treatment of brain tumors, especially pituitary tumors, skull base tumors, and metastases. His research interest centers on developing genetically-modified, cell-based therapies for treatment of brain tumors.
Andy Willis is the Chief External Affairs Officer (CEAO) for UNC Health Care and the UNC School of Medicine. He previously served as the Chief of Staff for UNC Health Care and the UNC School of Medicine.

As CEAO, Willis is utilizing his years of public sector experience to assist Dr. Wesley Burks and other senior administrators in the design and implementation of collaborative projects with numerous public and private partners around the state.

He has management responsibility over the following units: Communications, Marketing/Branding, Consumer Insights and Community Affairs; Federal, State, and Local Governmental Affairs; University Relations; UNC Health Care System Board of Directors; UNC Health Foundation – philanthropy; and the strategic/policy initiatives of the Dean and CEO. He is one of the ten senior leaders serving on the CEO/Dean’s Executive Council.

Willis has over 25 years of experience in government and higher education in North Carolina. He began his career in Pamlico County government, followed by time in the North Carolina General Assembly as a senior budget policy and fiscal analyst for the Fiscal Research Division. For four years, he was Assistant to the Chancellor for External Affairs at N.C. State University, his alma mater, before being named by UNC President Erskine Bowles as the University of North Carolina’s Vice President for Government Relations.

Willis returned to state government in 2009 through his appointment by Governor Beverly Perdue as Senior Advisor to the Governor for Governmental Affairs, where he represented the Governor and her cabinet in front of the State legislature and the Federal government. In 2011, Governor Perdue appointed Willis to serve as the State Budget Officer, Secretary to the Council of State, and as a member of the Governor’s Cabinet.

He served as the governor’s primary fiscal advisor and as one of the three primary fiduciaries for the State of North Carolina. This included providing constitutional and statutory oversight and management of the State of North Carolina’s $50 billion budget. Upon the election of Governor Pat McCrory, he served as the Chief Operating Officer for the Office of State Budget and Management before he joined UNC Health Care in 2013.

Willis holds a Master of Public Administration degree from UNC Chapel Hill and a Bachelor of Arts degree from N.C. State University.
Amy Higgins serves as UNC Health Care’s Chief Transformation and Experience Officer (CTEO). In this role, she is responsible for leading the organization’s transformation efforts. She oversees several functions, including strategic planning, strategy execution, customer experience, business development, new businesses, and corporate ventures.

Higgins joined UNC Health Care in 2008, coming from The Boston Consulting Group (BCG), a global strategy consulting firm. Based in BCG’s Chicago office, she led consulting teams that worked with senior executives across industries to address complex strategic and operational challenges.

Higgins holds an MBA from The University of Chicago’s Booth School of Business. She graduated summa cum laude with a Bachelors of Arts in Music from The University of South Carolina, where she was a Carolina Scholar. She also attended the University of London Royal Holloway as a Rotary Ambassadorial Scholar. Amy and her husband, Daniel, live in Cary with their two children. In her free time, she enjoys golfing, playing music, and spending time with family.
Scott A. Doak
Chief Human Resources Officer
UNC Health Care

Scott Doak is Chief Human Resources Officer for UNC Health Care. He has a proven track record of achieving results by building, improving, modernizing and leading multiple complex Human Resources functions across several "Best in Class" and Fortune 500 Organizations and Industries.

Doak joined UNC Health Care in 2017 as the System Vice President of Human Resources and was promoted to Chief Human Resources Officer in 2019.

Prior to joining UNC Health Care, he served as both the Executive Director of Talent Acquisition and Executive Leader of Enterprise Human Resources Shared Services at Cleveland Clinic in Cleveland, Ohio. At Cleveland Clinic, Doak Developed and deployed a new Human Resources Information System, a sophisticated knowledge case management tool, constructed a Human Resources Shared Services Center and deployed a high functioning call distribution system. In addition, he developed and rolled out a complex (multi-site, multi-state and global) Talent Acquisition and Internal Mobility program.

Prior to joining the Cleveland Clinic, Doak served as Executive Director of the Talent Organization for MD Anderson, Human Resources Director for Hospital Corporation of America, and held various human resources roles at Texas Children’s Hospital, American General Life Insurance and PepsiCo.

Doak earned an MBA from TWU, and a BBA in Finance from The University of Houston. He also holds the Senior Professional Human Resources certification, and was honorably discharged from the United States Army.
Gary L. Park
Chief Operating Officer
UNC Health Care

Gary Park is Chief Operating Officer, UNC Health Care. In this role, he has oversight responsibility for all hospital operations within UNC Health Care hospitals. Previously, he served as President of UNC Hospitals from 2004 to 2019.

Prior to joining UNC Hospitals, Park served as President of Rex Hospital in Raleigh from January 2001 to September 2004. He also served as Executive Vice President and Chief Operating Officer of Moses Cone Health System in Greensboro from October 1997 to December 2000.

Park served as President of Wesley Long Community Hospital in Greensboro from November 1992 to September 1997 when Wesley Long merged with Moses Cone Health System. From 1986 to 1992, he served as President of Thomas Memorial Hospital in South Charleston, West Virginia.

Park earned a bachelor’s degree from West Virginia University and a master’s degree from the West Virginia College of Graduate Studies.
John Lewis
Chief Business Integration Officer
UNC Health Care

John Lewis is the Chief Business Integration Officer for UNC Health. In this capacity, he is responsible for multiple administrative functions of the health care system including Finance, IT, Data Analytics, Construction, Real Estate, Plant Operations, Supply Chain and Operational Efficiency.

Lewis previously served UNC Health in multiple leadership positions. He has held the role of Chief Financial Officer for UNC Health and the UNC School of Medicine, Chief Operating Officer for UNC Faculty Physicians, and CFO for both UNC Hospitals and UNC Rex Healthcare.

Before joining UNC Health Care, Lewis worked at the strategy consulting firms The Boston Consulting Group and SJS, Inc. Earlier in his career, he taught English in rural Japan.

Lewis earned an undergraduate degree in English Literature from Brown University and an MBA from Duke University’s Fuqua School of Business.
Glenn George serves as Chief Legal Officer for UNC Health Care. She joined UNC Health Care in 2011 as Senior Vice President and General Counsel for both the Health Care System and the UNC School of Medicine.

George attended the University of North Carolina as an undergraduate earning B.A. degrees in Political Science and psychology. She received her Juris Doctor from Harvard Law School.

She served with University of Arizona, Tucson as Vice President for Legal Affairs and General Counsel and also as a professor of law there from 2010-2011.

George’s experience includes serving as Special Deputy University Counsel for the University of North Carolina at Chapel Hill (2009-2010) and as a professor of law at the UNC School of Law (2008-2010).

She served as a professor of law at the College of William and Mary (2006-2008) and the University of North Carolina (1999-2006) as well as Interim EEO/ADA Officer for UNC-CH in 2006.

Additional UNC-Chapel Hill experience includes George serving as UNC-CH HIPAA Privacy Officer (2002-2006) and Interim General Counsel (2002-03).

From 1997-1999, she was Associate Vice President for Human Relations and Risk Management, for the University of Colorado (System). She also served as Interim Associate Vice President for Human Relations and Risk Management, for the University of Colorado (System) and was a professor of law with the University of Colorado School of Law.

George’s private sector legal practice includes serving as an associate with Gibson, Dunn & Crutcher, in Los Angeles, California (1978-1983) where she specialized in Labor Law and Employment Discrimination.
Mark F. Miller serves as the Chief Financial Officer and Treasurer (CFO) for UNC Health Care. Previously, he served as Senior Vice President of Finance for UNC Health Care.

Miller came to UNC Health Care from Novant Health, where he served as Senior Vice President of Operational Finance. He spent 10 years with Duke University Health System in roles which included CFO of Duke University Hospital and CFO of Durham Regional Hospital (now Duke Regional). Miller began his career in the Charlotte office of Arthur Andersen LLP where he focused primarily on healthcare audit and consulting.

He holds an MBA from the University of North Carolina at Chapel Hill Kenan-Flagler Business School. He earned a Bachelor of Science from the University of North Carolina at Charlotte. Miller is a Certified Public Accountant, licensed in North Carolina. He is a member of the Healthcare Financial Management Association and the American Institute of Certified Public Accountants.
Lisa Schiller has served as Chief Communications, Marketing, Community & Corporate Affairs Officer for UNC Health Care and the UNC School of Medicine since 2018. She joined the health care system in 2006.

Schiller is very involved in the Triangle community and in professional organizations, serving on the Greater Raleigh Chamber of Commerce's Inter-city committee, Raleigh Professional Women's Forum, Holt Brothers Foundation Board of Directors, Carolina Hurricanes Foundation Board of Directors, Research Triangle Regional Partnership Board of Directors, Healthcare Executive Forum, Society for Healthcare Strategy & Market Development (SHSMD) Board of Directors, and is an honorary member of Alpha Kappa Psi – Eta Omega Chapter.

She was recognized with the Award for Individual Professional Excellence, the highest honor in the field by SHSMD in 2014. Schiller earned her bachelor's degree in communication from James Madison University. She enjoys spending time with her husband, daughters and Goldendoodles. She also likes golfing, cooking, and attending sporting events and concerts.
Appendix E

UNC REX & UNC Hospitals Audited Financial Statements

UNC REX Fiscal Year 2017
UNC REX Fiscal Year 2018
UNC REX Fiscal Year 2019
UNC Hospitals Fiscal Year 2017
UNC Hospitals Fiscal Year 2018
UNC Hospitals Fiscal Year 2019

Please see separate attachments for all financial statements
Appendix F

UNC REX & UNC Hospitals Bond Offering Appendix A

UNC REX 2019 Bonds

UNC Hospitals 2019 Bonds
APPENDIX A

INFORMATION CONCERNING
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INTRODUCTION

Rex Hospital, Inc. (the “Corporation”) and its affiliates offer a wide range of primary, secondary and tertiary care services to residents of Wake County and surrounding counties in northeast central North Carolina. The Corporation owns and operates a general acute care hospital (“Rex Hospital”) licensed for 439 general acute care beds and two rehabilitation and nursing care centers licensed for 120 and 107 beds, respectively. The main campus of Rex Hospital (the “Main Campus”) is located on 62 acres in the northwest section of Raleigh, North Carolina and includes approximately 1.5 million square feet of physical plant. Commencing operations in 1894, Rex Hospital has expanded to its current bed complement and treated 33,178 inpatients and 1,343,884 outpatients during the fiscal year ended June 30, 2019, supported by a medical staff of over 1,100 physicians and nearly 7,000 professional, administrative and support personnel.

Rex Healthcare, Inc. (the “Parent Corporation”) is the sole member of the Corporation. The Parent Corporation is a “supporting organization” for the University of North Carolina Health Care System (“UNCHCS”) and certain of its affiliates, including the Corporation. As a “supporting organization” for UNCHCS and certain of its affiliates, the Parent Corporation may perform management and administrative functions and overall planning and coordination, as well as provide shared services, for UNCHCS and those affiliates. The Parent Corporation and its affiliates shown in the organizational chart on page A-4 are referred to as “Rex Healthcare” or “Rex” in this Appendix A. The Obligated Group under the Master Indenture consists of the Parent Corporation and the Corporation (collectively, the “Members of the Obligated Group”).

UNCHCS is the sole member of the Parent Corporation. UNCHCS was established by the North Carolina General Assembly in 1998. The original legislation included only The University of North Carolina Hospitals at Chapel Hill (“UNC Hospitals”) and the clinical patient care programs of The University of North Carolina at Chapel Hill School of Medicine. UNCHCS acquired the sole membership of the Parent Corporation in 2000. UNCHCS is not a Member of
the Obligated Group and is not liable for payment of the principal of or interest on the 2020A Bonds. See “RELATIONSHIP WITH UNCHCS” in this Appendix A.

Unless otherwise required by the context, all capitalized terms used in this Appendix A, but not otherwise defined herein, have the meanings assigned in the forepart of this Official Statement.

THE OBLIGATED GROUP

The Parent Corporation

The Parent Corporation was incorporated in 1986 as a North Carolina nonprofit corporation and is exempt from federal and North Carolina income taxation as a charitable organization described in Section 501(c)(3) of the Internal Revenue Code of 1986, as amended (the “Code”). The Parent Corporation serves as the parent corporation for the Corporation and certain of its affiliates, which together comprise a multi-entity health care delivery system providing health care and ancillary services. Effective December 15, 2019, the Parent Corporation employs (i) all employees of the Corporation, other than employees who are employed by the State of North Carolina (the “State”), and (ii) the non-State employees of certain other UNCHCS affiliates directly or indirectly controlled by UNCHCS. The purpose of centralizing the employment of all non-State employees is to standardize and consolidate human resources and payroll services. The non-State employees will be leased back to their respective entities from the Parent Corporation. This arrangement will have no net impact on the financial statements of the Parent Corporation and the Corporation.

The Corporation

The Corporation, which was incorporated in 1986, owns and operates Rex Hospital. The Corporation is a North Carolina nonprofit corporation and is exempt from federal and North Carolina income taxation as a charitable organization described in Section 501(c)(3) of the Code.

THE NON-OBLIGATED GROUP AFFILIATES

In addition to the Corporation, the Parent Corporation also directly controls one affiliate that is not a Member of the Obligated Group: the Foundation.

The Foundation. The Rex Healthcare Foundation, Inc. (the “Foundation”) is a North Carolina nonprofit corporation and is exempt from federal and North Carolina income taxation. The Foundation was organized in 1958 to promote the health and welfare of the people of Wake County, North Carolina by promoting philanthropic contributions and public support of the Parent Corporation and its various nonprofit affiliates. In fiscal year 2019, the Foundation raised $1,990,546 through annual events including the Rex Hospital Open, which is a professional golf tournament benefiting the Foundation, as well as other fundraising activities, and earned $147,051 from investment returns. Total net assets of the Foundation as of June 30, 2019 equaled $4,841,142.
The Corporation owns a 100% interest in five affiliates that are not Members of the Obligated Group:

*Rex Enterprises.* Rex Enterprises Company, Inc. (“Rex Enterprises”) is a for-profit corporation organized in 1987 to engage in commercial transactions for the benefit of Rex’s health care mission. Rex Enterprises owns a 100% interest in Rex Wakefield Enterprises, LLC, which, through two subsidiaries (Rex Wakefield Wellness, LLC and Rex Wakefield MOB, LLC), owns real estate at Rex Healthcare’s Wakefield campus in northern Wake County, North Carolina. Rex Enterprises also owns a 50% interest in Quality Textile Services, Inc., a company that provides laundry services to local hospitals (“Quality Textile Services”), and a 100% interest in Rex Wakefield MOB, LLC, a company that built and leases a medical office building on the Wakefield campus. Rex Enterprises also owns less than a 5% interest in Rex MOB Partners, LLC, a company that operates a multi-tenant medical office building located on the Main Campus. Rex Enterprises is also the sole member of Rex Health Ventures, LLC, which provides investment management services to Rex Health Ventures I, LP, a Delaware limited partnership operating a venture capital fund (“Rex Health Ventures”).

*Rex Holdings.* Rex Holdings, LLC (“Rex Holdings”) was formed to hold membership interests in various limited liability companies. Currently, Rex Holdings is the sole member of Rex V, LLC. During fiscal years 2019 and 2018, there were no activities related to either Rex Holdings or Rex V, LLC.

*Rex Orthopedic Ventures, LLC* (“Rex Orthopedic Ventures”). Rex Orthopedic Ventures, which owns a 51% interest in Orthopaedic Surgery Center of Raleigh LLC, an orthopedic joint venture with various orthopedic physicians.

*Rex Health Ventures G.P. I, LLC* (“Rex Health Ventures GP”). Rex Health Ventures GP is the general partner of Rex Health Ventures.

*Rex Surgery Center of Garner, LLC* (“Rex Surgery Center of Garner”). Rex Surgery Center of Garner was formed for the possible future operation of a joint venture in Garner, North Carolina. This entity has had no operations/activities since its formation in 2018.

To engage in transactions which benefit the Corporation’s healthcare mission, the Corporation owns interests in the following entities: (i) a 50% interest in JRH Ventures, LLC (“JRH Ventures”), a joint venture with Johnston Health Services Corporation, a UNCHCS hospital affiliate, which, through two subsidiaries, owns and operates radiation treatment centers in Clayton and Smithfield, both in Johnston County, North Carolina; (ii) a 79% interest in Rex Surgery Center of Wakefield, LLC (“Rex Surgery Center of Wakefield”); (iii) a 55.75% interest in Rex Surgery Center of Cary, LLC (“Rex Surgery Center of Cary”); (iv) a 58.6% interest in TRO Ventures, LLC (“TRO Ventures”), a joint venture with UNCHCS, which through a subsidiary, owns and operates a radiation treatment center in Raleigh, North Carolina; (v) a 44% interest in WR Imaging, LLC (“WR Imaging”), a joint venture with Wake Radiology, one of Wake County’s largest privately owned outpatient imaging practices, to provide outpatient imaging services; and (vi) a 7.5% interest in NC Heart and Vascular Research, LLC (“NCHVR”), a joint venture with various cardiologists to provide research.
The Foundation, Rex Enterprises, Rex Holdings, Rex Orthopedic Ventures, Rex Health Ventures GP, Rex Surgery Center of Garner, JRH Ventures, Rex Health Ventures, Rex Surgery Center of Wakefield, Rex Surgery Center of Cary, TRO Ventures, WR Imaging and NCHVR are not Members of the Obligated Group and are referred to as the “Non-Obligated Group Affiliates” in this Appendix A. The operations of the Non-Obligated Group Affiliates are related strategically to, or otherwise support the activities of, the Obligated Group.

Set forth below is an organizational chart of the Parent Corporation and certain of its affiliates.

**RELATIONSHIP WITH UNCHCS**

In 1998, the North Carolina General Assembly established UNCHCS for the purpose of providing patient care, facilitating the education of physicians and other health care providers, conducting research collaboratively with the health science schools of The University of North Carolina at Chapel Hill (“UNC-Chapel Hill”) and rendering other services designed to promote the health and well-being of the citizens of the State. UNCHCS is governed and administered as an affiliated enterprise of The University of North Carolina system.

UNCHCS acquired the sole membership of the Parent Corporation in 2000. The Parent Corporation sought a larger partner to navigate the rapidly changing health care landscape and determined that UNCHCS was the best choice, and UNCHCS recognized the role of Rex Hospital in providing healthcare services in Wake County, one of the State’s largest and fastest-growing health care markets. As a member of UNCHCS, the Corporation and its affiliates benefit from significant cost-saving measures through consolidation of services and economies of scale. The
Corporation negotiates for payor contracts jointly with the other subsidiaries and affiliates of UNCHCS. UNCHCS provides certain shared services to the Corporation and other affiliates. The shared services include information technology, revenue cycle, supply chain management, accounting, strategic planning, and legal services, among others.

UNCHCS has undertaken significant expansion and affiliated with other community hospitals in recent years, improving health care availability in other regions of the State, expanding the reach of its buying and negotiating power, leading to better integration of physicians and service lines and creating new opportunities for research and innovation. UNCHCS is now affiliated with (1) Johnston Health Services Corporation (“JHSC”) in Smithfield and Clayton, (2) Nash Health Care Systems (“Nash”) in Rocky Mount, (3) Chatham Hospital (“Chatham”) in Siler City, (4) Caldwell Memorial Hospital (“Caldwell”) in Lenoir, (5) Henderson County Hospital Corporation d/b/a Margaret R. Pardee Memorial Hospital (“Pardee”) in Hendersonville, (6) Wayne Memorial Hospital (“Wayne”) in Goldsboro, (7) Lenoir Memorial Hospital (“Lenoir”) in Kinston, (8) UNC Rockingham Health Care (“Rockingham”) in Eden, and (9) Onslow Memorial Hospital (“Onslow”) in Jacksonville.

UNCHCS has historically relied on the Corporation and UNC Hospitals for cash transfers to support strategic affiliations. In fiscal year 2019, UNCHCS transferred $180 million to the Corporation as a refund of these historical cash transfers and in recognition of the investments needed to support the ongoing growth of the Corporation in the Wake County market.

UNC Physicians Network, LLC (“UNC Physicians Network”) is a regional network of over 325 employed physicians and advance practice practitioners who deliver a broad range of primary care and specialty services to residents throughout central and eastern North Carolina, including residents served by Rex Healthcare. Practices affiliated with UNC Physicians Network have access to additional operational support, specialty and subspecialty care providers and the UNCHCS electronic medical records system. UNC Physicians Network is wholly-owned by UNCHCS.

UNCHCS provides annual equity contributions to UNC Physicians Network to fund operating cash deficits. UNCHCS funds these contributions through assessments on the Corporation, UNC Hospitals and other entities of UNCHCS. The amount of the Corporation’s assessment is determined at the end of a fiscal year and is a fluctuating amount determined on the basis of an allocation of (i) 100% of the operating losses (if any) of the physician practices of UNC Physicians Network located in Wake County and (ii) an allocation of the administrative overhead costs of UNC Physicians Network, based primarily on budgeted receipts in Wake County as a percentage of total budgeted receipts of UNC Physicians Network. The Corporation’s contributions for the operating cash deficits and administrative overhead costs related to UNC Physicians Network were $10.5 million, $8.3 million and $8.6 million during the fiscal years ended June 30, 2017, 2018 and 2019, respectively.

The Corporation makes contributions to the UNCHCS Enterprise Fund to support the ongoing health care mission of UNCHCS (including the clinical, research and academic mission of the UNC School of Medicine), including $4.6 million, $3.3 million and $4.1 million in the fiscal years ended June 30, 2017, 2018 and 2019, respectively. Contributions to the UNCHCS Enterprise Fund are funded by the UNCHCS entities, including UNC Hospitals, UNC Faculty Physicians, the
Corporation, and other entities as they become affiliated with UNCHCS. The funding amount and allocation is determined annually, or more often if necessary, based on recommendations made by the leadership teams of UNCHCS and its affiliated entities, as part of an annual budgeting process.

In addition, the Corporation makes annual contributions to fund strategic initiatives of UNCHCS in a fluctuating amount based on 50% of operating income over a 5.0% margin after deducting transfers related to the operating cash deficit of UNC Physicians Network, transfers related to the administrative overhead costs of UNC Physicians Network and other transfers supporting the academic and clinical missions of UNCHCS. There was a payment of $6.9 million in fiscal year 2017 but no payments were made in fiscal years 2018 or 2019.

See “SELECTED FINANCIAL AND UTILIZATION INFORMATION – Management Discussion and Analysis of Combined Financial Information” in this Appendix A for additional information on these contributions in the fiscal years ended June 30, 2017, 2018 and 2019 and the three months ended September 30, 2018 and 2019.

UNCHCS and the Corporation have not established a formal annual cap on such contributions. However, all transfers of cash from the Corporation to UNCHCS are subject to the limitations contained in the Master Indenture. See “SUMMARY OF THE MASTER INDENTURE – Particular Covenants – Transfer of Operating Assets; Transfer of Cash and Investments; Sale of Accounts” in Appendix C.

UNCHCS, UNC-Chapel Hill and the Corporation collaborate in several clinical areas, including (1) oncology, where the research capabilities of UNC-Chapel Hill and UNC Hospitals are integral to Rex-UNC Cancer Care, a comprehensive cancer program; (2) cardiology, including a heart valve replacement clinic in Raleigh and the North Carolina Heart and Vascular Hospital on the Main Campus; (3) women’s services, with GYN oncology and Urogynecology having clinics; (4) nursing, with Rex Hospital serving as a clinical training site for UNC-Chapel Hill nursing undergraduates; (5) the opening of the pediatric inpatient unit in December 2019 on the Main Campus; and (6) obstetrics, with UNC Maternal-Fetal Medicine program expanding to provide inpatient consultative services five days/week.

The governing boards of the Parent Corporation and the Corporation are elected by UNCHCS. See “GOVERNANCE AND MANAGEMENT” herein. Additionally, UNCHCS has the power (i) to approve the annual operating and capital budgets and strategic plans of the Parent Corporation, the Corporation and their affiliates and (ii) to appoint and remove corporate officers of the Parent Corporation, the Corporation and their affiliates.

UNCHCS is not a Member of the Obligated Group and is not liable for payment of the principal of or interest on the 2020A Bonds.

**RELATIONSHIP WITH JOHNSTON HEALTH**

On September 27, 2019, UNCHCS, the Corporation, JHSC and Johnston Memorial Hospital Authority (“JMHA” and, collectively with JHSC, “Johnston Health”) approved a non-binding Letter of Intent (the “Letter of Intent”) to combine operations of JHSC and the Corporation
via a Joint Operating Agreement (the “JOA”). The goal would be for the definitive JOA to be signed sometime before the end of the first quarter of 2020; however, no assurances can be given that the JOA will be consummated. If consummated, the JOA would have an initial term of 25 years.

The intent of the JOA is to enable the parties to build on their existing relationships. The organizations have shared a long history of collaboration in which the management teams of Johnston Health, the Corporation, and UNCHCS have developed a strong working relationship. Since 2015, UNCHS has held a 35% ownership interest in JHSC. The JOA would allow for the expansion of these existing relationships and improve clinical outcomes and accessibility to care in their respective communities.

The parties to the JOA intend, at an operational, strategic, and clinical level, to combine the operations of JHSC and the Corporation (collectively, the “Combined Operations”). The Combined Operations would include (1) current operations of the Corporation, (2) current operations of JHSC, and (3) any new sites, programs or services to be added by the Corporation or JHSC during the term of the JOA. The Combined Operations would intend to care for patients originating from Wake County, Johnston County and other nearby counties (the “JOA Service Area”) whose patients seek to receive care from the Corporation, JHSC or other affiliated providers.

The Corporation is expected to be responsible for managing the Combined Operations, and the Corporation’s Board of Directors is expected to provide governing oversight of the Combined Operations, subject to state law and certain reserved rights of Johnston Health. JHSC would be entitled to designate three members of the Corporation’s Board of Directors.

Pursuant to the terms of the Letter of Intent, the parties intend for the JOA to provide for the budgeting of $125 million (the “Financial Commitment”) from the Combined Operations within the first five years of the JOA to fund existing routine and new strategic expenditures to improve health care services and operations that specifically serve the people of Johnston County (the “JOA Expenditures”). The Financial Commitment may be funded, in whole or in part, through improved operations of JHSC, and JOA Expenditures would be required to be supported by a justified business case and approved by the Corporation’s Board of Directors. If the Combined Operations do not have sufficient financial resources, JOA Expenditures may be deferred until such time as the Combined Operations could reasonably support the JOA Expenditures.

Under the JOA, each of UNCHCS, the Corporation and JHSC would continue to hold legal title to its existing assets. However, UNCHCS, the Corporation and JHSC would individually or collectively develop and acquire future assets to best serve the JOA Service Area and would equitably and reasonably allocate such assets among such parties. Any such future allocation of assets would be subject to all applicable legal and regulatory requirements and other contractual obligations, including covenants under the Master Indenture. See “Transfer of Operating Assets; Transfer of Cash and Investments; Sale of Accounts” in Appendix C under the heading “SUMMARY OF THE MASTER INDENTURE – Particular Covenants.”

While the JOA is expected to combine the operations of the Corporation and JHSC at an operational, strategic, and clinical level, the Combined Operations would not create a new or
separate legal entity. While the parties would prepare pro forma financial statements (for the parties’ internal use only) reflecting revenues and expenses accounted for as if they belong to the Combined Operations, each of the Corporation and Johnston Health would maintain separate financial statements to account for their respective assets, revenues, and expenses. Furthermore, the parties do not currently intend (1) for Johnston Health to become a Member of the Obligated Group under the Master Indenture or otherwise become obligated, directly or indirectly, on any indebtedness of the Corporation or the Parent Corporation (including the 2020A Bonds), or (2) for the Parent Corporation or the Corporation to be obligated, directly or indirectly, on any indebtedness of Johnston Health.

GOVERNANCE AND MANAGEMENT

Rex Healthcare, Inc. Board of Directors

The Parent Corporation is governed by a Board of Directors (the “Parent Corporation Board of Directors”) consisting of not less than three nor more than seven members. All members of the Parent Corporation Board of Directors are appointed by UNCHCS. Directors serve until removed or replaced by UNCHCS, or until his or her death or until he or she shall resign or become disqualified. The Parent Corporation Board of Directors currently is required to meet once a year and committees meet at different frequencies. The Parent Corporation Board of Directors or the Chairman of any committee may invite individuals with expertise in a particular area who are not directors to participate in committee meetings without a vote.

<table>
<thead>
<tr>
<th>Board Member</th>
<th>Principal Occupation</th>
<th>Term</th>
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<tbody>
<tr>
<td>Stephen W. Burriss</td>
<td>President, Triangle Operations, UNCHCS</td>
<td>2019-Present</td>
</tr>
<tr>
<td>Matthew G. Ewend, MD</td>
<td>Chief Clinical Officer, UNCHCS</td>
<td>2019-Present</td>
</tr>
<tr>
<td>Gary L. Park</td>
<td>Chief Operating Officer, UNCHCS</td>
<td>2019-Present</td>
</tr>
</tbody>
</table>

With the approval of UNCHCS, the Parent Corporation Board of Directors may, by resolution adopted by a majority of the Directors then in office, create an Executive Committee, consisting of two or more members of the Parent Corporation Board of Directors. The Executive Committee, if created, will have and may exercise, in the interim between meetings of the Parent Corporation Board of Directors, and subject to certain limitations, all of the powers of the Parent Corporation Board of Directors.

By resolution, the Parent Corporation Board of Directors may designate one or more additional committees, each of which will consist of two or more members of the Parent Corporation Board of Directors, and subject to certain limitations, having and exercising such authority as may be conferred by such resolution.

Rex Hospital, Inc. Board of Directors

The Corporation is governed by a Board of Directors (the “Corporation Board of Directors”) consisting of not less than nine nor more than thirteen members. The President of the Corporation serves as an ex-officio voting member of the Corporation Board of Directors. All of
the other members of the Corporation Board of Directors are elected by UNCHCS and serve a term of four years, with no more than three successive terms. UNCHCS may remove a Director (except the President of the Corporation) at any time, with or without cause. Leadership of the Medical Executive Staff of Rex Hospital is invited to attend (without vote) the regular meetings of the Corporation Board of Directors.

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<thead>
<tr>
<th>Board Member</th>
<th>Principal Occupation</th>
<th>Term</th>
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<tbody>
<tr>
<td>Catharine B. Arrowood</td>
<td>Partner, Parker Poe</td>
<td>2018-2022</td>
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<tr>
<td>Teresa C. Artis</td>
<td>Communications Counsel, ComCounsel</td>
<td>2019-2023</td>
</tr>
<tr>
<td>Ernie Bovio</td>
<td>President, Rex Hospital</td>
<td>Ex-Officio</td>
</tr>
<tr>
<td>Ann S. Collins, MD</td>
<td>Physician, Woman’s Health Alliance, PA</td>
<td>2016-2020</td>
</tr>
<tr>
<td>Courtney A. Crowder</td>
<td>Managing Director, APCO Worldwide</td>
<td>2017-2021</td>
</tr>
<tr>
<td>Peter D. Hans</td>
<td>President, North Carolina Community College System</td>
<td>2019-2023</td>
</tr>
<tr>
<td>Steven C. Lilly</td>
<td>CFO, FS KKR Capital Corporation</td>
<td>2017-2021</td>
</tr>
<tr>
<td>C. Howard Nye</td>
<td>Chairman of the Board, President and CEO, Martin Marietta Materials, Inc.</td>
<td>2016-2020</td>
</tr>
<tr>
<td>Gary L. Park</td>
<td>COO, UNCHCS</td>
<td>Ex-Officio</td>
</tr>
<tr>
<td>Bobby T. Parker</td>
<td>Retired - President, Parker Homes</td>
<td>2016-2020</td>
</tr>
<tr>
<td>Rig S. Patel, MD</td>
<td>Physician, Rex Digestive Healthcare</td>
<td>2017-2021</td>
</tr>
<tr>
<td>A. Wesley Burks, MD</td>
<td>CEO of UNCHCS and UNC - Chapel Hill Medical School Dean</td>
<td>Ex-Officio</td>
</tr>
<tr>
<td>Jason T. Sandner</td>
<td>CFO, Curi, Inc.</td>
<td>2019-2023</td>
</tr>
</tbody>
</table>

The standing committees of the Corporation Board of Directors are the following: Audit and Compliance; Strategic Planning and Finance; and Quality, Patient Safety and Human Resources. The Corporation Board of Directors may from time to time by resolution adopted by a majority of the Directors then in office establish such other committees from its members as it deems necessary to assist it in carrying out its duties and responsibilities to Corporation on a continuing basis. The chairman and members of such committees of the Corporation Board of Directors are recommended by the Chairman of the Corporation Board of Directors and are approved by a majority of the Corporation Board of Directors. Each such committee of the Corporation Board of Directors will have and may exercise the powers and authority granted by the Corporation Board of Directors in the resolution creating the committee.

The President of the Corporation or his or her designee serves as an ex officio voting member of each committee of the Corporation Board of Directors. The Corporation Board of Directors or the Chairman of any committee of the Corporation Board of Directors may invite individuals who are not directors with expertise in a particular area to participate in committee meetings without a vote.
Conflicts of Interest

The Parent Corporation Board of Directors and the Corporation Board of Directors have each adopted a conflict of interest policy governing the conduct of business with entities in which board members have a financial interest. The conflict of interest policy requires Directors to disclose annually any pertinent conflicts in order to protect the interests of the Parent Corporation and the Corporation when either is contemplating entering into a transaction or arrangement that might benefit the private interest of a Director or officer of either organization. In addition, Directors must recuse themselves from voting on matters in which a conflict or potential conflict of interest is present.

Executive Management

The principal executive management personnel of the Parent Corporation and Corporation are described below.

Ernie Bovio (51)
President

Mr. Bovio was named President of the Parent Corporation and the Corporation in October 2019. In that role, he leads all operations at Rex Healthcare, with six locations in Wake County including the North Carolina Heart and Vascular Hospital and nearly 7,000 co-workers. Mr. Bovio has had a long and successful career in hospital management in Texas and elsewhere. In 2014, he became Chief Executive Officer of High Point Regional Health and led that organization through several years of growth, clinical improvement and financial stability as part of the UNCHCS. Mr. Bovio holds a Masters of Healthcare Administration and Business Administration from the University of Houston and a Bachelor of Arts in History from Texas A&M University.

Andy Zukowski (43)
Vice President and Chief Financial Officer

Mr. Zukowski joined Rex in 2016 as Vice President and Chief Financial Officer overseeing strategic and financial operations and Rex Health Ventures. He has 15 years of experience as a finance executive with a successful record of accomplishment working collaboratively with leaders in a large academic medical center, regional tertiary systems, physician practices and networks, and community hospitals. He previously served in executive leadership roles at Michigan Medicine and within Trinity Health. He currently serves on the WakeEd Partnership Board and Quality Textile Services Board. He earned a Bachelor of Business Administration with a major in accounting from the University of Toledo and a Masters in Business Administration from Eastern Michigan University.

Linda H. Butler, MD (49)
Vice President of Medical Affairs/Chief Medical Officer

As Chief Medical Officer for the Corporation, Dr. Butler serves as the primary physician administrative liaison to the medical staff, provides leadership for the Corporation’s quality program and promotes compliance with regulatory standards and requirements of accrediting
organizations. She also has filled the Chief Medical Information Officer role over the past two years. Dr. Butler served as managing partner of Capitol Pediatrics & Adolescent Center in Raleigh and president of medical staff at the Corporation prior to joining the management team as Vice President of Medical Affairs/Chief Medical Officer in January 2009. She currently serves on the board of Johnston Health and is a member of its quality committee. She also serves on the board of the North Carolina State Engineering Foundation and is a member of its nominating and recognition committee. She was honored as a Distinguished Alumni for Nuclear Engineering. Dr. Butler participated in Leadership NC in 2012 as a member of its Class XIX and was named “100 Hospital and Health System CMOs to Know” by Becker’s Hospital Review in 2013 and 2014. She was most recently elected as Vice President for the Raleigh Academy of Medicine. Dr. Butler received a bachelor’s degree in Nuclear Engineering from North Carolina State University, a master’s degree in Medical Physics from the University of Florida and her medical degree from the UNC School of Medicine. She also completed pediatric internship and residency at UNC Hospitals. Before joining the Corporation’s leadership team, Dr. Butler served as Chair of the Pediatric Department at Rex Hospital for two terms and as President of the Medical Staff. She practiced pediatrics in Wake County for 14 years prior to becoming part of the Corporation’s executive team.

**Kirsten Riggs (47)**
**Chief Operating Officer**

Ms. Riggs was named Chief Operating Officer in December 2019. In partnership with the executive team, Ms. Riggs provides leadership and change management for Rex Healthcare, promoting its reputation for quality, innovation and clinical excellence.

Ms. Riggs is an accomplished healthcare executive with over 20 years of experience working in areas of patient care, hospital operations, and physician alignment. Prior to becoming Chief Operating Officer, Ms. Riggs held the position of Vice President Heart and Vascular, which comprised more than 125 physicians and providers in over 25 locations. Ms. Riggs has worked at Rex Healthcare for over 20 years, where she began as a staff nurse in surgical services. She has held leadership roles in surgical and ambulatory services. Ms. Riggs holds a Bachelor of Science in Nursing from East Carolina University and an MHA from Pfeffer University.

**Joel D. Ray (54)**
**Vice President of Patient Care Services/Chief Nursing Officer**

Mr. Ray has over 30 years of nursing experience. He leads approximately 2,164 co-workers in the following areas: cardiovascular and pulmonary nursing, medical-surgical nursing, emergency services, pastoral care, women’s and children’s services, surgical services, patient transfer center, patient experience, and clinical education. Under his guidance, the nursing staff is currently in application for its third designation of Magnet status. Prior to joining the Corporation, Mr. Ray served 26 years in the United States Air Force Nurse Corps, retiring with the rank of Colonel in 2008, and served at the University of North Carolina Chapel Hill Medical Center as the Director of Surgery Service. Previous board experience includes three years as a member of the United States Air Force Nurse Corps Board of Directors. Mr. Ray currently serves on the Executive Board of the POE Center and the Hill-Rom Chief Nurse Executive Advisory Board and was honored with the Faye L. Miller Distinguished Service Award in 2017. Additionally, Mr. Ray
serves as the Co-Chair for Implementation of Carolina Care, a service excellence initiative across the eight hospitals within UNCHCS. He is a member of the American Organization of Nurse Executives and a published contributor to nursing and other healthcare journals. He received the Triangle Business Journal Health Care Hero Award and Veterans Award in 2018. Mr. Ray earned his B.S.N. from Arkansas State University and M.S.N. from Arizona State University.

Tate M. Bombard (46)
Vice President of Legal Affairs

Mr. Bombard has served as Vice President of Legal Affairs since March 2018. In this role, he oversees all the Corporation’s internal and external legal functions. Prior to this role, Mr. Bombard served as the Executive Director of Physician Administration and Associate General Counsel of the Corporation. Prior to joining the Corporation, Mr. Bombard worked as Director of Legal Services at Roper St. Francis in Charleston, South Carolina. He currently serves on the Magellan Charter School Board of Directors, and is a Fellow in the Healthcare Roundtable for General Counsel. Mr. Bombard received both his Juris Doctor and Bachelor of Science degrees from the University of South Carolina.

UNCHCS Senior Leadership

Gary L. Park (68), Chief Operating Officer, UNCHCS. Mr. Park is currently the Chief Operating Officer, UNCHCS, with oversight responsibility for all hospital operations within UNCHCS. Previously, Mr. Park served as President of UNC Hospitals from 2004 to 2019. Prior to joining UNC Hospitals, Mr. Park served as President and CEO of the Parent Corporation from January 2001 to September 2004 and continues to serve as the CEO of the Parent Corporation. He was Executive Vice President and Chief Operating Officer of Moses Cone Health System from October 1997 to December 2000. Mr. Park served as President of Wesley Long Community Hospital from November 1992 to September 1997 when Wesley Long Community Hospital merged with Moses Cone Health System. From 1986 to 1992, he served as President of Thomas Memorial Hospital in South Charleston, West Virginia. Mr. Park has a bachelor’s degree from West Virginia University and a master’s degree from the West Virginia College of Graduate Studies.

Steve Burriss (53), President, Triangle Operations, UNCHCS. Mr. Burris is currently the President, Triangle Operations, UNCHCS, with oversight responsibility for hospital operations in the Triangle region, including UNC Hospitals. Previously, Mr. Burris served as the President of the Corporation from 2015 to 2019. Mr. Burriss joined the Corporation in 1998 as director of human resources and was later promoted to vice president of human resources and then Chief Operating Officer. Mr. Burriss earned a Bachelor of Science degree in Business and an MBA from Marshall University.
FACILITIES AND SERVICES

Facilities

Main Campus Facilities

The Main Campus is a 62-acre site located in the northwestern portion of Raleigh, North Carolina, near the intersection of Interstate 440 and Interstate 40, providing convenient access to Cary, Chapel Hill, Apex, Holly Springs, Wake Forest, Raleigh-Durham International Airport and the Research Triangle Park (the “Research Triangle” or the “RTP”). The Main Campus also includes the 120-bed Rex Rehabilitation and Nursing Care Center of Raleigh; Rex Cancer Center, which offers comprehensive inpatient and outpatient services for cancer patients; Rex Wellness Center, a comprehensive medically supervised wellness center; and Rex Women’s Center, a 90-bed maternity unit.

The Main Campus includes approximately 1.5 million square feet of space for Rex Hospital, ancillary support structures and related parking lots. Opened in March 2017, the North Carolina Heart and Vascular Hospital is the largest building on the Main Campus, consisting of approximately 300,000 square feet and consolidating all cardiovascular services in a modern facility designed to improve treatment, education and prevention for patients and their families across central and eastern North Carolina. The patient tower is the next largest building on the Main Campus, consisting of approximately 245,000 square feet. Other buildings on the Main Campus include the Rex Rehabilitation and Nursing Care Center of Raleigh (43,500 square feet), Rex Women’s Center (103,000 square feet), Rex Same Day Surgery Center (40,000 square feet), Rex Cancer Center (69,000 square feet), Rex Wellness Center (27,000 square feet) and a state-of-the-art central energy plant (16,000 square feet). The central energy plant opened in 2013. All of these facilities are owned by the Corporation.

The Emergency Department provides emergency care for patients in a state-of-the-art, 24,000-square-foot emergency services facility, which includes resuscitation rooms, triage rooms for preliminary evaluation, and a decontamination room. In 2014, the Corporation added a helipad on the roof of the Emergency Department, which allows faster transfer of patients to Rex Hospital from smaller hospitals in eastern North Carolina, as well as easier transport of patients who need specialized care at UNC Hospitals in Chapel Hill. In late 2017, the Corporation added a dedicated area in its Emergency Department specifically for behavioral health patients. This quiet and secure space includes eight private rooms with features designed to improve the care of behavioral health patients.

Other services offered at the Main Campus or nearby include an urgent care clinic, various physician practices, a sleep disorders center, a pain management center, a wound healing center with hyperbaric therapies, a breast care center and a palliative care unit for patients with a limited life expectancy.

Other Facilities

Orthopaedic Surgery Center of Raleigh, which opened in March 2013, is a joint venture in which Rex Orthopedic Ventures owns a controlling interest. It leases a 27,700 square-foot
outpatient surgery center located less than one mile from the Main Campus and offers a wide range of orthopaedic care and services, including knees, feet, shoulders, hips and wrists, in a convenient outpatient setting.

The Corporation owns and operates Rex Rehabilitation and Nursing Care Center of Apex, a 107-bed nursing facility located in Apex, North Carolina. It provides rehabilitation care for patients after surgery or illness, as well as long-term nursing care.

