



Novant Health Pender Medical Center

Community Benefit Implementation Plan

Pender County, North Carolina

2022-2024

Approved by the Pender Memorial Hospital Board of Trustees on December 14, 2022

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I. Introduction

Novant Health Pender Medical Center (NHPEMC), in partnership with Kulik Strategic Advisers (dba, KSA) conducted the 2022 NHPEMC Community Health Needs Assessment (CHNA) to identify the most pressing health needs in our community. Novant Health Pender Medical Center will enhance the community's health by offering health programs, clinical services, and financial support in response to the specific health needs identified.

Members of the Pender County Health Department served as part of the Novant Health Pender Medical Center steering committee and Ruth Glaser, President of Novant Health Pender Medical Center, participated as part of the Pender County Health Department steering committee.

a) Organization Overview

Novant Health is an integrated network of hospitals, physician clinics, and outpatient facilities that delivers a seamless and convenient healthcare experience to communities in North Carolina, South Carolina, and Georgia. The Novant Health network consists of more than 1,800 physicians and over 35,000 team members who provide care at more than 800 locations, including 15 hospitals and hundreds of outpatient facilities and physician clinics. *Diversity MBA Magazine* ranked Novant Health first in the nation on its 2021 list of "Best Places for Women & Diverse Managers to Work." In 2021, Novant Health provided more than \$1.1 billion in community benefits including financial assistance and services.

Mission

Novant Health exists to improve the health of our communities, one person at a time.

Our team members and physician partners strive every day to bring our mission, vision, and values to life. We demonstrate this commitment to our patients in many ways. For example, our organization:

- Maintains an active community health outreach program.
- Demonstrates superior outcomes for many health conditions as indicated by our state and national quality scores.
- Creates innovative programs that address important health issues, with many of our programs and services being recognized nationally.
- Believes in its role as a socially responsible organization, working with community agencies and organizations to make our communities better places to live and work.

Novant Health Pender Medical Center (NHPEMC) is a 43-bed critical access hospital with an additional 43 skilled nursing home beds in Burgaw (86 licensed beds total). The hospital offers residents of Pender County and surrounding communities a convenient and friendly place to receive care and treatment. It offers a range of services including emergency care, surgery, imaging, infusion therapy, and skilled nursing. New Hanover Regional Medical Center manages NHPEMC and has invested in the hospital's continued growth.

b) Our Defined Community

Primary and Secondary Service Areas

The Primary Service Area for Novant Health Pender Medical Center is defined by the zip codes that represent at least 75% of the hospital’s in-patient population as outlined below. For Novant Health Pender Medical Center, the Primary Service Area is 75.4% of inpatient discharges.

Novant Health Pender Medical Center				
Zip Code	IP Discharges	% Cases	County	Service Area
28425	78	18.1%	PENDER	Primary
28457	46	10.7%	PENDER	Primary
28478	39	9.0%	PENDER	Primary
28466	34	7.9%	DUPLIN	Primary
28421	17	3.9%	PENDER	Primary
28405	16	3.7%	NEW HANOVER	Primary
28435	15	3.5%	PENDER	Primary
28521	12	2.8%	DUPLIN	Primary
28401	11	2.6%	NEW HANOVER	Primary
28451	10	2.3%	BRUNSWICK	Primary
28411	10	2.3%	NEW HANOVER	Primary
28444	10	2.3%	SAMPSON	Primary
28458	9	2.1%	DUPLIN	Primary
28443	9	2.1%	PENDER	Primary
28412	9	2.1%	NEW HANOVER	Primary
28454	9	2.1%	PENDER	Secondary
28546	5	1.2%	ONslow	Secondary
28518	5	1.2%	DUPLIN	Secondary
28461	5	1.2%	BRUNSWICK	Secondary
28436	5	1.2%	COLUMBUS	Secondary
28403	5	1.2%	NEW HANOVER	Secondary
28429	5	1.2%	NEW HANOVER	Secondary
28540	4	0.9%	ONslow	Secondary
28358	4	0.9%	ROBESON	Secondary
28464	4	0.9%	DUPLIN	Secondary
28447	4	0.9%	SAMPSON	Secondary
28460	4	0.9%	ONslow	Secondary
28445	3	0.7%	ONslow	Secondary
28433	3	0.7%	BLADEN	Secondary

Although there are five counties in the Novant Health Pender Medical Center Primary Service Area, 47.3% of the patients in the Primary Service Area reside in Pender County, 12.8% in Duplin County, 10.7% in New Hanover County, and 2.4% each in Brunswick and Sampson Counties. The NHPMC secondary service area accounts for 15.1% of inpatient discharges and is populated by eight counties:

Pender, New Hanover, Duplin, Onslow, Robeson, Sampson, Bladen, and Columbus.

Most patients reside in Pender County, and it represents the highest population of potentially underserved, low-income, and minority individuals. Therefore, NHPEMC service areas will be the focus of demographic, health, and social indicators.

Pender County Population: Demographics

Pender County covers Burgaw, the County seat.



PRIMARY: Burgaw, Rocky Point, Watha, Atkinson, Hampstead. *East of ROUTE 17 separates 'rest' of Pender (not NHPEMC area).*

SECONDARY: Point Caswell, Long Creek, parts of Wallace & Castle Hayne (Duplin & New Hanover Counties, respectively).

Pender County's total population was 61,891 in 2020 and 62,815 in June 2022. NHPEMC's primary and secondary service area has 21,863 residents or approximately 35% of the County's population.

Pender County, North Carolina is a very rural community, with 68% of the County still considered rural by the United States Census Bureau definition of fewer than 1,000 persons per square mile. Pender County has 69.1 persons per square mile compared to North Carolina which is 33% rural, with 98 persons per square mile. The land area of Pender County (871.30 square miles), makes it the 5th largest County in North Carolina in geographic mass, contributing to transportation and access issues.

The rural nature of Pender County results in issues with social isolation, transportation, and access to health and human services.

PENDER COUNTY, NORTH CAROLINA DEMOGRAPHICS (COUNTY & SERVICE AREA)				
DEMOGRAPHIC	PENDER COUNTY		SERVICE AREA	
	TOTAL #	TOTAL %	TOTAL #	TOTAL %
<i>Age</i>				
0-5 years	3,528	5.7%	3,432	5.7%
6-18 years	13,864	22.4%	13,365	22.2%
19-64	33,112	53.5%	32,209	53.5%
65+	11,388	18.4%	11,198	18.6%
<i>Gender</i>				
Male	31,069	50.2%	30,222	50.2%
Female	30,822	49.8%	29,981	49.8%
<i>Race/Ethnicity</i>				
White (non-Hispanic)	47,347	76.5%	16,485	75.4%
Black (non-Hispanic)	8,912	13.7%	3,214	14.7%
Asian Pacific	495	0.8%	175	0.8%
Native American	619	1.0%	131	0.6%
Hispanic	4,952	8.0%	1,858	8.5%
<i>Poverty Level</i>	7,613	12.3%	7,405	12.3%
<i>Language other than English</i>	4,580	7.4%	4,335	7.2%
<i>Uninsured</i>	5,558	8.98%	8,067	13.6%* Adults
<i>Towns</i>				
Burgaw			4,449	20.3%
Rocky Point			1,792	8.2%
Watha			241	1.1%
Atkinson			1,419	6.5%
Hampstead			5,876	26.9%
PRIMARY			13,777	63.0%
Point Caswell			300	1.3%
Long Creek			2,448	11.2%
Part of Wallace			3,916	18.0%
Part of Castle Hayne			1,422	6.5%
SECONDARY			6,664	30.5%
TOTAL	61,891	100%	21,863	100%

Source: U.S. Census Bureau, American Community Survey, 2021 with Service Area computed by Towns.

The population of Pender County and the Service Area is older than that of North Carolina, in which 16.8% of the population is aged 65 or older. This older profile results in a higher chronic disease burden, with the Service Area with a slightly higher elderly population than all of Pender County.

The race/ethnic mix of the NHPEMC Service Area is close to that of Pender County, with slightly higher fractions of Blacks and Hispanics. The Black fraction for both Pender County and the NHPEMC Service

Area is slightly higher than North Carolina's percentage of 13.6% but much lower than the Hispanic representation of 18.9%.