Rex Healthcare of Cary is a 127,800 square-foot, two building campus located in Cary, North Carolina, offering area residents a wellness center and a primary care center, including physician practices. This facility also houses an outpatient surgery center with four operating rooms. The outpatient surgery center is a joint venture between the Corporation and 35 independent surgeons. Through a joint venture with Wake Radiology, comprehensive radiology services, including screening, mammography and laboratory, as well as rehabilitation services, are also offered at this facility.

The Corporation leases 20,000 square feet in Healthpark at Kildaire, a medical office building that opened in May 2019. That space includes UNC Urgent Care, laboratory, radiology, pulmonary, primary care and other outpatient medical services and practices.

Panther Creek will be a 98,000 square foot, mixed use ambulatory medical office building in Cary, North Carolina, that will host several components or affiliates of UNCHCS, including Rex, UNC Faculty Physicians and UNC Physicians Networks, as well as joint ventures with Wake Radiology, Raleigh Orthopaedic Clinic and Orthopaedic Surgery Center of Panther Creek. Panther Creek is under construction and is scheduled to open in early 2020. The total cost of the project is approximately $39.5 million and will be funded by UNCHCS.

In Garner, the Corporation leases a 30,000 square-foot facility housing a wellness center and outpatient rehabilitation services. The Corporation also leases space in an adjacent medical office building for a sleep disorders center and several physician practice offices, including North Carolina Heart and Vascular Hospital and Rex Surgical Specialists, both owned by the Corporation.

Rex Healthcare of Holly Springs opened in December 2011. The campus now consists of 38 acres owned by the Corporation. The two medical office buildings on the campus (45,000 square feet and 30,000 square feet) house UNC Urgent Care, imaging/radiology/laboratory services, Rex Pediatrics of Holly Springs, Rex Primary Care of Holly Springs, Rex Surgical Specialists and other physician practices.

In Knightdale, Rex Healthcare of Knightdale is a 75,000 square-foot, multi-purpose leased facility on a 19-acre campus that opened in May 2009. Services at this campus include UNC Urgent Care, a wellness center, physician offices, radiology and laboratory, a sleep disorders center, and a wound care center.

Rex Healthcare of Wakefield is a mixed-used development located on a 30-acre campus that opened in April 2009. It includes an outpatient surgery center with two operating rooms and two procedure rooms and an urgent care clinic known as UNC Urgent Care. There is also a satellite
location of Rex Cancer Center, offering medical and radiation oncology services in a convenient location for patients in the fast-growing area of North Raleigh. Other services on this campus include radiology and laboratory, physician offices, and mammography. Rex Wakefield MOB, LLC owns a 109,000 square-foot medical office building, and Rex Wakefield Wellness, LLC owns a 35,000 square-foot wellness center. The medical office building and wellness center are surrounded by restaurants, an anchor grocery store and other retailers.

New Facilities

The Corporation owns more than 30 acres of land near the Main Campus which is being used for parking and is being developed for the UNC Rex Outpatient Cancer Center, which is a part of the Project being financed by the 2020A Bonds. Construction on the new 145,000 square-foot facility began in May 2019 and the facility is scheduled to open in 2021. It will be located on the corner of Blue Ridge and Macon Pond Roads across the street from the Main Campus. It will consolidate oncology care that is currently provided in two clinics. Oncology services to be provided in the new cancer center will encompass multi-disciplinary medical, radiation and surgical oncology consultative and therapeutic services including chemotherapy and radiation therapy. Included in the functions to be housed within the building will be an oncology laboratory, oncology pharmacy as well as clinical research and other support services (patient navigation, social work and dietary support). There will also be a quality of life clinic providing complementary and alternative therapies for cancer patients, a large, multi-purpose community conference space, a patient and family sacred space and other patient and provider support areas. The new cancer center is designed to provide compassionate, patient-centered care in a modern setting. See “Capital Facility Plans” below.

In 2019, Rex began construction of UNC Rex Holly Springs Hospital, a 50-bed community hospital located at its campus in Holly Springs, which is a part of the Project being financed by the 2020A Bonds. This hospital will serve the medical needs of the fast-growing region of southwest Wake County with services in emergency care, labor and delivery, and surgery, among others. This facility is expected to open in 2021. See “Capital Facility Plans” below.

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The following map shows the location of the Rex Healthcare facilities in Wake County, North Carolina, excluding affiliated physician locations, which are located throughout the service area.
Clinical/Hospital Services

The following is a summary of clinical/hospital services provided by the Corporation or one or more of its affiliates:

Rex Heart and Vascular Services. The Corporation performs more than 35,000 heart and vascular procedures a year, including coronary artery bypass grafting, transcatheter aortic valve replacement (“TAVR”), echocardiography, peripheral vascular ultrasound, valve replacement and repair, angioplasty, cardiac catheterization, electrophysiology procedures and stent placement. The Corporation has been a Chest Pain Accredited Hospital for more than a decade, reinforcing the organization’s dedication to community outreach and innovation in the care of chest pain patients. The service line includes open heart surgical suites where physicians perform procedures such as coronary artery bypass grafting, mitral valve replacement and repair, and aortic valve and aortic arch replacements. The Corporation also provides a full range of invasive catheter based cardiac, vascular and electrophysiology procedures. Recovery facilities include a dedicated 12 bed cardio-thoracic intensive care unit, which provides intensive care to open-heart surgical patients, and 82 intermediate care unit beds, which provide continuous monitoring of heart rhythms using a telemetry system. Non-surgical heart and vascular patients requiring intensive care are treated in a 20-bed cardiac intensive care unit. The eight-story, 306,000 square-foot North Carolina Heart and Vascular Hospital opened on the Main Campus in early 2017, and consolidated all cardiovascular services and care into a modern, efficient and convenient facility. It improved access and service for patients and their families, and streamlined daily operations for staff.

Rex Cancer Center. Rex provides a full range of specialized, multi-disciplinary oncology including medical, radiation and surgical oncology treatment and support services to patients in Wake County and surrounding counties. During fiscal year 2019, the Rex Cancer Center provided 38,669 radiation oncology treatments and 77,239 chemotherapy treatments at six locations across Wake County. In addition to cancer treatments and therapies, the Rex Cancer Center provides
access to clinical trials and a wide array of outreach and support services, nutritional services, nurse navigation of care, rehabilitation services and survivorship or end of life care. The Rex Cancer Center works closely with the nationally recognized North Carolina Cancer Hospital and the UNC Lineberger Comprehensive Cancer Center in Chapel Hill to extend specialty services and clinical trials to patients in Raleigh. Since 2008, Rex has collaborated with Johnston Health to provide essential cancer care and services closer to home at radiation oncology clinics in Smithfield and Clayton. See also “CAPITAL FACILITY PLANS”.

Rex Emergency Services. Rex’s Emergency Department provided emergency care for nearly 65,000 patients in fiscal year 2019. Chest pain, abdominal pain, stroke and various traumatic injuries were the leading reasons for visits to the Emergency Department. See “SELECTED FINANCIAL AND UTILIZATION INFORMATION - Historical Utilization” and “CHARITY CARE AND COMMUNITY BENEFIT - Community Health Needs Assessment” for additional information on the Emergency Department at Rex Hospital and certain initiatives by Rex impacting or potentially impacting emergency care services.

Surgery at Rex Hospital. Rex Hospital performs about 28,000 surgical procedures a year for adults, women and children. This surgical volume includes nearly all tertiary inpatient and outpatient services except transplantation. Rex Hospital has 26 operating rooms and seven procedure rooms to facilitate optimal capacity utilization and operational efficiency. Rex surgery has maintained pace with many technological advancements including four DaVinci robots used for urology, gynecology, general and thoracic surgeries. Market dynamics and operating room utilization have propelled surgical growth into the ambulatory surgery environment where Rex has aligned with local surgeons through joint venture relationships in Raleigh, Cary and Wakefield. These facilities host outpatient surgeries and are used by more than 110 physicians who perform approximately 12,500 surgeries a year. The three locations have improved access to quality care across the Raleigh metropolitan area. Additionally, this growth in outpatient surgeries matches business needs for value-based clients and their insurers. With growth in hospital and ambulatory surgery center modalities, Rex has positioned itself to care for population growth in Wake County and beyond.

Rex Women’s Center. At Rex’s Women’s Center caregivers seek to provide family-centered care to the new mother, baby and extended family. During fiscal year 2019, 4,716 babies were born in the Rex Women’s Center. These births are supported by 24/7 obstetric, anesthesiology and neonatology services, high risk obstetrics provided by UNC Maternal Fetal Medicine, lactation support services provided by a team of certified lactation consultants and an in-house retail center for infant nutrition. Rex also offers a wide variety of pre- and post-natal classes, screening for postpartum depression and psychological services. There are three operating suites for cesarean births and Rex’s neonatal intensive care nursery offers 21 Level IV neonatal beds. The Rex Women’s Center includes 70 private rooms in which labor, delivery, recovery, and postpartum care of the mother and child normally occur.

Non-Acute Facilities and Related Services

UNC Urgent Care. The group of urgent care centers owned by the Corporation and previously known as Rex Express Care (with five locations in Cary, Holly Springs, Knightdale, Raleigh and Wakefield) changed its name to UNC Urgent Care in early 2019. Plans have been
announced to open five new locations across Wake County in order to better serve patients with affordable and convenient medical care. A new clinic in Apex opened in July 2019, and one in Morrisville opened in June 2019. The clinics treated 69,174 patients in fiscal year 2019, which was a 9.9% increase over fiscal year 2018, for a wide range of illnesses and medical conditions, including cuts, flu, shingles, poison ivy and burns. The clinics are open every day except Christmas and provide care that is generally less expensive and typically faster than a visit to an emergency department.

**Rex Rehabilitation and Nursing Care Centers.** The Rex Rehabilitation and Nursing Care Centers, located in Raleigh and Apex, are skilled nursing facilities that provide nursing care for patients with a variety of needs ranging from those requiring several months to recuperate from major surgery to patients with permanent conditions. There are 110 long-term care beds, with an average length of stay of over one year. There also are 117 beds dedicated to short-term rehabilitation, with an average length of stay of less than three weeks.

**Rex Wound Care Centers.** Rex Wound Care Centers are located in Raleigh and Knightdale. Physicians and medical staff at the facilities treat patients with chronic wounds that are difficult to heal by using advanced medical equipment, including two multi-person hyperbaric chambers. The Rex Wound Care Centers treated more than 1,700 patients during fiscal year 2019.

**Rex Sleep Disorders Centers.** The Rex Sleep Disorders Centers are located in Raleigh, Cary, Knightdale, Garner and Holly Springs. In order to fully understand sleep patterns and diagnose problems, various brain activities, body systems and their relationships are monitored throughout the night. Through an overnight sleep study at Rex Sleep Disorders Center, a recording of physiological measurements identifies different sleep stages to classify various sleep problems. All overnight sleep studies are conducted under the direction of a Medical Director, who is board-certified in sleep medicine, and trained sleep technologists. The five Rex Sleep Disorders Centers performed more than 2,800 sleep studies during fiscal year 2019.

**Rex Wellness Centers.** Located in Raleigh, Cary, Garner, Knightdale and Wakefield, the five Rex Wellness Centers offer cardiopulmonary rehabilitation, aquatic therapy, health education classes, and a wide variety of exercise, nutrition and wellness programs and facilities to members. These include indoor pools, aerobics, water exercise, exercise facilities with cardiovascular and weight training equipment, sauna, whirlpool, locker rooms, child activity facilities and complete fitness assessments. The Rex Wellness Centers had approximately 15,000 members during fiscal year 2019.

**Wake Radiology UNC Rex.** In February 2019, Rex formed a joint venture with Wake Radiology, a local independent outpatient imaging group practice, to improve access to specialized imaging services and to reduce costs for thousands of patients. The new organization now operates 14 outpatient imaging offices in communities throughout the greater Research Triangle area. Most locations provide comprehensive, diagnostic imaging services, such as MRIs, CT scans, X-rays, ultrasounds, greatly expanding access to advanced medical imaging in an outpatient setting. All of the combined locations also offer 3D mammography, an advanced technology for detecting breast cancer at its earliest possible stage. For many patients, the joint venture means they will no longer be required to go to the hospital for medical imaging that can be done in an outpatient setting.
setting. This shift is expected to reduce patient costs approximately $7 million annually by eliminating hospital-based fees.

*Rex Mobile Mammography.* Rex offers 3D mammography services on two Mobile Mammography Units. The units travel throughout central North Carolina and offer mammograms to women in areas where it is sometimes difficult to access healthcare. They regularly schedule visits at nonprofit organizations, community events, churches and employers, among others, in a 15-county region in order to provide crucial breast cancer screenings closer to home. During fiscal year 2018, the mobile mammography vehicles provided over 3,600 mammograms, many at a free or reduced cost. Rex Mobile Mammography services are made possible through generous funding from Revlon, Inc., the Kay Yow Cancer Fund, the Rex Hospital Open, The American Breast Cancer Foundation, the Rex Healthcare Foundation and Susan G. Komen for the Cure, North Carolina Triangle Affiliate. In addition, underinsured or uninsured patients who require further care are often provided with additional financial support for follow-up screenings or treatment through the Foundation and community partners.

**AWARDS AND ACCOLADES**

Rex routinely receives significant awards and accolades, both local and national, and has earned a reputation as one of the nation’s top hospitals for quality and safety.

Excellent quality and service are top priorities within the organization and the Chief Medical Officer and Chief Nursing Officer lead these initiatives. A director of patient experience as well as a director of performance improvement provide expertise and oversight of committees and teams to continuously improve service, thereby creating an ideal environment to build and sustain a quality-driven culture within Rex. These areas lead teams of co-workers throughout the organization offering performance improvement project facilitation, data analytics and lean six sigma training to analyze best practices, address concerns and implement improvement strategies.

In 2019, *Business North Carolina* magazine ranked the Corporation number one (tied with Cone Health) as Best Hospital in the State.

The Corporation is the only hospital in the State to receive an “A” grade annually since *The Leapfrog Group* began a national hospital safety scorecard in 2012, and is one of only 41 hospitals nationwide to have earned this distinction in 2019.

In 2007, Rex Hospital became the first Research Triangle area hospital awarded Magnet Recognition by the *American Nurses Credentialing Center* (“ANCC”). ANCC recognizes organizations that demonstrate excellence in meeting or exceeding national standards for healthcare service delivery. In 2011, Rex Hospital received reaccreditation from ANCC, and in 2016 received this reaccreditation for a third consecutive time. As a Magnet accredited facility, this places Rex Hospital nurses among the top ten percent in the nation. This highly desirable designation helps attract well-qualified nursing candidates.

The Corporation’s utilization of *Press Gainey* to measure satisfaction is driven by the Corporation’s mission to provide excellent care for patients and their families. In 2019, scores
demonstrated high performance levels against hospitals in the Press Gainey database from across the nation:

- Hospital Consumer Assessment of Healthcare Providers Rate the Hospital – 90th percentile
- Hospital Consumer Assessment of Healthcare Providers Recommend the Hospital – 93rd percentile
- Clinician and Group Consumer Assessment of Healthcare Providers and Systems Rate the Provider – 93rd percentile

In 2019, Rex Healthcare received a score of 100 and was designated a Leader in LGBTQ Healthcare Equality by the National LGBTQ Healthcare Equality Index Human Rights Campaign Foundation.

In 2019, Rex Hospital received a new Geriatric Emergency Department Accreditation, recognizing excellent care for older adults, and earned Level 3 “Bronze” accreditation from the American College of Emergency Physicians.

In 2019, Forbes ranked Rex Healthcare as #12 on its Top 20 Best Employers in North Carolina.

In 2019, the Corporation was ranked #7 on the U.S. News & World Report Best Regional Hospitals list and was rated high performing in nine adult procedures and conditions, achieved by only 57 of 4,500 hospitals in the nation.

In 2019, Rex Healthcare received national recognition from the American Heart Association as a Gold Plus STEMI Receiving and Silver NSTEMI recognition in its Mission: Lifeline program for improving patient care and outcomes for heart attack patients.

In 2019, the Corporation received the HeartCARE Center National Distinction of Excellence from the American College of Cardiology, reinforcing the hospital’s commitment to providing comprehensive and high-quality cardiovascular care for all patients. Rex Hospital is the only hospital in the State to receive the designation, and one of only 13 hospitals nationwide.

In 2018, Rex Hospital was named to a list of the nation’s 50 best Cardiovascular Hospitals by IBM Watson Health.

In 2018, Rex Hospital was named one of the “100 Great Hospitals” in the United States by Becker’s Hospital Review.

In 2018, Rex Healthcare received the Get With The Guidelines Gold Plus Quality Achievement Award from the American Heart Association for outstanding commitment to high-quality stroke care using the latest scientific evidence.

In 2018, the American College of Cardiology awarded Rex Healthcare the HeartCARE Center™ National Distinction of Excellence for demonstrating commitment to providing
comprehensive, high-quality cardiovascular care and its ongoing performance reporting. It is the first organization in Wake County and the State to receive this designation.

For 2018, Downtown Raleigh Alliance named the North Carolina Heart and Vascular Hospital its Development Project of the Year.

For 2018, Wake Technical Community College Foundation honored Rex Healthcare as its Corporate Benefactor of the Year.

In 2018, Rex Healthcare received a BCBSNC Blue Distinction Specialty Care designation for bariatric surgery, cardiac care, knee and hip replacement, spine surgery and maternity care.

In 2018, the Centers for Medicare and Medicaid Services Home Health Care Consumer Assessment of Healthcare Providers and Systems survey star ratings, which measures patient experiences with home health agencies, awarded Rex Nursing and Rehabilitation Care Center of Raleigh and Apex a Five-Star rating for overall quality.

The National Research Corporation named Rex Healthcare a Consumer Choice Award winner every year from 2004 to 2018.

Over the past several years, the Corporation’s information technology investments and strategies have been recognized by important national organizations. In January 2018, the Corporation received Stage 7 certification for the Epic system from the Health Information Management Systems Society. The Corporation was one of only 6% of health care systems nationally to receive this top-level certification, and the first of two organizations to receive this top-level certification for the analytics capabilities. In September 2018, the Corporation was awarded the coveted Nicholas E. Davie’s Award for thoughtful application of health information and technology to substantially improve clinical care delivery, patient outcomes and population health.

In 2018, HealthGrades named the Corporation to its America’s 50 Best Hospitals and Stroke Care Excellence lists. HealthGrades also awarded the Outstanding Patient Experience Award for the third consecutive time, placing the hospital among the top 15% of hospitals in the United States. In 2017, additional recognition by HealthGrades for the Cranial Neurosurgery Excellence Award and Joint Replacement Excellence Award that were bestowed to the Corporation for three consecutive years and the Cardiac Surgery Excellence Award for two consecutive years.

In 2017, Strategic Healthcare Partners (“SHP”) awarded Rex Home Services the SHP Best Superior Performer award for ranking in the top 20% in the SHP national HHCAHPS survey benchmark for overall satisfaction as measured from the patient’s point of view.

In 2017, Rex Healthcare earned first Centers for Medicare and Medicaid Services Five-Star rating, placing Rex Healthcare in the top 9% of hospitals in the United States.

In 2017, Web.com Tour named the Rex Healthcare Foundation its national Charity of the Year.
QUALITY AND SAFETY INITIATIVES

The Corporation is on a journey to become a High Reliability Organization. High Reliability Organizations are those that operate in complex environments without serious accidents or catastrophic failures. This framework is adaptive to many industries, particularly in healthcare since the consequences of failed processes cause patient harm. The principles of high reliability go beyond process improvement, focusing on a culture of relentless pursuit for perfection, prioritizing safety above all other organization goals.

High quality, safe and effective care is the number one priority at the Corporation. High quality care is patient centered, timely, efficient and equitable. The Corporation has rigorous quality and safety programs. The Corporation’s ability to maintain and improve the quality of its services is shown by the nationally recognized awards described in “Awards and Accolades” above. Additionally, the Corporation encourages patients to be involved and to inform members of their health care team by asking questions and taking an active role in their care. The Patient Family Advisory Council provides Corporation leadership with feedback during programmatic expansion and performance improvement initiatives.

The Corporation views quality in two distinct ways: (1) traditional process and outcome measures and (2) quality indicators/abilities of staff and physicians, such as the Hospital Consumer Assessment of Healthcare Providers and Systems measure of patient and physician satisfaction. Each of the Corporation’s departments monitors quality initiatives and performance. The Corporation Board of Directors and the Quality, Patient Safety and Human Resources Committee review all quality dashboards and corporate goals related to quality and safety, and review any root cause analysis that has been conducted.

The Corporation has participated in the North Carolina – Virginia Hospital Engagement Network since 2011. This is an association of 116 hospitals in North Carolina and Virginia that shared a goal of achieving a 40% reduction in hospital acquired conditions and a 20% reduction in readmissions. The Corporation has achieved Nursing Magnet designation three times and is applying for the fourth re-designation. The Corporation met quality goals or exceeded the benchmark for the following conditions: falls, pressure ulcers, early elective delivery, central line associated blood stream infections in the ICU, venous thromboembolisms, and readmissions. The Corporation participates in the Duke Infection Control Network and has better infection rates than the peer institutions.

UNCHCS has a Quality Improvement Oversight Committee that focuses on quality outcomes and process improvement across the health care system, including at the Corporation. The focus during fiscal year 2018 was sepsis diagnosis and treatment. The focus is now on mortality index reduction, enhanced recovery after surgery and opioid stewardship.

In 2014, the Corporation installed a new electronic medical record system, which was developed by and purchased from Epic, in conjunction with UNCHCS. This digitized medical records system improves the availability, efficiency, effectiveness and quality of clinical and business processes and affords caregivers and physicians improved communication. Since implementing the Epic EMR, the Corporation has achieved Health Information and Management Systems Society Stage 7 designation for inpatient care, ambulatory care and analytics. The
Corporation has also achieved the highest levels of Meaningful Use/Interoperability standards. With new multi-faceted processes for data security and HIPAA compliance, the Corporation has efforts in place to keep protected health information secure and has implemented risk assessment controls and audit processes to manage access and patient privacy. The Corporation has participated in rigorous accreditation and reaccreditation processes in several significant areas:

**Chest Pain Accreditation.** In 2007 the Corporation was the first hospital in the Research Triangle area to become Chest Pain Accredited. Since then, the Corporation has been re-accredited multiple times, most recently in 2018. Institutions receiving this accreditation have shown a dedication to community outreach and innovation in the care of chest pain patients. Additionally, those accredited meet or exceed quality-of-care measures based on improving the care process for acute coronary syndrome patients. This high-level quality of care is further supported by the Corporation’s status as a Watson top 50 Cardiovascular Hospital in 2019.

**Bariatric Center of Excellence.** In 2010, the Corporation received Bariatric Center of Excellence designation and was designated again in December 2014. To receive this designation, the participating hospital must demonstrate high volumes of procedures, low complication rates and excellent patient follow-up. The Corporation also has been awarded the Blue Cross-Blue Shield Bariatric Center of Distinction designation. The North Carolina State Employees’ Health Plan and other large employers will only authorize bariatric surgery at institutions that are Centers of Distinction. The Corporation’s Surgical Weight Loss program has also been re-designated as a comprehensive accredited center by the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (“MBSAQIP”) for a second time in 2019. MBSAQIP is a joint program of the American College of Surgeons and the American Society for Metabolic and Bariatric Surgery. This comprehensive program incorporates a multi-disciplinary approach to care, support and education before and after surgery.

**Stroke Center Certification.** The Corporation was designated as a thrombectomy capable stroke center by The Joint Commission in July 2019. Facilities honored with this recognition have proven experience providing specialty care and represent a “gold standard” within the healthcare industry. Achieving certification means that the services provided at the Corporation have the critical elements for long-term success in improving outcomes. The certification not only recognizes the Corporation’s ability to provide life-saving, emergency treatment of stroke, but also acknowledges a focus on endovascular intervention to remove clots causing ischemic strokes.

**Cancer Center.** Rex Cancer Center is certified by the American College of Surgeons as a Comprehensive Community Cancer Center and a Comprehensive Breast Center. Rex Cancer Center earned the Commission on Cancer’s Outstanding Achievement Award, which is only awarded to a select group of cancer centers nationwide that go above and beyond the standard requirements for accreditation. Patients at Rex Cancer Center in Raleigh receive the same level of care found in major academic medical centers with the added convenience of not having to travel far from home. Rex Cancer Center is affiliated with the nationally recognized North Carolina Cancer Hospital and the UNC Lineberger Comprehensive Cancer Center in Chapel Hill.

**The Joint Commission Disease-Specific Total Hip and Knee Replacement Certification.** The Corporation achieved Joint Commission certification for total joint procedures in 2019. This
is in addition to BCBS Center of Distinction designation and United Healthcare Center of Excellence designation.

**MEDICAL STAFF**

The Corporation’s medical staff consists of nearly 1,100 physicians (including approximately 800 active members), who are board certified or eligible (if they just completed their training). Most of the medical staff is community based, and is separate from the medical staff from each of the other UNCHCS affiliates. The following table lists the medical staff as of June 30, 2019, by specialty, active and other staff, number that are board certified and their average age. All Active, Associate and Senior physicians are considered “Active” with admitting privileges. Affiliate, Associate and Consulting are considered “Other.”

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<th>Specialty</th>
<th>Active Staff</th>
<th>Other Staff</th>
<th>Number Board Certified</th>
<th>Average Age</th>
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</tr>
<tr>
<td>Neurology</td>
<td>25</td>
<td>8</td>
<td>31</td>
<td>51</td>
</tr>
<tr>
<td>Neurosurgery</td>
<td>10</td>
<td>0</td>
<td>7</td>
<td>50</td>
</tr>
<tr>
<td>OB/GYN</td>
<td>57</td>
<td>2</td>
<td>54</td>
<td>48</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>42</td>
<td>6</td>
<td>45</td>
<td>49</td>
</tr>
<tr>
<td>Specialty</td>
<td>Active Staff</td>
<td>Other Staff</td>
<td>Number Board Certified</td>
<td>Average Age</td>
</tr>
<tr>
<td>---------------------------</td>
<td>--------------</td>
<td>-------------</td>
<td>------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Oral Surgery</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>55</td>
</tr>
<tr>
<td>Orthopaedic Surgery</td>
<td>28</td>
<td>13</td>
<td>35</td>
<td>47</td>
</tr>
<tr>
<td>Otolaryngology</td>
<td>29</td>
<td>1</td>
<td>30</td>
<td>55</td>
</tr>
<tr>
<td>Pathology</td>
<td>6</td>
<td>0</td>
<td>6</td>
<td>48</td>
</tr>
<tr>
<td>Pediatric Cardiology</td>
<td>0</td>
<td>6</td>
<td>6</td>
<td>54</td>
</tr>
<tr>
<td>Pediatric Neurology</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>59</td>
</tr>
<tr>
<td>Pediatric Surgery</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>54</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>100</td>
<td>32</td>
<td>128</td>
<td>49</td>
</tr>
<tr>
<td>Physical Medicine/Rehab</td>
<td>13</td>
<td>4</td>
<td>17</td>
<td>46</td>
</tr>
<tr>
<td>Plastic Surgery</td>
<td>17</td>
<td>1</td>
<td>18</td>
<td>50</td>
</tr>
<tr>
<td>Podiatry</td>
<td>8</td>
<td>10</td>
<td>15</td>
<td>49</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>0</td>
<td>17</td>
<td>16</td>
<td>49</td>
</tr>
<tr>
<td>Pulmonary Medicine</td>
<td>14</td>
<td>5</td>
<td>19</td>
<td>48</td>
</tr>
<tr>
<td>Radiation Oncology</td>
<td>13</td>
<td>6</td>
<td>19</td>
<td>47</td>
</tr>
<tr>
<td>Radiology</td>
<td>48</td>
<td>1</td>
<td>47</td>
<td>50</td>
</tr>
<tr>
<td>Reproductive Endocrinology</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>53</td>
</tr>
<tr>
<td>Thoracic Surgery</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>45</td>
</tr>
<tr>
<td>Urogynecology</td>
<td>5</td>
<td>0</td>
<td>5</td>
<td>44</td>
</tr>
<tr>
<td>Urology</td>
<td>15</td>
<td>0</td>
<td>15</td>
<td>52</td>
</tr>
<tr>
<td>Vascular Surgery</td>
<td>7</td>
<td>2</td>
<td>6</td>
<td>47</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>732</strong></td>
<td><strong>302</strong></td>
<td><strong>958</strong></td>
<td><strong>51</strong></td>
</tr>
</tbody>
</table>

The Corporation has 464 Advance Practice Providers (physician assistants or nurse practitioners) as of June 30, 2019. The Advance Practice Providers provide high quality, cost-effective care under the supervision of the attending physician in collaboration with other providers, nursing and Rex Healthcare team members.

**Pediatric Admissions**

In 2013, the Corporation determined it would no longer admit most medical patients under the age of 12. Rex historically had a small volume of pediatric inpatient cases, with 156 admissions during fiscal year 2012 (of those admitted, only 46 patients were under 12). The Corporation has continued to provide a wide range of outpatient care for children of all ages, including ear, nose and throat (“ENT”) procedures, general surgeries and orthopaedics, among others. The Corporation still admits post-op ENT and orthopaedic patients that are not medically complex. The Corporation also continues to offer neonatology care. The Emergency Department and Urgent Care clinics continue to treat injured and sick children. Patients under the age of 12 who require medical inpatient admission are transferred to UNC Hospitals in Chapel Hill or WakeMed in Raleigh. By the end of January 2020, the Pediatric Unit will have 10 inpatient beds that will be staffed by pediatric hospitalists. Intermediate care and critical care pediatric patients will continue to be transferred to UNC Hospitals in Chapel Hill or WakeMed.
Hospitalist Program and Admissions

The Corporation started its hospitalist program in December 1998. The hospitalist program has expanded to 37 physicians and 10 advanced practice providers as of June 30, 2019. These physicians and advanced practice providers are employed by the Corporation and manage admissions and inpatient cares for more than 400 private primary care and specialty physicians located within the Corporation’s service area. Admissions credited to the hospitalists are often referrals from family practitioners and other members of the Medical Staff:

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Number of Admissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>7,755</td>
</tr>
<tr>
<td>2017</td>
<td>8,776</td>
</tr>
<tr>
<td>2018</td>
<td>9,238</td>
</tr>
<tr>
<td>2019</td>
<td>9,223</td>
</tr>
</tbody>
</table>

The hospitalists accounted for approximately 33% of the total admissions to Rex Hospital in fiscal year 2019 and tend to lead other members of the Medical Staff in the number of annual admissions generated. However, many of the admissions credited to the hospitalists are referrals from other members of the Medical Staff and are included in the table below. No single admitting physician (including the hospitalists) was credited with more than 2.9% of total admissions in fiscal year 2019. Excluding the hospitalists, no single admitting physician accounted for more than 2.8% of total admissions in fiscal year 2019. The top physician specialties, based on the percentage of fiscal year 2019 admissions, are as follows:

<table>
<thead>
<tr>
<th>Admitting Physician Specialty</th>
<th>Admissions</th>
<th>Percentage of Admissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Medicine</td>
<td>9,474</td>
<td>28.6%</td>
</tr>
<tr>
<td>OB-Gyn</td>
<td>4,908</td>
<td>14.8</td>
</tr>
<tr>
<td>General Surgery</td>
<td>1,964</td>
<td>5.9</td>
</tr>
<tr>
<td>Cardiology</td>
<td>4,665</td>
<td>14.1</td>
</tr>
<tr>
<td>Orthopaedic Surgery</td>
<td>2,586</td>
<td>7.8</td>
</tr>
<tr>
<td>Other</td>
<td>9,544</td>
<td>28.8</td>
</tr>
<tr>
<td>Total</td>
<td>33,131</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

UNC Physicians Network

In addition, UNCHCS owns the UNC Physicians Network, a primary care physician organization. This organization has 85 practice locations across central North Carolina with over 300 employed primary care and specialty care physicians and advance practice practitioners. By employing more physicians in recent years, UNCHCS and the Corporation are positioning for changes in the healthcare industry, mostly driven by value-based healthcare reform. Employing a wide spectrum of physicians, from primary care to specialists, enables UNCHCS and the Corporation to provide high-quality care and services to all patients, while controlling costs and moving toward new delivery models such as population health.
Physician Recruitment

The Corporation’s primary care physician recruitment strategy is to utilize UNC Physicians Network, which recruits and employs primary care physicians as needed for the benefit of UNCHCS and the Corporation. These recruitment goals are supported by the Corporation leadership team and in collaboration with UNCHCS physician recruiters that focus on not only primary care recruitment, but also on specialty and executive physician recruitment. Physicians are employed by the Corporation based on its strategic plan and focus on clinical service lines with potential to grow the Corporation’s market share. During the past five years, the Corporation has significantly expanded its employment of specialist physicians, including in critical care, general surgery, neurosurgery, ENT, gastroenterology, cardiovascular surgery and cardiology. The Corporation has identified other specialty provider needs in urgent care, general surgery, hospitalists, pulmonology and vascular surgery and is currently recruiting, or plans to recruit in the near term, more of these physicians to its Medical Staff. The Corporation also added eight new gastroenterologists for expansion into the Clayton, North Carolina market. All of those recent additions are well-established physicians with many years of caring for patients in the region.

CORPORATE COMPLIANCE

The Corporation’s Compliance Program is led by its own compliance and privacy officer who reports to the UNCHCS Vice President and Chief Audit and Compliance Officer, as well as the Board of Directors. The Corporation’s Quality and Patient Safety Committee meets three times a year and reviews specific compliance, audit and privacy issues. Ongoing compliance functions include co-worker and physician training, reviews of clinical documentation, maintenance of hotline to report issues or concerns and other compliance related activities. The Corporation’s education program includes training on disclosure of matters of concern, and encourages disclosure of matters of concern to supervisors, the Compliance Officer or a telephone hotline. Compliance training for the Board of Directors, the Medical Staff and co-workers is conducted by the compliance officer and uses a system based curriculum.

The Corporation expects, as a condition of employment or any business relationship, that all covered co-workers, board members, officers, contractors, suppliers and vendors comply with the Corporation’s written standards of conduct. Compliance with these policies is a component of a co-worker’s job performance evaluation. Pursuant to its policies, the Corporation is required to and undertakes appropriate disciplinary action or other reporting obligations as a consequence of any co-worker or other covered person failing to report noncompliance issues with federal health care programs or the Corporation’s Standards of Conduct and Compliance Policy.

STRATEGIC INITIATIVES

The Corporation values its patients, co-workers and community. The Corporation’s vision is “Leading the transformation of health care, one person at a time.” Its mission is “Inspiring hope, improving health and healing communities.” On a daily basis the Corporation strives to be the healthcare provider of choice in Wake County and surrounding counties. It stresses superb nursing
care across all of its clinical service lines. Additionally, the Corporation works closely with its employed and community-based physicians to ensure high quality patient outcomes.

Management has identified four key values that best express what is important to the Corporation: Patients and Families First; Champion Teamwork; Build Communities; and Drive Change. The following is a brief discussion of these values.

Patients and Families First

- Ensuring excellence in patient safety, quality and accountability
- Achieving top performance in every outcome for patients

Champion Teamwork

- Collaborating with patients, physicians, co-workers and UNCHCS to bring health and wellness to the community
- Honoring respect, diversity and trust
- Caring and compassion for each other and patients

Build Communities

- Treating patients, visitors and co-workers like family
- Creating a stronger community through passion, dedication and a commitment to caring for all
- Reaching underserved populations

Drive Change

- Developing new ideas and ways of doing work
- Growing knowledge, expertise and learning

Management expects the Corporation to be a national leader in clinical quality and service excellence and to deliver excellent, efficient, and convenient care at a low cost, while stretching to continually improve the care provided. Three key goals underpin the current strategic plan: Improve Health; Increase Value; and Transform Ourselves. Improve Health focuses on increasing engagement by expanding consumer offerings and improving patient satisfaction while improving clinical outcomes, care pathways and patient safety. Increase Value targets easy patient access to services, maximizing capacity and throughput, redesigning care models to decrease the cost of care, and growing traditional lines of business while seeking new sources of revenue. Transform Ourselves aims to strengthen the culture of caring by investing in co-worker and physician engagement, as well as recruitment and retention, and realigning key structural elements to facilitate greater cooperation and collaboration across the Research Triangle area.

In an increasingly complex healthcare environment, with payors and patients looking for better, more efficient healthcare, not necessarily more healthcare, management believes it must proactively adapt to change. In conjunction with UNCHCS, the Corporation has invested in several new areas which reflect its strategic goals and values. These departments include Care
Access and Service Integration, Enterprise Analytics and Data Sciences, Virtual Care, Practice Quality and Innovation, and the Office of Diversity, Equity and Inclusion, just to name a few.

There is a strong commitment to the formation and investment in Enterprise Analytics and Data Sciences. For over nine months, a team of more than 20 leaders from across UNCHCS, including representatives from each of the system entities, worked to develop a plan for helping UNCHCS become more data driven. All of the recommendations that were produced were approved by UNCHCS senior leadership. Among other things, these included:

- Creating a dedicated function focused on building reusable data and analytical assets available to stakeholders across the system;
- Developing and implementing a data governance function to drive consistency in the definition, use, and interpretation of crucial data across the system; and
- Forming better oversight on how the system makes investments and decisions regarding data, reporting, and analytics.

This new team is currently staffed with more than 25 expert resources in such roles as Data Scientist, Statistician, Data Governance Consultant, and Business Quality Assurance Analyst. The solutions produced by this team will lead UNCHCS into the age of data-driven healthcare where clinicians can utilize real and near-time information to improve the care for its patients. Additionally, it will harness the power of predictive analytics to identify proactively patients whose condition might worsen without early intervention. This type of preventative medicine will keep patients safer, help them heal faster, and ultimately decrease the total cost of care the Corporation provides to its patients.

The Corporation continues to work with UNCHCS to find innovative ways to deliver population health. In fiscal year 2015, UNCHCS and the Corporation launched a new Medicare Advantage health plan (“Humana Gold Plus”) in Wake County for Medicare-eligible seniors through a collaboration with Alignment Healthcare, a leading population health company, and Humana, a national health insurance payer. The health plan’s goal is to improve the health and reduce the cost of care for enrolled seniors through better benefits, an advanced clinical model, and a defined provider network. UNCHCS serves as the health care delivery system provider, with a significant network of hospitals, physicians, and ancillary and post-acute providers to serve enrollees. Starting in 2017, the Corporation helped launch and now participates in a clinically integrated network and accountable care organization. Through these organizations, the Corporation has adopted new, advanced alternative payment models administered by both CMS and commercial payors. The explicit intent of the Corporation’s participation is to coordinate care between multiple providers and improve patients’ clinical outcomes while reducing the total cost of care across large populations. In order to achieve these aims, the Corporation has been leading clinical and data integration across the region, and has spearheaded collaboration and integration between ambulatory, acute and post-acute providers across the region to develop and implement innovative care models.

In 2018, Blue Cross and Blue Shield of North Carolina (“Blue Cross NC”) and UNCHCS’s UNC Health Alliance announced an initiative, Blue Value, that reduced premium costs for Affordable Care Act (“ACA”) customers in the Research Triangle area by more than $1,680 a year.
on average, before subsidies. As part of this arrangement, the North Carolina Department of Insurance approved an average rate decrease of more than 21 percent for these customers. Blue Cross NC insures 90,000 individual ACA customers in the 10-county region where Blue Value with UNC Health Alliance will be offered.

CAPITAL FACILITY PLANS

Master Facility Plan

In conjunction with outside consultants, the Corporation launched a strategic and master facility planning process in 2008, which culminated in Rex’s Vision 2030. This comprehensive master facility plan marries the programmatic strategic plan with a robust facility plan, and continues to be refreshed every two years. The primary focus of Vision 2030 is to plan the redevelopment of the 32-year old Main Campus, maximize unused acreage and support the previous suburban growth plan. Vision 2030 includes the North Carolina Heart and Vascular Hospital, which opened in March 2017, the new Cancer Center, and the new Holly Springs Hospital.

Cancer Center

In 2010 the Corporation received a Certificate of Need (“CON”) authorizing the renovation and expansion of its cancer center in existing space on the Main Campus. The new UNC Rex Outpatient Cancer Center will consolidate all cancer services into a single new building designed to accommodate increased demand and create efficiencies for oncology patients and providers. This space will house clinical space for hematology/oncology, surgical oncology, radiation oncology, and supportive care. It will also contain space for pharmacy, imaging, lab, oncology infusion, and radiation oncology treatment. As part of the new Cancer Center, the Corporation has received an exemption from CON law to replace two linear accelerators and one simulator. Construction of the new Cancer Center is underway and is projected to be completed in July 2021. The total estimated cost of the new Cancer Center is approximately $60 million, and will be funded with a combination of proceeds of the 2020A Bonds, operating cash flows, cash reserves, and philanthropic support. The estimated cost of the Cancer Center does not include the estimated cost of $3.9 million to replace the two linear accelerators and the simulator.

The Corporation is currently considering a lease arrangement with UNC Hospitals, UNCHCS or one of its affiliates for the use of space in the new Cancer Center. While no definitive timetable or terms have been established for any such leasehold arrangement, it would be an extension of the existing collaboration among the Corporation, UNC Hospitals and UNCHCS in the clinical area of oncology. Entering into a lease for the use of space in the new Cancer Center would be subject to the covenants in the Master Indenture governing the transfer of Operating Assets. See “Transfer of Operating Assets; Transfer of Cash and Investments; Sale of Accounts” in Appendix C under the heading “SUMMARY OF THE MASTER INDENTURE – Particular Covenants.” The right to payment for the space leased in the new Cancer Center would constitute an Account and would be subject to the security interest granted by the Corporation in its Pledged Assets under the Master Indenture. See the definitions of “Accounts” and “Pledged Assets” in Appendix C under the heading “DEFINITIONS OF CERTAIN TERMS.”
Holly Springs Hospital

The Corporation received a CON in 2014 authorizing the development of a 50 bed acute care hospital in Holly Springs, North Carolina, a fast-growing community in Rex’s service area. The new hospital facility, to be known as the UNC Rex Holly Springs Hospital, will be constructed on the Corporation’s existing campus in Holly Springs which opened in 2011, and will operate under the same hospital license as Rex Hospital. The Corporation plans to relocate three existing operating rooms from its Main Campus to the new facility and to develop additional ancillary and support services for the new hospital. This new hospital facility will also provide additional capacity to relieve some of the demands on the Main Campus.

The new hospital facility in Holly Springs will include:

- 44 general medical/surgical beds, six intensive care unit beds, and seven labor, delivery and recovery beds;
- Emergency Department with 24 general treatment rooms, including an isolation room, triage room, and two resuscitation rooms;
- Three operating rooms relocated from the Main Campus;
- One C-Section room and seven pre/post bays to accommodate the pre/post needs of surgical and C-Section patients;
- Six dedicated pediatric beds;
- One general procedure room;
- 18 pre/post recovery rooms, plus one isolation room;
- One newly acquired CT scanner;
- Mobile MRI unit;
- Two mobile ultrasound units, two fixed X-rays, one nuclear medicine (“SPECT/CT”) unit;
- Laboratory, pharmacy, physical therapy/occupational therapy;
- Cardiopulmonary services with arterial flow studies, electrocardiograms, stress testing, echocardiography, and respiratory therapy; and
- An energy plant, full service kitchen, and on-site sterile processing department.

Construction of the new hospital facility in Holly Springs is underway and is projected to be completed in August 2021. The total estimated cost of this new hospital facility is approximately $171 million, and will be funded with a combination of proceeds of the 2020A Bonds, operating cash flows, cash reserves, and philanthropic support.

INFORMATION SYSTEMS AND TECHNOLOGY INVESTMENTS

Since the initial implementation of Epic’s fully-integrated enterprise information system in June 2014, many significant enhancements to the system have been deployed that support increased quality and operational efficiencies. The ambulatory practices, urgent care facilities, home health services, and on-site laboratory are all integrated into the Epic system, which has established a unified patient record providing care teams with access to comprehensive clinical and administrative information, enabling better coordination across the continuum of care. This
A unified patient record system also includes a comprehensive clinical imaging history, incorporating diagnostic, radiologic, and cardiology images.

In addition to the investments in the Epic system, in August 2018 a robust unified communications platform was implemented across the hospital facilities, including voice-activated calling and secure messaging for real-time care coordination by the clinical staff. Clinical providers have a link within Epic to the North Carolina Controlled Substance Reporting System which enables compliance with the STOP Act and promotes Opioid stewardship. In March 2017, the North Carolina Heart and Vascular Hospital opened with innovative real time location services that leverage an advanced wireless network for temperature monitoring of medications and nutritional products, staff tracking and duress, and asset tracking of critical equipment.

Several strategic investments in information technology capabilities that support the transition to value-based health care payment models have been made recently. Patient registries have been established that focus on chronic disease management, and technologies for automated patient outreach have been implemented. Quality reporting based on integrated data from patient records and payor-administered claims is occurring in collaboration with third-party payors. In April 2019, the Epic system was enhanced to support the identification of social determinants of health and to enable care teams to assist patients with accessing resources from community-based organizations such as food pantries and medication assistance programs.

**SERVICE AREA**

The Main Campus is located in a commercial and residential section of northwest Raleigh, North Carolina. The Corporation’s service area encompasses a four-county area consisting of Wake, Harnett, Franklin and Johnston counties in northeast central North Carolina.

The Corporation’s primary service area is part of the Research Triangle, which is one of the strongest and most diverse economies in the United States. Wake County is the county seat and its most notable city is Raleigh, the capital of North Carolina. Wake County is also home to North Carolina State University, the largest public school system in the State, and a wide range of employers. The Research Triangle is located between Raleigh, Durham and Chapel Hill, and is the largest research park in the United States. The Research Triangle is a primary center in the United States for technology, biotechnology, and pharmaceutical research, and associated entrepreneurial activity. The region boasts a strong collaborative environment among academia, government and industry, with strong concentrations in technology, software development, and life sciences. Wake County is home to major companies such as SAS, Red Hat, and Martin Marietta Materials.

Raleigh is routinely included on national “Best of” lists, including being named the No. 2 Best Place for Business and Careers by Forbes.com in 2018 (Raleigh and Charlotte are the only East Coast cities that made the top 10). Forbes also named Raleigh No. 7 on its list of the nation’s “Smartest Cities.” Over half of the Wake County population holds a bachelor’s degree or a post-baccalaureate degree. Other recent accolades include being named “America’s Best City” by Businessweek, “No. 2 Most Educated City in America” by Forbes and “Healthiest City for Women” by Women’s Health magazine.
The following map shows the location of Rex Hospital and the four-county service area, with Wake County in blue as the primary service area. The other counties represented in green, Johnston, Franklin and Harnett, comprise the secondary service area. Of the patients admitted to Rex Hospital, 69% reside in Wake County, and 75% of its outpatients are from Wake County.

Fiscal Year 2019 Rex Hospital Patient Origin

<table>
<thead>
<tr>
<th>County</th>
<th>% Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wake</td>
<td>75%</td>
</tr>
<tr>
<td>Johnston</td>
<td>6</td>
</tr>
<tr>
<td>Franklin</td>
<td>4</td>
</tr>
<tr>
<td>Harnett</td>
<td>3</td>
</tr>
<tr>
<td>Other North Carolina Counties</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Source: Rex Internal Data (Inpatient and Outpatient).
The following map shows patient origin for Rex Hospital by zip code in fiscal year 2019:

Source: Rex Internal Data (Inpatient and Outpatient).

**Wake County Population Growth**

Wake County and its surrounding communities are among the fastest growing regions in the nation. According to the North Carolina Office of State Budget and Management (“OSBM”), Wake County had 1,070,197 residents as of July 1, 2018.

As shown in the following map, Wake County’s high rate of population growth is projected to continue. OSBM estimates that Wake County’s population will grow by over 24% between 2010 and 2020 and by over 20% between 2020 and 2030.
According to OSBM, Wake County is projected to add 218,453 people in this decade, the most in the State.

**Wake County Economic and Demographic Characteristics**

Unemployment rates in the Corporation’s primary service area are on par with the unemployment rate for the nation and less than the State. According to 2018 data from the United States Department of Labor – Bureau of Labor Statistics, unemployment rates were 3.7% nationwide, 3.4% in Wake County, and 3.9% in the State.

Average household income and education levels also compare favorably to both the nation and the State. The charts below show average household income, education level, and income distribution for the nation, the State and Wake County.
Market Share

The Corporation’s market share in its primary service area (Wake County) has consistently been slightly under 30%, reflecting the Corporation’s strong presence in a competitive market for hospital services. The Corporation defines its secondary service area as Franklin, Johnston and Harnett Counties. The Corporation maintains strong market share in these counties despite the proximity of competing healthcare providers. The Corporation has suburban campuses in fast-growing parts of Wake County, including Holly Springs, Wakefield and Knightdale. Those campuses have created new entry points for patients and have led to higher volumes for key service lines such as heart and vascular, oncology and surgery. In addition, the Corporation has expanded collaborations with specialty physician groups, including North Carolina Heart and Vascular physicians and North Carolina Surgery physicians, which have helped increase volumes from surrounding counties and smaller hospitals in eastern North Carolina.

The following table provides market share information for the Corporation’s primary service area and secondary service area, by each specified 12-month period, for inpatient cases in all business segments.

Source: The Claritas Company.
Market Share – Inpatient

Primary Service Area (Wake County)

<table>
<thead>
<tr>
<th>Hospital or System</th>
<th>Statistic</th>
<th>July 2015 - June 2016</th>
<th>July 2016 - June 2017</th>
<th>July 2017 - June 2018</th>
<th>Volume CAGR*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rex Healthcare</td>
<td>Volume</td>
<td>19,368</td>
<td>19,828</td>
<td>20,184</td>
<td>2.1%</td>
</tr>
<tr>
<td></td>
<td>Share</td>
<td>29%</td>
<td>28%</td>
<td>28%</td>
<td></td>
</tr>
<tr>
<td>WakeMed System</td>
<td>Volume</td>
<td>29,628</td>
<td>32,149</td>
<td>32,286</td>
<td>4.4%</td>
</tr>
<tr>
<td></td>
<td>Share</td>
<td>44%</td>
<td>45%</td>
<td>45%</td>
<td></td>
</tr>
<tr>
<td>Duke System</td>
<td>Volume</td>
<td>11,787</td>
<td>12,196</td>
<td>12,231</td>
<td>1.9%</td>
</tr>
<tr>
<td></td>
<td>Share</td>
<td>17%</td>
<td>17%</td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>UNC Hospitals</td>
<td>Volume</td>
<td>4,355</td>
<td>4,546</td>
<td>4,728</td>
<td>4.2%</td>
</tr>
<tr>
<td></td>
<td>Share</td>
<td>6%</td>
<td>6%</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>All Other</td>
<td>Volume</td>
<td>2,619</td>
<td>2,804</td>
<td>2,666</td>
<td>0.6%</td>
</tr>
<tr>
<td></td>
<td>Share</td>
<td>4%</td>
<td>4%</td>
<td>4%</td>
<td></td>
</tr>
</tbody>
</table>

Secondary Service Area

<table>
<thead>
<tr>
<th>County</th>
<th>Statistic</th>
<th>July 2015 - June 2016</th>
<th>July 2016 - June 2017</th>
<th>July 2017 - June 2018</th>
<th>Volume CAGR*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Franklin</td>
<td>Volume</td>
<td>1,111</td>
<td>1,140</td>
<td>1,113</td>
<td>0.1%</td>
</tr>
<tr>
<td></td>
<td>Share</td>
<td>18%</td>
<td>18%</td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>Johnston</td>
<td>Volume</td>
<td>1,960</td>
<td>1,932</td>
<td>2,105</td>
<td>3.6%</td>
</tr>
<tr>
<td></td>
<td>Share</td>
<td>11%</td>
<td>11%</td>
<td>12%</td>
<td></td>
</tr>
<tr>
<td>Harnett</td>
<td>Volume</td>
<td>1,145</td>
<td>1,184</td>
<td>1,192</td>
<td>2.0%</td>
</tr>
<tr>
<td></td>
<td>Share</td>
<td>9%</td>
<td>9%</td>
<td>10%</td>
<td></td>
</tr>
</tbody>
</table>

Source: Truven North Carolina Inpatient State Data.
*CAGR means compound annual growth rate.

Competition

In the opinion of management, the following are the Corporation’s principal competitors in the primary service area:

WakeMed Health and Hospitals

WakeMed Health and Hospitals (“WakeMed”) is a nonprofit multi-hospital system, currently consisting of three hospitals, WakeMed, WakeMed Cary and WakeMed North, approximately 10, 9 and 13 miles, respectively, from Rex Hospital. WakeMed’s system consists
of a 604-bed acute care tertiary hospital, a 98-bed inpatient physical rehabilitation hospital, a 178-bed full service community hospital in Cary, and a 61-bed inpatient women’s hospital in North Raleigh. In addition to acute care services, WakeMed operates three free-standing emergency rooms, rehabilitation and home health services. It also offers intensive care services for cardiac, cardiovascular surgery, neonatal, medical-surgical and pediatric patients. WakeMed specialty units provide monitored telemetry, pediatric, obstetric and orthopedic services.

**Duke Raleigh Hospital**

Duke Raleigh Hospital is a 186 licensed-bed general acute care hospital located in Raleigh, North Carolina, approximately six miles from Rex Hospital. Duke Raleigh Hospital is a nonprofit hospital owned and operated by Duke University Health System. Duke Raleigh Hospital offers general acute care services as well as cardiology, orthopaedic, oncology, gastroenterology, and endocrinology care.

The following map shows the location in Wake County of Rex Hospital and other Corporation facilities, WakeMed, WakeMed Cary, WakeMed North, and Duke Raleigh Hospital.

The following table presents inpatient operating statistics for Rex Hospital, Duke Raleigh Hospital, WakeMed Cary, WakeMed, and WakeMed North.
### Primary Service Area Hospitals -
Selected Inpatient Data*

<table>
<thead>
<tr>
<th></th>
<th>Rex</th>
<th>Duke Raleigh</th>
<th>WakeMed Cary</th>
<th>WakeMed</th>
<th>WakeMed North</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FFY2016 (10/1/15-9/30/16)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Licensed Beds</td>
<td>433</td>
<td>186</td>
<td>156</td>
<td>628</td>
<td>61</td>
</tr>
<tr>
<td>Available Beds</td>
<td>433</td>
<td>152</td>
<td>156</td>
<td>593</td>
<td>30</td>
</tr>
<tr>
<td>Discharges</td>
<td>28,467</td>
<td>8,985</td>
<td>10,565</td>
<td>30,674</td>
<td>1,003</td>
</tr>
<tr>
<td>Patient Days</td>
<td>110,328</td>
<td>37,228</td>
<td>40,516</td>
<td>157,712</td>
<td>3,193</td>
</tr>
<tr>
<td>ALOS</td>
<td>3.88</td>
<td>4.14</td>
<td>3.83</td>
<td>5.148</td>
<td>3.18</td>
</tr>
<tr>
<td>Avg. Daily Census</td>
<td>302</td>
<td>101</td>
<td>111</td>
<td>431</td>
<td>9</td>
</tr>
<tr>
<td>% Occupancy</td>
<td>70%</td>
<td>67.1%</td>
<td>71.2%</td>
<td>72.9%</td>
<td>29.2%</td>
</tr>
</tbody>
</table>

|                   |       |              |              |         |               |
| **FFY2017 (10/1/16-9/30/17)** |       |              |              |         |               |
| Licensed Beds     | 439   | 186          | 156          | 628     | 61            |
| Available Beds    | 439   | 171          | 156          | 593     | 30            |
| Discharges        | 29,091| 9,588        | 11,372       | 30,952  | **            |
| Patient Days      | 111,613| 42,854      | 45,018       | 158,460 | 3,620         |
| ALOS              | 3.84  | 4.47         | 3.96         | 5.12    | NA            |
| Avg. Daily Census | 306   | 117          | 123          | 433     | NA            |
| % Occupancy       | 70%   | 68.7%        | 79.1%        | 73.2%   | 33.1%         |

|                   |       |              |              |         |               |
| **FFY2018 (10/1/17-9/30/18)** |       |              |              |         |               |
| Licensed Beds     | 439   | 186          | 178          | 628     | 61            |
| Available Beds    | 439   | 175          | 178          | 597     | 30            |
| Discharges        | 30,233| 9,484        | 11,748       | 32,284  | **            |
| Patient Days      | 114,663| 42,783      | 45,663       | 160,309 | 5,223         |
| ALOS              | 3.79  | 4.51         | 3.89         | 4.97    | NA            |
| Avg. Daily Census | 314   | 117          | 125          | 438     | NA            |
| % Occupancy       | 72%   | 67.0%        | 70.3%        | 73.6%   | 47.7%         |

Source: 2017, 2018, 2019 NC Hospital License Renewal Applications.
* Data reported for Rex Hospital, WakeMed Cary, WakeMed and WakeMed North is on a federal fiscal year basis (October 1 to September 30 of the following year); data reported for Duke Raleigh Hospital is for the period beginning on July 1 and ending on June 30.
** Data included in WakeMed.
NA Not available.

### SELECTED FINANCIAL AND UTILIZATION INFORMATION

### Historical Utilization

The following table sets forth selected information concerning utilization of the Corporation’s facilities for the three fiscal years ended June 30, 2017, 2018 and 2019 and the three-month periods ended September 30, 2018 and 2019.
A substantial portion of the Corporation’s revenues is derived from third-party payors. This table sets forth the sources of gross patient service revenues by payor for the three fiscal years ended June 30, 2017, 2018 and 2019 and the three-month periods ended September 30, 2018 and 2019.

<table>
<thead>
<tr>
<th>Payor</th>
<th>Fiscal Year Ended June 30,</th>
<th>Three Months Ended September 30,</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2017</td>
<td>2018</td>
</tr>
<tr>
<td>Patient Days (excl. newborns)</td>
<td>112,284</td>
<td>114,109</td>
</tr>
<tr>
<td>Discharges (excl. newborns)</td>
<td>27,624</td>
<td>28,582</td>
</tr>
<tr>
<td>Observations Days</td>
<td>13,174</td>
<td>14,484</td>
</tr>
<tr>
<td>Number of Births</td>
<td>5,121</td>
<td>5,047</td>
</tr>
<tr>
<td>Average Daily Census:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult &amp; Pediatric</td>
<td>308</td>
<td>313</td>
</tr>
<tr>
<td>Newborn</td>
<td>31</td>
<td>30</td>
</tr>
<tr>
<td>Skilled &amp; Intermediate</td>
<td>216</td>
<td>218</td>
</tr>
<tr>
<td>Average Length of Stay:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult &amp; Pediatric</td>
<td>3.98</td>
<td>3.89</td>
</tr>
<tr>
<td>Newborn</td>
<td>2.19</td>
<td>2.14</td>
</tr>
<tr>
<td>Percent Occupancy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Licensed Beds:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult &amp; Pediatric</td>
<td>71%</td>
<td>77%</td>
</tr>
<tr>
<td>Skilled &amp; Intermediate</td>
<td>95%</td>
<td>96%</td>
</tr>
<tr>
<td>Outpatient Visits:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency Room</td>
<td>51,214</td>
<td>54,456</td>
</tr>
<tr>
<td>All Other Outpatients</td>
<td>1,060,592</td>
<td>1,160,898</td>
</tr>
<tr>
<td>(including physician visits)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Mix Index – All Payors</td>
<td>1.62</td>
<td>1.60</td>
</tr>
<tr>
<td>Case Mix Index – Medicare</td>
<td>2.04</td>
<td>1.97</td>
</tr>
</tbody>
</table>

Percentage of Patient Revenues by Payor

There are no capitation agreements. The Corporation has developed a managed care strategy that is updated annually and permits the Corporation to evaluate the performance of each of its managed care contracts. The Corporation’s payor mix has shifted to higher Medicare Managed Care as cardiology and oncology volumes have grown.
Managed Care Contracting

UNCHCS contracts with all major managed care payors. While all managed care contracts with a particular managed care payor are negotiated at the same time, and contract terms are consistent among UNCHCS hospitals, the Corporation and each other UNCHCS hospital has rates specific to its services. Contracting is integrated for most employed physicians. Negotiations for physician and hospital contracts are performed at the same time.

Combined Statement of Operations

The following Summary of Revenues and Expenses has been derived from the combined financial statements of the Parent Corporation and its subsidiaries for the three fiscal years ended June 30, 2017, 2018 and 2019 and the three-month periods ended September 30, 2018 and 2019. The Summary of Revenues and Expenses should be read in conjunction with the audited combined financial statements and related notes for the fiscal years ended June 30, 2019 and 2018 included in Appendix B.

The financial statements of the Parent Corporation and its subsidiaries as of and for the fiscal year ended June 30, 2017 are available on the Municipal Securities Rulemaking Board’s Electronic Municipal Market Access System at https://emma.msrb.org/EP1027402-ES826994-ES1228131.pdf, and are hereby incorporated herein by reference and have been audited by CliftonLarsonAllen LLP, independent auditors, as stated in their report appearing therein. CliftonLarsonAllen LLP has not been engaged to perform and has not performed, since the date of its report included therein, any procedures on the financial statements addressed in that report. CliftonLarsonAllen LLP also has not performed any procedures relating to this Official Statement.
COMBINED STATEMENTS OF REVENUES,
EXPENSES AND CHANGES IN NET POSITION
(Dollars in thousands)

<table>
<thead>
<tr>
<th></th>
<th>Years Ended June 30,</th>
<th>Three Months Ended September 30,</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2017</td>
<td>2018</td>
</tr>
<tr>
<td>OPERATING REVENUES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net Patient Service Revenue</td>
<td>$986,624</td>
<td>$1,060,817</td>
</tr>
<tr>
<td>Other Operating Revenues</td>
<td>46,957</td>
<td>58,235</td>
</tr>
<tr>
<td>Total Operating Revenues</td>
<td>1,033,581</td>
<td>1,119,052</td>
</tr>
<tr>
<td>OPERATING EXPENSES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salaries and Co-worker Benefits</td>
<td>462,394</td>
<td>490,789</td>
</tr>
<tr>
<td>Medical Supplies and Other Expenses</td>
<td>229,120</td>
<td>270,666</td>
</tr>
<tr>
<td>Other Expenses</td>
<td>224,936</td>
<td>240,734</td>
</tr>
<tr>
<td>Depreciation and Amortization</td>
<td>30,673</td>
<td>38,258</td>
</tr>
<tr>
<td>Total Operating Expenses</td>
<td>947,123</td>
<td>1,040,447</td>
</tr>
<tr>
<td>OPERATING INCOME</td>
<td>86,458</td>
<td>78,605</td>
</tr>
<tr>
<td>NONOPERATING INCOME</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(LOSS)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investment Income (Loss), Net</td>
<td>22,693</td>
<td>33,090</td>
</tr>
<tr>
<td>Interest</td>
<td>(5,473)</td>
<td>(8,154)</td>
</tr>
<tr>
<td>Other, Net</td>
<td>875</td>
<td>(1,062)</td>
</tr>
<tr>
<td>Nonoperating Income, Net</td>
<td>18,095</td>
<td>23,874</td>
</tr>
<tr>
<td>EXCESS OF REVENUES AND GAINS OVER EXPENSES AND LOSSES</td>
<td>104,553</td>
<td>102,479</td>
</tr>
<tr>
<td>CONTRIBUTIONS FROM (TO) RELATED PARTY</td>
<td>(22,335)</td>
<td>(34,901)</td>
</tr>
<tr>
<td>CHANGE IN NET POSITION</td>
<td>82,218</td>
<td>67,578</td>
</tr>
<tr>
<td>Net Position -- Beginning of Year</td>
<td>426,412</td>
<td>508,630</td>
</tr>
<tr>
<td>NET POSITION – END OF YEAR</td>
<td>$508,630</td>
<td>$576,208</td>
</tr>
</tbody>
</table>

Combined Statements of Net Position

The following Statements of Net Position of the Parent Corporation and subsidiaries as of June 30, 2017, 2018 and 2019 have been derived from the audited combined financial statements of the Parent Corporation and its subsidiaries. The Statements of Net Position should be read in their entirety along with the related notes for the fiscal years ended June 30, 2019 and 2018 included in Appendix B. Data for the three months ended September 30, 2018 and 2019 was prepared from unaudited internal records of the Parent Corporation.
# Combined Statements of Net Position

(Dollars in Thousands)

<table>
<thead>
<tr>
<th></th>
<th>As of June 30,</th>
<th>As of September 30,</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2017</td>
<td>2018</td>
</tr>
<tr>
<td><strong>ASSETS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CURRENT ASSETS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash and Cash Equivalents</td>
<td>$61,404</td>
<td>$139,769</td>
</tr>
<tr>
<td>Restricted Cash and Cash Equivalents</td>
<td>9,024</td>
<td>9,254</td>
</tr>
<tr>
<td>Patient Account Receivables, Net</td>
<td>103,567</td>
<td>108,194</td>
</tr>
<tr>
<td>Other Receivables</td>
<td>50,447</td>
<td>33,316</td>
</tr>
<tr>
<td>Inventories</td>
<td>19,461</td>
<td>21,593</td>
</tr>
<tr>
<td>Prepaid Expenses and Other Current Assets</td>
<td>9,170</td>
<td>24,570</td>
</tr>
<tr>
<td><strong>Total Current Assets</strong></td>
<td>253,073</td>
<td>336,696</td>
</tr>
<tr>
<td><strong>ASSETS LIMITED AS TO USE</strong></td>
<td>3,512</td>
<td>3,308</td>
</tr>
<tr>
<td><strong>CAPITAL ASSETS, NET</strong></td>
<td>445,652</td>
<td>436,531</td>
</tr>
<tr>
<td><strong>OTHER ASSETS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long Term Investments</td>
<td>269,132</td>
<td>243,454</td>
</tr>
<tr>
<td>Investments in Affiliates</td>
<td>25,934</td>
<td>27,408</td>
</tr>
<tr>
<td>Other Assets</td>
<td>27,619</td>
<td>23,866</td>
</tr>
<tr>
<td><strong>Total Other Assets</strong></td>
<td>322,685</td>
<td>294,728/</td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td>1,024,922</td>
<td>1,071,263</td>
</tr>
<tr>
<td><strong>DEFERRED OUTFLOWS OF RESOURCES</strong></td>
<td>34,142</td>
<td>28,138</td>
</tr>
<tr>
<td><strong>Total Assets and Deferred Outflows</strong></td>
<td>$1,059,064</td>
<td>$1,099,401</td>
</tr>
<tr>
<td><strong>LIABILITIES AND NET POSITION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CURRENT LIABILITIES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Maturities of Long-Term Debt</td>
<td>$6,874</td>
<td>$7,160</td>
</tr>
<tr>
<td>Vendor Accounts Payable</td>
<td>51,672</td>
<td>37,516</td>
</tr>
<tr>
<td>Accrued Salaries and Benefits</td>
<td>68,557</td>
<td>68,572</td>
</tr>
<tr>
<td>Estimated Third-Party Payor Settlements</td>
<td>28,563</td>
<td>29,254</td>
</tr>
<tr>
<td>Other Current Liabilities</td>
<td>9,840</td>
<td>9,476</td>
</tr>
<tr>
<td><strong>Total Current Liabilities</strong></td>
<td>165,506</td>
<td>151,978</td>
</tr>
<tr>
<td><strong>LONG-TERM DEBT</strong>, Net of Current Maturities</td>
<td>261,513</td>
<td>254,057</td>
</tr>
<tr>
<td><strong>UNFUNDED PENSION LIABILITY, NET</strong></td>
<td>115,925</td>
<td>106,026</td>
</tr>
<tr>
<td><strong>OTHER NONCURRENT LIABILITIES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Liabilities</td>
<td>543,179</td>
<td>512,296</td>
</tr>
</tbody>
</table>

A-43
The combined financial statements included in Appendix B contain the financial statements of the Parent Corporation and its subsidiaries, including the Obligated Group Members. For the fiscal years ended June 30, 2018 and 2019, the Obligated Group Members contributed approximately 99.6% and 99.8%, respectively, of the combined operating revenue, 95.9% and 97.4%, respectively, of the combined assets and deferred outflows of resources, and 94.8% and 99.2%, respectively, of the excess of revenues and gains over expenses and losses reported on such combined financial statements.

Management Discussion and Analysis of Combined Financial Information

**Fiscal Year 2017 Compared to Fiscal Year 2018**

For the fiscal year ended June 30, 2018, total operating income decreased year over year and the excess of revenues and gains over expenses and losses totaled $102.5 million, a $2.1 million decrease from the prior year. The primary driver for this decrease was higher expenses associated with expansion of services and an increase in depreciation expense related to the new North Carolina Heart and Vascular Hospital that opened in the prior year. Investment gains showed an increase of $10.4 million over the prior year for a total of $33.1 million in 2018. This partially offset most of the higher operating expenses. There was a $12.6 million increase in contributions to related parties. For the fiscal year ended June 30, 2018, total operating income decreased $7.9 million, or 9.1%, from the prior year. Net patient service revenue increased $74.2 million due to continued growth in volume as the Corporation made market specific investments in the areas of urgent care sites, physician practices and the heart and vascular tower. Outpatient and ambulatory services continue to be key drivers of growth along with steady inpatient utilization through an increase in complex care transfers, higher acuity services and growth in the market.

Total operating expenses increased $93.3 million, or 9.9%, from the prior year. The largest increase was a $57.3 million increase in medical supplies and other expenses, followed by a $28.4 million increase in salaries and benefits. The increase in medical supplies and other expenses was the result of patient volumes and inflation.
Contractions to UNCHCS were $34.9 million for the fiscal year ended June 30, 2018 and related to funding for operating needs of UNC Physicians Network and contributions to the UNCHCS Enterprise Fund.

Fiscal Year 2018 Compared to Fiscal Year 2019

For the fiscal year ended June 30, 2019, total operating income decreased year over year and the excess of revenues and gains over expenses and losses totaled $82.5 million, a $20.0 million decrease from the prior year. The primary driver for this decrease was related to several value based transitions that have resulted in market savings and unplanned physician moves negatively impacting volumes. A growth and operational efficiency plan has been put in place with expected impacts to begin to be realized in fiscal year 2020. Investment gains remained strong, resulting in $31.4 million of income. For the fiscal year ended June 30, 2019, total operating income decreased $16.4 million, or 20.9%, from the prior year. Net patient service revenue increased $44.9 million due to continued outpatient growth.

Total operating expenses increased $67.3 million, or 6.5%, from the prior year. The largest increase was a $38.7 million increase in salaries and benefits, followed by a $27.0 million increase in medical supplies, pharmacy and other expenses. The increase in medical supplies and other expenses was the result of patient volumes and inflation.

Contributions to UNCHCS were $19.4 million for the fiscal year ended June 30, 2019 and related to funding for operating needs of UNC Physicians Network and contributions to the UNCHCS Enterprise Fund. The Corporation received $179.7 million to refund prior year contributions for investments in system affiliates from the UNCHCS Enterprise Fund and to support continued strategies in the Wake County market.

Three Months Ended September 30, 2019 Compared to Three Months Ended September 30, 2018

For the three months ended September 30, 2019, total operating income increased over the comparable period in the prior year and the excess of revenues and gains over expenses and losses totaled $20.4 million, an $8.2 million increase from the comparable period in the prior year. The primary drivers for this increase were the growth and operational efficiency plans put into effect during the prior year. Investment gains remained strong, resulting in $8.5 million of income. For the three months ended September 30, 2019, total operating income increased $7.7 million, or 100.2%, from the comparable period in the prior year. Net patient service revenue increased $23.8 million, or 9.2%, from the comparable period in the prior year.

Total operating expenses increased $19.5 million, or 7.3%, from the comparable period in the prior year. The largest increase was a $10.0 million increase in medical supplies, pharmacy and other expenses, followed by a $8.4 million increase in salaries and benefits. The increase in medical supplies and other expenses was the result of patient volumes and inflation.

Contributions to UNCHCS were $6.8 million for the three months ended September 30, 2019 and related to funding for operating needs of UNC Physicians Network and contributions to the UNCHCS Enterprise Fund.
Historical and Pro Forma Debt Service Coverage Ratios

The following table sets forth, for the fiscal years ended June 30, 2017, 2018 and 2019, the historical debt service coverage ratio (the Obligated Group’s Income Available for Debt Service divided by Maximum Annual Debt Service on outstanding Long-Term Indebtedness) and the pro forma debt service coverage ratio (the Obligated Group’s Income Available for Debt Service divided by pro forma Maximum Annual Debt Service on Long-Term Indebtedness, assuming that the 2020A Bonds were issued as of the first day of the fiscal year ended June 30, 2019).

<table>
<thead>
<tr>
<th>(Dollars in Thousands)</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excess (Deficiency) of revenue over expenses</td>
<td>$104,445</td>
<td>$97,185</td>
<td>$81,847</td>
</tr>
<tr>
<td>Add (Deduct):</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depreciation and amortization</td>
<td>30,673</td>
<td>38,258</td>
<td>39,894</td>
</tr>
<tr>
<td>Interest expense</td>
<td>5,473</td>
<td>8,154</td>
<td>8,784</td>
</tr>
<tr>
<td>Unrealized (gains) losses</td>
<td>(8,216)</td>
<td>(26,517)</td>
<td>(19,182)</td>
</tr>
<tr>
<td>Income Available for Debt Service (A)</td>
<td>$132,375</td>
<td>$117,080</td>
<td>$111,343</td>
</tr>
<tr>
<td>Maximum Annual Debt Service on Outstanding Long-Term Indebtedness (B)</td>
<td>$14,166</td>
<td>$14,628</td>
<td>$15,479</td>
</tr>
<tr>
<td>Historical Debt Service Coverage Ratio (A/B)</td>
<td>9.34</td>
<td>8.00</td>
<td>7.19</td>
</tr>
<tr>
<td>Pro Forma Maximum Annual Debt Service on Long-Term Indebtedness (C)</td>
<td>$23,416</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pro Forma Debt Service Coverage Ratio (A/C)</td>
<td>4.76x</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) For purposes of this table, interest on the 2015B Bonds, which bear interest at a variable rate, is calculated at an assumed interest rate of 2.00% per annum through final maturity. Historical Pro Forma Maximum Annual Debt Service also assumes the issuance of the 2020A Bonds in the aggregate principal amount of $200,000,000.

(2) Historical Pro Forma Maximum Annual Debt Service and the Historical Pro Forma Long-Term Debt Service Coverage Ratio are preliminary and are subject to change in the final Official Statement.

Source: The Corporation.

Historical and Pro Forma Capitalization Ratios

The following table sets forth the capitalization ratio for the Members of the Obligated Group as of June 30, 2019, and the pro forma capitalization ratio, assuming the 2020A Bonds were issued in the aggregate principal amount of $200,000,000 as of such date.
### June 30, 2019\(^{(1)}\)

<table>
<thead>
<tr>
<th>Total Indebtedness(^{(2)})</th>
<th>$235,745</th>
<th>$463,100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unrestricted Net Position</td>
<td>801,049</td>
<td>801,049</td>
</tr>
<tr>
<td>Total Capitalization</td>
<td>$1,036,794</td>
<td>$1,264,149</td>
</tr>
<tr>
<td>Ratio of Indebtedness to Unrestricted Net Position</td>
<td>29.4%</td>
<td>57.8%</td>
</tr>
<tr>
<td>Indebtedness as a Percentage of Total Capitalization</td>
<td>22.7%</td>
<td>36.6%</td>
</tr>
</tbody>
</table>

\(^{(1)}\) Derived from audited financial statements for fiscal year ended June 30, 2019.

\(^{(2)}\) Includes net premium.

\(^{(3)}\) Pro Forma Total Indebtedness, Pro Forma Total Capitalization, Pro Forma Ratio of Indebtedness to Unrestricted Net Position, and Pro Forma Indebtedness as a Percentage of Total Capitalization are preliminary and are subject to change in the final Official Statement.

Source: The Corporation.

### Liquidity Ratios

This table sets forth the Obligated Group’s liquidity measured by operating cash, general investments and funded depreciation as of June 30, 2017, 2018 and 2019.

<table>
<thead>
<tr>
<th>Liquidity (Dollars in thousands)</th>
<th>As of June 30,</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2017</td>
</tr>
<tr>
<td>Cash and Cash Equivalents</td>
<td>$56,748</td>
</tr>
<tr>
<td>Investments</td>
<td>269,155</td>
</tr>
<tr>
<td>Total Cash &amp; Investments</td>
<td>325,903</td>
</tr>
<tr>
<td>Operating Expenses</td>
<td>948,354</td>
</tr>
<tr>
<td>Interest Expense</td>
<td>5,473</td>
</tr>
<tr>
<td>Depreciation &amp; Amortization Expense</td>
<td>(30,673)</td>
</tr>
<tr>
<td>Net Operating Expenses</td>
<td>923,154</td>
</tr>
<tr>
<td>Days</td>
<td>365</td>
</tr>
<tr>
<td>Daily Cash Requirements</td>
<td>$2,529</td>
</tr>
<tr>
<td>Days Cash on Hand</td>
<td>129</td>
</tr>
</tbody>
</table>
INVESTMENT POLICY

The Corporation Board of Directors has adopted an investment policy setting forth investment goals, objectives, responsibilities and criteria for management of the Corporation’s available funds. Available funds consist of financial assets other than operating cash. The policy is designed to be sufficiently specific to be meaningful, but flexible enough to be practical. The Corporation’s Audit and Finance Committee, under the direction of the Corporation Board of Directors, is responsible for directing and monitoring the investments and reviewing this investment policy at regular intervals.

The Corporation’s Audit and Finance Committee establishes investment objectives and guidelines, selects, manages and monitors qualified investment professionals to advise and oversee investments, and reports to the Corporation Board of Directors on the investment performance and financial condition of the Corporation’s funds. The key objectives of the investment policy are:

1. to achieve a total real return that provides reasonable growth of principal consistent with the preservation of the purchasing power of the fund, and
2. to preserve capital by minimizing the probability of loss of principal over the investment horizon of ten years, and emphasis is placed on minimizing return volatility rather than maximizing total return.

In July 2016, the Corporation Board of Directors approved moving funds to the UNC Investment Fund, LLC (the “UNC Investment Fund”). The UNC Investment Fund, managed by the UNC Management Company, Inc. (the “Management Company”), was organized in 2002 by UNC-Chapel Hill to allow UNC-Chapel Hill, other constituent and affiliated institutions in The University of North Carolina system, and affiliated foundations, associations, trusts, and endowments that support these institutions, to pool their resources and invest collectively in investment opportunities. This structure enhances the ability to attract and retain investment professionals and increase the number of entities that may invest in the pooled investment fund. Additionally, the Management Company manages an intermediate investment pool, the UNC Intermediate Pool, LLC. Both funds utilize third-party investment managers to allocate capital across asset classes.

The UNC Investment Fund’s asset allocation as of June 30, 2019 was as follows:
### Tactical Range (Actual (%)\(^1\))

<table>
<thead>
<tr>
<th>Portfolio</th>
<th>Tactical Range (%)</th>
<th>Actual (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long Biased Equity</td>
<td>24 - 36</td>
<td>27.5</td>
</tr>
<tr>
<td>Long / Short Equity</td>
<td>10 - 20</td>
<td>15.5</td>
</tr>
<tr>
<td>Diversifying Strategy</td>
<td>6 - 14</td>
<td>9.9</td>
</tr>
<tr>
<td>Fixed Income</td>
<td>6 - 14</td>
<td>9.4</td>
</tr>
<tr>
<td>Private Equity</td>
<td>14 - 22</td>
<td>24.1</td>
</tr>
<tr>
<td>Real Estate</td>
<td>5 - 12</td>
<td>5.8</td>
</tr>
<tr>
<td>Energy and Natural Resources</td>
<td>5 - 10</td>
<td>6.8</td>
</tr>
<tr>
<td>Cash</td>
<td>2 - 8</td>
<td>0.9</td>
</tr>
<tr>
<td>Liquidating Managers(^2)</td>
<td>N/A</td>
<td>0.2</td>
</tr>
</tbody>
</table>

\(^1\) Totals vary due to rounding.
\(^2\) Composite contains various managers in liquidation.

The Board of Directors of the Chapel Hill Investment Fund, Inc. (the UNC Investment Fund’s controlling member) established as its long-term objective for the UNC Investment Fund the preservation of the purchasing power of the UNC Investment Fund while providing a predictable, stable, and constant (in real terms) stream of earnings. As of June 30, 2019, the UNC Investment Fund had an annualized three and five year return of 10.6% and 7.7%, respectively. The annual performance for the past five fiscal years is as follows:

**UNC Investment Fund Performance**

*As of June 30,*

<table>
<thead>
<tr>
<th>Fiscal Year Return</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9.3%</td>
<td>(2.0%)</td>
<td>12.1%</td>
<td>12.0%</td>
<td>7.7%</td>
</tr>
</tbody>
</table>

The Obligated Group’s investment portfolio had a market value of $262.1 million as of June 30, 2019. Additional information regarding the Corporation’s investments is provided in the financial statements included in Appendix B.

In 2012, Rex Health Ventures I, LP (“RHV”), a venture capital fund, was formed to invest in health care startup companies and entrepreneurs. RHV invests in organizations that support the discovery and development of new treatments, tools, products and services that foster innovation and positively impact the provision of health care. The Corporation has committed to investing up to $38 million in RHV. Since its formation, RHV has invested in several successful companies, including Aerial BioPharma, Target PharmaSolutions, Veran Medical, Phononic and KitCheck. The Corporation is also serving as a test site for products and services of innovative companies.

**OUTSTANDING LONG-TERM DEBT OF OBLIGATED GROUP**

In addition to the 2020A Bonds, the other outstanding long-term debt secured under the Master Indenture consists of the 2010A Bonds, the 2015A Bonds and 2015B Bonds.

See the front part of this Official Statement for details of the 2020A Bonds.
**Direct Purchase Bonds**

The 2015B Bonds are currently held by TD Bank, N.A. (the “Direct Purchaser”). The outstanding principal amount of the 2015B Bonds is $100 million.

The Corporation has issued three Obligations in connection with the 2015B Bonds (collectively, the “Direct Purchase Obligations”): one to the Commission to evidence the Obligated Group’s obligation to make the principal and interest payments due on the 2015B Bonds, which has been assigned by the Commission to the bond trustee for the 2015B Bonds, and two to the Direct Purchaser to evidence the Obligated Group’s obligation to repay certain taxable loans the Direct Purchaser would be required to make under certain circumstances to purchase the 2015B-1 Bonds and the 2015B-2 Bonds and as evidence of the Obligated Group’s obligations under the Credit Agreement related to the 2015B Bonds (the “Credit Agreement”). The Direct Purchase Obligations are on parity with all Obligations issued and outstanding under the Master Indenture and are equally and ratably secured by the Master Indenture.

The Credit Agreement contains certain covenants of the Obligated Group that are not contained in the Master Indenture or the Loan Agreement related to the 2020A Bonds or that are similar but vary in some respects from the covenants contained in the Master Indenture and the Loan Agreement related to the 2020A Bonds. In particular, the Credit Agreement includes an additional financial covenant not contained in the Master Indenture or the Loan Agreement related to the 2020A Bonds that requires the Obligated Group to maintain a minimum number of days of unrestricted cash on hand at the end of each fiscal year. An Event of Default under (and as defined in) the Credit Agreement, which can result from a breach of such additional financial covenant, may result in an Event of Default under the Master Indenture.

Upon the issuance of the 2020A Bonds, the Direct Purchaser will be deemed to hold approximately 23%* in aggregate principal amount of all of the outstanding Obligations. Upon an Event of Default under the Master Indenture, the holders of at least 25% in aggregate principal amount of all outstanding Obligations issued under the Master Indenture will be able to direct the Master Trustee to accelerate all outstanding Obligations, and to exercise other remedies for the benefit of all holders of outstanding Obligations upon the occurrence of an Event of Default under the Master Indenture, subject to the right of the holders of not less than a majority in aggregate principal amount of outstanding Obligations to provide different or contrary directions to the Master Trustee under certain circumstances. See also “BONDHOLDERS RISKS – Risks Associated with the 2020A Bonds” in the front part of this Official Statement and “SUMMARY OF THE MASTER INDENTURE – Default and Remedies” in Appendix C to this Official Statement.

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* Preliminary, subject to change.
The following table shows the interest rates, prepayment provisions, mandatory purchase dates and maturity dates for the 2015B Bonds.

<table>
<thead>
<tr>
<th>Subseries</th>
<th>Par Outstanding</th>
<th>Call Feature</th>
<th>Mandatory Purchase Date</th>
<th>Interest Rate</th>
<th>Final Maturity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015B-1</td>
<td>$50,000,000</td>
<td>Any time @ par</td>
<td>May 21, 2025</td>
<td>84.77% of the sum of (One-Month LIBOR plus 1.04%)</td>
<td>July 1, 2044</td>
</tr>
<tr>
<td>2015B-2</td>
<td>$50,000,000</td>
<td>Any time @ par</td>
<td>May 21, 2028</td>
<td>84.77% of the sum of (One-Month LIBOR plus 1.11%)</td>
<td>July 1, 2044</td>
</tr>
</tbody>
</table>

CHARITY CARE AND COMMUNITY BENEFIT

Charity Care

The Corporation is committed to providing the best health services to everyone in the communities it serves, regardless of ability to pay. The Corporation has established a Patient Financial Assistance program to provide financial assistance to patients in need. During fiscal year 2014, the Corporation adopted the financial assistance policies of UNCHCS.

The Corporation considers extenuating circumstances associated with uninsured patients and may request documents to verify patient financial circumstances. Debt forgiveness percentages and maximum out-of-pocket amounts are based on the patient’s family income in relation to Federal Poverty Guidelines.

As of July 1, 2014, the Corporation provides a 40% discount for most self-pay patients’ accounts, which does not apply for case rates, bariatric and premium lens procedures, and the full rate is due at registration.

The UNCHCS Financial Assistance Policy extends a 100% discount, with a requested co-pay, on medically necessary health care to those who may not be able to access or afford medical insurance either individually or through their employer. This program is available for North Carolina residents at or below 250% of the Federal Poverty Level for their family size.

Professional customer service advocates with UNCHCS assist patients in determining eligibility and obtaining available coverage from Medicaid, Medicare and other available sources of healthcare coverage.

Patient Assistance Fund

Major illness poses a threat to more than just health. Medical bills, missed time from work, prescription medications, and transportation costs can place tremendous strain on patients and
families, adding to the sense of crisis in their lives. To help mitigate the financial stress that can complicate treatment, the Rex Patient Assistance Fund helps patients in financial need. This fund is administered through the Foundation.

Patients in need of these funds include those requiring daily wound care, heart and vascular patients, and patients treated for infections and other conditions at risk for recurrence. The Rex Patient Assistance Fund helps cover costs that are necessary to keep patients actively participating in their treatment, such as:

- transportation to clinics for outpatient treatment
- medications that may prevent serious complications or readmission to the hospital
- nutrition supplements.