Poverty

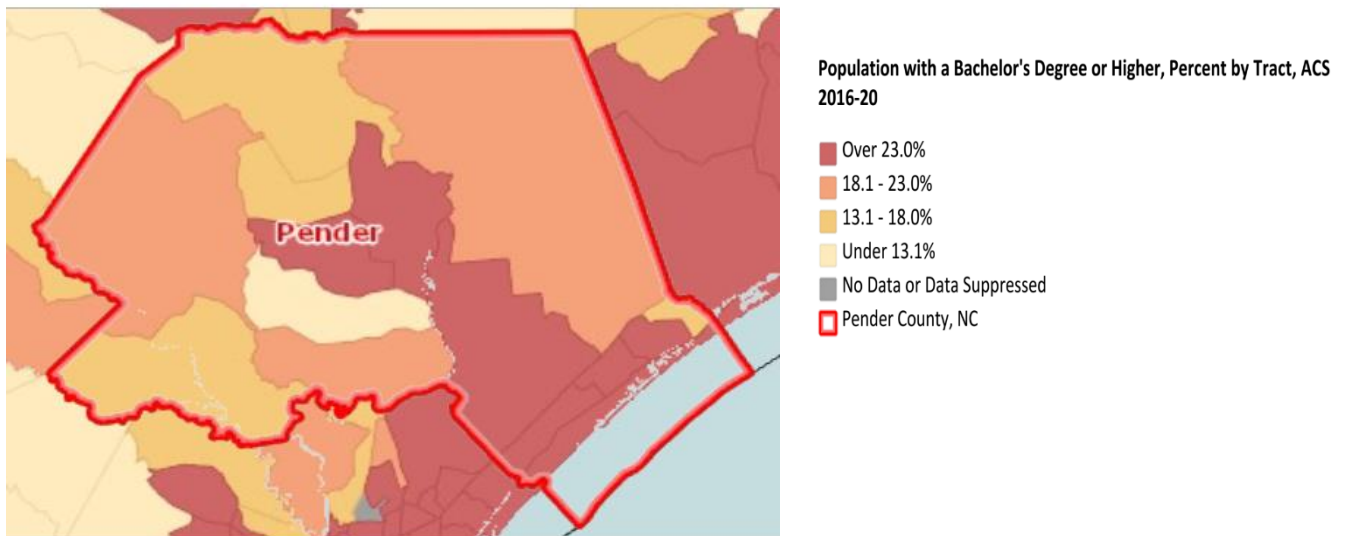
Poverty rates for Pender County are 12.3% for those living at or below 100% of the Federal Poverty Level ('dire poverty') with 19.9% of children living at or below 100% of the FPL. Pender County residents living at or below 200% of the Federal Poverty Level are 29.2% of the population.

Source: [U.S. Census Bureau American Community Survey 5-Year Estimates Subject Tables \(S1701\)](#).

Educational Attainment

Almost a third (28.9%) of Pender County residents have achieved educational attainment at a Bachelor's degree or higher compared to 32.0% of North Carolina residents and 32.9% of United States residents.

The percentage of Pender County residents with a Bachelor's Degree or higher is displayed in the map below.



Source: U.S. Census Bureau, American Community Survey, 2016-2020.

Pender County Population: Health Indicators

This section will explore health indicators starting with downstream metrics such as deaths and diagnosed diseases. Priority populations experiencing disproportionate impact or disparities will be highlighted. Upstream measures such as preventive screenings will be referenced. Both secondary research and primary data from the Community Health Opinion Survey will inform this narrative.

Pender County's leading causes of death in 2019 were heart disease and cancer. In addition to health indicators such as leading causes of death for the Pender County population, NHP EMC also considers how to impact root causes with analysis of social determinants of health, social risk, and social needs.

Pender County's leading causes of death in 2019 are displayed below with a comparison to the five-year death trend showing mortality rates per 100,000 population and age-adjusted rates.

RANK	TYPE	#	Rate-2019	# 2015-2019	Rate/100,000	Age-Adjusted
1	HEART DISEASE	128	203.0	589	195.0	157.7
2	CANCER	115	182.4	662	219.2	166.1
3	CEREBROVASCULAR DISEASE	43	68.2*	191	63.2	53.5
4	CHRONIC LOWER RESPIRATORY DISEASE	39	61.8*	145	48.0	36.0
5	CANCER-TRACHEA/BRONCHUS	31	49.2*	201	66.6	48.2
6	UNINTENTIONAL INJURY OR ACCIDENT	25	39.6*	132	43.7	43.4
7	DIABETES	23	36.5*	97	32.1	23.9
8	POISONING	19	30.7*	211	40.6	
9	MOTOR VEHICLE ACCIDENTS	18	28.5*	73	24.2	24.4
10	PNEUMONIA & INFLUENZA	18	28.5*	56	18.5	14.8
11	SUICIDE	17	27.0*	67	22.2	22.9
12	ALZHEIMER'S DISEASE	16	25.4*	91	30.1	26.4
13	NEPHRITIS, NEPHROTIC SYNDROME AND NEPHROSIS	15	23.8*	75	24.8	19.8
14	SEPTICEMIA	13	20.6*	60	19.9	15.5
15	DRUG OVERDOSE DEATHS	12	19.4*	55	17.8	16.2
16	CANCER-BREAST	6	19.0*	38	25.1*	18.0*
17	CANCER-PROSTATE	5	15.9*	38	25.9*	25.7*
18	CANCER-COLON, RECTUM & ANUS	5	7.9*	49	16.2*	13.0*
19	CHRONIC LIVER DISEASE & CIRRHOSIS	5	7.9*	32	10.6*	8.0*
20	INFANT DEATHS	2	3.2*	24	7.6*	
21	HOMICIDE	2	3.2*	12	4.0*	4.3*
	ALL OTHER	94	151.8	128	41.4	
	TOTAL	632	1,002.2	2,971	983.8	807.6

Source: [North Carolina Vital Statistics 2019 Volume 2: Leading Causes of Death \(ncdhhs.gov\)](https://www.ncdhhs.gov/vital-statistics/2019-volume-2-leading-causes-of-death); published January 2021 and accessed November 4, 2022.

* Death rates with a small number (<50 deaths) should be interpreted with caution.

The areas that are gold-highlighted indicate disparities.

Pender County, North Carolina Disparities – Deaths in 2019								
DEATHS	TOTAL		WHITE Non-Hispanic		BLACK Non-Hispanic		HISPANIC	
	#	Rate	#	Rate	#	Rate	#	Rate
Total	632	10.0	512	10.6	109	11.6	11	2.1
Males	350	11.1	285	11.9	57	12.5	8	3.2
Females	282	8.9	227	9.4	52	10.8	3	0.9
Age								
0-4	2	0.6	0	0.0	1	1.9	1	1.7
5-14	3	0.4	1	0.2	2	1.8	0	0.0
15-24	10	1.5	4	0.8	4	3.5	2	2.8
25-34	10	1.4	6	1.2	2	1.8	2	3.3
35-44	22	2.7	15	2.4	5	5.1	2	2.7
45-54	43	4.9	37	5.3	6	5.2	0	0.0
55-64	108	11.5	96	12.7	11	7.4	1	4.1
65+	434	37.0	353	36.8	78	42.2	3	10.9
Place								
Hospital	187	29.6	142	27.7	42	38.5	4	30.0
Other Facility	239	37.8	190	37.1	45	41.3	3	30.0
Home	206	32.6	180	35.2	22	20.2	4	40.0

Source: Vital Statistics, 2019: North Carolina Department of Health and Human Services, Accessed November 4, 2022

Disparities in Deaths

Disparities for deaths in Pender County by Gender, Age, and Race/Ethnicity are indicated in the shaded areas.

- Males have a higher death rate than females, 11.1 per 100,000 population compared to 8.9 for females.
- Blacks have the highest overall death rate at 11.6 per 100,000 with higher rates for males (12.5 per 100,000) compared to females. Hispanic have the lowest rates of death among the three comparison groups.
- By age, the disparities are pronounced for Blacks at all age groups except for the 25-34 and 55-64 age bands.
- The place of death is most frequently listed as ‘other facility’ than hospitals, followed by home, then hospitals. This holds true except for Hispanics, with the most frequent place of death in the Hospital or at Home.

Chronic Diseases and Specialty Care

The chronic diseases presented in the next few pages illustrate secondary research (epidemiology rates) comparing Pender County to North Carolina and the United States. Gold-highlighted boxes and **bold font** indicate disparities, either by gender, age, or race/ethnicity, and where Pender County has a higher rate of disease burden compared to the State or Nation.

- **Heart** – This disease type is the #1 cause of death in Pender County in 2019 and #2 for the five-year preceding period (015-2019) following Cancer of all types. In the Community Health Opinion Survey (CHOS), 36.1 % of CHOS respondents cited heart disease as an issue of importance, ranking #8 among 16 health issues of importance. In the chart below, coronary heart disease is significantly higher in Pender County for those stating that they were ‘ever diagnosed with coronary heart disease’ compared to North Carolina or the United States.
- **The Coronary Heart Disease (CHD):** crude death rate and age-adjusted death rate are higher than that of the State or Nation, with **disparities for males and for Blacks in Pender County.**

Coronary Heart Disease (CHD) Deaths, 2016-2020	PENDER COUNTY, NC		NORTH CAROLINA		UNITED STATES	
Ever diagnosed with CHD	9.1%		6.6%		6.2%	
CHD Hospitalizations/Medicare Beneficiaries	44,345		1,870,475		55,969,031	
CHD Hospitalizations/Medicare Beneficiaries/ Rate per 1,000	11.3		12.2		11.8	
Five-year total deaths from CHD	1,018		51,983		1,838,830	
CHD Crude Death Rate (per 100,000)	147.6		100.2		112.5	
CHD Age-Adjusted Death Rate (per 100,000)	83.0		82.9		91.5	
Gender Disparity, CHD	Males	Females	Males	Females	Males	Females
CHD Age-Adjusted Death Rate (per 100,000)	113.9	56.5	116.9	56.8	125.3	64.6
Race/Ethnic Disparity, CHD	White	Black	White	Black	White	Black
Age-Adjusted CHD Deaths, By Race/Ethnicity	83.4	97.4	83.6	89.0	93.8	108.1

Source: Centers for Disease Control and Prevention, CDC-National Vital Statistics System, 2016-2020 & Behavioral Risk Factor Surveillance Study, 2019

- **Hypertension (High Blood Pressure)** – The percentage of individuals in Pender County with diagnosed high blood pressure or hypertension is significantly higher at all ages, with the most striking disparity for those 65 years of age and older.
- **Disparities:** Prevalence is higher among older adults and is notably higher among certain racial and ethnic groups, especially non-Hispanic Black people. Psychosocial and socioeconomic stressors—such as low socioeconomic status, depression, job stress, financial stress, segregated neighborhoods, and neighborhood poverty level—also contribute to the risk of hypertension.

Hypertension	PENDER COUNTY, NC	NORTH CAROLINA	UNITED STATES
Medicare Beneficiaries with Hypertension	5,826	697,259	19,162,770
Percent of Hypertensive/Medicare Beneficiaries	63.8%	60.0%	59.8%
DISPARITY BY AGE			
% Diagnosed Hypertension: 65 years and older	66.6%	62.5%	59.8%
% Diagnosed Hypertension: Less than 65 years	49.4%	48.0%	42.4%

Source: Centers for Medicare and Medicaid Services, Chronic Conditions Warehouse, 2018

- **Cancer** – Cancer was the 2nd leading cause of death in 2019 in Pender County, although for the preceding five-year period (2015-2019) was the leading cause of death. The incidence rate for new cancer cases is higher in Pender County than North Carolina or the United States, with **higher rates for Whites than any other race/ethnicity.**

Cancer Incidence (new cases) 2014-2018	PENDER COUNTY, NC	NORTH CAROLINA	UNITED STATES
New Cases	1,082	56,784	1,703,249
Cancer Incidence Rate (per 100,000 population)	473.0	468.9	448.6
White: New Cancer cases	471.6	465.6	451
Black: New Cancer cases	432.4	460.7	444.9

By top five Cancer types: Pender County slightly differs from the top 5 types of cancer compared to North Carolina, with **Cancer of the Lung or Bronchus leading over Breast Cancer.** The remaining three types are consistent with North Carolina incidence.

Cancer Incidence (new cases) by Type 2014-2018	Pender County, NC	Cancer incidence rate per 100,000	Cancer Incidence (new cases) by Type 2014-2018	North Carolina	Cancer incidence rate per 100,000
1. Lung & Bronchus (all stages)	163	65.3	1. Breast (all Stages)	8,713	136.5

2. Breast (all Stages)	154	134.3	2. Lung & Bronchus (all stages)	8,252	66.3
3. Prostate (all stages)	142	104.9	3. Prostate (all stages)	7,140	119.3
4. Colon & Rectum (all stages)	81	38.6	4. Colon & Rectum (all stages)	4,391	36.8
5. Melanoma of the Skin (all stages)	80	33.8	5. Melanoma of the Skin (all stages)	3,044	26.0

Source: North Carolina: State Cancer Profiles, 2014-2018

Cancer is a top concern of Community Health Opinion Survey (CHOS) respondents, with 41.2% of residents citing this as a Health Issue of Importance, ranking #5 of 16 issues.

In addition, respiratory issues were referred to in many key informant interviews, with pneumonia as the 5th highest diagnosis resulting in inpatient admission and acute respiratory infection, unspecified as the 2nd highest diagnosis among Emergency Department visits in 2021.

It should be noted that while this chronic disease is the 2nd leading cause of death in 2019, and the leading cause of death for the past five years, these cases are transferred to Novant Health New Hanover Medical Center for care.

- **Stroke** – Stroke was the 3rd leading cause of death in 2019 and in the preceding five-year period (2015-2019) in Pender County.

As seen in the secondary research below, the crude death and age-adjusted death rates for Stroke in Pender County are significantly higher than that of North Carolina or the United States. Some of this difference is due to the higher percentage of the elderly population in Pender County (18.4%) and the Service Area (18.6%) compared to North Carolina (17%) and the United States (16.8%) though this is a much higher rate of cerebrovascular accidents than expected.

Cerebrovascular Accident Deaths (Stroke)	PENDER COUNTY, NC	NORTH CAROLINA	UNITED STATES
Total Population, 2016-2020 average	61,988	10,378,547	326,747,554
Five-year Total Deaths, 2016-2020	201	26,022	746,604
Crude death rate per 100,000 population	64.8	50.1	45.7
Age-adjusted death rate per 100,000	53.9	42.6	37.6

Source: Centers for Disease Control and Prevention, National Vital Statistics System, Access via CDC Wonder, 2016-2020. Accessed November 4, 2022.

Risk Factors for Stroke or Cerebrovascular Accident (CVA) include many of the preventable health behaviors or risks reported in the Community Health Opinion Survey (CHOS) by residents.

- Overweight or Obese

- Sedentary life
- Binge Drinking
- Diabetes
- Smoking
- High blood pressure
- High cholesterol
- Family history of stroke
- Cardiovascular diseases
- Age - people above age 55 are at higher risk
- Gender - men are at high risk of stroke than women

Diabetes – Diabetes is an issue of importance for Health Concerns per CHOS respondents. It ranked at 26.9% or #9 for Residents in the 2022 CHNA survey. The results are positive when comparing Pender County to North Carolina and the United States, with lower percentages of adults, 20 years and higher, with chronic diabetes and lower rates for the elderly (Medicare beneficiaries). The typical higher rate for males than females is consistent for Pender County, but still lower for both genders compared to the State and Nation.

Diabetes	PENDER COUNTY, NC	NORTH CAROLINA	UNITED STATES
Adults (20 years and up)			
Adults with Diagnosed Diabetes (Age 20+)	4,864	812,564	239,919,249
% of Adults with Chronic Diabetes	8.3%	9.0%	9.0%
Elderly (65 years and higher)			
Medicare Beneficiaries with Diabetes	8,203	331,308	9,029,582
% Medicare Beneficiaries with Diabetes	24.2%	28.5%	27.0%
DISPARITY: GENDER			
Males with Diabetes	7,158	394,075	12,120,715
Males: Diabetes %	8.6%	9.4%	9.5%
Females with Diabetes	7,159	418,485	12,068,861
Female: Diabetes %	7.8%	8.8%	8.5%

Source: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, 2019

A high percentage of Pender County residents diagnosed with diabetes, especially those 65 years of age and older, were compliant with annual exams and A1c blood test monitoring.

A1c Annual Monitoring	PENDER COUNTY, NC	NORTH CAROLINA	UNITED STATES
% Medicare enrollees with diabetes with an annual exam	90.9%	90.5%	87.5%

Source: Dartmouth College Institute for Health Policy and Clinical Practice, Dartmouth Atlas of Health Care, 2019.

Risk Factors for Diabetes and Other Chronic Diseases – Physical Inactivity resulting in being overweight and/or obesity are risk factors for multiple chronic diseases, especially diabetes. Weight loss support was listed as a Personal Health Issue of Importance by 45.8% of CHOS respondents and ranked #4 among 16 issues.