**Healthcare Reform**

Under the most likely scenarios of healthcare reform, management expects charity care costs (as a percentage of revenue) will moderate, as an increasing percentage of the population is covered by health insurance. Charity care costs are expected to remain into the future, as it will take time for the uninsured to obtain insurance coverage and the problem of the underinsured (i.e., unable to pay a deductible) is expected to continue. Management expects healthcare reform will continue to have an impact on charity care.

**Community Benefits**

In fiscal year 2018, the Corporation spent more than $171 million on combined bad debt and community benefit. The Corporation treats every patient, regardless of a patient’s ability to pay, by providing care without charge or at significant reduction from established rates to qualified charity care patients. A pharmacy assistance program also provides additional support.

The Corporation recognizes its responsibility to provide services and programs to improve the overall health and wellbeing of the communities it serves, either at no cost or at reduced rates. These funds prevent illness, promote wellness and improve the overall health of residents, according to the latest Community Benefits Report by the North Carolina Healthcare Association.

The Corporation is the third largest employer in Wake County and has a long history of giving back to the community. As a nonprofit healthcare organization, supporting others who work to improve the health and wellness of our community is a high priority. Through sponsorship, in-kind support and community grants to more than 80 nonprofit organizations each year, the Corporation benefits from a positive, well-established reputation across the service area. Examples include Alice Aycock Poe Center for Health Education, Alliance Medical Ministry, American Heart Association, Interact (domestic violence), Kay Yow Cancer Fund, National Alliance on Mental Illness, Susan G. Komen Race for the Cure, the USO-NC, and Zero Prostate Cancer.

Ongoing outreach and interaction with community groups and chambers of commerce affirms the Corporation’s solid grasp of issues facing the community. Additional information from
the Community Health Needs Assessment provides another dataset used to evaluate and refine strategic decisions.

In fiscal year 2018, the Corporation established an innovative concept to help feed financially insecure patients. The Corporation now runs the only hospital-based food pantry in the Research Triangle in collaboration with Food Bank of Central and Eastern North Carolina and Food Lion. Case managers identify patients through questions related to social determinants of health, and those identified as experiencing challenges with securing nutritious food resources are given a prescription to visit the food pantry upon discharge to receive four days’ worth of healthy food. This helps patients in meeting their nutritional needs and helps put them on a better path to optimal physical health.

In 2018, the Corporation also opened an eight-bed behavioral health zone in its emergency department to provide a safe, quiet and healing environment for patients experiencing a behavioral health crisis where they begin receiving on-site psychiatric care until discharge or transfer. This was the first unit of its kind in the area and has helped to fill a gap in mental health care in the community.

A desire to extend awareness and education of important preventive efforts, generate positive and impactful results, and share leadership tools and expertise, support community relations at Rex. Rex sponsors a variety of health-related outreach projects and supports health and human services, education, the arts and economic development initiatives throughout the service area. In addition, mobile screenings and community outreach lend to an overall improvement in community health:

- The Rex Emergency Response Team provides on-site medical treatment at races, special events and large venues including PNC Arena, North Carolina State’s Carter-Finley Stadium and others throughout the region.

- Mobile Mammography units have reached approximately 4,400 medically underserved women providing free, onsite screenings provided monthly at Wake County Health Department, Advance Community Health and Alliance Medical Ministries.

- The Heart and Vascular Mobile Unit provides free screenings including the NC MedAssist Over the Counter Medicine giveaway event and Congressman Price’s Health Fair.

- The Heart and Vascular Screening team provided education to more than 4,000 at the 2018 North Carolina State Fair on how to administer hands-only CPR.

The Corporation’s workforce participates in a variety of corporate social responsibility projects to promote community involvement. Co-workers are an integral component to the success of these hands-on projects, such as hurricane relief and school supply drives for those in need. In 2019, a commitment was made to Habitat for Humanity of Wake County to build a home in an underserved neighborhood in southeast Raleigh. Over the course of 12 weeks, more than 200 co-workers invested over 1,400 hours to build this home as a way of commemorating the organization’s 125th anniversary.
Community Health Needs Assessment

Every three years the Corporation, in collaboration with community residents, various partners, local hospitals, and employed or elected governmental officials, undertakes a comprehensive Community Health Needs Assessment (“CHNA”). This is systematic collection, assembly, analysis, and dissemination of information about the health of the community served by the Corporation.

The CHNA in 2016 identified the following items of priority:

- Health Insurance Coverage
- Transportation
- Access to Health Services
- Mental Health and Substance Abuse

The Corporation had a Board-approved implementation plan to address these priorities. Specific educational platforms surrounding primary care, cancer, cardiovascular disease, women’s health, men’s health and mental health were developed. Between 2016 and 2019, community programs and health services were monitored and reviewed from implementation to execution.

The CHNA in June 2019 identified the following items of priority:

- Transportation Options and Transit
- Employment
- Access to Care
- Mental Health/Substance Use Disorders
- Housing and Homelessness

Action plans, strategies and tactics to address these five identified priority areas will begin development in fall 2019 and will provide a foundation for this work over the next three years. A new Wake County initiative, Live Well Wake, will provide emphasis to this work.

EDUCATION AND RESEARCH

Education

The Corporation has approximately 40 agreements with health professional training programs throughout North Carolina and approximately 39 programs in other states. In addition to agreements with UNC-Chapel Hill, the Corporation has also entered into agreements with Duke University, East Carolina University and Western Carolina University for health professional training and other medical education programs. In addition, the Corporation has agreements with local programs offered by Wake Technical Community College and Johnston Community College. The Corporation currently supports these programs financially, through teaching resources, classroom space, and clinical practice sites. The Corporation is committed to supporting the next generation of health care providers through hands-on work experience, as evidenced by the number of affiliations currently in place. The Corporation hosts multiple North Carolina State College of
Engineering teams on site for their senior design projects. The engineering students work with bedside clinicians and medical staff to develop concepts and designs for new healthcare products. The Corporation meets annually with representatives from all of these schools in order to identify training opportunities. William Peace University is establishing onsite classes for their newly established RN to BSN program.

The first UNCHCS Advanced Leader Academy was launched in September 2014. This program is designed for high-achieving clinical and administrative managers across UNCHCS. Participants were nominated by an executive at their entity. This 12-month intensive and action-oriented learning program (134 hours) focuses on learning advanced leadership principles and skills. Leaders will build collaborative relationships across the health care system to facilitate systems thinking and system integration and develop the capacity to take on new leadership challenges. Twenty-four leaders representative of the diversity in the health care system were selected to attend. This program is sponsored by the UNC Healthcare Learning Institute’s College of Leadership Excellence.

The UNC Center for Leadership Excellence is a benefit available to all co-workers. This provides an opportunity for co-workers to develop their leadership skills. Programs are designed to engage participants in highly interactive learning experiences that challenge their thinking, encourage collaboration and networking with other co-workers from across the organization, and provide individuals with practical tools that lead them to the next level of excellence in their work and home life. Programs include Compassionate Leader, Diversity Leader and Emerging Leader. The Compassionate Leader program has over 60 hours of class time available to participants.

In addition to its academic relationships, the Corporation supports community-based health care professional organizations. The Corporation serves as a Wake Area Health Education Center-affiliated training site for the American Heart Association sanctioned training programs listed in the following table.

<table>
<thead>
<tr>
<th>American Health Association Sanctioned Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Cardiac Life Support Initial Provider</td>
</tr>
<tr>
<td>Advanced Cardiac Life Support Provider Renewal</td>
</tr>
<tr>
<td>Basic Life Support</td>
</tr>
<tr>
<td>Healthcare Provider CPR</td>
</tr>
<tr>
<td>Neonatal Resuscitation Initial Provider</td>
</tr>
<tr>
<td>Neonatal Resuscitation Renewal</td>
</tr>
<tr>
<td>Pediatric Cardio Pulmonary Resuscitation</td>
</tr>
<tr>
<td>Pediatric Advanced Life Support Initial Provider</td>
</tr>
<tr>
<td>Pediatric Advanced Life Support Renewal</td>
</tr>
</tbody>
</table>

The Wake Area Health Education Center provides health care-related educational programs and services to workers and facilities throughout the region. The Corporation’s co-workers regularly participate in such programs. Physicians and Advance Practice Professionals benefit from Area Health Education Center continuing medical education programs as well.
Research

The Corporation is committed to offering patients the latest treatment options in convenient locations. The Corporation is developing a system-wide affiliate research program incorporating shared UNCHCS research compliance resources, in addition to growing research collaborations with UNCHCS physicians and system-wide affiliations and their associated practices.

The Corporation’s collaborations with UNC’s Lineberger Comprehensive Cancer Center has provided Rex Cancer Center patients with access to over 100 clinical trials. The Corporation currently has 16 studies open to enrollment and 50 active studies with patients in treatment as part of studies that are no longer in accrual. The largest volume of oncology patients are enrolled in studies for breast cancer, gastrointestinal cancers, and head and neck cancers. Patients are enrolling in studies at the Rex Cancer Center in Raleigh, the Cancer Center of Wakefield, and the centers in Cary and Garner. The research program affords patients the opportunity to receive treatment on those trials in a family-oriented community setting closer to home.

Internationally renowned cardiovascular researchers offer a large patient population access to leading interventions in the coronary, vascular, structural heart and electrophysiology arenas. Rex/UNC cardiovascular investigators are involved with a wide variety of drug and device trials and actively participate in a number of cardiac registry projects designed to collect data and improve outcomes. Currently, there are 90 active trials and 23 additional trials have been awarded but are not yet enrolling.

Organizational benefits of a community hospital research program include:

- Complete portfolio of treatment options, including innovative therapies, for patients at all affiliated hospitals and practice sites
- Enhanced scientific reputation
- Continuous Quality Improvement through advanced medicine and innovative therapies
- National/International visibility through the efforts of highly respected investigators and academic collaborator
- Real world outcomes via community based research populations.

CO-WORKER AND CO-WORKER BENEFITS

The Corporation enjoys favorable relations with its co-workers. The Corporation has been named one of the best places to work by various publications, including Modern Healthcare, Carolina Parent, Triangle Business Journal and Becker’s Hospital Review.
As of August 12, 2019, the Corporation employed a total of 5,628 full-time equivalent co-workers. Of that total, 54% are related to direct patient care (nursing, patient care non-RN and clinical paraprofessional), 35% are professional and administrative and 11% are support.

The Corporation is committed to retention of all nursing and non-nursing staff. Nursing staff turnover in fiscal year 2019 was 16.45%. The turnover rate for the workforce as a whole was 15.83% and the vacancy rate was 4%. In fiscal year 2018, nursing staff turnover was 14.48%, organizational turnover was 15.76% and the vacancy rate was 5%. Currently, the Corporation has no material shortages of key healthcare professionals.

The Corporation’s human resources department recruits co-workers through various outlets including print, online, and radio media. In addition, interactive advertising approaches, such as social networking sites, search engine optimization, and e-postcards are utilized. The Corporation participates in school career fairs and professional job fairs. Hard-to-fill positions and strategic initiatives are reviewed annually and supporting recruitment plans are created. Management has taken other steps to avoid shortages in the professional and technical areas. These steps include scholarship and tuition programs, referral programs, periodic assessment of market averages for salaries, flexible staffing schedules, special staffing incentives, and periodic surveys of its co-workers, with survey results used to determine aspects of the work environment that need improvement. These efforts have kept co-worker turnover rates and co-worker satisfaction at levels that compare favorably with industry and peer group benchmarks.

Management believes that communication with co-workers is essential to co-worker retention and has several communication methods in place, including a bi-weekly email news blast, executive rounding, a co-worker intranet, and quarterly co-worker forum meetings with the Corporation’s President and other executives.

The Corporation provides a wide array of benefits for its co-workers. Eligible co-workers have two options for health insurance and two options for both dental and vision insurance with coverage effective the first day of the month following the date of hire. In addition, the Corporation has an onsite child care center for its co-workers’ children. A 403(b) retirement plan with employer matching is available for all co-workers and those hired before January 2009 participate in the Corporation’s defined benefit pension plan. Tuition reimbursement, scholarships and a 529 college savings plan are also available for co-workers.

None of the Corporation’s co-workers are under a collective bargaining agreement with the Corporation, and management has not been notified by any union seeking recognition.

**PENSION AND POST-RETIREMENT BENEFITS**

The Corporation has a defined benefit pension plan (the “Plan”) covering its co-workers with a hire date of January 31, 2009 and earlier. Benefits under the pension equity formula are expressed in terms of a lump sum based on final average earnings and pension credits earned for years of service. The Corporation makes annual contributions to the Plan in accordance with funding requirements determined by an actuary. Contributions are intended to provide not only for benefits attributed to service to date, but also for those expected to be earned in the future. The

Effective January 31, 2009, the Corporation elected to close the Plan to new co-workers. Participation is frozen such that there will be no new participants in the Plan after January 31, 2009. Participants as of January 31, 2009 will continue to participate with no change to the years of service rules or the benefits calculation. The Corporation has elected to stop accruing benefits for all co-workers enrolled in the Plan as of March 31, 2015.

The accumulated benefit obligation of the Plan was $316.6 million at June 30, 2018, and $320.0 million at June 30, 2019. The market value of Plan assets was $210.6 million and $218.2 million at June 30, 2018 and 2019, respectively, resulting in a funded ratio of 66.5% and 68.2% for each respective year.

<table>
<thead>
<tr>
<th>Discount rate</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected long-term rate of return on Plan assets</td>
<td>6.5%</td>
<td>6.5%</td>
</tr>
<tr>
<td>Rate of increase in compensation levels</td>
<td>3.0%</td>
<td>3.0%</td>
</tr>
</tbody>
</table>

The long-term rate of return on Plan assets of 6.5% is based upon management’s estimate of future long-term rates of return on similar assets and is consistent with historical returns on such assets.

**Investment of Retirement Plan Assets**

The Corporation’s overall investment strategy is to generate a return that is sufficient to meet current and expected future financial requirements. Target returns are based upon an actuarial review which calculates the “minimum required return” for the Corporation’s pension portfolio as well as its investment time horizon. All investments are governed by an investment policy overseen by the UNCHCS Retirement Committee and the Corporation’s Board of Directors. The Pension Retirement Committee is comprised of Corporation senior leadership, board members and outside consultants specializing in retirement and investment strategies. The Pension Retirement Committee meets three times a year to review investments and their performance to ensure compliance with the asset allocation guidelines.

**Tax Sheltered Annuity Plan**

The Corporation offers an option allowing co-workers to contribute to a tax-sheltered annuity plan (the “Annuity Plan”) under Section 403(b) of the Internal Revenue Code. The Corporation’s contributions to the Annuity Plan totaled $14.1 million in 2018 and $15.1 million for 2019. Under the Annuity Plan, the Corporation has a tiered matching system program: For co-workers with under three years of service, the Corporation matches 50% of the first 6% contributed; for 3 to 8 years of service, the Corporation matches 50% of the first 8%; and for those with 8 years or more of service, the Corporation matches 50% of the first 10% contributed. Co-workers are vested in their contribution immediately, and are vested in the company match contributions after completing two years of service in which they work at least 1,000 hours per plan year.
Post Retirement Benefit Plan

The Corporation does not provide a post-retirement health benefit plan.

LICENSURE, MEMBERSHIPS AND ACCREDITATION

The Joint Commission conducted an accreditation survey of the Corporation in September 2017. The Joint Commission found evidence of standards compliance. The next Joint Commission survey is expected in 2020. The Corporation achieved specialty specific certification in Total Joint Replacement and was designated as a Thrombectomy Capable Stroke Center in August 2019.

The Corporation is certified for Medicare and Medicaid reimbursement and licensed by the Division of Health Service Regulation, North Carolina Department of Health and Human Services.

The Corporation’s Cancer Care is dually-accredited by the Commission on Cancer as a Comprehensive Cancer Program and by the National Accreditation Program for Breast Centers as a Comprehensive Breast Center.

INSURANCE

The Corporation has a comprehensive property and casualty insurance program, including general and professional liability coverage that is reviewed and approved annually by the Chief Financial Officer and the Chief Medical Officer. The program is deemed to provide adequate protection for the Corporation and its affiliates against any reasonably foreseeable risks or claims. The Corporation purchases coverage for general and professional liability claims and has excess coverage in the event the primary policies are exhausted.

LITIGATION

The Corporation is involved in litigation arising in the normal course of business. After consultation with legal counsel, management believes these matters will be resolved without a material adverse effect on the Corporation’s financial condition or results of operations.
Appendix A

University of North Carolina
Hospitals at Chapel Hill
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UNIVERSITY OF NORTH CAROLINA HOSPITALS
AT CHAPEL HILL

HISTORY, BACKGROUND AND GENERAL DESCRIPTION

General

The University of North Carolina Hospitals at Chapel Hill ("UNC Hospitals"), an operating unit of the University of North Carolina Health Care System ("UNC Health Care System" or the "System"), operates a multi-disciplinary, primary, secondary, tertiary and quaternary academic medical center whose mission is fourfold: (1) quality patient care, (2) education, (3) research, and (4) community service. UNC Hospitals operates acute care hospitals licensed for 817 acute care beds on two campuses located in Chapel Hill and Hillsborough, North Carolina. UNC Hospitals serves as a referral center for patients from throughout the State of North Carolina (the "State") and is a primary source of care for patients in the local area.

From 1952 to 1972, UNC Hospitals (formerly North Carolina Memorial Hospital) was operated as a unit of the Division of Health Affairs of the University of North Carolina at Chapel Hill ("UNC-CH") and was governed by the Board of Trustees of UNC-CH. In 1972, the North Carolina General Assembly consolidated all public institutions of higher education in the State into The University of North Carolina system. At the same time, the General Assembly designated North Carolina Memorial Hospital as a separate entity within The University of North Carolina system with its own Board of Directors. Its status remained unchanged until November 1, 1998 when, pursuant to State legislation, the UNC Health Care System was created and UNC Hospitals and the clinical patient care programs of the UNC-CH School of Medicine were placed under the governance of the Board of Directors of the UNC Health Care System.

UNC Health Care System

The North Carolina General Assembly granted broad powers to the UNC Health Care System to assure management flexibility in a rapidly changing and competitive health care business environment. The UNC Health Care System is governed by a Board of Directors, the majority of whom are appointed by the Board of Governors.

The UNC Health Care System is administered as an affiliated enterprise of The University of North Carolina system to provide patient care, facilitate the education of physicians and other health professionals, conduct research collaboratively with the health sciences schools of UNC-CH, and render other services designed to promote the health and well-being of the citizens of the State. UNC Hospitals remains a distinct entity within the UNC Health Care System, with separate auditable accounts and the ability to contract in its individual capacity.

In 2000, the UNC Health Care System acquired the sole membership interest in Rex Healthcare, Inc. ("Rex Healthcare"). Rex Healthcare sought a larger partner to navigate the rapidly changing health care landscape and determined that the UNC Health Care System was the best choice, and the UNC Health Care System recognized the role of Rex Healthcare in providing healthcare services in Wake County, North Carolina, one of the State’s largest and fastest-growing health care markets. As a member of the UNC Health Care System, Rex Healthcare and its
affiliates, including Rex Hospital, Inc. ("Rex Hospital"), benefit from significant cost-saving measures through consolidation of services and economies of scale. The UNC Health Care System provides certain shared services to Rex Healthcare and its other affiliates. The shared services include information technology, revenue cycle, supply chain management, accounting, strategic planning, and legal services, among others.

The UNC Health Care System has undertaken significant expansion and affiliated with other community hospitals in recent years, improving health care availability in other regions of North Carolina, leading to better integration of physicians and service lines and creating new opportunities for research and innovation. In addition to Rex Healthcare, the UNC Health Care System is now affiliated (through sole membership interests or management agreements) with the following hospitals: Caldwell Memorial Hospital, Inc. ("Caldwell") in Lenoir; Chatham Hospital, Inc. ("Chatham") in Siler City; Johnston Health Services Corporation ("JHSC") and Johnston Memorial Hospital Authority ("JMHA" and, together with JHSC, "Johnston") in Smithfield and Clayton; Lenoir Memorial Hospital, Inc. ("Lenoir") in Kinston; Nash Health Care Systems ("Nash") in Rocky Mount; Onslow County Hospital Authority d/b/a Onslow Memorial Hospital ("Onslow") in Jacksonville; Henderson County Hospital Corporation d/b/a Margaret R. Pardee Memorial Hospital ("Pardee") in Hendersonville; UNC Rockingham Health Care, Inc. ("Rockingham") in Eden; and Wayne Health Corporation and Wayne Memorial Hospital, Inc. (together, "Wayne") in Goldsboro.

High Point Regional Health, located in High Point, was also an affiliate of UNC Health Care System, but was sold to Wake Forest University Baptist Medical Center in September 2018.

The UNC Health Care System has relied on Rex Hospital and UNC Hospitals for cash transfers to support strategic affiliations. Rex Hospital and UNC Hospitals have funded investments in new affiliates, including Johnston, Caldwell and Rockingham, through transfers of cash and capital commitments, with Rex Hospital and UNC Hospitals providing 33% and 67%, respectively, of such funding.

Other components of the UNC Health Care System include (i) UNC Faculty Physicians (formerly known as UNC Physicians and Associates), the medical practice plan of physicians and associated health care providers of the UNC-CH School of Medicine; (ii) UNC Physicians Network, LLC ("UNC Physicians Network"), a subsidiary of the UNC Health Care System, which owns and operates over 97 community-based practices with over 325 employed physicians and advance practice practitioners who deliver a broad range of primary care and specialty services to residents throughout central and eastern North Carolina; and (iii) UNC Physicians Network Group Practices, LLC ("UNC Physicians Network GP"), a wholly owned subsidiary of the UNC Health Care System, which owns and operates two community-based practices with over 30 employed physicians and advance practice providers. In addition, five outpatient dialysis centers are operated by Carolina Dialysis LLC through a joint venture between the UNC Health Care System (majority owner) and Renal Research Institute (managing partner).

The UNC Health Care System has made significant investments in population health care to prepare for a value-based reimbursement regulatory environment. UNC Health Alliance, LLC, a subsidiary of UNC Physicians Network, is a clinically integrated network designed to enable private practice community physicians to enter into value contracts jointly with the UNC Health
Care System and third party payors, with the goal of increasing quality and better managing the
cost of care. UNC Senior Alliance, LLC is also a subsidiary of UNC Physicians Network and has
entered into an agreement with the Centers for Medicare and Medicaid Services as an Accountable
Care Organization for Medicare recipients effective January 1, 2017. This Accountable Care
Organization will involve some hospitals in the UNC Health Care System, employed physicians
and participating community physicians in private practice.

Community physician practices affiliated with UNC Physicians Network have access to
additional operational support, specialty and subspecialty care providers and the UNC Health Care
System’s electronic medical records system. The UNC Health Care System and other affiliated
community hospitals provide annual equity contributions to UNC Physicians Network to fund
operating cash deficits. The UNC Health Care System funds its contributions through assessments
on Rex Hospital, UNC Hospitals, UNC Faculty Physicians and other affiliated community
hospitals.

The UNC Health Care System Enterprise Fund supports the ongoing health care mission
of the UNC Health Care System (including the research and academic missions of the UNC-CH
School of Medicine). Contributions to the UNC Health Care System Enterprise Fund are funded
by entities in the UNC Health Care System, including UNC Hospitals, UNC Faculty Physicians,
Rex Hospital and other entities as they become affiliated with the UNC Health Care System.
Funding from this Enterprise Fund is determined annually, or more often if necessary, based on
recommendations made by the UNC Health Care System leadership team, with final approval
made by the Chief Executive Officer of UNC Health Care System as part of an annual budgeting
process.

See “MANAGEMENT DISCUSSION AND ANALYSIS OF FINANCIAL
INFORMATION” herein for additional information on these contributions for UNC Hospitals in

NEITHER UNC HEALTH CARE SYSTEM, UNC FACULTY PHYSICIANS, UNC
PHYSICIANS NETWORK, UNC PHYSICIANS NETWORK GP, REX HEALTHCARE,
REX HOSPITAL, CALDWELL, CHATHAM, JOHNSTON, LENOIR, NASH, ONSLOW,
PARDEE, ROCKINGHAM, WAYNE NOR ANY OF THE OTHER ENTITIES
AFFILIATED WITH THE SYSTEM, OTHER THAN UNC HOSPITALS, IS OBLIGATED
TO PAY THE PRINCIPAL OF, PREMIUM, IF ANY, OR INTEREST ON, THE SERIES
2019 BONDS.
The organizational structure of UNC Health Care System is shown below including managed (designated by dotted line) and controlled hospitals.

(1) Obligor on the Series 2019 Bonds
(2) Patient Care Programs of UNC-CH School of Medicine

See also “PHYSICIAN AND HOSPITAL NETWORKS” and “PARTNERSHIPS, VENTURES, AND AFFILIATED SERVICES” herein.
Operating Strategies

The UNC Health Care System continues implementation of a health care delivery system that provides the continuum of services now required in health care. This strategy relies on a variety of options for program and service development. The UNC Health Care System utilizes acquisitions, partnerships, network development, contracts, and other means as opportunities are developed. Guided by a philosophy of collaboration and partnership with other providers of care, the UNC Health Care System continues to evaluate options of strategic importance to its development. Acquisitions and affiliations include those in areas such as home health, hospice, physician practices and infusion services. See “PARTNERSHIPS, JOINT VENTURES, AND AFFILIATED SERVICES” and “POTENTIAL ACQUISITIONS AND DIVESTURES” herein.

There are several key components of the UNC Health Care System’s development that have become the centerpieces in developing an integrated delivery system. These program initiatives are described below.

Performance Improvement

The UNC Health Care System has a Performance Improvement (“PI”) program in operation that focuses on both enhancing the quality of services provided and containing the cost of those services. The PI program is guided by a Performance Improvement Plan and Strategic Quality Goals that are updated and evaluated on a regular basis. The PI program uses process improvement, guidelines and pathways, and statistical techniques to continually improve both clinical and administrative services. Employee and patient satisfaction measurement assist the UNC Health Care System in continually monitoring its performance. Patient safety and eliminating preventable harm are major components of the PI program. See “PERFORMANCE IMPROVEMENT INITIATIVES” herein.

Integrated Information System

The Enterprise Integrated Delivery System (“EIDS”) is the fundamental information system infrastructure to support the provision of health care across the continuum of care. EIDS utilizes information technology to connect different providers across the UNC Health Care System. As the UNC Health Care System continued to grow and mature, the disparate electronic health record systems in use by hospitals and outpatient clinics across the UNC Health Care System illustrated the critical need for an integrated suite of clinical, business, and revenue cycle solutions to provide coordinated, real-time data for patients, providers, leadership, and outside parties. In 2012, the leadership team of the UNC Health Care System selected the electronic health record system from Epic Systems Corporation (“Epic”). From 2012 to 2016, a team of information technology, business, and clinical employees worked to build and test Epic@UNC, including a patient portal (My UNC Chart) and a referring physician portal (UNC CareLink). During this period, the UNC Health Care System also developed a system-wide governance and support model for information technology through the Information Services Division.

Since 2014, Epic@UNC has been implemented at eight hospitals across the UNC Health Care System (UNC Hospitals, Chatham, Rex Hospital, Johnston, Caldwell, Pardee, Nash, and Wayne) and more than 600 outpatient clinics. Prior to beginning use of Epic@UNC, each such
hospital was connected to the UNC Health Care System’s network infrastructure. With Epic@UNC in place and an integrated reporting structure, the ongoing focus will involve working with clinical and business leaders to optimize workflows of Epic@UNC and ancillary systems to ensure providers and staff are able to most efficiently serve patients.

Since the initial implementation of Epic@UNC, ambulatory practices, urgent care facilities, home health services, and on-site laboratory facilities have been integrated into the Epic system, thereby establishing a unified patient record providing care teams with access to comprehensive clinical and administrative information, and enabling better coordination across the continuum of care. This unified patient record also includes a comprehensive clinical imaging history, incorporating diagnostic, radiologic and cardiology images.

In addition, a robust unified communications platform was implemented in 2018 across UNC Hospitals’ facilities, including voice-activated calling and secure messaging for real-time care coordination by clinical staff. Several strategic investments in information technology capabilities that support the transition to value-based health care payment models have been made recently. Patient registries have been established that focus on chronic disease management, and technologies for automated patient outreach have been implemented. Quality reporting based on integrated data from patient records and payor-administered claims is occurring in collaboration with third-party payors. In April 2019, the Epic system was enhanced to support the identification of social determinants of health and to enable care teams to assist patients with accessing resources from community-based organizations such as food pantries and medication assistance programs.

An Overview of UNC Hospitals

UNC Hospitals operates a multi-disciplinary, primary, secondary, tertiary and quaternary academic medical center whose mission is fourfold: (1) quality patient care, (2) education, (3) research, and (4) community service.

Patient Care: UNC Hospitals fills an important State and regional role in trauma and burn care, newborn intensive care, high risk obstetrics, arthritis treatment, digestive diseases, pediatric surgery, nephrology, heart disease, otorhinolaryngology, hemophilia, organ transplantation and cancer research and treatment. In the Fiscal Year ended June 30, 2019, UNC Hospitals provided 300,442 days of care to 41,166 inpatients (based on discharges), and there were 2,529,183 outpatient visits to clinics and ancillary units. See “CLINICAL PROGRAMS” herein.

Education: UNC Hospitals serves as the clinical training site for the health professions schools of UNC-CH and for other academic institutions in the region. See “MEDICAL STAFF – Residency Training Programs” and “– Educational Affiliations” herein.

Research: UNC Hospitals is the clinical home of the federally-funded NC TraCS Institute Clinical and Translational Research Center (formerly known as the General Clinical Research Center or “GCRC”). It is also the clinical base for a number of national and international programs, including programs that focus on blood coagulation disorders, cystic fibrosis, burn and wound healing and heart disease. Since the faculty of the UNC-CH School of Medicine and selected members of the faculty of the UNC-CH School of Dentistry comprise UNC Hospitals’ attending medical staff, significant clinical research is conducted at UNC Hospitals. See “CLINICAL PROGRAMS – Research” herein.

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Community Service: UNC Hospitals serves people from every county in the State through public education and interaction with community agencies. In addition to its outpatient and specialty clinics, UNC Hospitals provides many medical care services found only in advanced academic medical centers through state-of-the-art equipment, advanced drugs, the latest surgical techniques, and the presence of highly skilled practitioners.

As an agency of the State, UNC Hospitals is governed by applicable statutory and constitutional provisions. In 1998, UNC Hospitals was granted independence from various statutes governing personnel, purchasing, property acquisition, and construction activities. UNC Hospitals has exercised this management flexibility and established policies and procedures in these areas of its operation.

The President of UNC Hospitals, subject to the authority of the UNC Health Care System's Board of Directors, is responsible for all aspects of budget preparation, budget execution and expenditure reporting. The Finance Department of UNC Hospitals administers the budget and financial affairs of UNC Hospitals in accordance with the North Carolina Executive Budget Act.

AWARDS AND ACCOLADES

The UNC Health Care System routinely receives significant awards and accolades, both local and national, and UNC Hospitals has earned a reputation as one of the nation's top hospitals for quality and safety.

Excellent quality and service are top priorities for UNC Hospitals. UNC Hospitals employs an executive director of customer experience who leads teams of co-workers from across the organization to analyze best practices, address concerns and implement strategies to improve upon customer service models. Hospital Consumer Assessment of Healthcare Provider Systems has ranked UNC Hospitals above the national average in both overall hospital rating and patients' willingness to recommend UNC Hospitals to others.

The UNC Health Care System and UNC Hospitals have received the following recent honors, among others:

- UNC Hospitals was ranked nationally across five adult specialties in *U.S. News & World Report*’s annual “Best Hospitals” report for 2019-2020. To be nationally ranked in a specialty, a facility must be rated among the top 50 hospitals in the nation for that specialty. UNC Hospitals is nationally ranked in the specialties of Ear, Nose and Throat (16), Cancer (27), Gynecology (29), Nephrology (29), and Gastroenterology and GI Surgery (42). The North Carolina Children’s Hospital was nationally ranked in seven pediatric specialties in *U.S. News and World Report*’s annual “Best Children’s Hospitals” report for 2019-2020. Those pediatric specialties included Diabetes and Endocrinology (16), Pulmonology (16), Orthopedics (23), Nephrology (30), Cancer (36), Gastroenterology and GI Surgery (36), and Urology (37).

- In the State, UNC Hospitals was ranked as the #2 hospital by *U.S. News & World Report* for 2019-2020.
• UNC Hospitals was named one of “100 Great Hospitals in America 2019” by Becker’s Hospital Review. According to Becker’s Hospital Review, the hospitals included on this list have been recognized nationally for excellence in clinical care, patient outcomes, and staff and physician satisfaction. UNC Hospitals has received this honor every year since 2014.

• UNC Hospitals was included on Newsweek Magazine’s inaugural list of The World’s Best Hospitals. UNC Hospitals was ranked #50 from the more than 250 American hospitals that were included in the rankings. Newsweek’s list of the world’s best hospitals recognizes 1,000 outstanding hospitals across 11 nations.

• Leapfrog gave UNC Hospitals a top “A” grade for patient safety on its Spring 2019 Hospital Safety Grade scorecard, which uses 28 measures of publicly-available hospital safety data. Nationwide, 832 hospitals received an “A” grade.

• In January 2018, the UNC Health Care System achieved Stage 7 certification (highest possible) for hospitals, outpatient practices, and advanced analytics from the Health Information Management Systems Society, confirming the UNC Health Care System as a national leader in healthcare information technology and analytics. Only 6% of health care systems nationally receive this top-level certification and the UNC Health Care System is the first of two health systems in the United States to achieve Stage 7 status in all three domains. In addition, UNC Health Care System is one of only 27 health systems in the United States to be recognized as “Most Wired Advanced” in 2017 and 2018 by the American Hospital Association for use of information technology to improve patient care and clinical integration. In September 2018, the UNC Health Care System was awarded the coveted Nicholas E. Davie’s Award for thoughtful application of health information technology to substantially improve clinical care delivery, patient outcomes and population health.

• UNC Hospitals was awarded American Hospital Association (“AHA”) Mission: Lifeline® Gold Receiving Quality Achievement Award in 2018 for implementing specific quality improvement measures outlined by the AHA for the treatment of patients who suffer severe heart attacks. UNC Hospitals earned the award by meeting specific criteria and standards of performance for the quick and appropriate treatment of STEMI patients by providing emergency procedures to re-establish blood flow to blocked arteries when needed. UNC Hospitals has received this honor every year since 2012.

• The American Association of Critical Care Nurses awarded UNC Hospitals several Beacon Awards for Excellence, which recognizes a unit’s work towards optimal outcomes and exceptional patient care. UNC Hospitals now has 12 units that have received a Beacon Award, the most recognized units of any hospital in the State.

• In 2010, UNC Hospitals was awarded Magnet Recognition by the American Nurses Credentialing Center (“ANCC”), its highest national credential, in recognition of quality patient care, nursing excellence and innovations in professional nursing practice. UNC Hospitals is one of only 498 health care organizations in the United States (out of more than 6,000) to earn this honor. In 2015, UNC Hospitals received reaccreditation from ANCC and is currently going through another reaccreditation process for the four year
award. As a Magnet accredited facility, UNC Hospitals’ nurses are highlighted as being among the top 10% in the nation.

- UNC Hospitals has been recognized by Healthgrades as a recipient of the Outstanding Patient Experience Award™ every year since 2014. This distinction recognizes hospitals as leaders in patient experience based on responses to the Hospital Consumer Assessment of Healthcare Provider Systems survey.

- UNC Hospitals was awarded AHA/American Stroke Association’s Get With The Guidelines®-Stroke Gold Plus Quality Achievement Award with Target: Stroke Honor Roll Elite Plus for 2019. The award recognizes a hospital’s commitment to providing the most appropriate stroke treatment according to nationally recognized, research-based guidelines based on the latest scientific evidence.

**FACILITIES**

The facilities comprising UNC Hospitals currently total approximately 2.5 million gross square feet. UNC Hospitals is located on the campus of UNC-CH in Chapel Hill, North Carolina, with a second campus located six miles from the Chapel Hill campus in Hillsborough, North Carolina. UNC Hospitals also operates a mental health facility (“WakeBrook”) in facilities owned by Wake County, North Carolina.

The following table summarizes UNC Hospitals’ bed configuration as of September 30, 2019.

**Chapel Hill / Hillsborough**

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<td>Rehabilitation</td>
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<tr>
<td>Total</td>
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**WakeBrook**

<table>
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<tr>
<th>Category</th>
<th>Licensed Beds</th>
<th>Operational Beds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychiatry</td>
<td>28</td>
<td>28</td>
</tr>
</tbody>
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In 1986, UNC Hospitals began a facilities development program that included major building expansions to create the North Carolina Neurosciences Hospital, North Carolina Children’s Hospital, North Carolina Women’s Hospital and North Carolina Cancer Hospital. These projects encompassed 1,005,487 gross square feet of clinical, diagnostic, research, administrative, and ancillary support services space at a total cost of approximately $384 million. These and other projects were undertaken to replace older facilities, enhance clinical services and
establish outreach programs. The North Carolina Neurosciences Hospital was completed in 1996. The 441,350 square foot North Carolina Children’s Hospital and North Carolina Women’s Hospital (located within a single facility) began operations in 2002. These projects were funded with a combination of bond proceeds and cash reserves. The North Carolina Cancer Hospital, with gross square footage of approximately 310,740 and a total cost of approximately $171.4 million, began operations in 2009. Costs associated with the construction and equipping of the North Carolina Cancer Hospital were funded with approximately $151.4 million of North Carolina Cancer Hospital Grant Funds and approximately $20 million of UNC Hospitals’ cash reserves.

UNC Hospitals requested and received approval to construct a medical campus in Hillsborough, North Carolina consisting of an acute care hospital and a physician office building. The facility includes a Level II trauma center (i.e., emergency room), radiology, clinical laboratory, pharmacy services, nutrition, and teaching space among other functions and programs. The physician office building opened in July 2012, and the acute care hospital opened in July 2015. The facility cost approximately $238 million and was funded with UNC Hospitals’ reserves.

Since July 2011, UNC Hospitals has expanded its total licensed beds from 798 to 923 on the Chapel Hill and Hillsborough campuses. Major projects included creation of an acute burn/wound unit, a new bassinet pod in the Newborn Critical Care Center, a new Medical/Surgical unit, a new Medicine Progressive Care Unit, a new Bone Marrow Transplant Unit, and conversion of observation beds on the Hillsborough campus. All of these projects were funded with UNC Hospital’s cash reserves.

In partnership with Wake County, North Carolina, UNC Hospitals assumed operation of the County’s behavioral health facility, WakeBrook, including 16 inpatient psychiatric beds, 32 residential beds, and a crisis and assessment clinic. A 12-bed expansion of the facility was completed in July 2016, bringing the total number of acute care psychiatric beds to 28, with funding in the amount of $4.4 million provided by UNC Hospitals and Rex Hospital.

FUTURE PLANS AND SIGNIFICANT CAPITAL PROJECTS IN DEVELOPMENT

General

UNC Hospitals has a 10-year Facility Master Plan to serve as a program plan for capital development needs. This plan carefully coordinates planning efforts with UNC-CH to assure UNC Hospitals’ development occurs in harmony with planned development of the UNC-CH Health Science Schools and programs, particularly with respect to land use, patient access and parking.

UNC Hospitals periodically updates its long-range capital plans and considers a wide variety of program options as possible areas of emphasis in capital development initiatives. Future capital development plans emphasize the strategic programmatic needs of UNC Hospitals and its patients. The Facility Master Plan emphasizes programs for oncology, heart, musculoskeletal, and ambulatory services. Replacing hospital beds located in older facilities is a goal of the Facility Master Plan.

Recently completed or planned projects include the initiatives described below.
Expansion of Inpatient Licensed Acute Care Beds

UNC Hospitals is currently licensed for 817 acute care beds and operates 811 beds. UNC Hospitals is executing a multi-year plan to operationalize all licensed beds by Fiscal Year 2024.

The projects to be included are as follows:

CTICU Relocation/NSICU Expansion – This project will involve the relocation of the Cardio-Thoracic Intensive Care Unit ("CTICU") to space within UNC Hospitals Anderson Pavilion building. The Neurosurgery Intensive Care Unit ("NSICU"), which is adjacent to the existing CTICU, will then expand into that vacated space. This will result in a net increase of seven Intensive Care Unit beds. The renovation of both areas, consisting of approximately 22,550 square feet, is estimated to cost $15.5 million.

Women's Hospital Bed Conversion – The existing, non-licensed beds at the Women’s Hospital will be converted to acute care or labor, delivery, recovery and postpartum rooms. Only minor renovations will be required to meet the bed licensure rules. The total estimated cost of this project is $1.2 million.

Hillsborough Campus 2nd Bed Wing – This project will involve the construction of the second bed wing envisioned as part of the initial master plan for the Hillsborough campus. The lower two floors will be used for 40 licensed inpatient beds, dialysis services and administrative space. The upper two floors will relocate the existing Rehabilitation Unit from the Chapel Hill campus freeing up space for other bed types. The total estimated cost of this expansion is $76.9 million.

7 Bedtower & East/West – Following relocation of the Rehabilitation Unit to the Hillsborough campus, these floors will be renovated to create additional acute beds at the Chapel Hill campus. The total project area is approximately 40,000 square feet and the estimated cost is $21.9 million.

Expansion of Ambulatory Facilities

UNC Hospitals is also actively expanding access to key services through relocating services from the campus in Chapel Hill to three key locations within its primary service area, including:

- 150,000 square foot medical office building on its Eastowne Campus (Chapel Hill) at an estimated cost of $68.7 million;

- 100,000 square foot medical office building in Panther Creek (Cary) at an estimated cost of $43.7 million; and

- 50,000 square foot medical office building adjacent to the UNC Rex campus (Raleigh) at an estimated cost of $12.2 million.

All of these medical office buildings will be completed in calendar year 2020 and funded by UNC Health Care System.
Land

There are multiple sites presently being held for future clinic development and operation by UNC Hospitals. At Meadowmont in Chapel Hill ("Meadowmont"), there are two sites which are approximately one acre each and offer the opportunity for 10,000 square foot facilities on each site. Developed in 1999, Meadowmont is a 435 acre mixed use development with convenient access to the Town of Chapel Hill and Interstate 40 and offers retail shopping, restaurants and recreational opportunities to residents. In addition, there are two vacant sites at the Hillsborough campus with approximately 12 to 13 acres each.

Preliminary estimated capital expenditures for Fiscal Years ending June 30, 2020 through 2024 for both buildings and equipment are as follows:

<table>
<thead>
<tr>
<th>Existing Projects &amp; Capital Equipment</th>
<th>FY20</th>
<th>FY21</th>
<th>FY22</th>
<th>FY23</th>
<th>FY24</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Projects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surgical Pavilion*</td>
<td>72,000,000</td>
<td>102,000,000</td>
<td>93,000,000</td>
<td>19,730,000</td>
<td>–</td>
</tr>
<tr>
<td>Infrastructure and Utilities*</td>
<td>8,000,000</td>
<td>18,000,000</td>
<td>18,000,000</td>
<td>7,300,000</td>
<td>10,000,000</td>
</tr>
<tr>
<td>Terrace Cafe</td>
<td>4,000,000</td>
<td>1,700,000</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Hillsborough 2nd Wing</td>
<td>5,500,000</td>
<td>46,000,000</td>
<td>18,500,000</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Proton Therapy</td>
<td>5,500,000</td>
<td>13,600,000</td>
<td>16,600,000</td>
<td>5,600,000</td>
<td>–</td>
</tr>
<tr>
<td>Main Campus New Beds</td>
<td>–</td>
<td>5,000,000</td>
<td>25,000,000</td>
<td>20,000,000</td>
<td>20,000,000</td>
</tr>
<tr>
<td>Further Hillsborough Growth</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>5,000,000</td>
<td>20,000,000</td>
</tr>
<tr>
<td>Total New Projects</td>
<td>95,000,000</td>
<td>186,980,000</td>
<td>171,100,000</td>
<td>57,630,000</td>
<td>50,000,000</td>
</tr>
<tr>
<td>Total Projects</td>
<td>166,250,000</td>
<td>271,980,000</td>
<td>259,100,000</td>
<td>149,630,000</td>
<td>135,000,000</td>
</tr>
</tbody>
</table>

* Components of the Project being financed, in part, with the Series 2019 Bonds.

To the extent that funding for the new projects described above has not already been identified, if the Board of Directors elects to go forward with such projects, UNC Hospitals expects to fund such projects from some combination of its cash reserves, debt and other sources of revenue.

Surgical Pavilion, Infrastructure and Utilities Project

UNC Hospitals is constructing a Surgical Pavilion at its main campus in Chapel Hill to replace 24 operating rooms that were originally opened in September 1952. Because of the date of their original design and the significant changes in technology during the past 70 years, the current operating rooms are no longer adequate to accommodate more modern equipment and the number of health care personnel required to assist in various types of surgical procedures.

In addition to replacing 24 operating rooms, 56 pre- and post-operative rooms and 56 intensive care beds will be constructed, and support spaces will be enhanced and enlarged, including family waiting areas, personnel locker rooms, and administrative space for case documentation.

The facility will be connected to the hospital facility on the Chapel Hill campus, will be approximately 335,000 square feet and will have a separate entrance to facilitate more efficient
and easier entry. Construction commenced in November 2018 and is expected to be completed in Spring 2022 at an estimated cost of $318 million. Approximately $150 million of the cost of this project will be financed with proceeds of the Series 2019 Bonds. Additional utility infrastructure and emergency power sources are needed to support this project and the existing campus buildings. These upgrades will be undertaken in conjunction with project construction. Once construction is completed, the vacated space will be renovated and converted to additional procedure rooms that can accommodate cases outside the perioperative suites.

Renovation of the Terrace Café (adjacent to the site of the Surgical Pavilion) will be completed in conjunction with the construction of the Surgical Pavilion to generate construction timeline and cost efficiencies.

**Proton Therapy**

In 2018, UNC Hospitals was awarded a certificate of need to develop a single room proton therapy program. Management immediately launched a comprehensive planning effort to design a facility on the Chapel Hill campus contiguous to the North Carolina Cancer Center. The project is expected to cost $44.4 million and is targeted to open in January 2023.

**GOVERNANCE AND ADMINISTRATION**

The statute creating the UNC Health Care System prescribes a Board of Directors (the “Board of Directors”) of 24 members, including eight ex-officio and 16 at-large members. The 16 at-large members are appointed for four year terms beginning on November 1 of the year of their appointment, 12 of whom are appointed by the Board of Governors and four of whom are appointed by the Board of Directors. The Board of Directors is the governing body of UNC Hospitals. The Board of Directors holds regularly scheduled meetings every 60 days.

There are currently three vacancies on the Board of Directors. The current members of the Board of Directors are as follows:

<table>
<thead>
<tr>
<th>NAME &amp; BOARD POSITION</th>
<th>INITIAL APPOINTMENT &amp; CURRENT TERM EXPIRATION</th>
<th>OCCUPATION, EMPLOYER &amp; LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>At-Large Members</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anne H. Bernhardt</td>
<td>11/01/16-10/31/20</td>
<td>Vice Chairman, Bernhardt Furniture Lenoir, NC</td>
</tr>
<tr>
<td>Samuel B. Bowles</td>
<td>11/01/16-10/31/20</td>
<td>Managing Director, Minturn Partners Charlotte, NC</td>
</tr>
<tr>
<td>G. Hadley Callaway</td>
<td>11/01/18-10/31/22</td>
<td>Physician, Raleigh Orthopedic Clinic Raleigh, NC</td>
</tr>
<tr>
<td>NAME &amp; BOARD POSITION</td>
<td>INITIAL APPOINTMENT &amp; CURRENT TERM EXPIRATION</td>
<td>OCCUPATION, EMPLOYER &amp; LOCATION</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Rebecca T. Cobey (Becky)</td>
<td>11/01/18-10/31/22</td>
<td>Community Volunteer Chapel Hill, NC</td>
</tr>
<tr>
<td>Michael A. Crabb, III (Trey)</td>
<td>11/01/18-10/31/22</td>
<td>Executive Director, Morgan Stanley &amp; Co. LLC(3) Nashville, TN</td>
</tr>
<tr>
<td>Susan B. Culp</td>
<td>11/01/16-10/31/20</td>
<td>Retired; Past Chair of High Point Regional Health High Point, NC</td>
</tr>
<tr>
<td>Anne B. Faircloth</td>
<td>11/01/18-10/31/22</td>
<td>Owner and Manager, Faircloth Farms Clinton, NC</td>
</tr>
<tr>
<td>Timothy L Humphrey</td>
<td>11/01/18-10/31/22</td>
<td>Vice President, Chief Data Officer, IBM Raleigh, NC</td>
</tr>
<tr>
<td>A. Dale Jenkins</td>
<td>11/01/16-10/31/20</td>
<td>CEO, Curi Raleigh, NC</td>
</tr>
<tr>
<td>John G. McNeil, MD, MPH, PhD</td>
<td>11/01/18-10/31/22</td>
<td>President and CEO, Verum Clinical Research Fayetteville, NC</td>
</tr>
<tr>
<td>J. Troy Smith, Jr.</td>
<td>11/01/18-10/31/22</td>
<td>Attorney, Ward and Smith, P.A. New Bern, NC</td>
</tr>
<tr>
<td>Gregory J. Wessling</td>
<td>11/01/17-10/31/21</td>
<td>Consultant, A&amp;G Associates and Partners, LLC Davidson, NC</td>
</tr>
<tr>
<td>Edward L. Willingham, IV</td>
<td>11/01/16-10/31/20</td>
<td>Chief Operating Officer, First Citizens Bank Raleigh, NC</td>
</tr>
</tbody>
</table>

*Ex-Officio Members*

<table>
<thead>
<tr>
<th>NAME &amp; BOARD POSITION</th>
<th>INITIAL APPOINTMENT &amp; CURRENT TERM EXPIRATION</th>
<th>OCCUPATION, EMPLOYER &amp; LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>William L. Roper, MD, MPH</td>
<td>01/15/19-Present</td>
<td>President, UNC System Chapel Hill, NC</td>
</tr>
<tr>
<td>A. Wesley Burks, MD</td>
<td>01/16/19-Present</td>
<td>Dean, School of Medicine Vice Dean for Medical Affairs CEO, UNC Health Care System Chapel Hill, NC</td>
</tr>
<tr>
<td>NAME &amp; BOARD POSITION</td>
<td>INITIAL APPOINTMENT &amp; CURRENT TERM EXPIRATION</td>
<td>OCCUPATION, EMPLOYER &amp; LOCATION</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------------------------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>Matthew G. Ewend</td>
<td>02/01/17-Present</td>
<td>Chief Clinical Officer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UNC Health Care System</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chapel Hill, NC</td>
</tr>
<tr>
<td>Kevin M. Guskiewicz, PhD</td>
<td>02/06/19-Present</td>
<td>Chancellor, UNC-Chapel Hill</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chapel Hill, NC</td>
</tr>
<tr>
<td>Matthew A. Mauro, MD</td>
<td>03/01/17-Present</td>
<td>President, UNC Faculty Physicians</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UNC Health Care System</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chapel Hill, NC</td>
</tr>
<tr>
<td>Cristen Page, MD, MPH</td>
<td>02/18/19-Present</td>
<td>Executive Dean, School of Medicine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chapel Hill, NC</td>
</tr>
<tr>
<td>Gary L. Park</td>
<td>2004-Present</td>
<td>Chief Operating Officer(2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UNC Health Care System</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chapel Hill, NC</td>
</tr>
<tr>
<td>Jonathan C. Pruitt</td>
<td>01/31/18-Present</td>
<td>Vice Chancellor for Finance and Administration, UNC-Chapel Hill</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chapel Hill, NC</td>
</tr>
</tbody>
</table>

(1) Morgan Stanley & Co. LLC is serving as a co-underwriter of the Series 2019 Bonds.

(2) Mr. Park also serves as President of UNC Hospitals for the sole purpose of serving on the Board of Directors in that capacity.

The standing committees of the Board of Directors are the Executive Committee, Finance, Audit and Compliance Committee, Strategic Planning and Communication Committee, and Joint Conference, Quality and Academic Affairs Committee. The Executive Committee has the power to transact all regular business of the UNC Health Care System between meetings of the Board of Directors and reports to the Board of Directors at its next regular meeting. The Finance, Audit and Compliance Committee reviews and makes recommendations to the Board of Directors concerning the fiscal operations of the UNC Health Care System, including accounting, auditing, budgeting, corporate compliance, purchasing, patient accounting functions, personnel policies and practices, compliance with State budgeting practices and procedures, the performance of the audit functions, and the operation and findings of the Compliance Program. The Strategic Planning and Communication Committee reviews and makes recommendations to the Board of Directors concerning long-range planning for clinical, educational and research programs, strategic planning and facility improvement and expansion, communication programs and activities, and the solicitation and use of gifts. The Joint Conference, Quality and Academic Affairs Committee reviews and makes recommendations to the Board of Directors concerning medical-administrative matters, including the efficiency, effectiveness and quality of patient care and related programs, and receives regular reports on the goals and status of educational and research programs at the UNC-CH School of Medicine.
SENIOR MANAGEMENT PERSONNEL

Summary biographical information of UNC Hospitals’ management personnel is presented below.

UNC Hospitals Senior Leadership

Janet Hadar (51), President. Ms. Hadar was appointed as President in October, 2019. Prior to being named President, Ms. Hadar was Senior Vice President for Operations and has served in various roles of increasing responsibility within hospital and system operations since joining UNC Hospitals in 2002. Prior to joining UNC Hospitals, Ms. Hadar was a practicing clinician at the University of Wisconsin Medical Center and the Hospital of the University of Pennsylvania. She has also spent time in health care consulting. Ms. Hadar leads multiple committees at UNC Hospitals and throughout the UNC Health Care System, and is a fellow in the American College of Health Care Executives Association. She has served on numerous community boards and is presently on the Health Alliance Board. Ms. Hadar received a B.S.N. from Villanova University, a M.S.N. from the University of Pennsylvania, and a M.B.A. from Case Western Reserve University.

Christopher S. Ellington (55), President of UNC Health Care Network Hospitals and Executive Vice President/Chief Financial Officer for UNC Hospitals. Mr. Ellington is currently the President of UNC Health Care Network Hospitals (since 2015), and Executive Vice President and Chief Financial Officer for UNC Hospitals. Prior to this role, he also served as the principal fiscal leader for UNC Health Care System affiliations. He joined UNC Hospitals in September 2008 as Senior Vice President and Chief Financial Officer and was named Executive Vice President and Chief Financial Officer in July 2010. He has been listed in Becker’s Hospital Review as a “CFO to know” annually since 2013 and has also been named a top CFO by the Triangle Business Journal and Business Leaders magazines. Before joining UNC Hospitals in 2008, Mr. Ellington was Vice President of Fiscal Services and Chief Financial Officer for Appalachian Regional Healthcare in Lexington, Kentucky. He has also worked in similar executive positions for healthcare systems in Kentucky, West Virginia, and Texas. He serves on the Boards of the North Carolina Hospital Association and Carolina Dialysis, as well as UNC Health Care System affiliated entities in Johnston, and Caldwell. He is an advanced member of the Healthcare Financial Management Association. Mr. Ellington received his bachelor’s degree in Accounting from Clemson University and his master’s degree in Business Administration from the University of Phoenix.

Catherine K. Madigan (63), Senior Vice President and Chief Nursing Officer, UNC Hospitals, Chief Nursing Officer, UNC Health Care System, and Associate Dean for UNC Health Care in the UNC-Chapel Hill School of Nursing. Dr. Madigan was appointed as the Senior Vice President and Chief Nursing Officer at UNC Hospitals and the Associate Dean for the UNC Health Care System in the UNC-CH School of Nursing in February 2016. Prior to her current role, she served in various roles of increasing responsibility within the Division of Nursing since joining UNC Hospitals in 2003, most recently as a Vice President and the Associate Chief of Nursing Officer from 2008 to 2016. Dr. Madigan served as an Adjunct Faculty member at the University of Pennsylvania - School of Nursing from 1996 to 2003. From 1983 to 1996, she served as the Director of the Cardiac Center and a Clinical Nurse Specialist at The Children’s Hospital at the University of Colorado Health Sciences Center. At UNC Hospitals, she has served as Director
of the Magnet Initiative, and led the team responsible for the successful attainment of Magnet Certification in 2010 and re-designation in October 2015. She has written many articles and presented posters and presentations at numerous local and national nursing conferences. Dr. Madigan serves on multiple committees at UNC Hospitals and throughout the UNC Health Care System, and is a member of the American Organization of Nurse Executives where she participated for three years on the Diversity Council. Additionally, Dr. Madigan is on the UNC Health Care System Board of Directors/ Joint Conference, Quality and Academic Affairs Committee. Dr. Madigan received a BSN from Vanderbilt University - School of Nursing, an MSN from the University of Colorado Health Sciences Center - School of Nursing, and her Doctor of Nursing Practice degree from the UNC-CH School of Nursing.

Thomas S. Ivester, M.D., M.P.H. (49), Chief Medical Officer and Vice President for Medical Affairs, UNC Hospitals. Dr. Ivester is the Chief Medical Officer and Vice President for Medical Affairs for UNC Hospitals, Professor of Maternal Fetal Medicine in the UNC School of Medicine, and Associate Professor of Maternal Child Health at UNC Gillings School of Global Public Health. As Chief Medical Officer, Dr. Ivester chairs the Medical Staff Executive Committee and serves on the Joint Conference Quality and Academic Affairs Committee. He is responsible for medical staff appointments and the peer review process. Dr. Ivester also chairs the UNC Medical Center Improvement Council, and he oversees all physician service leaders and medical directors at UNC Medical Center. He previously served as Associate CMO for quality and Medical Director for Quality in Obstetrics. He is an active clinician in maternal fetal medicine, and serves as teaching faculty at the School of Public Health. Dr. Ivester earned a B.S. in Zoology from North Carolina State University, a M.D. from Brody School of Medicine at East Carolina University, and a M.P.H. - Leadership from University of North Carolina at Chapel Hill. He completed residency in Ob-Gyn at the Medical Center of Delaware (Christiana Hospital), and fellowship in maternal fetal medicine at Columbia University and University of Tennessee - Memphis.

Ian B. Buchanan, M.D. (43), President of Ambulatory and Post-Acute Care, UNC Health Care System. Dr. Buchanan is currently President of Ambulatory and Post-Acute Care, UNC Health Care System, with responsibility for UNC Hospitals' outpatient services and hospital support services. In addition, he is Chief Research Officer for the UNC Health Care System, with responsibility for facilitating the conduct of clinical and translational research across UNC Health Care System hospitals and physician practices. Prior to this role, he served as Senior Vice President of Operations, UNC Hospitals. He has been part of the UNC Health Care System leadership team since 2008. Prior to his role at the UNC Health Care System, Dr. Buchanan was an account executive with Optum Health (a UnitedHealth Group company) in New York City and worked with Fortune 50 clients to design and implement disease management and wellness programs. Dr. Buchanan received his bachelor’s degree in Biology from Davidson College and M.D. and M.P.H. degrees from UNC-CH.

B. Glenn George (66), Chief Legal Officer. Ms. George has served as Chief Legal Officer of the UNC Health Care System since December 2011. Prior to joining the UNC Health Care System, she worked at the University of Arizona, where she served as the Vice President for Legal Affairs and General Counsel and Professor of Law. Ms. George also served as the interim General Counsel at UNC-CH from 2002 to 2003. Ms. George spent much of her career as a Professor of Law, with appointments at UNC-CH, College of William & Mary, and the University of Colorado, where she also served as the Associate Vice President of Human Relations and Risk Management.
from 1996 to 1999. Ms. George published numerous law review articles during her academic career and was selected as a Fulbright Scholar to China in 2009. She began her legal career in Los Angeles as an associate for Gibson, Dunn & Crutcher. Ms. George received her bachelor’s degree from UNC-CH and her juris doctorate from Harvard University. Ms. George is a member of the North Carolina State Bar and the American Health Lawyers Association.

**UNC Health Care System Senior Leadership**

*Gary L. Park (68), Chief Operating Officer, UNC Health Care System.* Mr. Park is currently the Chief Operating Officer, UNC Health Care System, with oversight responsibility for all hospital operations within the UNC Health Care System. Previously, Mr. Park served as President of UNC Hospitals from 2004 to 2019. Prior to joining UNC Hospitals, Mr. Park served as President and CEO of Rex Healthcare from January 2001 to September 2004 and continues to serve as the CEO of Rex Healthcare. He was Executive Vice President and Chief Operating Officer of Moses Cone Health System from October 1997 to December 2000. He served as President of Wesley Long Community Hospital from November 1992 to September 1997 when Wesley Long Community Hospital merged with Moses Cone Health System. Prior to his position at Wesley Long Community Hospital, he served as President of Thomas Memorial Hospital in South Charleston, West Virginia, from 1986 to 1992. Mr. Park has a bachelor’s degree from West Virginia University and a master’s degree from the West Virginia College of Graduate Studies.

*Steve Burriss (53), President, Triangle Operations, UNC Health Care System.* Mr. Burriss is currently the President, Triangle Operations, UNC Health Care System, with oversight responsibility for hospital operations in the Triangle region, including UNC Hospitals. Previously, Mr. Burriss served as the President of Rex Hospital from 2015 to 2019. Mr. Burriss joined the Rex Hospital in 1998 as director of human resources and was later promoted to vice president of human resources and then Chief Operating Officer. During his tenure as President, the Rex Hospital was highlighted as one of the Top 50 Hospitals in the United States by Becker’s Hospital Review. Mr. Burriss earned a Bachelor of Science degree in Business and an MBA from Marshall University.

**MEDICAL STAFF**

**General**

As of August 26, 2019, the Medical Staff consisted of 1,358 Active Staff, 11 Affiliate Staff, seven Courtesy Staff and two Honorary Staff. The Medical Staff (described in the table below) consists exclusively of physicians and dentists on the faculties or affiliated with the UNC-CH Schools of Medicine and Dentistry.

As the primary teaching hospital of UNC-CH, UNC Hospitals serves as a major source of education for health professionals in the region and the State. UNC Hospitals serves as a clinical educational site for medical, dental, pharmacy, and nursing students and students of numerous allied health professions, such as laboratory science, physical therapy, occupational therapy, speech and audiology, ultrasound, radiology technologists, and therapeutic recreation.

All physicians and dentists who are members of the Medical Staff of UNC Hospitals are licensed to practice by the North Carolina Medical Board or the North Carolina Board of Dental Examiners. In order to become members of the Medical Staff, applicants must document their
experience, education, demonstrated ability, physical and mental health status, adherence to ethics of their respective professions, and ability to work cooperatively with others. In addition, in accordance with the Medical Staff Bylaws, new appointments must be board certified or in preparation for certification by a member board of the American Board of Medical Specialties or an American Dental Association recognized specialty or subspecialty in which the applicant seeks clinical privileges. If a member of the Medical Staff subject to this requirement fails to obtain board certification within the time limits specified by the Bylaws of the Medical Staff, hospital appointment and clinical privileges will be terminated, unless the requirement is waived in exceptional circumstances, as provided in the Medical Staff Bylaws. Each member of the Medical Staff participates in quality improvement activities of UNC Hospitals and the Medical Staff. Participation in continuing education is a requirement for maintaining Medical Staff membership.

The Medical Staff is divided into four categories: Active Staff, Affiliate Staff, Courtesy Staff, and Honorary Staff. The Active Staff consists of full-time and part-time physicians and dentists who hold a full-time or clinical faculty appointment in the School of Medicine or the School of Dentistry at UNC-CH. The full-time Active Staff admits patients almost exclusively to UNC Hospitals. The Courtesy Staff consists of physicians and dentists who have met the basic qualifications for Active Staff membership, but may or may not hold a faculty appointment in the School of Medicine or the School of Dentistry. Courtesy Staff members must also hold membership on the active staff of another hospital where they actively participate in quality improvement activities. The Honorary Staff consists of physicians and dentists recognized for their professional eminence or noteworthy contributions to the health and medical sciences who no longer practice at UNC Hospitals because they have retired or reside outside of the community. Honorary Staff members do not have admitting privileges, and no new appointments to the Honorary Staff were permitted after July 15, 2019. The Affiliate Staff consists of physicians and dentists who have an office-based practice and refer patients to the inpatient services or procedural areas of UNC Hospitals. Appointment to the Affiliate Staff is intended for the purpose of coordination of care and appropriate follow-up of the Affiliate Staff’s patients after treatment at UNC Hospitals. Members of the Affiliate Staff are not eligible for clinical privileges or admitting privileges, and are not entitled to vote on Medical Staff matters. Members of the Affiliate Staff may visit patients they have referred to UNC Hospitals.

The Medical Staff is organized into 21 clinical departments and numerous committees, which report to the Executive Committee of the Medical Staff at least annually. Each department has a Chair who is responsible for the operation of the department and has general supervision over the clinical work that takes place within the department. The department Chair makes recommendations for Medical Staff appointments and clinical privileges. In addition to other duties, the department Chair is accountable for all professional and administrative activities within the department.

The Medical Staff has an Executive Committee, which is responsible for making recommendations to the Board of Directors concerning the structure of the Medical Staff, Medical Staff membership and clinical privileges for eligible individuals and quality improvement activities. The Joint Conference, Quality and Academic Affairs Committee of the Board of Directors acts as a liaison group between the Board of Directors and the Medical Staff.
Distribution by Specialty and Category

The following table identifies the distribution of members of UNC Hospitals’ Medical Staff, by specialty, as of August 26, 2019:

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Number</th>
<th>Average Age</th>
<th>Board Certified (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anesthesiology</td>
<td>86</td>
<td>45</td>
<td>87</td>
</tr>
<tr>
<td>Dentistry</td>
<td>40</td>
<td>48</td>
<td>80</td>
</tr>
<tr>
<td>Dermatology</td>
<td>23</td>
<td>46</td>
<td>100</td>
</tr>
<tr>
<td>Emergency Medicine</td>
<td>52</td>
<td>43</td>
<td>77</td>
</tr>
<tr>
<td>Family Medicine</td>
<td>94</td>
<td>46</td>
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</tr>
<tr>
<td>Internal Medicine</td>
<td>390</td>
<td>48</td>
<td>94</td>
</tr>
<tr>
<td>Neurology</td>
<td>44</td>
<td>49</td>
<td>84</td>
</tr>
<tr>
<td>Neurosurgery</td>
<td>9</td>
<td>47</td>
<td>78</td>
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<tr>
<td>Obstetrics/Gynecology</td>
<td>87</td>
<td>44</td>
<td>75</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>19</td>
<td>45</td>
<td>68</td>
</tr>
<tr>
<td>Oral &amp; Maxillofacial Surgery</td>
<td>8</td>
<td>58</td>
<td>100</td>
</tr>
<tr>
<td>Orthopedics</td>
<td>25</td>
<td>47</td>
<td>92</td>
</tr>
<tr>
<td>Otolaryngology/Head &amp; Neck Surgery</td>
<td>36</td>
<td>45</td>
<td>75</td>
</tr>
<tr>
<td>Pathology &amp; Laboratory Medicine</td>
<td>38</td>
<td>52</td>
<td>92</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>150</td>
<td>46</td>
<td>95</td>
</tr>
<tr>
<td>Physical Medicine &amp; Rehabilitation</td>
<td>15</td>
<td>43</td>
<td>100</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>84</td>
<td>49</td>
<td>93</td>
</tr>
<tr>
<td>Radiation Oncology</td>
<td>23</td>
<td>46</td>
<td>96</td>
</tr>
<tr>
<td>Radiology</td>
<td>62</td>
<td>45</td>
<td>76</td>
</tr>
<tr>
<td>Surgery</td>
<td>75</td>
<td>47</td>
<td>87</td>
</tr>
<tr>
<td>Urology</td>
<td>18</td>
<td>43</td>
<td>72</td>
</tr>
</tbody>
</table>

**Total/Average**

|               | 1,378 | 47   | 86% |

In addition to these members of the Medical Staff, UNC Hospitals grants practice privileges for specified services to Independent Allied Health Professionals. These include Clinical Pharmacists, Licensed Clinical Social Workers, Optometrists, Podiatrists, Psychologists, and holders of doctoral degrees who are affiliated with the Department of Psychiatry, the Department of Pathology and Laboratory Medicine or other departments, and who are appointed to the faculty, employed by the UNC-CH School of Medicine, or are a party to a contract with UNC Hospitals. Only Independent Allied Health Professionals who meet the same basic qualifications as those required for membership on the Medical Staff are qualified to provide specified patient care services at UNC Hospitals. Independent Allied Health Professionals are not included in the preceding table. As of August 26, 2019, there were 101 Independent Allied Health Professionals with practice privileges at UNC Hospitals. These are distributed across multiple specialties.

UNC Hospitals also grants practice privileges for specified services to Dependent Allied Health Professionals. These include Certified Registered Nurse Anesthetists, Clinical Pharmacist Practitioners, Nurse Midwives, Nurse Practitioners, Physician Assistants, Radiologist Assistants, Registered Nurse First Assistants, Certified First Surgical Assistants, and Anesthesia Assistants. They must function at the direction and under the supervision of a physician sponsor who must be

A-20
a full-time or part-time member of the Active Staff at UNC Hospitals. The services of a Dependent Allied Health Professionals are limited to assisting the physician sponsor in the specified field in which the Dependent Allied Health Professional has been trained, and as described in a written job description. As of August 26, 2019, there were 514 Dependent Allied Health Professionals with practice privileges at UNC Hospitals. These were distributed across multiple departments.

**Hospitalist Program and Admissions**

Started by UNC Hospitals in July 2005, the hospitalist program (the "UNC Hospitalists") has expanded to 44 physicians and ten advanced practice providers (nurse practitioners and physician assistants) as of July 31, 2019. UNC Hospitalists manage admissions to and inpatient care for UNC Hospitals in Chapel Hill and Hillsborough for patients from affiliates in the UNC Health Care System, private primary care and specialty physicians located within the local service area and transfers from across the State. All UNC Hospitalists are trained in internal medicine and are board certified, and some are dual trained and board certified in pediatrics or other medicine subspecialties. UNC Hospitalists care for patients in both the adult and pediatric units at UNC Hospitals. In addition to clinical patient care duties, UNC Hospitalists also teach medical students and residents at UNC Hospitals. UNC Hospitalists collaborate with internal and external general medicine and pediatric providers and specialists on best practices, improving the quality of care and increasing efficiency.

**UNC Hospitalists Inpatient and Observation Admissions**

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Number of Admissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>7,096</td>
</tr>
<tr>
<td>2018</td>
<td>8,232</td>
</tr>
<tr>
<td>2019</td>
<td>8,239</td>
</tr>
</tbody>
</table>

UNC Hospitalists accounted for approximately 30% of the inpatient admissions through the UNC Hospitals Emergency Department at the Chapel Hill and Hillsborough locations in Fiscal Year 2019. Since the opening of the second campus in Hillsborough, UNC Hospitalists have provided care for the majority of its inpatients.

**Residency Training Programs**

UNC Hospitals has administrative responsibility for residents and subspecialty residents and sponsors 30 specialty and 54 subspecialty programs (as detailed below) approved by the Accreditation Council for Graduate Medical Education and three dental residency programs. As of August 31, 2019, 899 residents and subspecialty residents were appointed to Graduate Medical Education at UNC Hospitals.

**Subspecialty Programs**

<table>
<thead>
<tr>
<th>Addiction Medicine</th>
<th>Internal Medicine-Transplant Hepatology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood Banking/Transfusion Medicine</td>
<td>Micrographic Surgery and Dermatologic Oncology</td>
</tr>
<tr>
<td>Child &amp; Adolescent Psychiatry</td>
<td>Maternal-Fetal Medicine</td>
</tr>
<tr>
<td>Complex General Surgical Oncology</td>
<td>Molecular Genetic Pathology</td>
</tr>
</tbody>
</table>
Consultation-Liaison Psychiatry
Cytopathology
Emergency Medical Services
Epilepsy
Female Pelvic Medicine & Reconstructive Surgery
Forensic Pathology
Forensic Psychiatry
Gynecologic Oncology
Hematopathology
Internal Medicine-Advanced Heart Failure & Transplant Cardiology
Internal Medicine-Cardiovascular Disease
Internal Medicine-Clinical Cardiac Electrophysiology
Internal Medicine-Clinical Informatics
Internal Medicine-Endocrinology, Diabetes, and Metabolism
Internal Medicine-Gastroenterology
Internal Medicine-Geriatric Medicine
Internal Medicine-Hematology/Oncology
Internal Medicine-Hospice and Palliative Medicine
Internal Medicine-Infectious Disease
Internal Medicine-Interventional Cardiology
Internal Medicine-Nephrology
Internal Medicine-Pulmonary/Critical Care Medicine
Internal Medicine-Rheumatology
Neonatal-Perinatal Medicine
Neuromuscular Medicine
Neuroradiology
Obstetric Anesthesiology
Orthopaedic Sports Medicine
Otolaryngology-Neurotology
Otolaryngology-Pediatric
Pain Medicine
Pediatric Anesthesiology
Pediatric Critical Care Medicine
Pediatric Emergency Medicine
Pediatric Endocrinology
Pediatric Gastroenterology
Pediatric Hematology/Oncology
Pediatric Infectious Diseases
Pediatric Nephrology
Pediatric Pulmonology
Reproductive Endocrinology & Infertility
Sports Medicine (Primary)
Surgical Critical Care
Vascular & Interventional Radiology
Vascular Neurology
Vascular Surgery – 2 Year Independent Program

**Dental Education Programs**
General Practice Dentistry
Oral and Maxillofacial Surgery

**General Specialty Programs**
Allergy & Immunology
Anesthesiology
Cardiothoracic Surgery – Integrated Program
Child Neurology
Dermatology
Emergency Medicine
Family Medicine
Internal Medicine
Internal Medicine/Pediatrics
Medical Genetics
Neurology
Neurosurgery

Otolaryngology
Pathology
Pediatrics
Pediatrics/Anesthesiology – 5 Year Combined
Physical Medicine & Rehabilitation
Plastic Surgery – Integrated Program
Preventive Medicine
Psychiatry
Radiation Oncology
Radiology-Diagnostic
Radiology-Interventional-Integrated Program
Sleep Medicine

Pediatric Dentistry
Obstetrics & Gynecology  
Orthopedic Surgery  
Ophthalmology  
Surgery  
Urology  
Vascular Surgery – Integrated Program

Educational Affiliations

UNC Hospitals maintains affiliate relationships with health profession schools and programs of UNC-CH and with universities throughout the State and nation. In addition, UNC Hospitals maintains other affiliate relationships with community colleges and health professional training programs such as biomedical technicians, medical assistants, respiratory therapy, and phlebotomy. UNC Hospitals’ recruitment and retention success is attributable, in part, to the challenging opportunities provided by a tertiary/quaternary medical center and the affiliated teaching experiences. UNC Hospitals’ working environment and its allied health professions recruitment program have enabled it to maintain a high quality professional staff.

Collaborative relationships with the UNC School of Nursing and the School of Medicine’s Department of Allied Health have resulted in accelerated training programs for nursing and radiological technologist professionals. UNC Hospitals funds educational scholarships, stipends, and tuition assistance to promote workforce development and on-going staff learning and professional progression as health care providers.

The Health Science Schools on the UNC-CH campus consist of the following:

**School of Medicine**
- Medical Education
- Area Health Education Program
- Medical Allied Health
- Physical Therapy Program
- Occupational Therapy Program
- Radiological Science Program
- Cytotechnology Program
- Clinical Laboratory Sciences Program
- Rehabilitation Counseling Program
- Speech and Hearing Sciences
- Physician’s Assistant Program

**School of Nursing**

**School of Dentistry**
- Dental Education
- Dental Hygienist Program
- Dental Assistant Program

**School of Public Health**
- Health Policy and Administration

**School of Pharmacy**

In addition, several health-related programs are important components of other UNC-CH schools and of UNC Hospitals itself. These are:

**School of Social Work**

**Therapeutic Recreation Program**

**UNC Hospitals’ Programs**
- Radiation Oncology Technologist
- Nuclear Medicine Technologist
- Pharmacy Residency Program
- Clinical Pastoral Care Education Program

See also “PHYSICIAN AND HOSPITAL NETWORKS” and “PARTNERSHIPS, JOINT VENTURES, AND AFFILIATED SERVICES” herein.
CLINICAL PROGRAMS

Inpatient Units

UNC Hospitals provides a full range of acute care services across all major specialties, including obstetrics, gynecology, surgery, medicine, family medicine, orthopaedics, pediatrics, neurology, psychiatry, rehabilitation, oncology, ophthalmology and dermatology. In 1953, UNC Hospitals developed the first intensive care unit in the nation, and this long history in critical and acute care has led to the current allocation of operational beds to assure access to appropriate specialists, state-of-the-art equipment and extensive ancillary support. The following table sets forth the type and number of operational beds at UNC Hospitals as of September 30, 2019:

<table>
<thead>
<tr>
<th>Intensive Care Units</th>
<th>Acute Care Units</th>
<th>Intermediate / Stepdown Units</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit Name</strong></td>
<td><strong>Beds</strong></td>
<td><strong>Unit Name</strong></td>
</tr>
<tr>
<td>Burn Center</td>
<td>21</td>
<td>Medical / Surgical</td>
</tr>
<tr>
<td>Cardiothoracic</td>
<td>16</td>
<td>Hillsborough</td>
</tr>
<tr>
<td>Cardiac</td>
<td>13</td>
<td>Medical / Surgical</td>
</tr>
<tr>
<td>Medicine</td>
<td>30</td>
<td>OB/Gyn &amp; Gyn</td>
</tr>
<tr>
<td>Neonatal</td>
<td>48</td>
<td>Oncology</td>
</tr>
<tr>
<td>Neurosciences</td>
<td>16</td>
<td>Pediatrics</td>
</tr>
<tr>
<td>Pediatric</td>
<td>20</td>
<td>Psychiatry</td>
</tr>
<tr>
<td>Surgery / Trauma</td>
<td>16</td>
<td>Rehabilitation</td>
</tr>
<tr>
<td>Hillsborough Medical/Surgical</td>
<td>18</td>
<td>Stroke / Neurosurgery</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>198</strong></td>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

North Carolina Neurosciences Hospital

Inpatient psychiatric services within a 76-bed licensed facility and associated outpatient clinics are located in the North Carolina Neurosciences Hospital. In addition to inpatient and outpatient psychiatric services, there are inpatient beds for neurology, otolaryngology and neurosurgery and outpatient clinics for these services. Specialized programs for eating disorders and a stroke unit accredited by The Joint Commission are components of this facility. This facility includes comprehensive diagnostic and therapeutic neuropsychiatric and neuroscience capabilities and a full-service emergency room and Level I trauma center.

North Carolina Children’s Hospital

The North Carolina Children’s Hospital is currently licensed for 92 beds and offers a broad range of pediatric specialty and sub-specialty services to pediatric patients and their families. These services are provided in both an inpatient and an outpatient setting and include neonatal care, oncology, cardiology, nephrology, surgery, critical care, hematology, gastroenterology, and endocrinology.
North Carolina Women’s Hospital

The North Carolina Women’s Hospital is currently licensed for 67 beds and offers highly specialized services in both obstetrics and gynecology, including an in-vitro fertilization program, specialization in high risk and complicated pregnancies and deliveries, pre-natal diagnosis, fetal cardiology, gynecology, gynecologic oncology, and other specialized services for women.

North Carolina Cancer Hospital

The cancer programs at UNC Hospitals are part of a Comprehensive Cancer Center designated by the National Cancer Institute (one of only 47 such centers in the United States). The North Carolina Cancer Hospital offers a coordinated approach to the care of cancer patients by integrating various specialty clinics and services including, among others, medical oncology, surgical oncology, pediatric oncology, gynecologic oncology, radiation oncology, and multidisciplinary programs for breast cancer, thoracic oncology, gastrointestinal oncology, genitourinary oncology, head and neck oncology, melanoma and hematologic malignancies. Six linear accelerators provide radiation therapy, including one Cyberknife. Additionally, a mobile intra-operative radiation therapy unit is also available in the operating room suite. There are currently 53 staffed beds in operation at this facility.

The North Carolina Jaycee Burn Center

This facility is the only verified burn center in the State. It provides comprehensive medical care and rehabilitative services to burn victims. The 21 bed intensive care center is recognized nationally as one of the most outstanding facilities for burn care, research and education.

UNC Hospitals – Hillsborough Campus

The Hillsborough campus provides integrated, convenient and patient-centered care for patients from Hillsborough and the surrounding area. This 83-bed facility on the Hillsborough campus is part of UNC Hospitals and focuses on many of its elective surgical programs, such as joint replacement, spine, ophthalmology, urology, benign gynecology, and general surgery.

The Hillsborough campus includes emergency room services which is recognized by the American College of Emergency Physicians as a Geriatric Emergency Department. In addition to a medical office building, the Hillsborough campus provides outpatient services such as Imaging, Vascular Interventional Radiology, and cardiac stress testing. Inpatient services provide integrated, convenient and patient-centered care, and offer highly specialized services for geriatric medicine.

Ambulatory Care Programs

In Fiscal Year 2019, various clinics, emergency departments, and ancillary care departments served more than 1.2 million individuals and completed nearly 1.9 million patient appointments across both primary and specialty care disciplines. Providers saw patients in various clinic locations across the State. The expansion of a wide variety of clinical services, notably the addition of Medical Oncology at Rockingham and the ground-breaking for the Eastowne Medical Office Building, also occurred in Fiscal Year 2019.
Transplant Services

UNC Hospitals continues to experience growth in a complete array of transplant services. These services have grown from 47 solid organs transplanted in Fiscal Year 1990 to 258 solid organs, Ventricular Assisted Device ("VAD") and islet events in Fiscal Year 2019. The following transplant services are offered:

- Kidney
- Heart / VAD
- Lung
- Kidney / Pancreas
- Liver
- Pancreas
- Bone Marrow
- Heart / Lung
- Small Bowel

Cardiovascular Services

As a regional referral center for the State, UNC Medical Center-Cardiac Services offers a wide range of advanced procedures. In May 2019, the Structural Heart Program achieved the milestone of performing the 400th Transcatheter Aortic Valve Replacement. The Structural Heart Program continues to be active in clinical trials for innovative next generation valve replacement technology employing minimally invasive techniques. The Mechanical Circulatory Support program offers a compliment of temporary assist devices such as Impella, ECMO, and Centrimag. A freestanding ECMO team for pediatric and adult patients supports the transport of critical patients and continuous management of ECMO in the ICU. The ECMO program was awarded the Gold Center of Excellence by Extracorporeal Life Support Organization. The Cardiac Cath Lab maintains a rating of Gold Plus for STEMI Care from the American Heart Association. The Electrophysiology Lab offers a variety of therapies for complex heart rhythm abnormalities including the minimally invasive leadless pacemaker implant. Non-Invasive Cardiac Imaging is supported by the Echocardiography Department with offices in various locations.

UNC Air Care

This aeromedical transport service provides helicopter, fixed-wing and ground ambulance services. This program facilitates the rapid dispatch of trauma care services to field sites and transportation to UNC Hospitals and facilitates transfers from other institutions for those patients needing care provided by UNC Hospitals.

Computerized Tomography ("CT")

The Department of Radiology operates seven scanners on the Chapel Hill campus, including six that are hospital-based and one that is in the UNC Ambulatory Care Center which serves inpatients and outpatients. Four of the hospital-based scanners are 64-slice, multi-detector scanners. These scanners allow high definition, musculoskeletal imaging, angiographic and venous procedures, three dimensional imaging, fly-thru imaging, cardiac imaging, and perfusion head scans for early stroke detection. All of these procedures can be done at exceptionally fast speeds, reducing radiation exposure while providing better resolution. CT Scanner service is also available at the UNC Hospitals Imaging and Spine Center (with one CT scanner) and the Hillsborough campus (with two CT scanners).
Magnetic Resonance Imaging ("MRI")

This program operates nine scanners with six hospital-based, fixed-site magnets ranging from 1.5 Tesla to 3.0 Tesla systems used for both inpatients and outpatients at the main hospital. These scanners have special capabilities for all routine imaging, as well as brain perfusion, extensive cardiac imaging for both cardiac anatomy and cardiac function. MRI Scanner service is also available at the UNC Hospitals Imaging and Spine Center and the Hillsborough campus.

Positron Emission Tomography/Computerized Tomography ("PET/CT")

This program operates two PET/CT scanners. PET/CT technology allows the fusion of both PET metabolic images and CT structural images into one set of images. The fused images greatly enhance the ability of radiologists, oncologists, and cardiologists to detect primary tumors, determine the staging process for malignancies, and see cardiac function. This information is essential for treatment planning for oncology and cardiology patients and is gaining other service applications in additional clinical specialties.

Dialysis

This service, supported by the Division of Nephrology, operates 180 certified dialysis stations, with 19 more stations being developed. In addition to the acute adult and pediatric service located at UNC Hospitals, five chronic dialysis centers, Lee and Sanford Dialysis (Lee County), Carrboro Dialysis (Orange County), and Pittsboro and Siler City Dialysis (Chatham County), are operated by Carolina Dialysis LLC through a joint venture between the UNC Health Care System (majority owner) and Renal Research Institute (managing partner). Additional dialysis centers are being explored within the service area.

Gastroenterology Procedures

An active gastroenterology service is supported by the Gastrointestinal Procedures Center. This service provides state-of-the-art endoscopic capability and patient recovery services to a growing patient referral volume at UNC Hospitals and at an off-campus location in Meadowmont. A Gastrointestinal Motility Laboratory provides research and clinical care to patients referred from the southeastern United States.

Neurophysiology

The Clinical Neurophysiology Laboratory performs electronencephalograms, electromyelograms, nerve conduction velocities, autonomic testing and sensory evoked potentials, which are essential to the diagnosis and monitoring of patients with illnesses involving the central and peripheral nervous systems. These studies are performed to diagnose neurological abnormalities, classify epilepsies, quantify efficacy of treatment and localize areas of neurologic disease. Highly trained staff members evaluate the effects of anticonvulsant drug therapies, non-invasive monitoring and potential surgical approaches to neurologic diseases.

Peripheral Vascular Laboratory

This nationally recognized and accredited laboratory provides sophisticated ultrasound diagnostic services for both inpatients and outpatients to evaluate pre-and post-operative venous
and arterial perfusion. These tests are completed utilizing state-of-the-art color flow Doppler ultrasound technology.

Rehabilitation Services

Physical therapy, occupational therapy, speech pathology, and audiology services are provided for patients in both inpatient and outpatient settings across the continuum of care from intensive care units to the rehabilitation program, home health and outpatient services. Recreational therapy and child life services are provided in selected inpatient and outpatient programs, particularly in psychiatry, pediatrics, the North Carolina Jaycee Burn Center, and the North Carolina Rehabilitation Center. In July 2019, the Commission on Accreditation of Rehabilitation Facilities fully reaccredited the adult, children and adolescent rehabilitation programs.