Physical Inactivity	PENDER COUNTY, NC	NORTH CAROLINA	UNITED STATES
Adults with no leisure time physical activity	16,422	1,775,644	54,200,862
% Of adults with no leisure time physical activity	20.1%	21.8%	22.0%
Gender Disparity			
Males with no leisure time physical activity	11,780	794,551	24,675,186
Males: % with no leisure time physical activity	19.4%	20.6%	20.8%
Females with no leisure time physical activity	14,642	981,102	29,525,666
Female: % with no leisure time physical activity	20.7%	22.9%	23.1%

Obesity	PENDER COUNTY, NC			NORTH CAROLINA			UNITED STATES		
Adult Obesity (20+)	26.0%			28.7%			29.0%		
Overweight and Obese Adolescents (10-17)	24.2%			30.7%			19.7%		
Obesity Disparity by Child/Adolescents and by Age ²							2-5 years	6-11	12-18
	20.2%			22.4%			12.7%	20.7%	22.2%
Obesity Disparity by Child/Adolescents and Race/Ethnicity	White	Black	Hispanic	White	Black	Hispanic	White	Black	Hispanic
	17.2%	26.9%	28.3%	18.1%	29.2%	28.6%	16.6%	24.8%	26.2%

Definition: Abnormal or excessive fat accumulation diagnosed by calculating Body Mass Index (BMI) and waist-hip circumference. A BMI of over 30 is considered obese, with 25-29 defined as overweight. A waist measurement higher than 35 inches for women and for men 40 inches is considered obese.

Sources: Centers for Disease Control & Prevention, Behavioral Risk Factor Surveillance System, 2019
Centers for Disease Control & Prevention, National Center for Health Statistics, 2020

- **Respiratory** – Asthma is the only respiratory issue of concern, with asthma the leading health issue after Cancer of the Lung/Bronchus.

A smaller amount of Medicare beneficiaries (elderly) has diagnosed asthma compared to the State or Nation. This is similar, but close to the State levels for adults under 65 years of age in Pender County.

Asthma	PENDER COUNTY, NC		NORTH CAROLINA		UNITED STATES	
Medicare FFS Beneficiaries with Asthma	1,411		55,316		1,665,694	
Asthma Rate	4.2%		4.8%		5.0%	
Asthma Disparity by Age	Below 65	65 years+	Below 65	65 years+	Below 65	65 years+
	7.2%	3.9%	7.6%	4.2%	7.5%	4.5%

Chronic Disease Prevention

Risk Factors for Stroke or Cerebrovascular Accident (CVA) include many of the preventable health behaviors or risks reported in the Community Health Opinion Survey (CHOS) by residents.

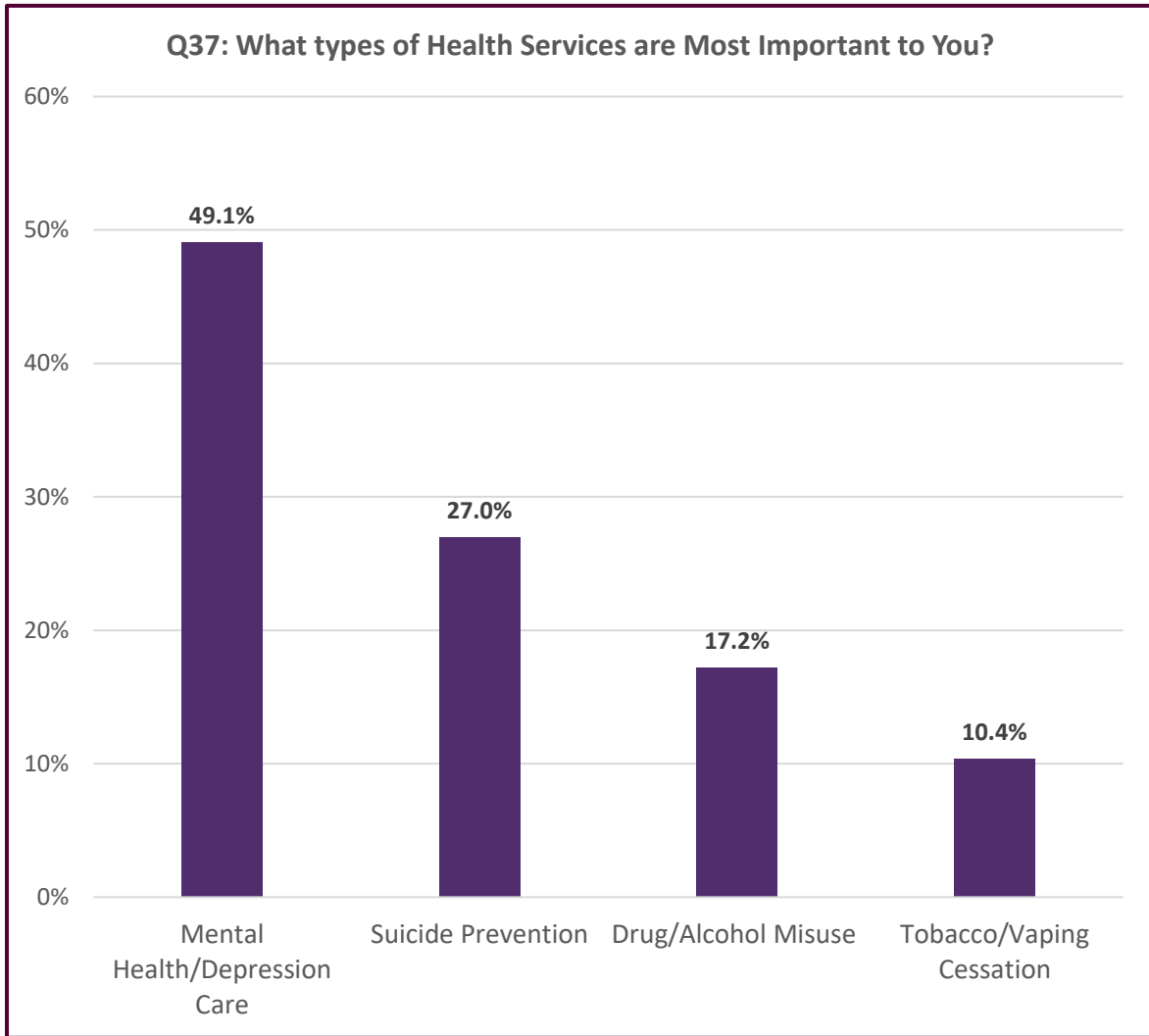
- Overweight or Obese
- Sedentary life
- Binge Drinking
- Diabetes
- Smoking
- High blood pressure
- High cholesterol
- Family history of stroke
- Cardiovascular diseases
- Age - people above age 55 are at higher risk
- Gender - men are at high risk of stroke than women

Priority Populations for Chronic Disease in Pender County

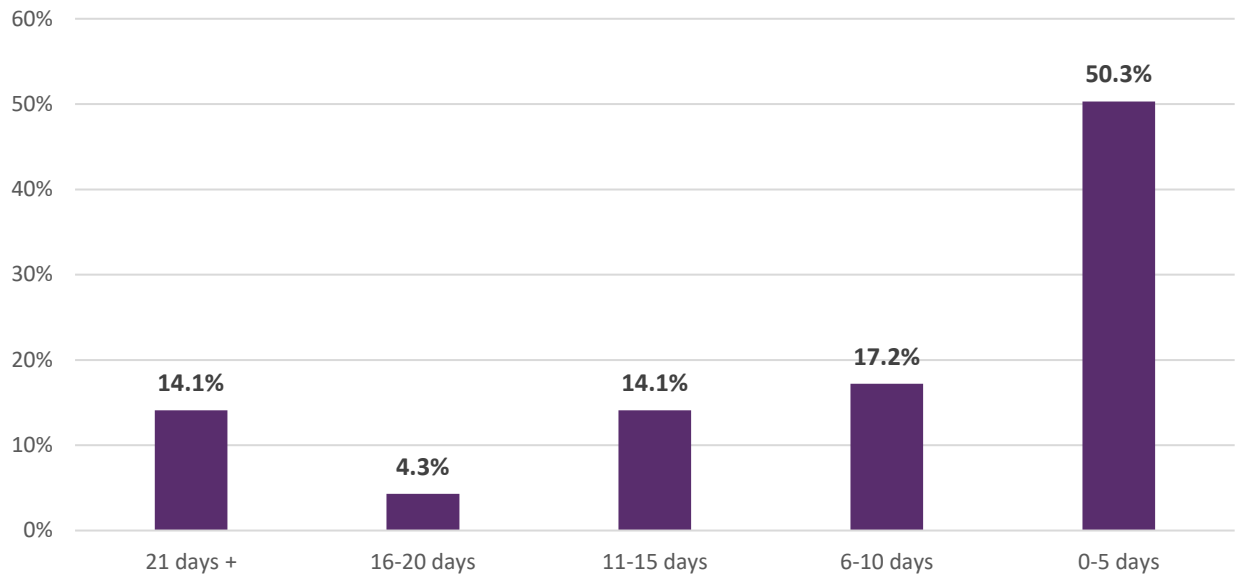
1. Elderly – Coronary Heart Disease, Hypertension, Stroke, Diabetes
2. Blacks in Pender County for Coronary Heart Disease and Hypertension
3. Males for Diabetes