Research

UNC Hospitals is one of the homes of the NC TraCS Clinical and Translational Research Center (formerly known as the General Clinical Research Center or the “GCRC”). The center is part of a nationwide network of approximately 60 Clinical and Translational Science Award programs, each of which is located at a major academic medical research center.

Sleep Studies

The Sleep Studies Program and the Sleep Studies Laboratory provide extensive testing to identify the presence of sleep disturbances and to determine therapeutic solutions to these problems. Procedures include polysomnography, positive airway pressure, sleep apnea assessment, multiple sleep latency tests and other sleep studies. Diagnostic procedures are performed on both inpatients and outpatients, and the multidisciplinary sleep clinic is used to screen and evaluate sleep complaints.

Support Services

All support services are maintained and provided by UNC Hospitals and the UNC Health Care System, thereby affording the greatest amount of control over both quality and cost. These services include food and nutrition, security, safety, maintenance, construction and design, materials management, purchasing, printing, mail, telecommunications, environmental services, patient transportation, guest services, patient equipment, and linen services.

Perioperative Division

Perioperative services include approximately 14,500 inpatient and 22,300 outpatient cases performed annually at four separate sites. The hospital on the Chapel Hill campus has 25 licensed operating rooms and one procedure room, the Children’s Hospital has six licensed operating rooms and one procedure room, the Ambulatory Surgery Center has six licensed operating rooms and two procedure rooms, and the hospital on the Hillsborough campus has six licensed operating rooms and two procedure rooms. Each site has a pre- and post-operative unit and a central processing unit. Additionally the Women’s Hospital has three dedicated cesarean section rooms. See “FUTURE PLANS AND SIGNIFICANT CAPITAL PROJECTS IN DEVELOPMENT” herein for information about the construction of the Surgical Pavilion on the Chapel Hill campus.
Trauma Center

UNC Hospitals was one of the first hospitals in the State to be designated a “Level One” trauma center and to be equipped to handle all types of emergency care. UNC Hospitals has established the Mid-Carolina Trauma Regional Advisory Committee as part of an initiative of the Office of Emergency Medical Services for the State. Currently, 13 hospitals are primary members of this Committee, which focuses on education and improvement of emergency services.

Urodynamics

UNC Hospitals has established a urophysiology laboratory which serves as the clinical procedure area for patients undergoing evaluation, diagnosis and/or treatment of problems of incontinence and impotency. The principal specialists utilizing the laboratory represent both urology and urogynecology services. There are currently two on-campus clinics, one in Urology and one in Gynecology.

Vascular and Interventional Radiology

The Vascular and Interventional Radiology service uses image-guided, minimally invasive diagnostic and therapeutic techniques to perform procedures aimed at treating various disease processes. These radiologists treat aneurysms, arteriovenous malformations, internal bleeding, blood clots, vena cava filter insertions, chemoembolizations, renal hypertension, infections and abscesses, urinary tract obstructions, and many other conditions without using surgery. This program performs more than 30,500 procedures a year in nine angiography suites. The technologists and nurses also support procedures performed in operating rooms.

Home Health

UNC Hospitals operates a home health agency in Chapel Hill and a branch office in Pittsboro. The service area of these combined offices covers five counties in central North Carolina (Alamance, Chatham, Durham, Orange and parts of Lee). The agency provides skilled nursing, physical, occupational and speech therapy, home health aides and medical social work services, and certified nursing assistants.

UNC Hospitals Home Care Specialists has a home infusion pharmacy and medical equipment company in Durham. The service area covers 31 counties throughout central North Carolina. The agency provides:

- Home infusion services for antibiotics, total parenteral nutrition, pain management, biologics, parenteral and enteral nutrition, chemotherapy and other infusion and enteral related supplies, equipment and treatments;

- Durable medical equipment which may include hospital beds, support surfaces, wheelchairs, walkers, canes, crutches, commodes, shower seats, tub benches, enteral nutrition formula-feeding equipment, and negative pressure wound therapy; and

- Respiratory therapy related items such as sleep apnea equipment, oxygen, and suction devices.
In 2011, UNC Homecare Specialist replaced the former relationship that existed with Mid-Carolina Home Care Specialists, LLC and is reported as an operating unit of UNC Hospitals.

Hospice

UNC Hospitals has a hospice agency, UNC Hospice, whose parent office is located in Pittsboro, with a branch office located in Chapel Hill. These offices serve Orange, Chatham, Wake and Lee Counties, along with parts of six contiguous counties. This hospice agency provides support and care in the last phases of incurable diseases so that patients may live as fully and comfortably as possible. Services offered through this agency include physician visits, skilled nursing, certified nursing assistants, nutritional counseling, medical social work, chaplain, bereavement and volunteers. Additionally, hospice provides medications and home medical equipment related to a patient’s terminal illness and as ordered by the patient’s physician.

The SECU Jim & Betsy Bryan Home of UNC Health Care opened in November 2016. Hospice patients receiving care in the inpatient unit are those hospice patients with symptoms that cannot be managed at home. Symptoms are addressed through the use of physician ordered medications and treatments specifically tailored to bring them under control. The services provided to these patients include physician visits, skilled nursing, certified nursing assistants, nutritional counseling, medical social work, chaplain, bereavement, and volunteers. The residential unit serves as a home-like level of care provided for hospice patients until they can return to their homes.

Wellness Center

Preventive health services are an important component of the transition to population-based health services. Since 2002, UNC Hospitals has operated a successful freestanding medically-based community health and wellness center in the Meadowmont development, which offers a full range of fitness and wellness services, along with outpatient rehabilitative oriented health services. In 2013, based on the success of the facility in Meadowmont, UNC Hospitals opened a second wellness center in Cary. Over 12,950 people are active members of the two Wellness Centers, which together average more than 2,500 member visits per day.

WakeBrook Behavioral Health Services

Pursuant to agreements with Wake County and Alliance Health (responsible for managing behavioral health care in Wake County as the designated Local Management Entity), UNC Hospitals provides a variety of behavioral health services at WakeBrook in Raleigh. Services include a 16 bed residential alcohol and drug detoxification unit, a 16 bed residential facility based crisis unit and 28 inpatient acute care psychiatric beds.

Other services provided by UNC Health Care System affiliates include crisis and assessment evaluation and referral (available 24 hours a day/seven days a week); a primary care clinic available to behavioral health patients without a primary care physician; an Assertive Community Treatment Team providing comprehensive outpatient treatment and support; and an outpatient clinic serving approximately 500 of the County’s patients with serious and persistent mental illness (provided at a separate, nearby location).
Other Services

In addition to the preceding services, UNC Hospitals provides a full range of primary, secondary, tertiary and quaternary patient care services for both ambulatory and hospitalized patients. These services are both diagnostic and therapeutic in nature and are delivered on UNC Hospitals’ campus.

PERFORMANCE IMPROVEMENT INITIATIVES

UNC Hospitals has successfully implemented multiple initiatives to improve patient care and safety, resulting in improvements in key outcome metrics. Significant reductions in hospital-acquired infections and patient safety indicators have contributed to high scores with Leapfrog’s Hospital Safety Grade and the Safety of Care component of CMS’s Hospital Star Rating. Among teaching hospitals in the United States, UNC Hospitals ranks in the 80th percentile for CMS Inpatient Pay-for-Performance programs. Cost savings from reductions in hospital-acquired infections is estimated at greater than two million dollars for Fiscal Year 2019 compared to previous years.

Every year more than 1.6 million Americans develop sepsis during hospitalization, and nearly a quarter-million of those die from sepsis-related complications. Because of the prevalence, seriousness and treatability of sepsis, UNC Hospitals launched a sepsis initiative in 2015, aiming to implement reliable screening for early detection of sepsis, educate multidisciplinary teams in evidence-based therapies, and standardize tools and treatment bundles for every inpatient from infants to the elderly. As a result of this initiative, UNC Hospitals has improved sepsis care bundle compliance by over 10% with appropriate care being initiated in the Emergency Department within one hour of arrival. During Fiscal Year 2019, mortality reduction efforts were expanded beyond sepsis, and a UNC Hospitals Mortality Review Committee was formed to address systems issues using quality improvement methods.

North Carolina is in the midst of the national opioid crisis with an average of five deaths every day. UNC Hospitals has implemented precision opioid prescribing to reduce post-operative opioid misuse. To achieve consistent results, UNC Hospitals has developed standard opioid prescription schedules for more than 50 unique surgical populations. Patient surveys reveal no increase in prescription refill requests and no change in patient satisfaction with their pain control.

“Carolina Care” is the UNC Health Care System brand of patient care and service. The goal of Carolina Care is to model consistent behaviors that enhance the patient experience. UNC Hospitals consistently performs above 80th percentile with patient satisfaction scores. During the past two Fiscal Years, an initiative to improve patient engagement has resulted in an increase of over 10% in patients using MyChart to access appointments and test results and to communicate with their doctors.

UNC Hospitals leverages continuous, evidence-based process improvement strategies, such as Lean Six Sigma and the Model for Improvement, to plan and execute care improvement interventions. Staff are trained through IHI Open School and organizational Lean training. The UNC Institute for Healthcare Quality Improvement sponsors “Physicians Engaged in Quality & Safety” training geared toward resident physicians, as well as Improvement Scholars, an experiential faculty development program that incorporates many aspects of quality improvement,
including teamwork (TeamSTEPPS™), partnering with patients and families, and presenting and publishing improvement results.

**PHYSICIAN AND HOSPITAL NETWORKS**

**Physician Network**

UNC Health Care System and some of its affiliates own UNC Physicians Network, which owns and operates over 97 community-based practices in 13 counties in the State. The purpose of the community-based practices is to provide care close to home for the convenience of patients and to allow clinicians and staff of the UNC Health Care System to be part of their local communities.

Approximately 325 physicians and nurse practitioners provide care at these community locations. The revenues from these physician clinics do not secure the Series 2019 Bonds, for which UNC Hospitals is the sole obligor. The following chart shows the community-based patient visits over the past five Fiscal Years.

![UNC Physicians Network Annual Patient Visits](chart)

**Hospital Network**

UNC Hospitals has developed arrangements with several hospitals across the State for the provision of health care services to foster improvements in the quality of health care for North Carolina citizens, improve access to a broad range of needed services in rural areas of North Carolina and enhance the viability of community hospitals and UNC Hospitals. Arrangements with the local hospitals vary according to the needs of the respective communities. Support provided by UNC Hospitals and the UNC Health Care System includes partnering in joint ventures, offering locally based continuing education opportunities, offering specific training programs, and establishing physician outreach clinics. The following list shows the hospitals in the State with which UNC Hospitals maintains a working affiliation and their locations:

A-32
<table>
<thead>
<tr>
<th>Hospital</th>
<th>Hospital Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alamance Regional Medical Center</td>
<td>Burlington</td>
</tr>
<tr>
<td>Betsy Johnson Hospital</td>
<td>Dunn</td>
</tr>
<tr>
<td>Caldwell*</td>
<td>Lenoir</td>
</tr>
<tr>
<td>Cape Fear Valley Medical Center</td>
<td>Fayetteville</td>
</tr>
<tr>
<td>CarolinaEast Medical Center</td>
<td>New Bern</td>
</tr>
<tr>
<td>Atrium Health (formerly Carolinas HealthCare System)</td>
<td>Charlotte</td>
</tr>
<tr>
<td>Carteret Health Care</td>
<td>Morehead City</td>
</tr>
<tr>
<td>Central Carolina Hospital</td>
<td>Sanford</td>
</tr>
<tr>
<td>Chatham*</td>
<td>Siler City</td>
</tr>
<tr>
<td>Cone Health</td>
<td>Greensboro</td>
</tr>
<tr>
<td>Granville Medical Center</td>
<td>Oxford</td>
</tr>
<tr>
<td>FirstHealth Moore Regional Hospital</td>
<td>Pinehurst</td>
</tr>
<tr>
<td>Johnston*</td>
<td>Smithfield and Clayton</td>
</tr>
<tr>
<td>Mission Hospital</td>
<td>Asheville</td>
</tr>
<tr>
<td>Onslow*</td>
<td>Jacksonville</td>
</tr>
<tr>
<td>Pardee*</td>
<td>Hendersonville</td>
</tr>
<tr>
<td>Nash*</td>
<td>Rocky Mount</td>
</tr>
<tr>
<td>New Hanover Regional Medical Center</td>
<td>Wilmington</td>
</tr>
<tr>
<td>Outer Banks Hospital</td>
<td>Nags Head</td>
</tr>
<tr>
<td>Person Memorial Hospital</td>
<td>Roxboro</td>
</tr>
<tr>
<td>Rex Healthcare*</td>
<td>Raleigh</td>
</tr>
<tr>
<td>Sampson Regional Medical Center</td>
<td>Clinton</td>
</tr>
<tr>
<td>Southeastern Regional Medical Center</td>
<td>Lumberton</td>
</tr>
<tr>
<td>Lenoir*</td>
<td>Kinston</td>
</tr>
<tr>
<td>Rockingham*</td>
<td>Eden</td>
</tr>
<tr>
<td>Vidant Health</td>
<td>Greenville</td>
</tr>
<tr>
<td>WakeMed</td>
<td>Raleigh</td>
</tr>
<tr>
<td>Wayne UNC Health Care*</td>
<td>Goldsboro</td>
</tr>
<tr>
<td>Womack Army Medical Center</td>
<td>Fayetteville</td>
</tr>
</tbody>
</table>

* Affiliate hospital in the UNC Health Care System.

**PARTNERSHIPS, JOINT VENTURES, AND AFFILIATED SERVICES**

The UNC Health Care System currently consists of UNC Hospitals, a provider network, UNC Physicians Network, the clinical programs of the UNC-CH School of Medicine, and ten affiliated hospitals throughout the State of North Carolina. The affiliated hospitals are as follows:

**Rex Healthcare** – In 2000, the UNC Health Care System acquired the sole membership in Rex Healthcare. In addition to a 439 licensed bed acute care facility located in Raleigh, Rex Healthcare offers a range of health care services at locations across Wake County. These include five wellness centers, six suburban campuses, freestanding outpatient diagnostic urgent care and surgery centers, and two skilled nursing facilities with 227 beds focusing on rehabilitation and long-term nursing care.
**Caldwell** – Located in Lenoir, Caldwell operates a 110-bed acute care facility and has a provider network of more than 50 primary and specialty care physicians and advanced practice professionals. Caldwell was acquired by the UNC Health Care System in 2013.

**Chatham** - Chatham was acquired by the UNC Health Care System in 2008 and provides the residents of Chatham County with access to the advanced health care offered by the UNC Health Care System in a community hospital environment. The 25-bed critical access facility is located in Siler City.

**Johnston** - Based in Smithfield, Johnston provides health care services for patients across Johnston County. Johnston’s network includes a 149 licensed bed acute care facility located in Smithfield and a 50 licensed bed hospital in Clayton. Johnston joined the UNC Health Care System in 2014 as a joint venture with the UNC Health Care System and is managed under a management services agreement.

On September 27, 2019, UNC Health Care System, Rex Hospital and Johnston approved a non-binding Letter of Intent to combine the operations of JHSC and Rex Hospital via a Joint Operating Agreement (the “JOA”). The goal would be for the definitive JOA to be signed sometime before the end of the first quarter of 2020; however, no assurances can be given that the JOA will be consummated. If consummated, the JOA would have an initial term of 25 years.

The intent of the JOA is to enable the parties to build on their existing relationships. The organizations have shared a long history of collaboration, and UNC Health Care System has held a 35% ownership interest in JHSC since 2015. The JOA would allow for the expansion of these existing relationships and improve clinical outcomes and accessibility to care in their respective communities. The parties to the JOA intend, at an operational, strategic, and clinical level, to combine the operations of JHSC and Rex Hospital (collectively, the “Combined Operations”). The Combined Operations would not create a new or separate legal entity, and UNC Hospitals would not be obligated, directly or indirectly, on any indebtedness of Johnston.

**Lenoir** – Lenoir, licensed for 261 beds, offers inpatient, outpatient and preventive healthcare services in Kinston. Lenoir joined the UNC Health Care System under a management services agreement in 2016.

**Nash** – Nash, based in Rocky Mount, joined the UNC Health Care System under a management services agreement in 2014. Nash is comprised of four hospitals with 345 licensed beds.

**Onslow** – Onslow joined the UNC Health Care System under a management services agreement in 2019. Onslow is licensed for 162 beds and operates an acute care hospital in Jacksonville and serves Onslow County.

**Pardoo** – Pardoo joined the UNC Health Care System under a management services agreement in 2012. Pardoe operates a 222-bed acute care hospital in Hendersonville and offers a range of services at locations throughout Henderson County.

**Rockingham** – Rockingham, licensed for 108 beds, was acquired by UNC Health Care in January 2018. It consists of an acute care hospital facility and skilled nursing facility in Eden.
Wayne – Wayne operates a community hospital in Goldsboro with 316 licensed beds. Wayne joined the UNC Health Care System under a management services agreement in 2016.

Each of these hospitals is responsible for its own indebtedness. UNC Hospitals is not obligated legally or contractually to repay or guarantee any of the debt of these hospitals.

NEITHER UNC HEALTH CARE SYSTEM, UNC FACULTY PHYSICIANS, UNC PHYSICIANS NETWORK, UNC PHYSICIANS NETWORK GP, REX HEALTHCARE, REX HOSPITAL, CALDWELL, CHATHAM, JOHNSTON, LENOIR, NASH, ONSLOW, PARDEE, ROCKINGHAM, WAYNE NOR ANY OF THE OTHER ENTITIES AFFILIATED WITH THE SYSTEM, OTHER THAN UNC HOSPITALS, IS OBLIGATED TO PAY THE PRINCIPAL OF, PREMIUM, IF ANY, OR INTEREST ON, THE SERIES 2019 BONDS.

Additionally, UNC Hospitals Burlington Imaging and Breast Center is a partnership between UNC Hospitals and Alliance HealthCare Services. The partnership was established in February 2011 to build and expand the imaging services available to patients in Alamance County and surrounding counties.

In October 2015, UNC Health Care and Cisco Systems, located in the Research Triangle Park (the “Research Triangle Park”), launched LifeConnections Health Center, a patient centered medical home located on Cisco’s campus in the Research Triangle Park. The LifeConnections Health Center partnership includes family medicine physicians and a care team from UNC Physicians Network while integrating Cisco mobile telehealth and telemedicine equipment.

SERVICE AREA AND DEMOGRAPHICS

UNC Hospitals serves the entire State as a provider of care, educator of health professionals and center for clinical and basic sciences research. UNC Hospitals’ primary and secondary service areas encompass the 13 counties surrounding Chapel Hill and account for approximately 75% of UNC Hospitals’ total patient discharges. Six of these counties, Orange, Durham, Wake, Chatham, Alamance, and Lee, comprise the primary service area. The remaining seven counties, Johnston, Cumberland, Harnett, Sampson, Moore, Guilford, and Randolph, represent the secondary service area (see Map 1 below). The counties are all located within a 100-mile radius of UNC Hospitals.
The 13-county service area is segmented into primary and secondary areas based upon the levels of UNC Hospitals’ patient origin (where the patients reside) and market share (UNC Hospitals’ percentage of the total discharges in a given county) in each county. Map 1 above identifies the primary and secondary service area counties and UNC Hospitals’ location within the service area. These 13 counties, as well as an additional 24 counties, comprise the UNC Hospitals’ target area for most strategic services development. However, UNC Hospitals serves patients from throughout the State and neighboring states. UNC Hospitals’ tertiary and quaternary service areas include the remainder of the State, as well as portions of surrounding states.

PATIENT ORIGIN

The six county primary service area (Orange, Durham, Wake, Chatham, Alamance, and Lee) accounts for approximately 57% of UNC Hospitals’ patient discharges, and the secondary service area (Guilford, Randolph, Moore, Harnett, Johnston, Cumberland, and Sampson) accounts for approximately 18%. This patient origin distribution for the primary and secondary service areas was consistent over the previous five Fiscal Years. In addition to the 13-county primary and secondary service areas, there are eight other peripheral counties from which UNC Hospitals obtains a significant number of patients (approximately 8% of its patient discharges), including Caswell, Person, Robeson, Vance, Richmond, New Hanover, Wayne, and Halifax. Taken together, these 21 counties account for approximately 83% of NC Hospitals’ discharges. The remaining base of patients originates from throughout the State and surrounding states.

MARKET SHARE

Based on the most recently available data, UNC Hospitals’ inpatient market share in the six counties that constitute its primary service area is as follows: Orange, 66%; Durham, 11%; Wake, 8%; Chatham, 56%; Alamance, 21%; and Lee, 20%. In the seven counties that comprise its secondary service area, UNC Hospitals has an overall market share of 5%, with individual
county market shares ranging from 1% to 8%. The following table presents inpatient discharges for selected hospitals in the service area and a market share summary.

**Inpatient Market Share Summary**

<table>
<thead>
<tr>
<th>Hospital Type</th>
<th>Licensed Beds</th>
<th>Primary Service Area</th>
<th>Secondary Service Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNC Hospitals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government</td>
<td>917</td>
<td>22,978</td>
<td>16%</td>
</tr>
<tr>
<td>Rex Hospital(1)</td>
<td>559</td>
<td>21,276</td>
<td>15%</td>
</tr>
<tr>
<td>Alamance Regional</td>
<td>NFP</td>
<td>9,087</td>
<td>6%</td>
</tr>
<tr>
<td>Central Carolina</td>
<td>137</td>
<td>3,881</td>
<td>3%</td>
</tr>
<tr>
<td>Duke University</td>
<td>NFP</td>
<td>21,871</td>
<td>15%</td>
</tr>
<tr>
<td>Duke Regional</td>
<td>NFP</td>
<td>11,151</td>
<td>8%</td>
</tr>
<tr>
<td>WakeMed</td>
<td>739</td>
<td>22,016</td>
<td>15%</td>
</tr>
</tbody>
</table>

NFP = Not-For-Profit; FP = For-Profit.

Sources: NC Inpatient State Data, Normal Newborns excluded
2018 North Carolina State Licensure Renewal Data

(1) In July 2000, the UNC Health Care System acquired control of Rex Healthcare and its affiliates. Rex Healthcare maintains its status as a non-profit corporation and revenues generated by Rex Healthcare and its affiliates, including Rex Hospital, do not secure the Series 2019 Bonds, for which UNC Hospitals is the sole obligor.

(2) Includes acute care, rehabilitation, psychiatry, substance abuse and nursing beds reported for federal fiscal year 2018.

**COMPETITION**

Within the primary and secondary service areas, UNC Hospitals has identified the following hospital providers as competitors for market share: Alamance Regional Medical Center, Central Carolina Hospital, Duke University Medical Center, Rex Hospital (an affiliate of the UNC Health Care System), Duke Regional Hospital and WakeMed/WakeMed Cary. Map 2 displays all of the hospitals in UNC Hospitals’ primary and secondary service areas. UNC Hospitals has approximately 13% of the licensed hospital beds in this 13-county area. There has been no merger or acquisition activity among hospitals in the Triangle (Chapel Hill, Durham and Raleigh) region in the last two years.
Map 2
UNC Hospitals
Service Area Counties and
Service Area Facilities

- University of North Carolina Hospitals(2) 834
  UNC Hillsborough 83
  1. Duke University Medical Center 937
  2. Duke Regional/Select Specialty Hospital 369
  3. North Carolina Specialty Hospital 18
  4. WakeMed/WakeMed Cary 941
  5. Duke Health Raleigh 186
  6. Rex Hospital 559
  7. Johnston Smithfield 149
  8. Johnston Clayton 50
  9. Sampson Regional Medical Center 146
  10. Cape Fear Valley Medical Center 634
  11. Highsmith-Rainey Memorial 66
  12. Betsy Johnson Memorial Hospital 151
  13. Central Carolina Hospital 137
  14. Chatham Hospital 25
  15. Randolph Hospital 145
  16. Alamance Regional Medical Center 238
  17. High Point Regional Hospital 351
  18. Cone Health 906
  19. Kindred Hospital 124
  20. First Health Moore Regional Hospital 390

(1) Includes acute care, rehabilitation, psychiatry, substance abuse and nursing beds reported for federal fiscal year 2018.
(2) 917 beds as of September 30, 2018, including UNC Hospitals in Hillsborough.

Primary Service Area
Secondary Service Area
Population Growth and Economic Climate

The overall economic climate in the Raleigh-Cary and Durham-Chapel Hill Metropolitan Statistical Areas ("MSAs") has been one of steady growth. Based on 2018 data from Truven Market Expert, median household income for the Raleigh-Cary MSA was $70,856 and $60,268 for the Durham-Chapel Hill MSA. The median age for the Raleigh-Cary MSA was 37.2 years and 37.6 years for the Durham-Chapel Hill MSA. According to the U.S. Census Bureau, the Raleigh-Cary MSA experienced a 20.5% increase in population from 2010 to 2018, compared to a rate of 8.9% for the State. During the same period, the Durham-Chapel Hill MSA experienced a 13.6% growth rate in population. The population in the Raleigh-Cary MSA grew by 47% between 1990 and 2000 and 45% between 2000 and 2010. The population in the Durham-Chapel Hill MSA grew by 23% between 1990 and 2000 and by 20% between 2000 and 2010.

Selected Demographic Indicators for the Raleigh-Cary and Durham MSAs

<table>
<thead>
<tr>
<th>MSA/County Name</th>
<th>Population</th>
<th>Number of Households</th>
<th>Median Household Income</th>
<th>Median Age (Years)</th>
<th>Median Home Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Durham-Chapel Hill MSA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orange (1)</td>
<td>143,390</td>
<td>55,087</td>
<td>$68,262</td>
<td>34.9</td>
<td>$305,511</td>
</tr>
<tr>
<td>Durham (1)</td>
<td>312,988</td>
<td>128,680</td>
<td>$59,013</td>
<td>35.6</td>
<td>221,584</td>
</tr>
<tr>
<td>Chatham (1)</td>
<td>74,906</td>
<td>30,808</td>
<td>$59,364</td>
<td>48.1</td>
<td>254,424</td>
</tr>
<tr>
<td>Person</td>
<td>39,462</td>
<td>15,944</td>
<td>$44,517</td>
<td>43.6</td>
<td>134,349</td>
</tr>
<tr>
<td>MSA Total/Avg</td>
<td>570,746</td>
<td>230,519</td>
<td>$60,268</td>
<td>37.6</td>
<td>240,209</td>
</tr>
<tr>
<td>Raleigh-Cary MSA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wake (1)</td>
<td>1,073,193</td>
<td>410,750</td>
<td>$74,833</td>
<td>36.7</td>
<td>$279,243</td>
</tr>
<tr>
<td>Johnston (2)</td>
<td>195,948</td>
<td>70,606</td>
<td>$56,600</td>
<td>38.5</td>
<td>167,872</td>
</tr>
<tr>
<td>Franklin</td>
<td>65,926</td>
<td>25,180</td>
<td>$45,946</td>
<td>41.5</td>
<td>148,759</td>
</tr>
<tr>
<td>MSA Total/Avg</td>
<td>1,335,067</td>
<td>506,536</td>
<td>$70,856</td>
<td>37.2</td>
<td>254,869</td>
</tr>
<tr>
<td>NC Total/Avg</td>
<td>10,383,620</td>
<td>4,061,714</td>
<td>52,839</td>
<td>39.3</td>
<td>182,218</td>
</tr>
</tbody>
</table>

(1) UNC Hospitals Primary Service Area County.
(2) UNC Hospitals Secondary Service Area County.

Orange County (the county in which UNC Hospitals is located) is in central North Carolina and is one of the fastest growing counties in the State. Orange County is one of three counties (along with Durham and Wake Counties) that comprise the Research Triangle. Located in the Research Triangle is the Research Triangle Park, a 7,000-acre research and industrial park that is the largest research park in the United States. The Research Triangle Park was founded in the late 1950s and is home to more than 300 companies, government agencies and research institutions that employ approximately 55,000 people in the Research Triangle. Companies such as IBM, GlaxoSmithKline, Cisco Systems, and Lenovo have located major research and development facilities in the Research Triangle Park. In addition, a large governmental research complex that includes the National Institute of Environmental Health Sciences and the Environmental Protection Agency operates in the Research Triangle Park.

As of the end of December 2018, according to data available from the North Carolina Employment Security Commission, the unemployment rate for the Raleigh-Cary MSA was 3.3%, the unemployment rate for the Durham-Chapel Hill MSA was 3.3% and the unemployment rate
for Orange County was 3.2%. As of December 2018, the unemployment rate for the State was 3.8%.

**SELECTED UTILIZATION INFORMATION**

The following table summarizes selected utilization information for UNC Hospitals:

<table>
<thead>
<tr>
<th></th>
<th>Fiscal Year Ended June 30,</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2017</td>
<td>2018</td>
<td>2019</td>
</tr>
<tr>
<td>Licensed Beds</td>
<td>929</td>
<td>933</td>
<td>945</td>
</tr>
<tr>
<td>Operational Beds:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>At end of period</td>
<td>929</td>
<td>933</td>
<td>945</td>
</tr>
<tr>
<td>Average</td>
<td>910</td>
<td>933</td>
<td>945</td>
</tr>
<tr>
<td>Percent Occupancy (1)</td>
<td>83.7%</td>
<td>83.0%</td>
<td>84.9%</td>
</tr>
<tr>
<td>Patient Days (1)</td>
<td>277,856</td>
<td>282,663</td>
<td>292,702</td>
</tr>
<tr>
<td>Observation Days</td>
<td>8,589</td>
<td>10,447</td>
<td>10,104</td>
</tr>
<tr>
<td>Average Length of Stay (in days)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6.96</td>
<td>7.12</td>
<td>7.07</td>
</tr>
<tr>
<td>Acute Care Only</td>
<td>6.37</td>
<td>6.55</td>
<td>6.52</td>
</tr>
<tr>
<td>Discharges (2)</td>
<td>39,691</td>
<td>39,832</td>
<td>41,166</td>
</tr>
<tr>
<td>Average Daily Census</td>
<td>761</td>
<td>774</td>
<td>802</td>
</tr>
<tr>
<td>Deliveries</td>
<td>3,894</td>
<td>4,174</td>
<td>4,125</td>
</tr>
<tr>
<td>Inpatient OR Cases</td>
<td>13,955</td>
<td>14,319</td>
<td>14,431</td>
</tr>
<tr>
<td>Outpatient OR Cases</td>
<td>20,114</td>
<td>21,613</td>
<td>22,276</td>
</tr>
<tr>
<td>Clinical Lab Procedures</td>
<td>4,244,138</td>
<td>4,517,918</td>
<td>4,705,706</td>
</tr>
<tr>
<td>Emergency Room Visits</td>
<td>82,074</td>
<td>82,663</td>
<td>85,360</td>
</tr>
<tr>
<td>Inpatient</td>
<td>16,668</td>
<td>16,460</td>
<td>17,585</td>
</tr>
<tr>
<td>Outpatient</td>
<td>65,406</td>
<td>66,203</td>
<td>67,775</td>
</tr>
<tr>
<td>Outpatient Clinic Visits</td>
<td>1,483,040</td>
<td>1,570,694</td>
<td>1,624,607</td>
</tr>
<tr>
<td>Outpatient Ancillary Visits</td>
<td>836,922</td>
<td>874,148</td>
<td>904,576</td>
</tr>
<tr>
<td>Case Mix Index – Medicare</td>
<td>2.18</td>
<td>2.20</td>
<td>2.19</td>
</tr>
<tr>
<td>Case Mix Index – All Payors</td>
<td>1.88</td>
<td>1.89</td>
<td>1.89</td>
</tr>
</tbody>
</table>

(1) Excludes newborn nursery and observation beds.
(2) Excludes transfers and newborn.

**SOURCES OF PATIENT REVENUE**

UNC Hospitals receives payments on behalf of patients from various commercial insurance carriers, the federal government under the Medicare Program, the State under the Medicaid Program, several other State agencies and HMOs and PPOs through contractual agreements. The percentage of gross patient service revenue attributable to each of these sources for the Fiscal Years ended June 30, 2017, 2018 and 2019 was as follows:
<table>
<thead>
<tr>
<th>Primary Payor</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicare</td>
<td>35.2%</td>
<td>36.0%</td>
<td>36.7%</td>
</tr>
<tr>
<td>HMO/PPO</td>
<td>27.8</td>
<td>27.4</td>
<td>27.6</td>
</tr>
<tr>
<td>Medicaid</td>
<td>19.0</td>
<td>19.2</td>
<td>18.6</td>
</tr>
<tr>
<td>Commercial Insurance (1)</td>
<td>5.5</td>
<td>5.2</td>
<td>5.2</td>
</tr>
<tr>
<td>State Agencies and Other</td>
<td>5.6</td>
<td>5.6</td>
<td>5.3</td>
</tr>
<tr>
<td>Self Pay (2)</td>
<td>6.9</td>
<td>6.6</td>
<td>6.6</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

(1) Includes commercial indemnity and State employees’ health plan.
(2) Includes charity cases.

For a discussion of Medicare, Medicaid and managed care reimbursement, see “BONDHOLDERS’ RISKS – Federal Laws Affecting Health Care Facilities” in the front part of this Official Statement.

**SELECTED FINANCIAL INFORMATION**

The following summaries of the statements of revenues, expenses and changes in net position and statements of net position for the Fiscal Years ended June 30, 2017, 2018 and 2019, have been derived from financial statements of UNC Hospitals audited by the Office of the State Auditor for the State of North Carolina. Some of the amounts for the Fiscal Year ended on June 30, 2017 on the Summary of Statement of Net Positions were restated for Government Accounting Standards Board (“GASB”) Statement No. 75 to reflect the impact of recording Other Post-Employment Benefits (“OPEB”) and for presentation purposes to match the methodology used in the financial statements for subsequent Fiscal Years. The complete Management’s Discussion and Analysis of the financial activities of UNC Hospitals and certain other financial information from the audited financial statements prepared by management of UNC Hospitals for the Fiscal Year ended June 30, 2019 appear in Appendix B to this Official Statement. The following summaries should be read in conjunction with the financial statements and notes included in Appendix B to this Official Statement.
Summary of Statements of Revenues, Expenses
And Changes in Net Position

(Dollars presented in thousands)
Fiscal Year Ended June 30,

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating Revenue:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net Patient Service Revenue</td>
<td>$1,728,598</td>
<td>$1,846,906</td>
<td>$2,034,110</td>
</tr>
<tr>
<td>Other Operating Revenue</td>
<td>45,048</td>
<td>45,446</td>
<td>39,607</td>
</tr>
<tr>
<td><strong>Total Operating Revenue</strong></td>
<td>$1,773,646</td>
<td>$1,892,352</td>
<td>$2,073,717</td>
</tr>
<tr>
<td><strong>Operating Expenses:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salaries and Fringe Benefits</td>
<td>$670,735</td>
<td>$765,794</td>
<td>$751,949</td>
</tr>
<tr>
<td>Medical and Surgical Supplies</td>
<td>410,805</td>
<td>440,808</td>
<td>508,632</td>
</tr>
<tr>
<td>Contracted Services</td>
<td>321,946</td>
<td>340,188</td>
<td>350,731</td>
</tr>
<tr>
<td>Other Expenses</td>
<td>94,970</td>
<td>97,655</td>
<td>102,423</td>
</tr>
<tr>
<td>Depreciation</td>
<td>59,652</td>
<td>59,513</td>
<td>73,540</td>
</tr>
<tr>
<td><strong>Total Operating Expenses</strong></td>
<td>$1,558,108</td>
<td>$1,703,958</td>
<td>$1,787,275</td>
</tr>
<tr>
<td><strong>Operating Income</strong></td>
<td>$215,538</td>
<td>$188,394</td>
<td>$286,442</td>
</tr>
<tr>
<td><strong>Non-Operating Revenue (Expense):</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investment Activity</td>
<td>$62,824</td>
<td>$80,896</td>
<td>$62,820</td>
</tr>
<tr>
<td>Interest Expense</td>
<td>(11,956)</td>
<td>(10,119)</td>
<td>(9,555)</td>
</tr>
<tr>
<td>Loss on Disposal of Capital Assets</td>
<td>(1,421)</td>
<td>(16)</td>
<td>(4,685)</td>
</tr>
<tr>
<td>Other</td>
<td>2,209</td>
<td>1,943</td>
<td>611</td>
</tr>
<tr>
<td><strong>Net Nonoperating Revenue</strong></td>
<td>$51,656</td>
<td>$72,704</td>
<td>$49,191</td>
</tr>
<tr>
<td><strong>Income Before Other Revenues</strong> and Expenses</td>
<td>$267,194</td>
<td>$261,098</td>
<td>$335,633</td>
</tr>
<tr>
<td>Health Care System Assessments/Transfers (1)</td>
<td>(171,862)</td>
<td>(172,464)</td>
<td>(106,552)</td>
</tr>
<tr>
<td><strong>Increase in Net Position</strong></td>
<td>$95,332</td>
<td>$88,634</td>
<td>$229,081</td>
</tr>
</tbody>
</table>

(1) Health Care System Assessments are paid from Revenues (as defined in the General Indenture) after the payment of debt service and current expenses and flow to the UNC Health Care System Enterprise Fund. These funds support initiatives selected by the Chief Executive Officer of the UNC Health Care System based on recommendations from the leadership team.
## Summary of Statements of Net Position

(Dollars presented in thousands)

<table>
<thead>
<tr>
<th>Fiscal Year Ended June 30,</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Assets:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash and Cash Equivalents</td>
<td>$155,188</td>
<td>$49,825</td>
<td>$240,851</td>
</tr>
<tr>
<td>Restricted Cash and Cash Equivalents</td>
<td>2,207</td>
<td>1,080</td>
<td>730</td>
</tr>
<tr>
<td>Patient Accounts Receivable, Net</td>
<td>196,917</td>
<td>236,749</td>
<td>249,435</td>
</tr>
<tr>
<td>Other Accounts Receivable, Net</td>
<td>22,462</td>
<td>51,844</td>
<td>25,529</td>
</tr>
<tr>
<td>Due from Governmental Units</td>
<td>117,398</td>
<td>54,048</td>
<td>91,475</td>
</tr>
<tr>
<td>Estimated Third Party Settlements</td>
<td>10,586</td>
<td>10,404</td>
<td>10,457</td>
</tr>
<tr>
<td>Inventories</td>
<td>54,152</td>
<td>65,727</td>
<td>65,025</td>
</tr>
<tr>
<td>Prepaid Expenses &amp; Other Assets</td>
<td>87,244</td>
<td>117,711</td>
<td>33,678</td>
</tr>
<tr>
<td><strong>Total Current Assets</strong></td>
<td>646,154</td>
<td>587,388</td>
<td>717,180</td>
</tr>
<tr>
<td><strong>Noncurrent Assets:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Restricted Cash and Cash Equivalents</td>
<td>94,977</td>
<td>91,659</td>
<td>63,277</td>
</tr>
<tr>
<td>Restricted Investments</td>
<td>283,800</td>
<td>328,464</td>
<td>359,426</td>
</tr>
<tr>
<td>Investments</td>
<td>428,086</td>
<td>530,781</td>
<td>498,644</td>
</tr>
<tr>
<td>Due from Governmental Units</td>
<td>9,720</td>
<td>14,086</td>
<td>15,577</td>
</tr>
<tr>
<td>Other Assets</td>
<td>56,141</td>
<td>82,187</td>
<td>109,010</td>
</tr>
<tr>
<td>Capital Assets – Net of Depreciation</td>
<td>745,786</td>
<td>776,943</td>
<td>810,482</td>
</tr>
<tr>
<td><strong>Total Noncurrent Assets</strong></td>
<td>1,618,510</td>
<td>1,824,120</td>
<td>1,856,416</td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td>$2,264,664</td>
<td>$2,411,508</td>
<td>$2,573,596</td>
</tr>
<tr>
<td><strong>Current Liabilities:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>88,625</td>
<td>70,191</td>
<td>89,714</td>
</tr>
<tr>
<td>Accrued Salaries and Benefits</td>
<td>54,736</td>
<td>72,883</td>
<td>52,517</td>
</tr>
<tr>
<td>Estimated Third Party Settlements</td>
<td>85,118</td>
<td>113,009</td>
<td>99,553</td>
</tr>
<tr>
<td>Other Current Liabilities</td>
<td>12,707</td>
<td>10,005</td>
<td>10,330</td>
</tr>
<tr>
<td>Due to Governmental Units</td>
<td>26,280</td>
<td>40,292</td>
<td>64,158</td>
</tr>
<tr>
<td>Long-Term Liabilities – Current Portion</td>
<td>36,358</td>
<td>36,847</td>
<td>29,704</td>
</tr>
<tr>
<td><strong>Total Current Liabilities</strong></td>
<td>303,824</td>
<td>343,227</td>
<td>345,976</td>
</tr>
<tr>
<td><strong>Noncurrent Liabilities:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-Term Liabilities</td>
<td>686,278</td>
<td>635,901</td>
<td>682,326</td>
</tr>
<tr>
<td>Long-Term Liabilities - OPEB</td>
<td>1,704,202</td>
<td>1,267,142</td>
<td>1,108,129</td>
</tr>
<tr>
<td>Hedging Derivative Liability</td>
<td>12,558</td>
<td>7,919</td>
<td>9,608</td>
</tr>
<tr>
<td>Estimated Third Party Settlements</td>
<td>75,354</td>
<td>64,289</td>
<td>69,912</td>
</tr>
<tr>
<td><strong>Total Noncurrent Liabilities</strong></td>
<td>2,478,392</td>
<td>1,975,251</td>
<td>1,869,975</td>
</tr>
<tr>
<td><strong>Total Liabilities</strong></td>
<td>$2,782,216</td>
<td>$2,318,478</td>
<td>$2,215,951</td>
</tr>
<tr>
<td><strong>Deferred Resources - Net</strong></td>
<td>$(260,433)</td>
<td>$261,515</td>
<td>$297,049</td>
</tr>
</tbody>
</table>

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(Dollars presented in thousands)
Fiscal Year Ended June 30,

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Position:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Invested in Capital Assets, Net of Related Debt</td>
<td>556,615</td>
<td>598,464</td>
<td>627,960</td>
</tr>
<tr>
<td>Restricted for Expendable Purposes:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance Reserve Fund</td>
<td>283,800</td>
<td>328,463</td>
<td>359,426</td>
</tr>
<tr>
<td>Professional Liability &amp; Other</td>
<td>9,720</td>
<td>18,404</td>
<td>20,900</td>
</tr>
<tr>
<td>Trust Fund Operations</td>
<td>611</td>
<td>678</td>
<td>643</td>
</tr>
<tr>
<td>Unrestricted</td>
<td>$(1,107,865)</td>
<td>$(1,114,494)</td>
<td>$(947,328)</td>
</tr>
<tr>
<td>Total Net Position</td>
<td>$(257,119)</td>
<td>$(168,485)</td>
<td>$60,596</td>
</tr>
</tbody>
</table>

The Implementation of GASB Statement No. 75 required a prior period change in Unrestricted Net Position for the Fiscal Year ended June 30, 2017.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL INFORMATION

Fiscal Year 2019 Compared to Fiscal Year 2018

Statements of Revenues, Expenses and Changes in Net Position

Net patient revenue increased by $187.2 million and was partially driven by a 3.3% increase in discharges and Emergency Department visits and a 2.2% increase in total surgeries. Volume and gross revenue have continued to increase from the improved utilization of UNC Hospitals on the Hillsborough campus and growth of the retail pharmacy business, and net revenue has benefitted from continued pricing and collection improvements.

Operating expenses increased by $83.3 million over the prior year. The $13.8 million decrease in salaries and benefits is net of a favorable $47.2 million adjustment due to pension and other postemployment benefits expense as required by GASB Statements No. 68 and No. 75. This adjustment minimizes the impact of increased salary and benefit expense attributable to the expansion of hospital operations and market increases in compensation. Medical supply and drug expenses increased by $67.8 million from the prior year and reflect a significant increase in inpatient and outpatient pharmaceutical expenses, approximately $55.0 million, and higher inpatient acuity.

Net nonoperating revenues decreased by $23.5 million from the prior year due to lower investment returns and disposal of capital assets. Cash required for day-to-day operations is deposited with the State Treasurer in the Short-Term Investment Fund. Funds set aside to fund specific capital projects and the future growth of UNC Hospitals have been invested with UNC Investment Fund, LLC.

UNC Health Care System assessments reflect funding by UNC Hospitals of initiatives that the Chief Executive Officer of UNC Health Care System deems appropriate. These initiatives are selected and applicable assessments are quantified based on recommendations made from senior leadership. These assessments, totaling $106.6 million, were down 38% compared to 2018.
Statements of Net Position

Total assets increased by $162.1 million as of June 30, 2019, due primarily to operating performance, return on investments, and investment in capital assets. Included within this change, current assets increased by $129.8 million, due primarily to an investment liquidation of $60 million and year end receipts from the Medicaid UPL program received in June 2019. Net capital assets increased by $33.5 million, as spending on construction and equipment purchases exceeded depreciation expense.

Total liabilities decreased by $102.5 million from June 30, 2018, due primarily to the change in the net pension liability and net other postemployment benefits liability in accordance with GASB Statement No. 68 and No. 75. Current liabilities increased by $2.7 in total. Changes in current liabilities included decreases in estimated third party settlements of $13.5 million and in outstanding debt of $7.1 million that was offset by an increase in amounts due to governmental units of $23.9 million. Changes in the accrual amounts for accounts payable (an increase of $19.5 million) and salaries and benefits (a decrease of $20.4 million) are the result of timing differences between payments and year-end liabilities.

Deferred outflows of resources increased from $211.5 million to $279.9 million while deferred inflows of resources increased from $473.0 million to $577.0 million for a net change of $35.5 million. These adjustments, required by GASB Statements No. 68 and No. 75, relate to the State of North Carolina Teachers’ and State Employees’ Retirement System Plan and other postemployment benefits, recognize the differences between actual and expected pension plan experience, including investment performance.

Net position increased by $229.1 million over the prior year and was driven by operating income of $286.4 million and investment activity of $62.8 million offset by Health Care System assessments of $106.6 million.

Fiscal Year 2018 Compared to Fiscal Year 2017

Statements of Revenues, Expenses and Changes in Net Position

Net patient revenue increased by $118.3 million and reflects a 1.0% increase in discharges and Emergency Department visits and a 4.5% increase in total surgeries. Volume and gross revenue have continued to increase from the opening of UNC Hospitals on the Hillsborough campus, and net revenue has benefitted from continued pricing and collection improvements.

Operating expenses increased $145.8 million over the prior year. The $95.1 million increase in salaries and benefits is net of an unfavorable $40.9 million adjustment to pension and other postemployment benefits expense as required by GASB Statements No. 68 and No. 75. This adjustment inflates the impact of increased salary and benefit expense attributable to the expansion of hospital operations and market increases in compensation. Medical supply expenses increased $30.0 million from the prior year and reflect a significant increase in pharmaceutical supplies expense as a result of increases in outpatient pharmacy volume and inpatient acuity.

Net nonoperating revenues increased by $21.0 million over the prior year due to higher investment returns. Cash required for day-to-day operations is deposited with the State Treasurer

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in the Short-Term Investment Fund. Funds set aside to fund specific capital projects and the future growth of the UNC Hospitals have been invested with UNC Investment Fund, LLC.

UNC Health Care System assessments reflect funding by UNC Hospitals of initiatives that the Chief Executive Officer of UNC Health Care System deems appropriate. These initiatives are selected and applicable assessments are quantified based on recommendations made from senior leadership. These assessments, totaling $172.5 million, were consistent from 2017 to 2018.

**Statements of Net Position**

Total assets increased by $146.8 million as of June 30, 2018, due primarily to operating performance, return on investments, and investment in capital assets. Included within this change, current assets decreased by $58.8 million, due primarily to investment purchases of $75 million. Net capital assets increased $31.2 million, as spending on construction and equipment purchases exceeded depreciation expense. Other noncurrent assets increased $174.4 million primarily from increased investment activity.

Total liabilities decreased by $463.7 million from June 30, 2017, due primarily to the change in the net pension liability and net other postemployment benefits liability in accordance with GASB Statements No. 68 and No. 75. Current liabilities increased $39.4 million, due primarily to the increase in estimated third party settlements and amounts due to other governmental units. Changes in the accrual amounts for accounts payable (a decrease of $18.4 million) and salaries and benefits (an increase of $18.1 million) are the result of timing differences between payments and year-end liabilities.

Deferred outflows of resources decreased from $240.3 million to $211.5 million, and deferred inflows of resources increased from $19.9 million to $577.0 million for a net change of $521.9 million. This net change is exaggerated due to implementation of GASB Statement No. 75, which was initially implemented in the audited financial statements for the Fiscal Year ended June 30, 2018. These adjustments, required by the GASB Statements No. 68 and No. 75, relate to the State of North Carolina Teachers’ and State Employees’ Retirement System Plan and other postemployment benefits, recognize the differences between actual and expected pension plan experience, including investment performance.

Net position increased $88.6 million over the prior year and was driven by operating income of $188.4 million and investment activity of $80.9 million offset by Health Care System assessments of $172.5 million.

**OUTSTANDING INDEBTEDNESS**

The Board of Governors of The University of North Carolina has issued on behalf of UNC Hospitals its (i) $110,000,000 University of North Carolina Hospitals at Chapel Hill Revenue Bonds, Series 2001A/B (the “Series 2001 Bonds”), (ii) $98,015,000 University of North Carolina Hospitals at Chapel Hill Revenue Refunding Bonds, Series 2003A/B (the “Series 2003 Bonds”), (iii) $44,290,000 University of North Carolina Hospitals at Chapel Hill Revenue Refunding Bonds, Series 2009A (the “Series 2009A Bonds”), (iv) $43,290,000 University of North Carolina Hospitals at Chapel Hill Taxable Revenue Bonds, Series 2010B (Build America Bonds) (the “Series 2010B Bonds”), and (v) $99,945,000 University of North Carolina Hospitals at Chapel

<table>
<thead>
<tr>
<th>Series</th>
<th>Outstanding at June 30, 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series 2001 Bonds</td>
<td>$ 84,400,000</td>
</tr>
<tr>
<td>Series 2003 Bonds</td>
<td>70,125,000</td>
</tr>
<tr>
<td>Series 2009A Bonds</td>
<td>17,620,000</td>
</tr>
<tr>
<td>Series 2010B Bonds</td>
<td>32,845,000</td>
</tr>
<tr>
<td>Series 2016 Bonds</td>
<td>99,945,000</td>
</tr>
</tbody>
</table>

UNC Hospitals, as a part of its ongoing operations, has entered into various operating leases for space rental. As of June 30, 2019, the minimum lease payments remaining were $50,774,414.

Information on the bonds outstanding and the lease amounts can be found in the footnotes to the audited financial statements in Appendix B to this Official Statement.

**DEBT SERVICE COVERAGE**

The following table prepared by UNC Hospitals sets forth the Historical Long-Term Debt Service Coverage Ratio for the Fiscal Years ended June 30, 2017, 2018 and 2019 and the Pro-Forma Historical Long-Term Debt Service Coverage Ratio. The pro-forma calculations for the Maximum Annual Debt Service assume that the Series 2019 Bonds were outstanding in Fiscal Year 2019 and do not take into account the federal government subsidy on the Series 2010B Bonds.

See Appendix C, “Definitions of Certain Terms and Summary of Principal Legal Documents – Definitions” for the definitions of “Income Available for Debt Service,” as amended, “Maximum Annual Debt Service” and “Long-Term Debt Service Coverage Ratio.” UNC Health Care System Assessments are paid from Revenues (as defined in the General Indenture) after the payment of debt service and current expenses and flow through the Revenue Fund established by the General Indenture to the UNC Health Care System Enterprise Fund.
Increase in net position
Plus Depreciation, Interest, and Amortization
Additional Adjustments(1)
Income Available for Debt Service (A)

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Increase in net position</strong></td>
<td>$95,332</td>
<td>$88,634</td>
<td>$229,081</td>
</tr>
<tr>
<td><strong>Plus Depreciation, Interest, and Amortization</strong></td>
<td>71,608</td>
<td>69,632</td>
<td>83,095</td>
</tr>
<tr>
<td><strong>Additional Adjustments(1)</strong></td>
<td>114,227</td>
<td>94,875</td>
<td>54,561</td>
</tr>
<tr>
<td><strong>Income Available for Debt Service (A)</strong></td>
<td>$281,167</td>
<td>$253,141</td>
<td>$366,737</td>
</tr>
</tbody>
</table>

**Historical**

Maximum Annual Debt Service (B) | $26,273  | $26,273  | $26,273  |
Long-Term Debt Service Coverage Ratio (A/B) | 10.70 x  | 9.63 x   | 13.96 x  |

**Historical Pro Forma**

Maximum Annual Debt Service (C)(2) | $33,712  |
Long-Term Debt Service Coverage Ratio (A/C) | 10.88x   |

(1) Additional adjustments include Unrealized Gain (Loss) on Investments, Gain (Loss) on Disposal of Assets, and Health Care System Assessments.
(2) For purposes of this table, interest on the Series 2001 Bonds, which bear interest at a variable rate, is calculated at an assumed interest rate of 2.0% per annum. Interest on the Series 2003 Bonds is calculated at the rate of 3.48% per annum, reflecting UNC Hospitals’ obligations under an interest rate exchange agreement relating to the Series 2003 Bonds. Interest on the Series 2009A Bonds is calculated at the rate of 3.606% per annum, reflecting UNC Hospitals’ obligations under an interest rate exchange agreement relating to the Series 2009A Bonds. Interest on the Series 2010B Bonds is presented without accounting for the Build America Bond federal subsidy thereon.

**CASH, CASH EQUIVALENTS AND INVESTMENTS**

UNC Hospitals has covenanted under the General Indenture to maintain funds on deposit in the Maintenance Reserve Fund in an amount equal to 7.5% of the Gross Patient Revenue for the preceding Fiscal Year.

The following table sets forth the balance (in thousands of dollars) of cash, cash equivalents and investments on deposit in the Maintenance Reserve Fund and other specific funds for the dates indicated.

<table>
<thead>
<tr>
<th></th>
<th>6/30/2017</th>
<th>6/30/2018</th>
<th>6/30/2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Reserve – Cash</td>
<td>$120,722</td>
<td>$43,413</td>
<td>$197,621</td>
</tr>
<tr>
<td>Unrestricted Funds – Cash</td>
<td>34,199</td>
<td>8,188</td>
<td>42,739</td>
</tr>
<tr>
<td>Maintenance Reserve Fund – Investments</td>
<td>283,800</td>
<td>328,464</td>
<td>359,426</td>
</tr>
<tr>
<td>Investments – Internal Designation</td>
<td>428,086</td>
<td>530,781</td>
<td>498,644</td>
</tr>
<tr>
<td><strong>Total Cash, Cash Equivalents and Investments</strong></td>
<td>$866,807</td>
<td>$910,846</td>
<td>$1,098,430</td>
</tr>
</tbody>
</table>

The table above excludes funds held in trust due to donor restrictions, remaining construction proceeds from the Series 2016 Bonds and funds held for principal and interest payments.
For additional information about the Maintenance Reserve Fund, including the minimum required amounts and the use of funds in excess of such minimum required amounts, see “SECURITY AND SOURCES OF PAYMENT – Maintenance Reserve Fund” in the front part of this Official Statement and Appendix C, “Summary of the General Trust Indenture – Maintenance Reserve Fund.”

**LIQUIDITY AND CAPITALIZATION**

The following information has been provided by UNC Hospitals for informational purposes and does not reflect the terms of any covenant or other obligation or requirement set forth in the General Indenture.

<table>
<thead>
<tr>
<th>Cash and Investments (in thousands of dollars)</th>
<th>6/30/2017</th>
<th>6/30/2018</th>
<th>6/30/2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash &amp; cash equivalents</td>
<td>$154,921</td>
<td>$51,601</td>
<td>$240,360</td>
</tr>
<tr>
<td>Investments</td>
<td>450,216</td>
<td>859,245</td>
<td>858,070</td>
</tr>
<tr>
<td>Total Cash and Investments</td>
<td>$866,807</td>
<td>$910,846</td>
<td>$1,098,430</td>
</tr>
</tbody>
</table>

| Operating Expenses                             | $1,558,108| $1,703,958| $1,787,275|
| Plus: Interest Expense                         | 11,956    | 10,119    | 9,555     |
| Less: Depreciation and Amortization Expense    | (59,652)  | (59,513)  | (73,540)  |
| Net Operating Expenses                         | $1,510,412| $1,654,564| $1,723,290|
| Daily Cash Requirements                        | $4,138    | $4,533    | $4,721    |
| Days Cash on Hand                              | 209       | 201       | 233       |
UNC Hospitals Capitalization Ratio
(in thousands of dollars)

<table>
<thead>
<tr>
<th></th>
<th>6/30/2019</th>
<th>Pro Forma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series 2001 Bonds</td>
<td>$84,400</td>
<td>$84,400</td>
</tr>
<tr>
<td>Series 2003 Bonds</td>
<td>70,125</td>
<td>70,125</td>
</tr>
<tr>
<td>Series 2009A Bonds</td>
<td>17,620</td>
<td>17,620</td>
</tr>
<tr>
<td>Series 2010B Bonds</td>
<td>32,845</td>
<td>32,845</td>
</tr>
<tr>
<td>Series 2016 Bonds</td>
<td>99,945</td>
<td>99,945</td>
</tr>
<tr>
<td>Series 2019 Bonds</td>
<td>0</td>
<td>149,995</td>
</tr>
<tr>
<td>Net premium/(discount)</td>
<td>822</td>
<td>50,753</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$305,757</strong></td>
<td><strong>$505,683</strong></td>
</tr>
</tbody>
</table>

**Capitalization**

<table>
<thead>
<tr>
<th></th>
<th>6/30/2019</th>
<th>Pro Forma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total long-term debt</td>
<td>$305,757</td>
<td>$505,683</td>
</tr>
<tr>
<td>Unrestricted net position$^{(1)}</td>
<td>39,053</td>
<td>39,053</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$344,810</strong></td>
<td><strong>$544,736</strong></td>
</tr>
</tbody>
</table>

**Capitalization Ratio**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>88.7%</strong></td>
<td></td>
</tr>
<tr>
<td><strong>92.8%</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Capitalization Ratio (adjusted for OPEB)**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>21.0%</strong></td>
<td></td>
</tr>
<tr>
<td><strong>30.6%</strong></td>
<td></td>
</tr>
</tbody>
</table>

(1) Amount shown for unrestricted net position is equal to total net assets less expendable amounts for professional liability and trust funds. The adjusted capitalization ratio is shown to illustrate the impact of OPEB on unrestricted net position.

**INVESTMENT POLICY**

The Board of Directors has adopted an investment policy setting forth investment goals, objectives, responsibilities and criteria for management of the UNC Hospitals’ Fund. The UNC Hospitals’ Fund consists of financial assets other than operating cash. The Finance, Audit and Compliance Committee, under the direction of the Board of Directors, is responsible for directing and monitoring the investment of the UNC Hospitals’ Fund and reviewing this investment policy at regular intervals.

The Finance, Audit and Compliance Committee establishes investment objectives and guidelines, selects, manages and monitors qualified investment professionals to advise and oversee investments, and reports to the Board of Directors on the investment performance and financial condition of the UNC Hospitals’ Fund. The key objectives of the investment policy are: (1) to achieve a total return that provides modest growth of principal consistent with the preservation of the purchasing power of the UNC Hospitals’ Fund; and (2) to preserve capital by minimizing the probability of loss of principal over the investment horizon of ten years. Emphasis is placed on minimizing return volatility rather than maximizing total return.

In September 2011, the Board of Directors approved moving the UNC Hospitals’ Fund to the UNC Investment Fund, LLC (the “UNC Investment Fund”). The UNC Investment Fund, managed by the UNC Management Company, Inc. (the “Management Company”), was organized in 2002 by UNC-CH to allow UNC-CH, other constituent and affiliated institutions in the UNC System, and affiliated foundations, associations, trusts, and endowments that support these
institutions, to pool their resources and invest collectively in investment opportunities. This structure enhances the ability to attract and retain investment professionals and increase the number of entities that may invest in the pooled investment fund. Additionally, the Management Company manages an intermediate investment pool, the UNC Intermediate Pool, LLC. Both funds utilize third-party investment managers to allocate capital across asset classes.

The UNC Investment Fund’s asset allocation as of June 30, 2019 was as follows:

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>Tactical Range (%)</th>
<th>Actual (%)&lt;sup&gt;(1)&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long Biased Equity</td>
<td>24 - 36</td>
<td>27.5</td>
</tr>
<tr>
<td>Long / Short Equity</td>
<td>10 - 20</td>
<td>15.5</td>
</tr>
<tr>
<td>Diversifying Strategy</td>
<td>6 - 14</td>
<td>9.9</td>
</tr>
<tr>
<td>Fixed Income</td>
<td>6 - 14</td>
<td>9.4</td>
</tr>
<tr>
<td>Private Equity</td>
<td>14 - 22</td>
<td>24.1</td>
</tr>
<tr>
<td>Real Estate</td>
<td>5 - 12</td>
<td>5.8</td>
</tr>
<tr>
<td>Energy and Natural Resources</td>
<td>5 - 10</td>
<td>6.8</td>
</tr>
<tr>
<td>Cash</td>
<td>2 - 8</td>
<td>0.9</td>
</tr>
<tr>
<td>Liquidating Managers&lt;sup&gt;(2)&lt;/sup&gt;</td>
<td>N/A</td>
<td>0.2</td>
</tr>
</tbody>
</table>

<sup>(1)</sup> Totals vary due to rounding.
<sup>(2)</sup> Composite contains various managers in liquidation.

The Board of Directors of the Chapel Hill Investment Fund, Inc. (the UNC Investment Fund’s controlling member) established as its long-term objective for the UNC Investment Fund the preservation of the purchasing power of the UNC Investment Fund while providing a predictable, stable, and constant (in real terms) stream of earnings. As of June 30, 2019, the UNC Investment Fund had an annualized three and five year return of 10.6% and 7.7%, respectively. The annual performance for the past five Fiscal Years follows:

**UNC Investment Fund Performance**  
**As of June 30,**

<table>
<thead>
<tr>
<th>Fiscal Year Return</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9.3%</td>
<td>(2.0%)</td>
<td>12.1%</td>
<td>12.0%</td>
<td>7.7%</td>
</tr>
</tbody>
</table>

The investment portfolio with the Management Company had a total market value of $858.1 million as of June 30, 2019. Additional information regarding the Hospitals’ investments is provided in the financial statements included in Appendix B.

**SWAP POLICY**

The Board of Directors has adopted a policy establishing guidelines for the use and management of interest rate exchange agreements or “swap agreements.” The use of swap agreements balances UNC Hospitals’ primary objectives of reducing capital costs, minimizing volatility in interest rates and increasing the efficiency of debt structures. UNC Hospitals is authorized to use interest rate exchange agreements: (1) to achieve significant savings over other
bond market products; (2) to enhance investment returns; (3) to prudently manage interest rate
risk; and (4) to achieve enhanced flexibility in meeting overall financial objectives. Swap
agreements are not to be used for speculation.

At the time of entering into a swap agreement, suitable counterparties must have at least
two long-term unsecured credit ratings in one of the highest two rating categories from Fitch,
Moody’s or Standard and Poor’s, in addition to demonstrated experience in successfully executing
swap agreements. The policy also addresses conditions for assigning or terminating swap
agreements, as well as collateralization provisions for swap agreements. Additional information
regarding UNC Hospitals’ interest rate swap agreements with respect to the Series 2003 Bonds
and the Series 2009A Bonds is provided in the financial statements of UNC Hospitals for the Fiscal
Year ended June 30, 2019 included in Appendix B to this Official Statement under “Note 7 –
Long-Term Liabilities – Demand Bonds” and “Note 8 – Derivative Instruments.”

POTENTIAL ACQUISITIONS AND DIVESTURES

The UNC Health Care System and UNC Hospitals plan for, evaluate and pursue potential
merger, acquisition and affiliation opportunities on a continuing basis as part of their overall
strategic planning and development process. This planning and development process may result
in an increase in the number of hospitals and other health care facilities owned, operated by, and/or
affiliated in some way with, the UNC Health Care System, UNC Hospitals or affiliates of the UNC
Health Care System. As part of its ongoing planning and property management functions, the
UNC Health Care System also reviews the use, compatibility and business viability of many of its
operations and the operations of its affiliates, and, from time to time, the UNC Health Care System
may pursue changes in the use of, or disposition of, such operations.

The UNC Health Care System and UNC Hospitals occasionally receive offers for or
expressions of interest from third parties about potential acquisitions of operations or properties
that are owned and/or operated by the UNC Health Care System or UNC Hospitals. Discussions
with respect to mergers, acquisitions, affiliations, divestitures, dispositions or changes of use are
conducted by UNC Health Care System’s management on a regular basis with other parties and
may include execution of non-binding letters of intent. It is likely that the identity, operations and
facilities of the UNC Health Care System and its components will change from time to time. Such
changes could have an adverse effect on the financial condition of UNC Hospitals and the UNC
Health Care System and such effect could be material.

LICENSURE, ACCREDITATION AND MEMBERSHIPS

UNC Hospitals has been accredited by The Joint Commission. On July 17, 2019, UNC
Hospitals completed its latest full survey by The Joint Commission, and it was accredited on
August 30, 2019. The re-accreditation of UNC Hospitals’ Home Health Care and Behavioral
Health programs also took place at this time. These accreditations are valid for a three-year period.
Other programs accredited by The Joint Commission include Comprehensive Stroke and
Ventricular Assist Device. The accreditation certificates for these programs are valid for a two-
year period. UNC Hospitals is licensed by the State through the Division of Health Service
Regulation of the Department of Health and Human Services as an acute care general hospital.
UNC Hospitals has also been granted the status of an “Academic Medical Center Teaching

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Hospital,” which gives it opportunities for exemption from certain aspects of the Certificate of Need Law. UNC Hospitals is certified for participation in the Medicare and Medicaid programs.

A significant number of UNC Hospitals programs are accredited and recognized by a variety of national organizations. They include (but are not limited to):

- Bariatric Center of Excellence by the American College of Surgeons
- Bone Marrow Transplant by the Foundation for the Accreditation of Cellular Therapy
- Center for Transplant Care designated as a CMS approved Transplant Center, and UNOS member in good standing
- Ventricular Assist Device Program Certification by Joint Commission.
- Advanced Comprehensive Stroke Center Certification by Joint Commission
- Chest Pain Center Accreditation by the Society for Cardiovascular Care
- Level 4 Epilepsy Center by the National Association of Epilepsy Centers (highest designation)
- American College of Surgeons Commission on Cancer Accreditation; NCI-designated Comprehensive Cancer Center by the American College of Surgeons Commission on Cancer Accreditation
- Adult and Pediatric Level I Trauma by the American College of Surgeons
- Verified Burn Center by American College of Surgeons.
- Commission on Accreditation of Medical Transport Systems
- Inpatient medical rehabilitation program by the Commission on Accreditation of Rehabilitation Facilities
- Residency Training Program by the Accreditation Council for Graduate Medical Education
- Occupational Therapy Residency Programs by the American Occupational Therapy Association
- Physical Therapy orthopedic, neurology, and pediatric residency programs by the American Physical Therapy
- Specialty Pharmacy by the Utilization Review Accreditation Commission
- Pharmacy residency program by the American Society of Health System Pharmacy

The clinical, anatomic pathology and special purpose laboratories at UNC Hospitals are accredited by the College of American Pathologists, and the Transfusion Medicine, Blood Donation Center, Apheresis and Hematopoietic Progenitor Cell ("HPC") Laboratory are accredited by the American Association of Blood Banks. The Blood Bank is also inspected and approved by the Food and Drug Administration. The Apheresis Unit is a National Marrow Donor Program collection approved site and along with the HPC Laboratory are accredited by the Foundation for Accreditation of Cellular Therapy. The Histocompatibility Laboratory is accredited by the American Society of Histocompatibility and Immunogenetics. The Laboratories are accredited under the Clinical Laboratory Improvement Amendment. The Bone Marrow and Stem Cell Transplant program is accredited by the Foundation for the Accreditation of Cellular Therapy.

The Peripheral Vascular Laboratory and Cardiac Ultrasound are accredited by the Intersocietal Accreditation Commission with certifications in extracranial cerebrovascular, peripheral arterial, peripheral venous, visceral vascular and transthoracic echocardiography. The Radiology programs specializing in nuclear medicine, magnetic resonance imaging, positron
emission tomography, mammography, ultrasound, and computer axial tomography procedures are accredited by the American College of Radiology. UNC Hospitals participates with the Lineberger Comprehensive Cancer Center as one of only 50 Comprehensive Cancer Centers as designated by the National Cancer Institute.

UNC Hospitals is a “Contracting Hospital” with Blue Cross and Blue Shield of North Carolina and is a member of the American Hospital Association and its Metropolitan, Maternal and Fetal, and Psychiatric Constituency Sections. UNC Hospitals also belongs to the North Carolina Healthcare Association, the Association of American Medical Colleges and its Council on Teaching Hospitals, the National Association of Children’s Hospitals and Related Institutions, and the Academic Medical Center Connection.

EMPLOYEES

Human Resource Policy and Salary Administration

Effective November 1, 1998, the North Carolina General Assembly delegated to the Board of Directors of the UNC Health Care System the authority to govern the human resource management practices of UNC Hospitals, including establishment of policies and rules governing classification, compensation and other matters pertaining to employment and retention of personnel.

Staff Profile

As of June 30, 2019, UNC Hospitals employed (through the UNC Health Care System), inclusive of house staff, 10,509 full time equivalents (“FTE”). Included in this FTE number were 915 house staff, 2,582 registered nurses and 63 licensed practical nurses. There is an average of 11,795 employees on the payroll at any given time. In addition, UNC Hospitals employed approximately 47 paid FTEs in temporary status jobs as of June 30, 2019 and had an additional 72 FTEs contracted through outside agencies.

UNC Hospitals currently and periodically faces challenges due to national and regional nursing shortages. UNC Hospitals has an aggressive recruitment and retention program in place to respond to these challenges.

Benefits

UNC Health Care System participates in the benefits programs offered through the State. Employees of UNC Health Care System, as State employees, are required to participate in a one of two retirement options:

- A defined benefit retirement program (Teachers’ and State Employees’ Retirement System of North Carolina) that provides benefit payments at retirement based on salary and years of credited service. The State Retirement System also provides a Disability Income Plan and Death Benefit at no additional cost to the employee. Employees contribute funds on a pre-tax basis and the North Carolina General Assembly establishes the amount that the UNC Health Care System is required to contribute to the State Retirement System. The funding policy for the State Retirement System

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provides for employer and member contributions at actuarially determined rates. Beyond its employer required contribution, the UNC Health Care System has no unfunded liabilities in regard to the benefit programs offered through the State Retirement System. Additional information on the pension plans and other benefits can be found in the footnotes to the audited financial statements for the Fiscal Year ended June 30, 2019 contained in Appendix B to this Official Statement.

- A defined contribution retirement program (the Optional Retirement Program) that provides benefits based on contributions to the account, made pre-tax by the employee and the North Carolina General Assembly establishes the amount that the UNC Health Care System is required to contribute to the employee’s chosen retirement vendor (TIAA or Fidelity). The State Retirement System also provides a Disability Income Plan to these participants at no additional cost to the employee. The contributions are invested and the returns are credited to the employee’s account. The value of the account is based on the amount of contributions made and the performance of the investment funds the employee selects. The accumulated balance provides monthly income during an employee’s retirement. The employer contribution rate has not changed since plan inception. Beyond its employer-required contributions, the UNC Health Care System has no unfunded liabilities in regard to the benefit programs offered through the State Retirement System.

Additional information on the retirement plans and other benefits can be found in the footnotes to the audited financial statements for the Fiscal Year ended June 30, 2019 contained in Appendix B to this Official Statement.

Employees of UNC Health Care System participate in the North Carolina State Health Plan through the State of North Carolina’s Self Insured Teachers’ and State Employees’ Health Benefit Plan. Dependent and family coverage is also available on a pre-tax basis. UNC Health Care System supports an elective, employee-paid benefits program as defined by State law. A voluntary flexible benefit program option is offered through North Carolina Flex. Nine pre-tax benefit program options are available: a Health Care Spending Account, a Dependent Care Spending Account, a Vision Care Plan, an Accidental Death and Dismemberment Insurance Plan, a Dental Plan, a Critical Illness Plan, a Cancer Plan, a Group Term Life Insurance Plan and a TRICARE supplemental policy. Additionally, the NC Flex plan offers a Core Accidental Death and Dismemberment Plan in the amount of $10,000 at no cost to employee. The System also participates in the Voluntary Shared Leave Program, Academic Assistance Program and the Law Enforcement Officer Supplemental Pay Program.

The UNC Health Care System provides an extensive Employee Quality of Work Life Program that contributes to job satisfaction and employee retention and is an extension of UNC Health Care System’s “Statement of Values” adopted by the Board of Directors. This statement emphasizes the qualities and philosophy necessary to achieve excellence in patient care, research, education, citizenship, and human resource management.

In June 2019, Forbes magazine ranked UNC Health Care as the No. 1 health care employer in North Carolina and the No. 5 overall employer in the State.
Collective Bargaining

Employees of UNC Health Care System, as employees of the State, have the right to become members of any labor organization; however, State agencies may not enter into agreements or contract with a bargaining unit which has as its purpose, or one of its purposes, collective bargaining with respect to grievances, labor disputes, wages or salary, rates of pay, hours of employment or the conditions of work of such employee. In addition, strikes by employees of UNC Health Care System are prohibited under State law. UNC Hospitals' management believes that its employees are generally satisfied and that the potential for conflict is minimal.

INSURANCE

UNC Hospitals maintains a comprehensive insurance program that, in the opinion of management, offers adequate protection against foreseeable risk. UNC Hospitals and the UNC-CH School of Medicine are participants in a program of professional liability self-insurance. Created in 1978, the University of North Carolina Liability Insurance Trust Fund (the "Trust Fund") provides coverage for UNC Hospitals as an entity, as well as for the employees and professional staff of UNC Hospitals, including the house staff. For the period from July 1, 2019 to June 30, 2020, the Trust Fund provides coverage on an occurrence basis of $3,000,000 per individual and $7,000,000 in the aggregate per claim. The Trust Fund provides coverage of $1,000,000 per occurrence in accordance with the limited waiver of sovereign immunity afforded by the State Tort Claims Act, for any recovery against UNC Hospitals for the negligence of its employees. To assure that both existing and future claims will be paid, the Board of Governors of The University of North Carolina is authorized by law to borrow up to $30 million to replenish the Trust Fund. As reflected in the June 30, 2019 audited financial statements contained in Appendix B to this Official Statement, UNC Hospitals had an excess of assets over liabilities on deposit with the Trust Fund in the amount of $15,577,026.

LITIGATION

UNC Hospitals is involved in litigation arising in the normal course of business. After consultation with legal counsel, management believes these matters will be resolved without a material adverse effect on the financial condition or results of operations of UNC Hospitals.
Appendix G

UNC REX and UNC Hospitals Rating Agency Reports
Rex Healthcare, NC
Update to credit analysis

Summary
Rex Healthcare (A2 stable) will maintain its good market position in Wake County, a fast growing and relatively well insured area. Rex will continue to derive material benefit from its membership in the UNC Health Care System and governance and ownership structure that runs up through the University of North Carolina at Chapel Hill and the state of North Carolina. Additionally, we expect that Rex will maintain adequate financial performance and liquidity ratios. Rex benefits from inclusion in the UNCHCS through integrated capital and strategic planning and UNCHCS transferred approximately $180 million to Rex in fiscal 2019 to support capital projects.

Credit strengths
» Ownership structure that rolls up through the University of North Carolina and State of North Carolina

» Material financial support from the UNC Health Care System to support capital spending; Rex further benefits from integrated strategic and capital spending with UNCHCS

» Growing patient volumes, and location in a fast growing and highly insured market

» Good core operating performance, before giving consideration to cash transfers to the UNC Health Care System

Exhibit 1
Cash flow margins down in recent years, but liquidity at a high point due to transfer from UNCHCS

Source: Moody’s Investors Service
Credit challenges

» Competitive market in Raleigh, requiring significant capital spending to remain competitive and meet needs of growing population
» Recent trend of weaker margins is likely to continue for the next several years owing to wage pressures and effort to position Rex as a low cost provider
» Net cash transfers to UNCHCS will continue in fiscal 2020 and for the foreseeable future, significantly reducing profitability when treated as an operating expense
» New Medicaid managed care program may result in reduction of revenue generated under the Medicaid program
» Unfunded pension liability increases comprehensive debt significantly, although a benefit freeze in fiscal 2015 significantly reduced the liability

Rating outlook
The stable outlook reflects our expectation that Rex will maintain good financial performance and cash flow, and will continue to benefit from inclusion in the UNCHCS.

Factors that could lead to an upgrade
» Material reduction in transfers to the UNC Health Care System, allowing Rex to generate strong cash flow margins
» Reduction in balance sheet leverage through accumulation of cash
» Continued enterprise growth

Factors that could lead to a downgrade
» Increase in transfers to the UNC Health Care System
» Reduction in profitability or balance sheet strength at Rex
» Significant new capital spending plans, beyond what is currently planned

Key indicators

Exhibit 2
Rex Healthcare, NC

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019 Pro-Forma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Revenue ($'000)</td>
<td>853,336</td>
<td>954,085</td>
<td>1,033,609</td>
<td>1,119,052</td>
<td>1,169,950</td>
</tr>
<tr>
<td>3 Year Operating Revenue CAGR (%)</td>
<td>5.8</td>
<td>9.3</td>
<td>11.3</td>
<td>9.5</td>
<td>7.0</td>
</tr>
<tr>
<td>Operating Cash Flow Margin (%)</td>
<td>5.5</td>
<td>8.7</td>
<td>9.3</td>
<td>7.3</td>
<td>7.0</td>
</tr>
<tr>
<td>PM: Medicare (%)</td>
<td>49.9</td>
<td>50.1</td>
<td>52.0</td>
<td>53.1</td>
<td>54.1</td>
</tr>
<tr>
<td>PM: Medicaid (%)</td>
<td>4.7</td>
<td>5.0</td>
<td>5.0</td>
<td>4.9</td>
<td>4.8</td>
</tr>
<tr>
<td>Days Cash on Hand</td>
<td>155</td>
<td>146</td>
<td>131</td>
<td>134</td>
<td>191</td>
</tr>
<tr>
<td>Unrestricted Cash and Investments to Total Debt (%)</td>
<td>166.8</td>
<td>128.7</td>
<td>127.4</td>
<td>147.8</td>
<td>114.2</td>
</tr>
<tr>
<td>Total Debt to Cash Flow (x)</td>
<td>3.6</td>
<td>2.8</td>
<td>2.4</td>
<td>2.6</td>
<td>4.7</td>
</tr>
</tbody>
</table>

Based on audits for Rex Healthcare, Inc. and Subsidiaries
2019 pro-forma includes $250 million additional debt
Contributions to Related Party and Interest Expense reclassified as operating expenses; in 2019 $180 million on Contributions Received from Related Party reclassified as non-operating leaving a net $19 million in transfers from Rex to UNCHCS in operating expenses
Investment returns normalized at 6% prior to 2015, and at 5% in 2015 and beyond

Source: Moody’s Investors Service

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.
Profile
Rex is a 439 acute care bed community hospital in Raleigh, North Carolina. It is an affiliate of the UNC Health Care System.

Detailed credit considerations

Market position: competitive and fast growing local market
Rex will continue to benefit from strong population growth in Wake County for the next several years. Wake County is growing at roughly double the rate of the US, which is driving good volume growth at Rex. Located in the “Research Triangle,” much of the job growth is comprised of highly compensated and well insured professions.

The local market is also highly competitive with other highly regarded and well capitalized competitors. Primary hospital competitors are WakeMed (A2 stable) and Duke Healthcare’s (Aa2 stable) Raleigh campus. Rex and its competitors will continue to make investments in physician practices and new locations in order to meet the needs of the growing population and capture market share.

Rex is using proceeds of the Series 2019 offering, and its own resources and cash flow, in order to build and equip a new hospital in Holly Springs, a fast growing suburb of Raleigh, and a cancer center on its main campus in Raleigh. The new hospital was subject to the State of North Carolina’s strict certificate of need process, which provides some assurance that it will have sufficient patient demand to support operations. The cancer center consolidates a number of services on Rex’s main campus and will provide opportunity for growth.

Rex is part of the UNC Health Care System (UNCHCS) which imparts both credit positive and credit negative elements. UNCHCS is comprised of 12 acute care hospitals, the UNC School of Medicine, UNC Faculty Physician plan, and several community based physician practices and a clinically integrated network that includes a number of independent practices. The system’s anchors are UNC Hospitals (Aa3 stable) and Rex. The system is concentrated in the triangle region, but has a small geographic presence in two western counties and generates over $4 billion in annual revenue and over 80,000 admissions.

UNCHCS owns or operates 12 acute care hospitals in North Carolina. Hospitals in UNCHCS collaborate on supply chain, revenue cycle, and broader strategy including service line and practice development. In recent years, UNCHCS has made significant progress in improving operational and strategic coordination among its hospitals and physician practices, and we expect these efforts will remain a key strategic focus over the next several years. Together, UNC Hospitals and Rex Healthcare account for about 75% of UNCHCS revenue.

Credit positive elements of the relationship are that UNCHCS’ ownership structure rolls up through the University of North Carolina and the State of North Carolina, which provides a degree of institutional credit support to Rex. Importantly, the system is becoming more integrated with regard to physician and service line strategy, and is implementing a number of programs to share resources and leverage the system’s economies of scale. We expect the cost reduction programs to benefit Rex directly (by reducing Rex’s operating expenses) and indirectly (by reducing the need for transfers to support other system entities) over the next several years.

A particularly important credit positive element of this support is system-wide capital planning. Following the sale of a High Point Hospital, UNCHCS transferred $180 million to Rex during fiscal 2019 in order to support the aforementioned capital projects, funding about 75% of those projects. This financial support fully repaid Rex for financial transfers that it made to support High Point and provided significant funding over and above that amount.

Credit negative elements of the relationship are that UNCHCS has undertaken significant expansion in recent years and has relied on Rex and UNC Hospitals for cash transfers to support system strategies. Despite the large capital transfer to Rex from UNCHCS in fiscal 2019, we expect that Rex will continue to provide cash transfers to support UNCHCS strategic priorities in the coming years.

Operating performance, balance sheet, and capital plans: transfers from parent shore up balance sheet measures; capital spending to remain high
Operating performance at Rex is good, but has trended downward somewhat in recent years. Inclusive of transfers to UNCHCS, the cash flow margin measured 7.0% in fiscal 2019 and 7.3% in 2018, down from 8.7% in 2016 and 9.3% in 2017. Margins before transfers are generally 2 – 3 percentage points higher with annual transfers of about $20 - $35 million. As discussed above, Rex received $180 million in transfers from UNCHCS in fiscal 2019 to support capital projects.
Rex's margins have come down in recent years due to several factors including wage growth to keep up with a growing and competitive market, additional expenses incurred with the opening of the Heart and Vascular Hospital in 2018, and a strategic push to position itself as a low cost provider. Inclusive of transfers to UNCHCS, we anticipate margins will remain at lower levels of 7% - 8% over the next two years as the Holly Springs hospital and cancer center are brought online, and once operational, the operating cash flow margin will show some improvement to about 9%. Transfers to UNCHCS may come down somewhat over the next several years as performance at other hospitals improves and because High Point, which had been a drag on system-wide margins, was sold in 2018.

A near term challenge is that North Carolina will soon transition to a Medicaid managed care program. This will introduce some financial risk as it will require providers to negotiate Medicaid reimbursement rates. We expect the managed care companies to pursue strategies to lower per capita spending and the overall growth of spending on their covered populations. Rex has less Medicaid exposure than other providers but will nevertheless be affected by the changes. North Carolina recently awarded five managed care companies with contracts for the state Medicaid managed care program. UNCHCS, along with eleven other not-for-profit North Carolina systems and Presbyterian Health Services NM (Aa3 stable), formed a managed care company that applied to participate in North Carolina's Medicaid plan. Their bid was not one of the plans that was awarded by the state.

Rex's capital spending will remain elevated for the next several years as it completes the Holly Springs hospital and cancer center; spending will total over $420 million through 2023. Capital spending at the entire UNCHCS will total nearly $1.5 billion through 2023. This includes over $800 million of spending at UNCHCS to complete a surgical tower, expand the Hillsborough campus, and other routine and strategic spending. Spending at Rex and UNC Hospitals accounts for over 80% of planned capital spending at UNCHCS.

LIQUIDITY
Rex's unrestricted cash position is currently very strong, following the transfer of $180 million from UNCHCS to Rex in fiscal 2019. At FYE 2019, the organization had about $570 million of unrestricted cash and investments, translating into about 190 days cash. Inclusive of the Series 2019 plan of finance, cash to debt measures 112%. Given the timing of future spending and bond proceeds on hand from the Series 2019 financing, we expect Rex will maintain balance sheet ratios at approximately current levels.

Aside from working capital, investments are managed by the UNC Management Company. Although beneficial from the standpoint of asset management, investments at the Management Company have limitations on their liquidity and redemptions. The Management Company reported unfunded commitments to private capital at 18% of assets under management at fiscal year end 2018.

Debt structure and legal covenants
Inclusive of the Series 2019 plan of finance, Rex is highly leveraged with debt to revenue of about 43%. The organization does not have additional new money debt plans, and this ratio should improve over the next several years.

DEBT STRUCTURE
Inclusive of the Series 2019 plan of finance, debt structure is approximately 75% traditional fixed rate, 20% in direct bank placements, and the balance in notes payable. The direct bank placements are with TD Bank and expire in April 2025 and April 2028.

Covenants are calculated based on the obligated group and include a days cash covenant of 75 days and debt service coverage covenant of 1.2x. Rex is in compliance with all covenants.

DEBT-RELATED DERIVATIVES
There are no debt related derivatives.

PENSIONS AND OPEB
Rex has a frozen defined benefit plan. Although the unfunded liability is large at approximately $116 million (and would be about $250 million if a market discount rate were applied), the freezing of accrued benefits reduced the plan's projected benefit obligation by $75 million in 2016.

Management and governance
Rex's senior leadership has varying lengths of tenure with the organization. The CEO has been in his role for several years, but was previously the COO of the organization. The CFO joined in 2016. Management and governance rolls up through UNCHCS.
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Moody's Investors Service

Rating Action: Moody's assigns A2 to Rex Healthcare's (NC) Ser. 2019; outlook stable

22 Oct 2019

New York, October 22, 2019 -- Moody's Investors Service has assigned a A2 to Rex Healthcare's (Rex) proposed Health Care Facilities Revenue Bonds (Rex Healthcare), Series 2019, to be issued in an amount of $250 million. Bonds will be issued by the North Carolina Medical Care Commission and will have a final maturity of 2049. At this time we are affirming our A2 rating on $133 million of outstanding rated debt. The outlook is stable.