Behavioral Health

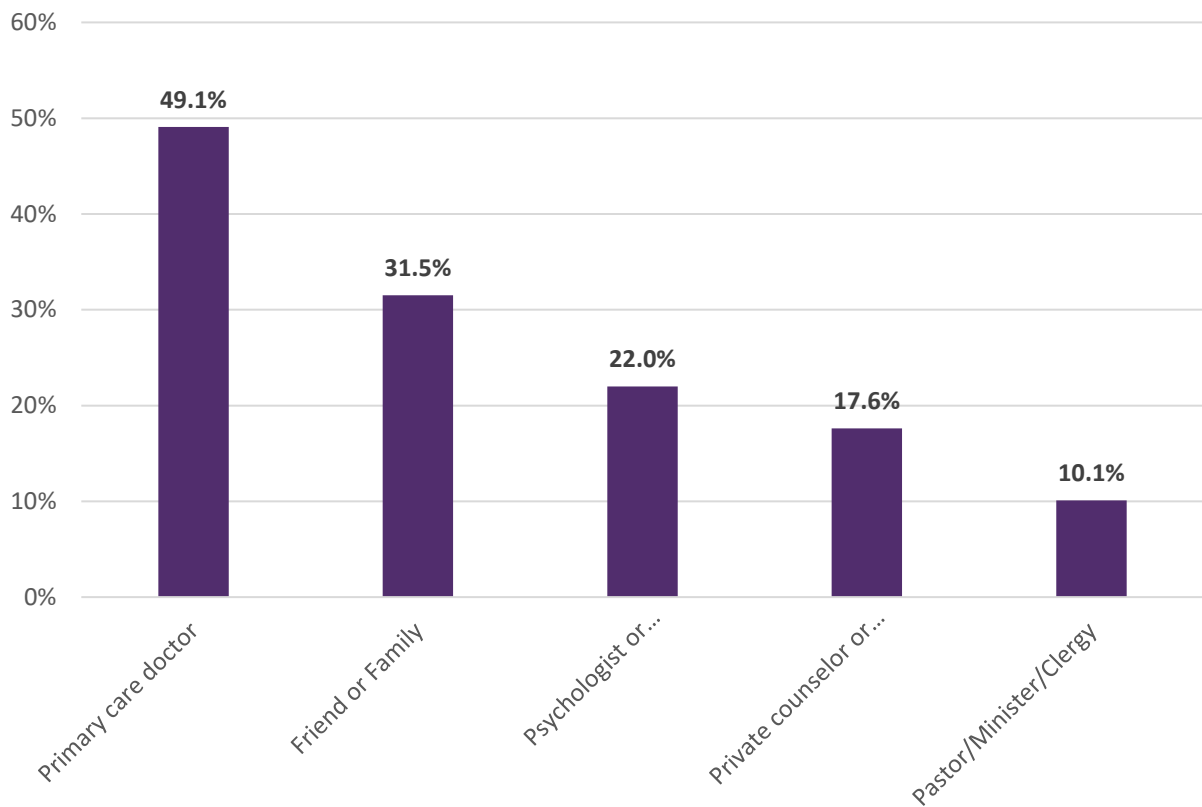
- **Mental Health** – from the Community Health Opinion Survey (CHOS) completed by 163 residents, the types of mental health services most important include 1) Depression Care at 49.1% 2) Suicide Prevention at 27% 3) Drug/Alcohol Misuse at 17.2% and Tobacco Use/ Vaping and related efforts to cease use at 10.4%.



Q40: Thinking about your mental health, which include stress, depression, anxiety and problems managing your emotions, how many days in the past month was your mental health 'NOT GOOD'?



Q45: Where would you go if you needed help for your mental health and wellness?



- Based on the CHOS, 18.4% of respondents felt that their mental health was ‘not good’ for over 2 weeks in the past month.
- The major resource that Pender County residents would use is their Primary Care doctor (49.1%) despite national issues with primary care physician discomfort with mental health concerns. Almost a third would access family or friends and almost 40% would use a psychologist, specialist, or private counselor.

Mental Health/Substance Use	PENDER COUNTY, NC	NORTH CAROLINA	UNITED STATES
MH/Substance Use ER Visits per 100,000 population	1,880.9	1,902.3	1,900.0
Age-Adjusted Suicide Rates	22.5	13.3	13.8
Opiate Poisoning Deaths	23.2	15.3	11.8

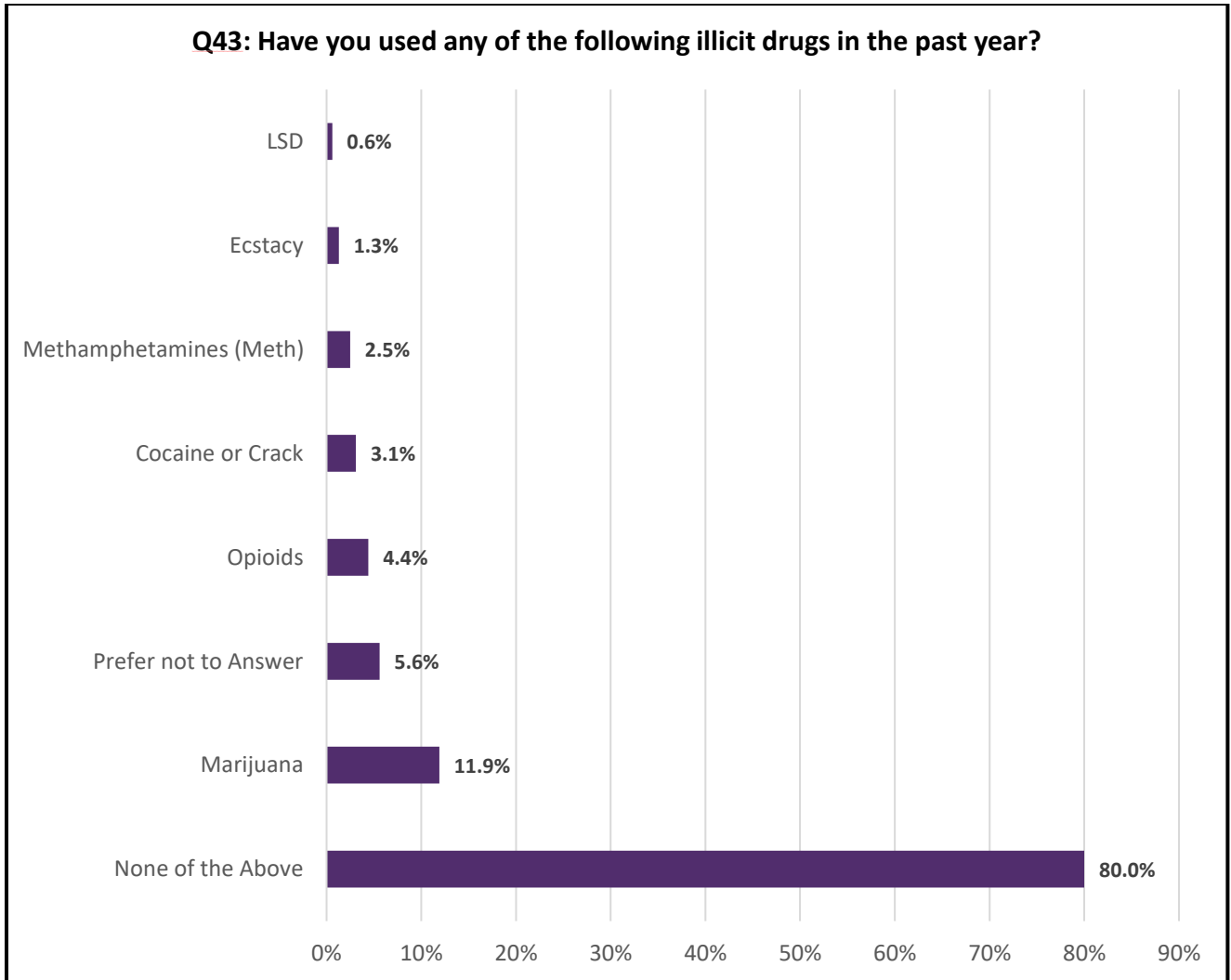
Sources: NC Hospital Association, Special Data Request (ER visits) and North Carolina Public Health, North Carolina Trends Report, 2019, [Pender.pdf \(ncdhhs.gov\)](#)
<https://injuryfreenc.ncdhhs.gov/DataSurveillance/poisoning/DEATHUnintentionalOpioidPoisoningsbyCounty-2008-2017.pdf>

Depression

Rates of Depression	PENDER COUNTY, NC	NORTH CAROLINA	UNITED STATES
Rates of Depression per 100,000 population (Adults, 18+)	21.2%	20.8%	19.5%

Source: America's Health Rankings analysis of CDC, Behavioral Risk Factor Surveillance System, United Health Foundation, [AmericasHealthRankings.org](https://www.americashealthrankings.org), accessed October 2022.

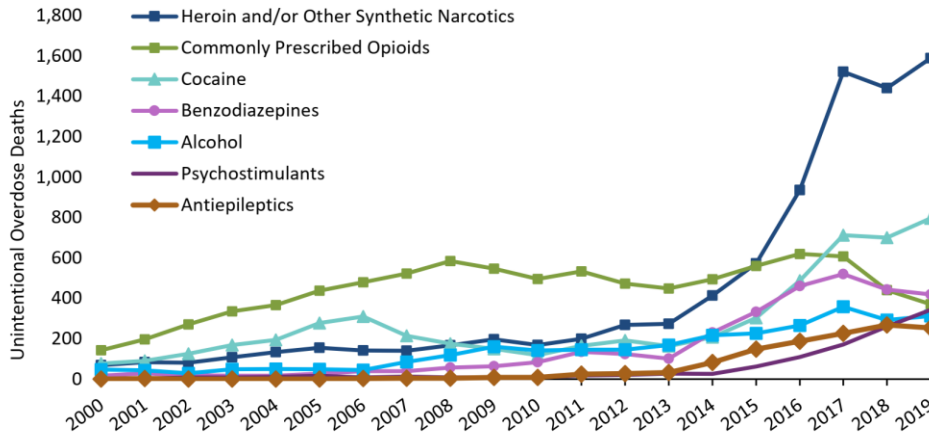
- Substance Use
 - Opioid Use



- The majority of CHOS respondents (80%) stated that they had not used illicit drugs in the past year.
- Marijuana was the most reported substance (11.9%) followed by Opioids at 4.4%, then Cocaine at 3.1%, and Meth at 2.5%.

- **Opioid Use**

Substances Contributing to Unintentional Overdose Deaths: NC Residents, 2000-2019

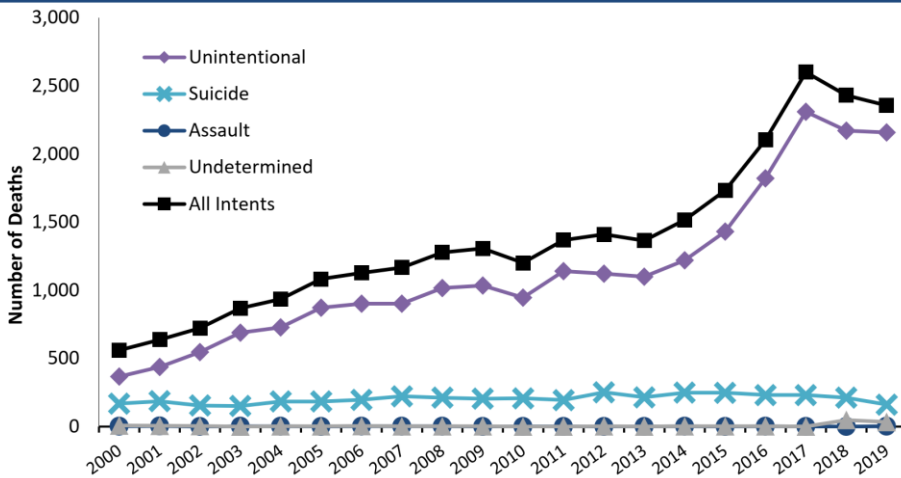


Illicit opioids, like heroin or fentanyl, are the largest contributors to unintentional overdose death, and increased in 2019. Overdose deaths involving cocaine, alcohol, psychostimulants or multiple substances also increased.

Please note: If a death involved multiple substances it can be included on more than one line.

Source: NC State Center for Health Statistics, Vital Statistics-Deaths, 2000-2019

Medication and Drug Overdose Deaths by Intent: NC Residents, 2000-2019



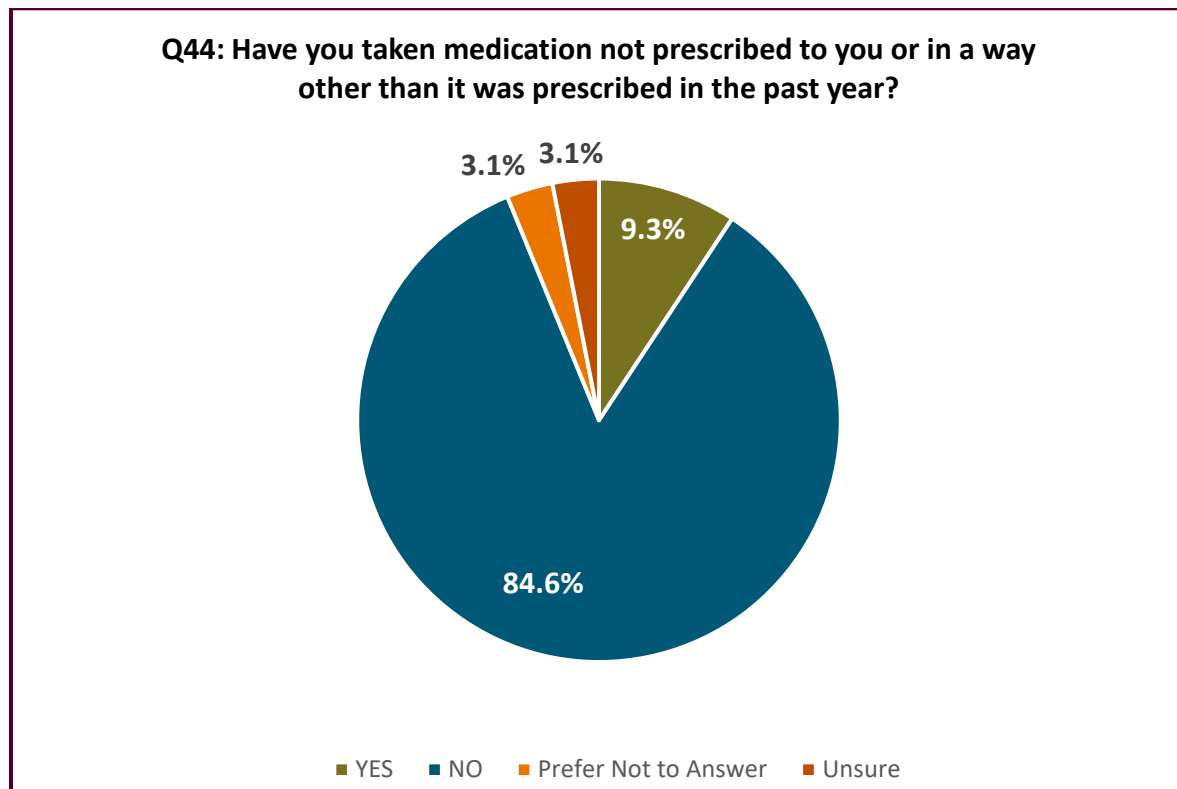
Unintentional medication and drug overdose deaths continue to make up the majority of all medication and drug overdose deaths, at 83% in 2019.

Source: NC State Center for Health Statistics, Vital Statistics-Deaths, 2000-2019

Unintentional Medication & Drug Overdose Deaths by Selected Demographics: NC Residents, 2015-2019

	Number	Percent	Rate	
Sex				Males continue to die from unintentional overdose at higher rates (28.1 per 100,000 N.C. residents) than females (13.6 per 100,000 N.C. residents).
Female	3,594	33.9%	13.6	
Male	7,022	66.1%	28.1	
Race/Ethnicity				American Indians and whites have the highest rates of unintentional overdose deaths (29 and 26.3 per 100,000 N.C. residents, respectively) among state residents.
Hispanic	242	2.3%	5.0	
White*	8,648	81.7%	26.3	
Black*	1,430	13.5%	12.6	
American Indian*	178	1.7%	29.0	Unintentional overdose death rates are highest among ages 25-34 (43.6 per 100,000 N.C. residents) and ages 35-44 (40.6 per 100,000 N.C. residents).
Asian/Pacific Islander*	37	0.3%	2.3	
Other*	46	0.4%	--	
Age Group				Please note: Demographic overdose rates vary across type of substance involved.
0-14	12	0.1%	0.1	
15-24	958	9.0%	13.9	
25-34	2,973	28.0%	43.6	*Non-Hispanic; *Other* includes other and multiple races, and unknown (population value not available, rate not calculated)
35-44	2,630	24.8%	40.6	
45-54	2,353	22.2%	34.2	**Rates not reported for <5 deaths
55-64	1,345	12.7%	20.4	^Rates unstable for 5-9 deaths; interpret with caution
65-84	311	2.9%	4.3	Rates are per 100,000 NC residents
85+	34	0.3%	3.7	Source: NC State Center for Health Statistics, 2018-2019, unintentional medication/drug overdose (X40-X44)

Prescription drug use - This question probed use of illegal or non-prescribed use of prescription drugs. Almost 10% (9.3%) reported use with 3.1% preferring not to answer and 3.1% unsure for a possible total of 15.4%.