RATINGS RATIONALE

The A2 rating reflects Rex's good market position in Wake County, a fast growing and relatively well insured area, Rex's membership in the UNC Health Care System (UNCHCS) and governance and ownership structure that runs up through the University of North Carolina at Chapel Hill and the state of North Carolina, and Rex's own adequate financial performance and liquidity ratios. Rex benefits from inclusion in the UNCHCS through integrated capital and strategic planning and UNCHCS transferred approximately $180 million to Rex in fiscal 2019 to support capital projects (inclusive of its own transfers to UNCHCS for routine support, Rex received a net $160 million from UNCHCS in 2019).

Key challenges include the need to maintain relatively high levels of capital spending in order to remain competitive and an expected resumption of net transfers to UNCHCS in fiscal 2020.

RATING OUTLOOK

The stable outlook reflects our expectation that Rex will maintain good financial performance and cash flow, and will continue to benefit from inclusion in the UNCHCS.

FACTORS THAT COULD LEAD TO AN UPGRADE

- Material reduction in transfers to the UNC Health Care System, allowing Rex to generate strong cash flow margins
- Reduction in balance sheet leverage through accumulation of cash
- Continued enterprise growth

FACTORS THAT COULD LEAD TO A DOWNGRADE

- Increase in transfers to the UNC Health Care System
- Reduction in profitability or balance sheet strength at Rex
- Significant new capital spending plans, beyond what is currently planned

LEGAL SECURITY

Bonds are secured by a security interest in Pledged Assets, which are essentially the organization's revenues. Rex Hospital and Rex Healthcare are the only members of the Obligated Group. Additional indebtedness is subject to a debt to capitalization limit of 65% and pro-forma debt service coverage of 1.2 times. There is an annual debt service coverage test of 1.2 times; a consultant must be retained if coverage is not met.

USE OF PROCEEDS

Bond proceeds will be used to fund several capital projects, including the Holly Springs Hospital and a cancer center, and to pay the costs of issuance.

PROFILE
Rex is a 439 acute care bed community hospital in Raleigh, North Carolina. It is an affiliate of the UNC Health Care System.

METHODOLOGY

The principal methodology used in these ratings was Not-For-Profit Healthcare published in December 2018. Please see the Rating Methodologies page on www.moodys.com for a copy of this methodology.

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Rating Action: Moody's assigns Aa3 to University of North Carolina Hospitals' Ser. 2019; outlook stable

22 Oct 2019

New York, October 22, 2019 -- Moody's Investors Service has assigned a Aa3 to University of North Carolina Hospitals proposed $150 million University of North Carolina Hospitals at Chapel Hill Revenue Bonds, Series 2019. Bonds will be issued by the Board of Governors of the University of North Carolina and have a final maturity in 2049. At this time we are affirming our Aa3 and Aa3/VMIG 1 ratings on about $315 million of outstanding debt. The outlook is stable.

RATINGS RATIONALE

The Aa3 rating reflects the University of North Carolina Hospitals' excellent market position and strong patient demand, combined with very strong financial performance (before giving effect to transfers to the University of North Carolina Health Care System, UNCHCS). Additional credit positive considerations include the organization's ownership structure which runs up through the University of North Carolina at Chapel Hill and the State of North Carolina and the organization's modest debt load, even after incorporating the Series 2019 bonds. Key challenges include large annual transfers to UNCHCS that materially reduce operating cash flow and weaken leverage metrics and a large unfunded pension liability.

The VMIG 1 short term rating on debt supported by standby bond purchase agreements reflects the agreements with - and the credit quality of - the corresponding banks.

RATING OUTLOOK

The stable outlook reflects our expectation that UNC Hospitals will maintain strong financial performance (before transfers to UNCHCS) and continue to grow patient volumes, especially as new facilities come online.

FACTORS THAT COULD LEAD TO AN UPGRADE

- Stronger operating cash flow margins inclusive of transfers to UNCHCS
- Retention of operating surpluses that allows balance sheet to strengthen
- Short term VMIG 1: not applicable

FACTORS THAT COULD LEAD TO A DOWNGRADE

- Persistently high cash transfers to UNCHCS that pressure margins and limit accumulation of unrestricted cash
- Significant increase in debt absent cash flow growth
- Short Term VMIG 1: Moody's downgrades the short-term CR Assessment of the Bank or the long-term rating of the bonds

LEGAL SECURITY

The bonds are secured by a pledge of revenues from University of North Carolina Hospitals. The legal documents permit the issuer (subject to approval of a bond insurer or banks providing SBPAs, if any) to replace the indenture, subject to the rating on the bonds not being lowered.

USE OF PROCEEDS

Proceeds of the Series 2019 bonds will be used to complete construction of a surgical tower on UNC Hospital's main campus in Chapel Hill.

PROFILE
UNC Hospitals is an academic medical center and teaching hospital for the UNC School of Medicine. UNC Hospitals is a member of the UNC Health Care System, which owns or operates 12 hospitals in North Carolina.

METHODOLOGY

The principal methodology used in the long-term ratings was Not-For-Profit Healthcare published in December 2018. The principal methodology used in the short-term ratings was Variable Rate Instruments Supported by Conditional Liquidity Facilities published in March 2017. Please see the Rating Methodologies page on www.moodys.com for a copy of these methodologies.

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University of North Carolina Hospitals

Update to credit analysis

Summary
The University of North Carolina Hospitals (Aa3 stable) will continue to benefit from its excellent market position and strong patient demand, combined with very strong financial performance (before giving effect to transfers to the University of North Carolina Health Care System, UNCHCS). Additional credit positive considerations include the organization’s ownership structure which runs up through the University of North Carolina at Chapel Hill and the State of North Carolina and the organization’s modest debt load, even after incorporating the Series 2019 bonds. Key challenges include large annual transfers to UNCHCS that materially reduce operating cash flow and weaken leverage metrics and a large unfunded pension liability.

Credit strengths
» Ownership structure that rolls up through the University of North Carolina and State of North Carolina, both of which are rated Aaa

» Strong clinical breadth including Level I Trauma, organ transplant, and one of two verified burn centers in the state supports a broad patient draw evidenced by 38% market share over a four-county primary service area and 68% market share in Orange County.

» Primary teaching site for UNC School of Medicine; one of only four AMC’s in North Carolina

» Operating performance before transfers to UNCHCS is very strong with operating cash flow margins of 14% - 17%; transfers reduce margins significantly
Low debt load of approximately 22% debt-to-revenue, inclusive of the Series 2019 plan of finance

Credit challenges

» Cash transfers to UNCHCS reduce margins by several percentage points and limit growth in balance sheet reserves
» Capital spending will remain high over the next several years
» New Medicaid managed care program may result in reduction of revenue generated under the Medicaid program
» Large unfunded pension liability resulting from participation in the Teachers’ and State Employees’ Retirement System, a multi-employer plan in North Carolina

Rating outlook

The stable outlook reflects our expectation that UNC Hospitals will maintain strong financial performance (before transfers to UNCHCS) and continue to grow patient volumes, especially as new facilities come online.

Factors that could lead to an upgrade

» Stronger operating cash flow margins inclusive of transfers to UNCHCS
» Retention of operating surpluses that allows balance sheet to strengthen
» Short term VMIG 1: not applicable

Factors that could lead to a downgrade

» Persistently high cash transfers to UNCHCS that pressure margins and limit accumulation of unrestricted cash
» Significant increase in debt absent cash flow growth
» Short term VMIG 1: Moody’s downgrades the short-term CR Assessment of the Bank or the long-term rating of the bonds

Key indicators

Exhibit 2

University of North Carolina Hospitals

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<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019 Pro Forma</th>
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<td>Operating Revenue ($'000)</td>
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<td>1,591,128</td>
<td>1,774,344</td>
<td>1,892,352</td>
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<tr>
<td>3 Year Operating Revenue CAGR (%)</td>
<td>5.8</td>
<td>9.5</td>
<td>12.2</td>
<td>10.0</td>
<td>9.2</td>
</tr>
<tr>
<td>Operating Cash Flow Margin (%)</td>
<td>8.3</td>
<td>8.5</td>
<td>6.5</td>
<td>6.1</td>
<td>12.2</td>
</tr>
<tr>
<td>PM: Medicare (%)</td>
<td>33.0</td>
<td>34.3</td>
<td>34.4</td>
<td>35.6</td>
<td>36.7</td>
</tr>
<tr>
<td>PM: Medicaid (%)</td>
<td>21.9</td>
<td>20.3</td>
<td>20.0</td>
<td>19.8</td>
<td>18.6</td>
</tr>
<tr>
<td>Days Cash on Hand</td>
<td>183</td>
<td>199</td>
<td>189</td>
<td>204</td>
<td>218</td>
</tr>
<tr>
<td>Unrestricted Cash and Investments to Total Debt (%)</td>
<td>237.6</td>
<td>306.0</td>
<td>249.9</td>
<td>305.3</td>
<td>241.6</td>
</tr>
<tr>
<td>Total Debt to Cash Flow (x)</td>
<td>1.8</td>
<td>1.5</td>
<td>2.2</td>
<td>2.0</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Based on audits for the University of North Carolina Hospitals at Chapel Hill
2019 includes $150 million additional debt
Health Care System Assessments and Interest reclassified as operating expenses
Investment returns normalized at 6% prior to 2015, and at 5% in 2015 and beyond
Source: Moody’s Investors Service

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.
Profile
UNC Hospitals is an academic medical center and teaching hospital for the UNC School of Medicine. UNC Hospitals is a member of the UNC Health Care System, which owns or operates 12 hospitals in North Carolina.

Detailed credit considerations

Market position: strong market position as an academic medical center in a favorable and growing market
UNC Hospitals has a very strong market position in its primary service areas and throughout the state generally owing to its position as one of the state’s major academic medical centers, high acuity of services provided, and strong clinical reputation. Although there are other highly regarded AMC’s and non-AMC hospitals with strong clinical reputations in North Carolina, we do not anticipate any material degradation to UNC Hospitals’ market position over the next several years.

Nevertheless, despite this strong reputation and market position, UNC Hospital’s pediatric heart surgery program was the subject of an investigation by various state and federal regulatory bodies following a news report alleging poor outcomes and oversight in the program. UNC Hospitals suspended the most complex surgeries in the program during the investigation, but has since resumed them. We do not expect material or long lasting credit implications as a result of the investigations; financially, the program is relatively small and is immaterial to UNC Hospital’s financial performance.

UNC Hospitals’ primary market of Orange County is located in the Research Triangle area a highly desirable part of North Carolina that has experienced strong population growth over the last decade plus and is projected to continue growing at rates higher than US averages over the next several years. These population trends, combined with the strong clinical draw of UNC Hospitals will contribute to continued patient volume growth over the next several years. UNC Hospitals has consistently operated at high occupancy levels over the last several years, growing patient volumes across nearly all key indicators. The organization is currently constructing a new tower to accommodate surgical volume growth and additional investments are planned at its Hillsborough campus (a community hospital) to increase capacity there. The Series 2019 bond offering completes the second of two planned tranches of financing for the surgery tower, which is expected to open in Spring 2022. Given high occupancy rates and strong demand for its services, we expect volume growth at UNC Hospitals once the new tower opens, as the organization is able to accommodate greater surgical volume and backfill beds with other patients.

UNC Hospitals competes with Duke University Health system (Aa2 stable) and Wake Forest Baptist (A2 negative) for high acuity referrals, clinical affiliations and other forms of alignment with community hospitals and regional referral centers throughout the state. This strategy has led UNC Hospitals to make a number of investments in hospitals and physician practices throughout the state through its participation in UNCHCS. UNCHCS owns or operates 12 acute care hospitals in North Carolina. Hospitals in UNCHCS collaborate on supply chain, revenue cycle, and broader strategy including service line and practice development. In recent years, UNCHCS has made significant progress in improving operational and strategic coordination among its hospitals and physician practices, and we expect these efforts will remain a key strategic focus over the next several years.

Over the last two years, UNC Rockingham Health Care ($52 million operating revenue) was added to UNCHCS as a owned hospital, and Wayne Memorial ($245 million operating revenue) and Onslow Memorial ($145 million operating revenue) were added under management contracts, while High Point was sold to Wake Forest Baptist. We view the sale of High Point positively; it was a drag on system financials and cash received from the sale will fund other system priorities, including capital spending at Rex Healthcare in Raleigh. Although UNCHCS hospitals are not cross-obligated on each others’ debt, we do consider the strategy and financial performance of UNCHCS in our rating of UNC Hospitals given that UNC Hospitals and Rex Healthcare (A2 stable, the other large hospital within UNCHCS) support UNCHCS through cash transfers.

Physician practices (both community based and academic) will continue to be major strategic priorities for UNCHCS. The system operates a physician led clinically integrated network that comprises the major employed physician groups of the system including UNC Faculty Physicians (an academic practice serving UNC Hospitals), UNC Physicians Network (a community practice), UNC Rex Healthcare Physicians, and Caldwell Physicians, alongside numerous affiliated independent practices. Competing systems in North Carolina also operate clinically integrated networks.
Operating performance, balance sheet, and capital plans: financial performance impacted by transfers to UNCHCS

Financial performance at UNC Hospitals is modest due to the impact of transfers to UNCHCS (which we reclassify as an operating expense). Inclusive of transfers, we expect UNC Hospitals’ operating cash flow margin to be in a range of 6% -8% over the next several years. Excluding transfers, UNC Hospitals produces very strong margins, typically ranging from 14% - 16%. Performance in 2019 was unusually strong at 12.2% (inclusive of transfers) due to a combination of good volumes and lower than typical transfers to UNCHCS.

We expect financial performance of UNCHCS to remain good with cash flow margins of 9% - 10%. The strategies and financial performance of the system hospitals varies. Some hospitals are very small community hospitals and generally generate breakeven performance, but are small enough such that their financial results have only a small impact on system wide performance. The largest system hospital after UNC Hospitals, is Rex Healthcare. Rex is a large ($1.2 billion revenue in FY 2019) community hospital in Raleigh that competes with similarly sized WakeMed (A2 stable) and Duke University Health System. Financial performance at Rex is good. Together, UNC Hospitals and Rex Healthcare account for about 75% of UNCHCS revenue.

A near term challenge is that North Carolina will soon transition to a Medicaid managed care program. This will introduce some financial risk as it will require providers to negotiate Medicaid reimbursement rates. We expect the managed care companies to pursue strategies to lower per capita spending and the overall growth of spending on their covered populations. North Carolina recently awarded five managed care companies with contracts for the state Medicaid managed care program. UNCHCS, along with eleven other not-for-profit North Carolina systems and Presbyterian Health Services NM (Aa3 stable), formed a managed care company that applied to participate in North Carolina’s Medicaid plan. Their bid was not one of the plans that was awarded by the state.

Capital spending will be elevated over the next several years, averaging around 3.0x depreciation expense and totaling about $257 million through fiscal 2023. $150 million of this spend will be financed with proceeds of the Series 2019 offering and the balance can be easily supported through expected cash flow. Other major projects include a $100 million expansion of the Hillsborough Hospital. Capital spending at the entire UNCHCS will total nearly $1.5 billion through 2023. This includes over $420 million of spending at Rex on a new community hospital, cancer center, and other routine and strategic spending. Spending at UNC Hospitals and Rex accounts for over 80% of planned capital spending at UNCHCS.

LIQUIDITY

UNC Hospitals has a good balance sheet position with days cash expected to remain above 200 days for the next several years and unrestricted cash to debt above 200% (inclusive of the Series 2019 offering). Aside from working capital, investments are managed by the UNC Management Company. Although beneficial from the standpoint of asset management, investments at the Management Company have limitations on their liquidity and redemptions. The Management Company reported unfunded commitments to private capital at 18% of assets under management at fiscal year end 2018.

Debt structure and legal covenants

On a pro-forma basis, leverage is relatively low with about 22% debt to revenue. UNCHCS’ debt burden is even lower at approximately 20% debt to revenue.

DEBT STRUCTURE

Inclusive of the Series 2019 offering, UNC Hospitals’ debt structure is approximately 62% fixed rate with the remaining balance in variable rate bonds backed by liquidity facilities provided by four different banks. Liquidity facilities backing $127 million of debt expire in fiscal 2021 and facilities backing $46 million of debt expire in fiscal 2022.

DEBT-RELATED DERIVATIVES

UNC Hospitals has two fixed payer interest rate swaps. The counterparty for both swaps is Bank of America, N.A. The first is based on a notional amount of $70.1 million and hedges the interest rate risk on the Series 2003A and B bonds. The second swap is based on a notional amount of $17.6 million and hedges the interest rate risk on the Series 2009A bonds. There is no collateral posted.

PENSIONS AND OPEB

UNC Hospitals participates in the Teachers’ and State Employees’ Retirement System, a multi-employer plan in North Carolina. The hospital makes its own payments into the plan; annual contributions from participating employers are determined by the plan.
In 2018, UNC Hospitals adopted GASB 75 which required it to recognize its share of the plans' OPEB liability, resulting in a large reduction to net assets and a negative unrestricted fund balance. Using Moody’s standard pension adjustments, the unfunded pension liability is well in excess of $1 billion, although we note that UNC Hospitals is contributing above the tread-water mark with contributions of $50 - $60 million annually.

The plan uses GASB accounting, but if market discount rates were applied, the underfunded status would grow significantly, and UNC Hospital’s share of the liability would be significant.

**Management and governance**

A new CEO was appointed to lead UNCHCS in 2019 following the planned retirement of the prior CEO. Other key members of the senior leadership team have been in place for several years.
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The Board Of Governors Of The University Of North Carolina
North Carolina Medical Care Commission
University Of North Carolina Hospitals; System

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Enterprise Profile--Very Strong
Financial Profile--Very Strong
Global Ratings assigned its 'AA' long-term rating to the University of North Carolina Board of Governors' (Board of Governors) $150 million series 2019 revenue bonds issued for University of North Carolina Hospitals (UNC Hospitals). We also assigned our 'AA-' long-term rating to the North Carolina Medical Care Commission's $250 million series 2019 revenue bonds issued for Rex Healthcare (doing business as UNC Rex Healthcare [UNC Rex]).

At the same time, we affirmed our 'AA' long-term rating on the Board of Governors' series 2010B and 2016 bonds and affirmed our 'AA/A-1' dual ratings on the Board of Governors' series 2001A, 2001B, 2003A, and 2003B variable rate demand bonds (VRDBs) supported by standby bond purchase agreements (SBPAs) from various banks, as well as our 'AA/A-1+' dual rating on the Board of Governors' series 2009A VRDBs also supported by an SBPA. The long-term rating reflects the creditworthiness of UNC Hospitals and the short-term component is derived solely from the short-term rating on the supporting bank. All series were issued for UNC Hospitals.

Lastly, we affirmed our 'AA-' long-term rating on the North Carolina Medical Care Commission's series 2010A and 2015A bonds issued for UNC Rex.

The outlook on all ratings, where applicable, is stable.

Both entities are affiliates of the unrated parent organization, University of North Carolina Health Care System (UNC HCS).
The ratings are based on our view of UNC Hospitals and UNC Rex Healthcare as core and highly strategic components of the group credit profile, respectively. Information provided throughout this report will focus on the credit characteristics of the consolidated UNC Health Care unless otherwise specified. UNC Health Care does not prepare audited financial statements and this analysis is reliant on figures consolidated by management, as well as the individual audits of UNC Hospitals and UNC Rex.

The two series 2019 fixed-rate issues will raise a combined $400 million in new money for various capital projects across the system's two primary affiliates: UNC Hospitals and UNC Rex. The $150 million for UNC Hospitals will go toward a new seven-floor surgical tower in Chapel Hill, which will include 56 intensive care unit patient rooms and 24-operating rooms when completed in 2022--the tower will also open up incremental capacity on the high-occupancy flagship campus. The $250 million UNC Rex funds will finance construction of a new 50-bed hospital in the high-growth Holly Springs region, as well as a new outpatient cancer center in Raleigh that will consolidate several clinics. We last reviewed UNC Health Care in June 2019, and this debt issuance was considered as part of that review.

The ratings reflect UNC Health Care's solid enterprise profile and sustained healthy financial performance and debt service coverage in recent years, factors that we believe offset some of the system's pro forma balance sheet ratios that are lighter for the rating level. The system's operating revenue base continues to grow, surpassing $4.4 billion in fiscal 2019 and providing close to 7x pro forma maximum annual debt service (MADS) coverage. The 945-staffed-bed UNC Hospitals (which includes the flagship University of North Carolina Hospital at Chapel Hill, as well as its smaller Hillsborough campus) continues to pull referrals from across North Carolina, serving tertiary and quaternary patients and acting as the state's only public teaching hospital in partnership with the UNC School of Medicine and UNC Faculty Physicians. The system owns and operates four additional acute care hospitals throughout the state (with its seventh facility under construction), and has management agreements with six other organizations.

Effective Sept. 1, 2018, UNC Health Care sold its ownership in the 269-staffed-bed High Point Medical Center to Wake Forest Baptist Medical Center. The hospital is 20 miles southeast of Winston-Salem and had been financially dilutive to the system in recent years. Earlier in 2018, UNC Healthcare acquired the 33-staffed-bed Morehead Memorial Hospital out of bankruptcy and renamed the facility UNC Rockingham Health Care. Moreover, the system entered into a two-year management agreement with Onslow Memorial Hospital (located in Jacksonville, North Carolina) in January 2019. Lastly, UNC Rex recently announced a letter of intent to form a joint operating agreement with Johnston Health, which is currently managed and partly owned by UNC Health Care. The agreement calls for Johnston to be more clinically and operationally integrated with UNC Rex and, in turn, UNC Health Care. This agreement is not final but has been considered as part of this review. No other material mergers, acquisitions, or divestments are imminent at this time, but we expect UNC Health Care will continue to affiliate with organizations across the state as it furthers its mission.

The system continued to produce solid income and cash flow in fiscal 2019, with a 5.2% operating margin and 6.8x pro forma MADS coverage, well ahead of budget. Moreover, unrestricted reserves have grown to nearly $2.2 billion aided by sound operations and proceeds from the sale of High Point Medical Center. We expect operations to remain healthy in fiscal 2020, and preliminary first-quarter results show income well in excess of budget.

UNC Health Care is entering what is expected to be a period of higher capital spending and investment, with several
projects aimed at increasing capacity and further capturing the region's population growth. In addition to the aforementioned bond-funded projects, the system is also adding a second patient tower to its Hillsborough campus and building out its Eastowne ambulatory campus in Chapel Hill, in addition to sustaining normal routine capital spending. The fiscal 2020 capital budget calls for a substantial increase in spending from 2019 and includes nearly $400 million in projects—though we expect actual spending to be lower than this. UNC Health Care's current capital plan calls for peak spending in fiscal 2021 before declining in 2022 and 2023. Though we believe it is possible new projects are considered in the outer years, we also believe the system's unrestricted reserves will remain fairly stable over the outlook period given the combined series 2019 bond funds, robust annual cash flow, and management's desire to defend unrestricted liquidity by delaying or deferring spending as necessary. We believe there is no material debt capacity at the current rating beyond the series 2019 bonds.

The final rating incorporates a positive adjustment based on UNC Health Care's relationship with the University of North Carolina at Chapel Hill, currently rated 'AAA'.

The rating further reflects our view of UNC Health Care's:

- Very strong market position as one the state's preeminent high-acuity health care facilities with a strong portfolio of access points and affiliations, driving referrals from across the state;
- History of healthy operations and extremely robust pro forma MADS coverage, both of which are expected to continue into fiscal 2020;
- Affiliation with the UNC School of Medicine and UNC Faculty Physicians, with a strong overall reputation for clinical excellence;
- Improving liquidity in recent years with nearly 200 days' cash on hand and pro forma unrestricted reserves to long-term debt of 230%, which remains good for the rating; and
- Favorable demographic characteristics in its overall primary and secondary service areas.

Partially offsetting the strengths, in our view, are UNC Health Care's:

- Weakening in leverage and unrestricted reserves to long-term debt following this issuance; leverage rose considerably in fiscal 2018 with the adoption of GASB 75 as the unfunded other postemployment benefits (OPEB) liability is now carried on the balance sheet;
- Heightened capital spending over the coming years coupled with operating liquidity (days' cash on hand) that has improved and is sufficient for the rating level, but remains light with our expectations for the 'AA' category;
- Competitive service area with the neighboring and well-respected Duke University Health System also competing for patients, physicians, and nurses; and
- State level pressures including North Carolina's expected transition to Medicaid managed care and the system's supplemental funding exposure, and the potential for material cuts to the state employee health plan in future years.
Outlook

The stable outlook reflects the expectation that UNC Health Care will maintain its market position strengths and solid financial performance over the outlook period, lending stability to the organization. Despite the added debt and higher capital spending forecast, we believe the system can sustain its current rating should operating performance continue at the level we expect and leverage metrics resume incremental improvement following this issuance.

Downside scenario

We could consider a lower rating on UNC Health Care if financial performance weakens materially from current levels or is below management's projections. Moreover, weakening in balance sheet metrics beyond pro forma levels or an unexpected decline in unrestricted reserves—whether due to increased capital spending or otherwise—could pressure the rating. A negative outlook or a lower rating on UNC Health Care would mean a negative outlook or lower rating level for both UNC Hospitals and UNC Rex.

Upside scenario

We do not think a higher rating is likely for UNC Health Care through the outlook period, given this debt issuance and financial metrics well below our medians at the higher rating. A positive outlook or a higher rating on UNC Health Care would mean a positive outlook or higher rating level for both UNC Hospitals and UNC Rex.

Enterprise Profile--Very Strong

Local demographics underpin growth

North Carolina and UNC Health Care's primary service areas have an economic base we consider strong and diversified. The professional and business service sectors, as well as the education and health sector, are the primary generators of projected employment growth.

Though UNC Hospitals has a large referral base, the majority (57%) of admissions come from its six county primary service area of Wake, Durham, Orange, Alamance, Chatham, and Lee counties. This region supports a population of over 1.8 million and its population growth is the impetus for the system's capital expansion projects. UNC Rex's primary service area of Wake County, a subset of UNC Hospitals' service area, generates 75% of its inpatient admissions and has a population of 1.1 million.

Market position and medical staff add stability to credit profile

UNC Health Care has a very broad patient pull that includes all 100 North Carolina counties. This broad draw is indicative of the large number of specialty and subspecialty services offered by UNC Hospitals and its affiliates. UNC Hospitals itself has staff of 1,358 active physicians, and 899 residents who are in training to become practicing physicians, most of whom are directly funded by UNC Hospitals. The system is also supported by UNC Physicians Network, a wholly owned subsidiary of the Health Care System, which consists of 97 community-based practices throughout Raleigh, Durham, and Chapel Hill and surrounding counties.

Market share for UNC Health Care is not available; however, UNC Hospitals' inpatient market share is expansive and relatively secure in its six-county primary service area at about 31% when including UNC Rex. Duke University Health

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System reports a similar market share but applies a different service area definition. UNC Rex maintains a stable market share of about 28% in its primary service area of Wake County, which grows to 35% when including UNC Hospitals—though still trailing WakeMed at 45%.

UNC Health Care has experienced steady volume growth at its two largest affiliates, UNC Hospitals and UNC Rex Healthcare, contributing to some capacity issues. UNC Hospitals’ infrastructure and high occupancy levels continue to generate the need for further expansion (such as the new surgical tower) and further utilization of services at its Hillsborough campus (11 miles north of the flagship) and UNC Rex (25 miles east). Consolidated utilization metrics fell in fiscal 2019 due to the exclusion of High Point Medical Center. System volumes are stable when accounting for this divestment, though UNC Rex did experience noticeable declines in surgical volumes in 2019 due to various issues related to physician turnover—these volumes have rebounded in early 2020. We also note no observable utilization or financial impact from a well-publicized May 2019 article which highlighted certain aspects of the system’s pediatric cardiology program at its Chapel Hill children’s hospital. System leadership voluntarily suspended some pediatric cardiology cases of the highest complexity, however, this suspension has since been lifted and procedures have resumed.

In September 2018, UNC Health Care sold its High Point facility to Wake Forest Baptist, headquartered in Winston-Salem. High Point had been dilutive to UNC Health Care’s financial operating performance in recent years, largely due to the departure of a large physician group (Cornerstone Health Care) that was acquired by Wake Forest Baptist several years ago. We think the sale of High Point will be mutually beneficial to both UNC Health Care and Wake Forest Baptist allowing UNC Health Care to shed itself of High Point’s operating losses and benefiting Wake Forest Baptist by restoring High Point as a referral location for Cornerstone Health Care’s physicians in that service area.

The system’s medical staff and high-acute patient mix help support a healthy payor mix with just under 50% of net patient revenue coming from commercial payors. UNC Health Care has exposure to North Carolina’s transition to Medicaid managed care slated to begin in early 2020, with a moderate 16.3% of net revenue coming from Medicaid in 2019. As part of the Medicaid transition, we expect some shift between supplemental funding and base rates, but understand that net funding should remain stable over the first few years of the program, volumes held constant.

**Stable leadership with strong University of North Carolina System ties**

UNC Hospitals and UNC Rex Healthcare have a strong group of senior leaders with close ties to, and some overlap of, senior executives at UNC Health Care, and the organizations have increased collaborative efforts to work more efficiently in recent years as part of their system partnership. UNC Health Care named a new CEO in December 2018, Dr. Wesley Burks, who had previously served as executive dean of the UNC School of Medicine. His appointment follows the retirement of Dr. Bill Roper, who now serves as interim president of the UNC System.

After several years of system growth through acquisition, added affiliates, and rising patient utilization, recent years have been focused on improving the system’s integration and better utilizing its portfolio of assets. We expect that the relationship among UNC Hospitals, UNC Rex Healthcare, and UNC Health Care will continue to strengthen, as the system increases focus on standardization and integration. We understand the next major points of emphasis are in the areas of value, experience, and population health management, as the system pursues a dual transformation focused
on both preserving existing strengths and building new competencies.

UNC Health Care is governed by a 24-member board of directors, one-third of whom are ex officio voting members, including leadership from the University of North Carolina System and UNC School of Medicine. Half of the board seats are appointed by the Board of Governors.

Table 1
University of North Carolina Health Care System, North Carolina Enterprise Statistics

<table>
<thead>
<tr>
<th></th>
<th>2019*</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient admissions</td>
<td>79,368</td>
<td>87,874</td>
<td>85,324</td>
</tr>
<tr>
<td>Equivalent inpatient admissions</td>
<td>183,848</td>
<td>188,081</td>
<td>177,644</td>
</tr>
<tr>
<td>Emergency visits</td>
<td>239,139</td>
<td>272,192</td>
<td>247,505</td>
</tr>
<tr>
<td>Inpatient surgeries</td>
<td>25,406</td>
<td>27,505</td>
<td>27,150</td>
</tr>
<tr>
<td>Outpatient surgeries</td>
<td>39,587</td>
<td>41,217</td>
<td>39,936</td>
</tr>
<tr>
<td>Medicare case mix index</td>
<td>2.0431</td>
<td>1.9484</td>
<td>1.9541</td>
</tr>
<tr>
<td>FTE employees</td>
<td>20,613</td>
<td>19,223</td>
<td>17,626</td>
</tr>
<tr>
<td>Active physicians</td>
<td>2,231</td>
<td>2,079</td>
<td>1,842</td>
</tr>
<tr>
<td>Based on net/gross revenues</td>
<td>Net</td>
<td>Net</td>
<td>Net</td>
</tr>
<tr>
<td>Medicare (%)</td>
<td>34.0</td>
<td>34.5</td>
<td>31.4</td>
</tr>
<tr>
<td>Medicaid (%)</td>
<td>16.3</td>
<td>14.4</td>
<td>16.0</td>
</tr>
<tr>
<td>Commercial/Blues (%)</td>
<td>48.1</td>
<td>47.8</td>
<td>50.7</td>
</tr>
</tbody>
</table>

*Includes two months of High Point Medical Center. Inpatient admissions exclude normal newborn, psychiatric, rehabilitation, and long-term care facility admissions.

Financial Profile--Very Strong

Operating performance driving exceptional debt service coverage

UNC Health Care has reported healthy revenue growth, stable financial operating performance, and solid debt service coverage in recent years. As expected, management finished fiscal 2019 ahead of its 4.2% adjusted operating margin target, as strong performance at UNC Hospitals offset some softness at UNC Rex--largely driven by several unanticipated physician transitions. Management's 2020 system budget again aims for a 4.2% adjusted operating margin, which we expect them to surpass. Preliminary system results through the first quarter generated a 5.4% adjusted operating margin. We expect performance to remain in line with the rating.

UNC Health Care has received stable net supplemental funding in recent years, totaling about $293 million in 2019. These figures include disproportionate share (DSH) and upper payment limit (UPL) funds. If the system's net DSH or UPL funding were to materially decline in future years, this could have a material effect on its overall financial profile. That said, we believe the system garners substantial support from state policymakers, which helps mitigate this exposure. Relatedly, this past year the North Carolina state treasurer attempted to remove upwards of $300 million from the state employee annual health care costs, with a direct impact to providers across the state such as UNC Health Care. Ultimately these changes were not implemented for state's current fiscal year, but this pressure is expected to return at the next cycle.
As mentioned, management's financial statements for the consolidated system cited in this report are not audited. Moreover, the financials do not include eliminations across affiliates. Material transfers to and from affiliates are netted against each other when possible. Mission support expense, $30.9 million in fiscal 2019, are mostly paid to the UNC School of Medicine and are included in operating expenses.

**Improved balance sheet can absorb new debt**
UNC Health Care's balance sheet has improved considerably over the past several years due partly to muted capital spending, healthy annual cash flow near $400 million, and proceeds from the sale of High Point Medical Center in fiscal 2019. All of the aforementioned have, in our view, positioned the balance sheet well for the expected ramp up in capital spending and the additional $400 million series 2019 debt. That said, we consider the system's pro forma balance sheet to be just adequate for the rating and believe there is little capacity for sizable additional debt beyond this issuance over the coming years, though no such plans currently exist. Leverage weakened in fiscal 2018 following the adoption of GASB 75 and we anticipate pro forma leverage will rise to 49% following this issuance; reserves to long-term debt should fall closer to 230%, down from about 400% at the conclusion of fiscal 2019.

We anticipate fiscal 2020 will mark the beginning of a period of heightened capital spending across the system, as construction continues or begins on projects intended to alleviate capacity constraints, modernize facilities, bolster the system's ambulatory footprint, and position UNC Health Care to capture the region's continued population growth. The largest single project is UNC Hospitals' $380 million seven-floor surgical tower in Chapel Hill, which will be partly funded by the $150 million series 2019 bonds. These bonds are the final component of the $250 million in financing that has already been approved by the North Carolina General Assembly for the project (the $99.9 million series 2016 bonds were issued in fiscal 2017). At UNC Rex, construction has started on a new 50-bed hospital in Holly Springs ($170 million total cost) and a new cancer center in west Raleigh ($58 million total cost), supported by UNC Rex's $250 million series 2019 bonds. Both these facilities are expected to be completed by summer 2021.

In addition to the projects supported by bond financing, UNC Health Care is engaged in several other notable capital projects including its new Eastowne ambulatory campus in Chapel Hill and a second patient tower at its Hillsborough campus. When including all projects and routine spending, management's current capital plan shows budgeted spending growing to about $400 million in 2020 and $460 million in 2021, before falling in subsequent years. As mentioned, we do expect actual spending to be lower than budgeted targets, but still anticipate much heavier spending over the coming years. Given the system's healthy cash flow and expected bond funds, we believe unrestricted reserve measures will hold stable over the outlook period, but we do not expect material growth.

**Moderate contingent debt and benefit liability exposure**
UNC Hospitals has several variable-rate demand bonds (series 2001A, 2001B, 2003A, 2003B, and 2009A) supported by SBPAs as a form of additional liquidity support. In 2015, management restructured its liquidity providers, which remain diversified across several banks, and UNC Hospitals maintains financial metrics favorable to those listed in each respective agreement. When including UNC Rex's series 2015B direct placement debt, about 50% of UNC Health Care's debt structure is what we consider contingent, but we expect this to fall below 30% with the issuance of the 2019 bonds. The series 2003A, 2003B, and 2009A VRDBs are synthetically fixed with UNC Hospitals' two swaps.

Pension considerations include UNC Hospitals' participation in the Teachers' and State Employees' Retirement System
(TSERS) cost-sharing multiple-employer defined-benefit plan that was 87.6% funded as of the 2019 audit, and UNC Rex Healthcare’s single-employer defined-benefit pension plan that was 68.2% funded and has been completely frozen to any new cumulative earnings for members since 2015. The total liability associated with these plans is $463.9 million. Though contributions have been rising in recent years (combined $80 million in 2019), we believe these plans will continue to be manageable at the current rating.

UNC Hospitals also participates in the state’s OPEB plan, the Retiree Health Benefit Fund (RHBF), which is funded on a pay-as-you-go basis. UNC Hospitals’ proportional share of the plan’s liability was $1.1 billion as of the 2019 audit, improved from the nearly $1.3 billion liability the year prior. Adding this to the balance sheet pushed the system’s leverage to 46% in 2018 from 23% in 2017 despite falling long-term debt. Provisions of TSERS and RHBF may only be amended by the state’s general assembly, leaving system management little ability to take action themselves to curtail benefits and better control required contributions.

Table 2

| University of North Carolina Health Care System, North Carolina Financial Statistics |
|-----------------------------------------------|-----------------|-----------------|
| Medians for ‘AA’ rated health care systems     | 2019* | 2018* | 2017* |
| Financial performance                          | 2018 |
| Net patient revenue ($000s)                   | 4,050,320 | 3,987,800 | 3,688,227 | 3,224,352 |
| Total operating revenue ($000s)                | 4,415,582 | 4,347,373 | 3,938,859 | MNR |
| Total operating expenses ($000s)               | 4,185,873 | 4,224,720 | 3,778,069 | MNR |
| Operating income ($000s)                       | 229,709 | 122,653 | 160,790 | MNR |
| Operating margin (%)                           | 5.20 | 2.82 | 4.08 | 4.40 |
| Net nonoperaing income ($000s)                 | 6,308 | 25,796 | 40,175 | MNR |
| Excess income ($000s)                          | 236,017 | 148,449 | 200,965 | MNR |
| Excess margin (%)                              | 5.34 | 3.39 | 5.05 | 6.70 |
| Operating EBIDA margin (%)                     | 9.54 | 7.17 | 8.45 | 10.10 |
| EBIDA margin (%)                               | 9.67 | 7.72 | 9.38 | 12.40 |
| Net available for debt service ($000s)         | 427,504 | 337,720 | 373,138 | 576,957 |
| Maximum annual debt service ($000s)            | 62,574 | 62,574 | 62,574 | MNR |
| Maximum annual debt service coverage (x)       | 6.83 | 5.40 | 5.96 | 6.40 |
| Operating lease-adjusted coverage (x)          | 4.13 | 3.36 | 3.86 | 4.70 |
| Liquidity and financial flexibility            |       |       |       |
| Unrestricted reserves ($000s)                   | 2,147,534 | 1,790,533 | 1,523,839 | 3,565,073 |
| Unrestricted days' cash on hand                | 195.2 | 161.0 | 153.3 | 314.10 |
| Unrestricted reserves/total long-term debt (%) | 400.8 | 313.3 | 244.6 | 264.00 |
| Unrestricted reserves/contingent liabilities (%) | 789.1 | 632.8 | 519.2 | 843.10 |
| Average age of plant (years)                   | 10.0 | 11.4 | 11.6 | 10.50 |
| Capital expenditures/depreciation and amortization (%) | 91.5 | 124.5 | 153.5 | 153.20 |
| Debt and liabilities                           |       |       |       |
| Total long-term debt ($000s)                   | 535,776 | 571,586 | 623,030 | MNR |
| Table 2                                                                 |
|---------------------------------------------------|------------------|------------------|------------------|------------------|
| **University of North Carolina Health Care System, North Carolina Financial Statistics (cont.)** |
| --Fiscal year ended June 30-- | Medians for ‘AA’ rated health care systems | |
| **2019** | **2018** | **2017** | **2018** |
| Long-term debt/capitalization (%) | 35.2 | 45.8 | 22.6 | 22.70 |
| Contingent liabilities ($000s) | 272,145 | 282,975 | 293,480 | MNR |
| Contingent liabilities/total long-term debt (%) | 50.8 | 49.5 | 47.1 | 41.50 |
| Debt burden (%) | 1.42 | 1.43 | 1.57 | 1.90 |
| Defined-benefit plan funded status (TSERS) (%) | 87.61 | 89.51 | 87.32 | 88.20 |
| Defined-benefit plan funded status (Rex) (%) | 68.19 | 66.51 | 62.88 | MNR |
| **Pro forma ratios** |
| Unrestricted reserves ($000s) | 2,147,534 | N/A | N/A | MNR |
| Total long-term debt ($000s) | 935,776 | N/A | N/A | MNR |
| Unrestricted days’ cash on hand | 195.2 | N/A | N/A | MNR |
| Unrestricted reserves/total long-term debt (%) | 229.5 | N/A | N/A | MNR |
| Long-term debt/capitalization (%) | 48.6 | N/A | N/A | MNR |
| **Miscellaneous** |
| Total net special funding ($000s) | 292,837 | 248,738 | 256,832 | MNR |

*Financials are based on unaudited figures consolidated by management. N/A—Not applicable. MNR—Median not reported.

**Credit Snapshot**

- **Security pledge:** Both UNC Hospitals and UNC Rex Healthcare hold separate debt and separate obligated groups with revenues pledged as security to support repayment of their respective bonds. UNC Health Care has not assumed or guaranteed either UNC Hospitals’ or UNC Rex Healthcare's debt. However, UNC Health Care has several reserved legal powers that effectively give it operating control of UNC Hospitals, UNC Rex Healthcare, and other affiliates.

- **Group rating methodology:** We consider UNC Hospitals to be core to the group credit profile (UNC Health Care), and concurrently consider UNC Rex Healthcare to be highly strategic to the group credit profile. UNC Hospitals accounted for a little under 50% of system operating revenue in fiscal 2019, with Rex Healthcare generating about 26%.

- **Organization description:** UNC Health Care is a six-hospital system and an affiliated enterprise of the University of North Carolina System, which is a component unit of the state. UNC Hospitals, the largest affiliate of the system, is the teaching hospital for University of North Carolina at Chapel Hill. UNC Health Care consists of UNC Hospitals (which includes both the flagship and smaller Hillsborough campus), UNC Rex Healthcare, Chatham Hospital, Caldwell Memorial Hospital, and UNC Rockingham Health Care. Managed facilities that are not consolidated into UNC Health Care include Pardee Hospital, Johnston Health (35% joint venture), Nash UNC Health Care, UNC Lenoir Health Care, Wayne UNC Health Care, and, effective January 2019, Onslow Memorial Hospital.

**Ratings Detail (As Of October 25, 2019)**
<table>
<thead>
<tr>
<th>The Brd of Governors of the Univ of North Carolina, North Carolina</th>
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<tr>
<td>Univ of North Carolina Hosps, North Carolina</td>
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<td>The Brd of Governors of the Univ of North Carolina (Univ of North Carolina Hosps) var rate rfdg rev bnds (Univ of North Carolina Hosps At Chapel Hill)</td>
</tr>
<tr>
<td><strong>Long Term Rating</strong></td>
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<td><strong>Series 2001A, 2001B</strong></td>
</tr>
<tr>
<td><strong>Long Term Rating</strong></td>
</tr>
<tr>
<td><strong>Series 2003A, 2003B</strong></td>
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<td><strong>Long Term Rating</strong></td>
</tr>
<tr>
<td><strong>Series 2009A</strong></td>
</tr>
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<td><strong>Long Term Rating</strong></td>
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