- **Vaping or any Tobacco Use**

Current Tobacco Use (18 years+)	PENDER COUNTY, NC	NORTH CAROLINA	UNITED STATES
Adults reporting current tobacco use (crude rate)	16.90%	18.15%	15.30%
% Of adults reporting Current tobacco use (age-adjusted rate)	18.70%	18.65%	15.70%

- (1) In 2018, 5.1% of adults in North Carolina used e-cigarettes, and 4.7% used smokeless tobacco.
- (2) In 2019, 35.5% of high school students in North Carolina used electronic vapor products on at least one day in the past 30 days. Nationally, the rate was 32.7%.

Source: Centers for Disease Control & Prevention, Behavioral Risk Factor Surveillance System, 2019

- **Alcohol Use** – Indicators of concern related to alcohol use are the percent of adults reporting excessive drinking in Pender County, the age-adjusted death rate per 100,000 population from ‘deaths of despair’ – suicide and/or drug-alcohol related, and alcohol-involved motor vehicle crash deaths per 100,000 population.

Alcohol Use (18 years+)	PENDER COUNTY, NC	NORTH CAROLINA	UNITED STATES
Adults reporting excessive drinking	22,233	1,353,411	50,612,058
% Of adults reporting excessive drinking	18.92%	16.54%	19.79%
Percent of Adults Binge Drinking in the Past 30 days	12.80%	15.44%	16.70%
Alcohol Use Disorder in Medicare Population	641	23,767	696,555
% Medicare Population with Alcohol Use Disorder	1.9%	2.0%	2.1%
Deaths of Despair (Suicide + Drug/Alcohol Poisoning)	379	25,603	806,246
Age-Adjusted Death Rate per 100,000 population of ‘Deaths of Despair’	61.0	47.3	47.0
Motor-Vehicle Crash – Alcohol Related deaths	36	1,951	49,522
Alcohol-Involved Crash deaths/100,000 population	5.1	3.4	2.6

Definitions:

- Excessive drinking: Percentage of men who report more than two drinks per day or more than one per day for women.
- Binge drinking: Percentage of the population who report at least one binge drinking episode involving five or more drinks for men or four or more for women in a 2-hour period over the past 30 days.

Sources: Centers for Disease Control & Prevention, Behavioral Risk Factor Surveillance System, 2019 Centers for Medicare and Medicaid Services, Administrative Claims, CMS Chronic Conditions Warehouse, 2018 US Department of Transportation, National Highway Traffic Safety Administration, Fatality Analysis Reporting System, 2015-2019

UTILIZATION OF BEHAVIORAL HEALTH SERVICES

Q47 - Please tell us whether you 'strongly agree', 'agree', 'disagree' or 'strongly disagree' with the next few statements about substance use services.

STATEMENT	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
In Pender County, substance use services are affordable	8.2%	10.1%	28.9%	10.7%	10.1%
In Pender County, substance use services are accessible and easy to find	8.2%	11.4%	22.2%	16.5%	12.7%
In Pender County, substance use services are high quality	6.7%	10.1%	27.9%	13.9%	8.9%

Q46 - In the past year, what prevented you from getting mental health care or substance use treatment?

STATEMENT	PERCENTAGE
No health insurance	32.0%
Guilt or shame	21.1%
Don't know where to go	17.2%
Cost too high (copay, deductible)	15.6%
Work interferes with appointment times	13.3%
Not enough providers	10.2%
No transportation to services	9.4%
Not ready to face the problem	7.8%
Don't believe treatment will help	7.0%
Provider doesn't accept my insurance	7.0%
Culture/personal beliefs	3.1%

Prevention

- Distribute Naloxone (Narcan) to law enforcement, school system.
- Consider developing a Syringe Services Program aimed at harm reduction.
- Train providers on clinical issues related to the opioid epidemic, including safe prescribing of opioids and pain treatment.

Priority Populations in Pender County related to substance use:

- 1) Males
- 2) Whites
- 3) Ages 25-34 and 35-44

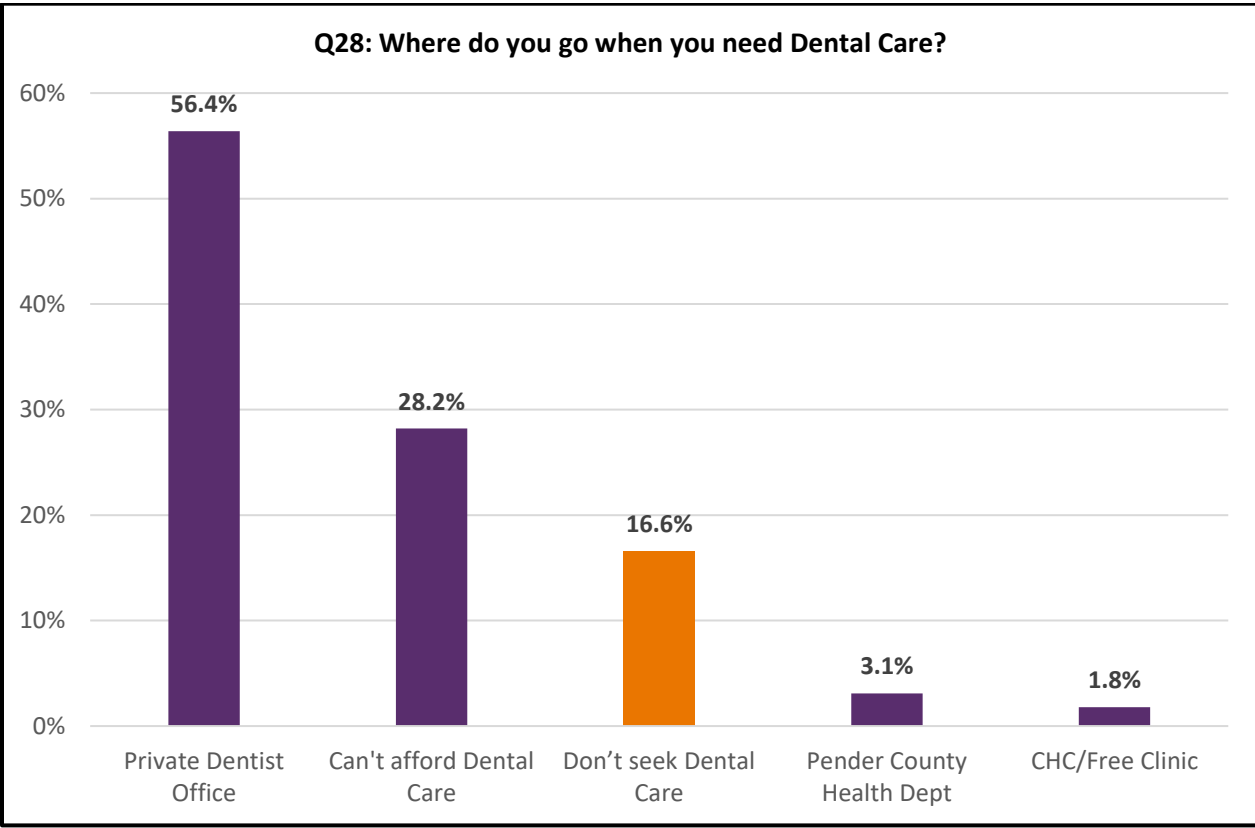
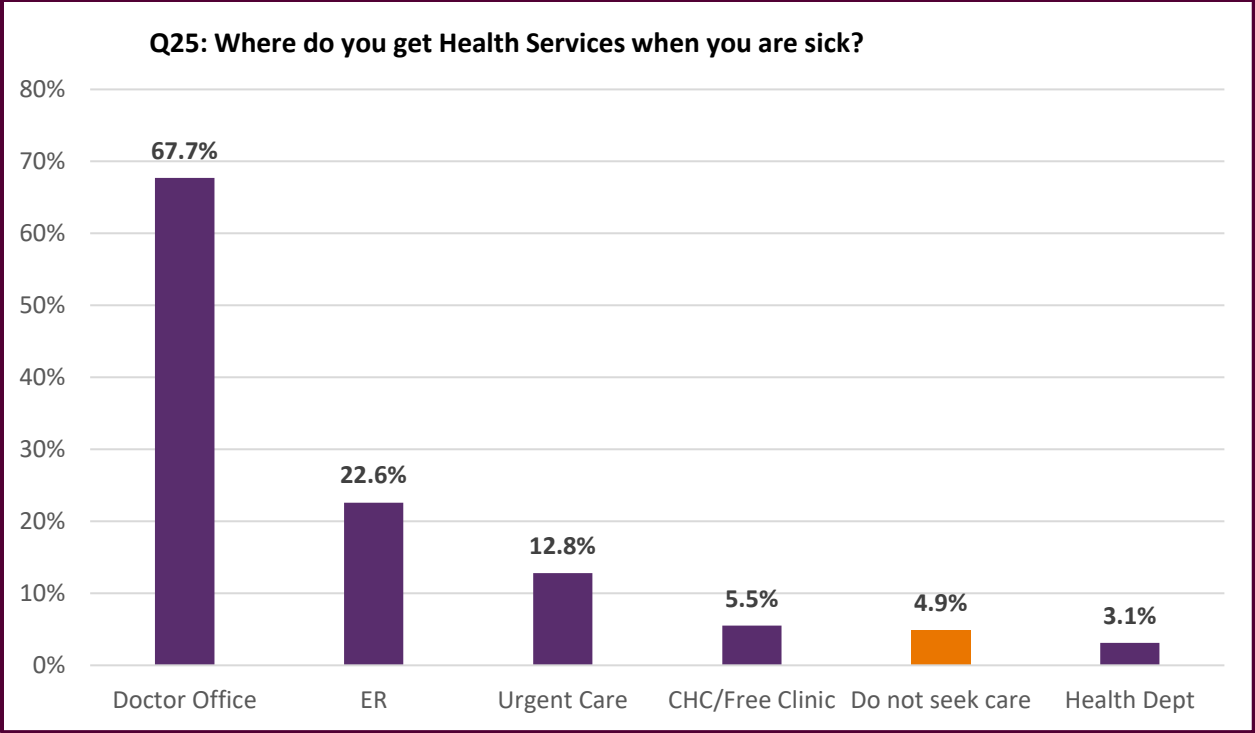
OVERALL GAPS IN HEALTH INDICATORS:

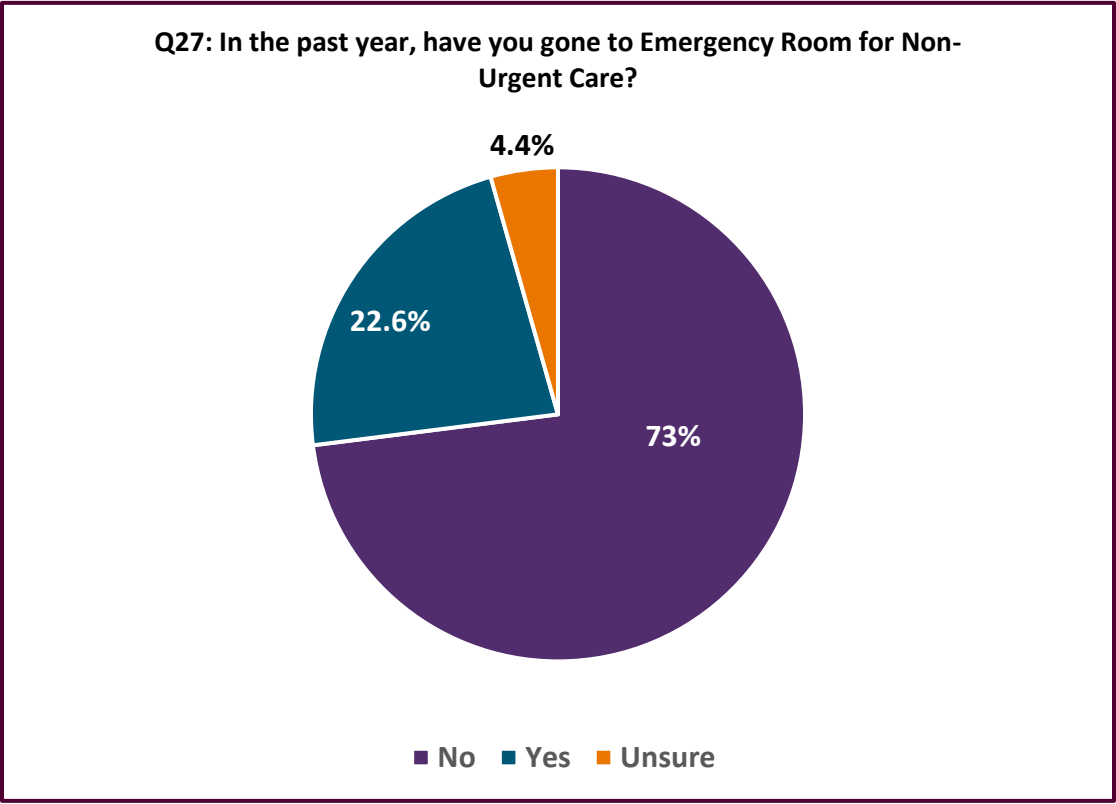
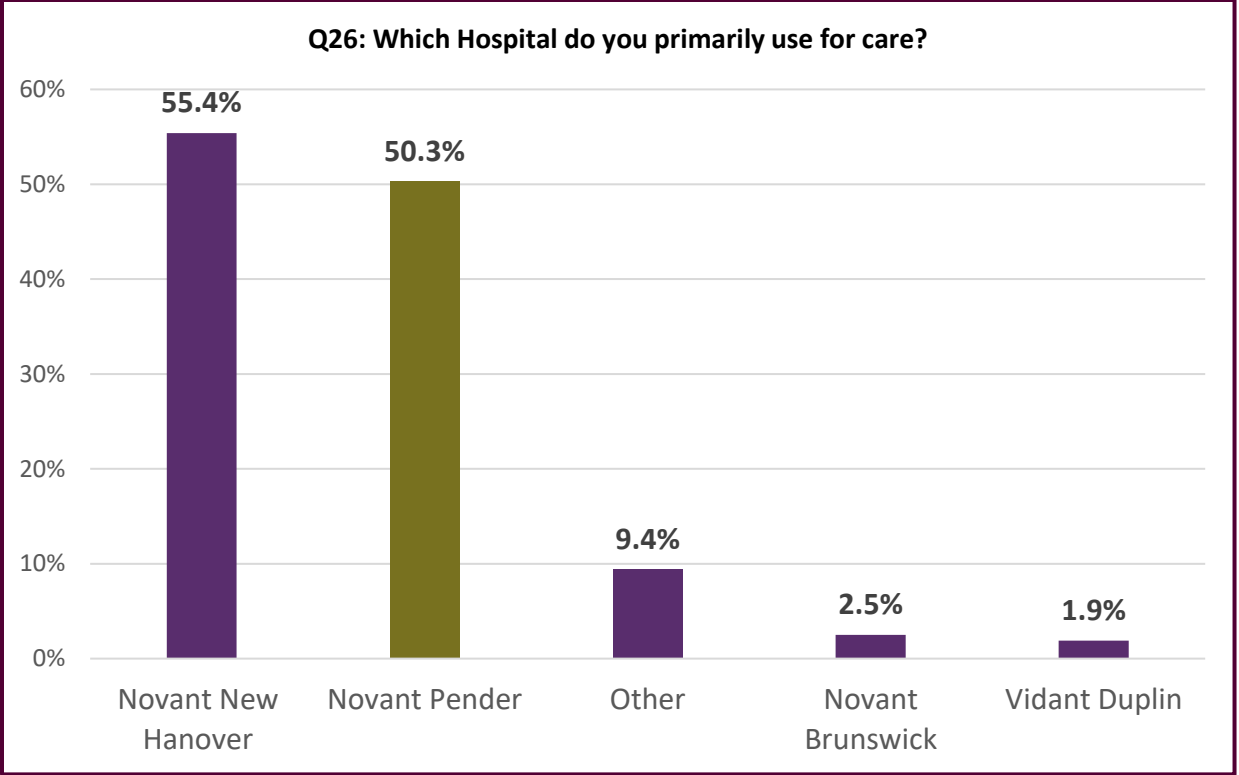
- 1) Primary Care
- 2) Specialty Care (cardiology, pulmonology, gastroenterology, and Infectious Disease)
- 3) Mental Health providers
- 4) Western part of Pender County

CHOS input on Health Care Utilization

The following data from the Community Health Opinion Survey (CHOS) conducted in by NHPEMC from July through mid-September is specific to health care utilization. The survey asked:

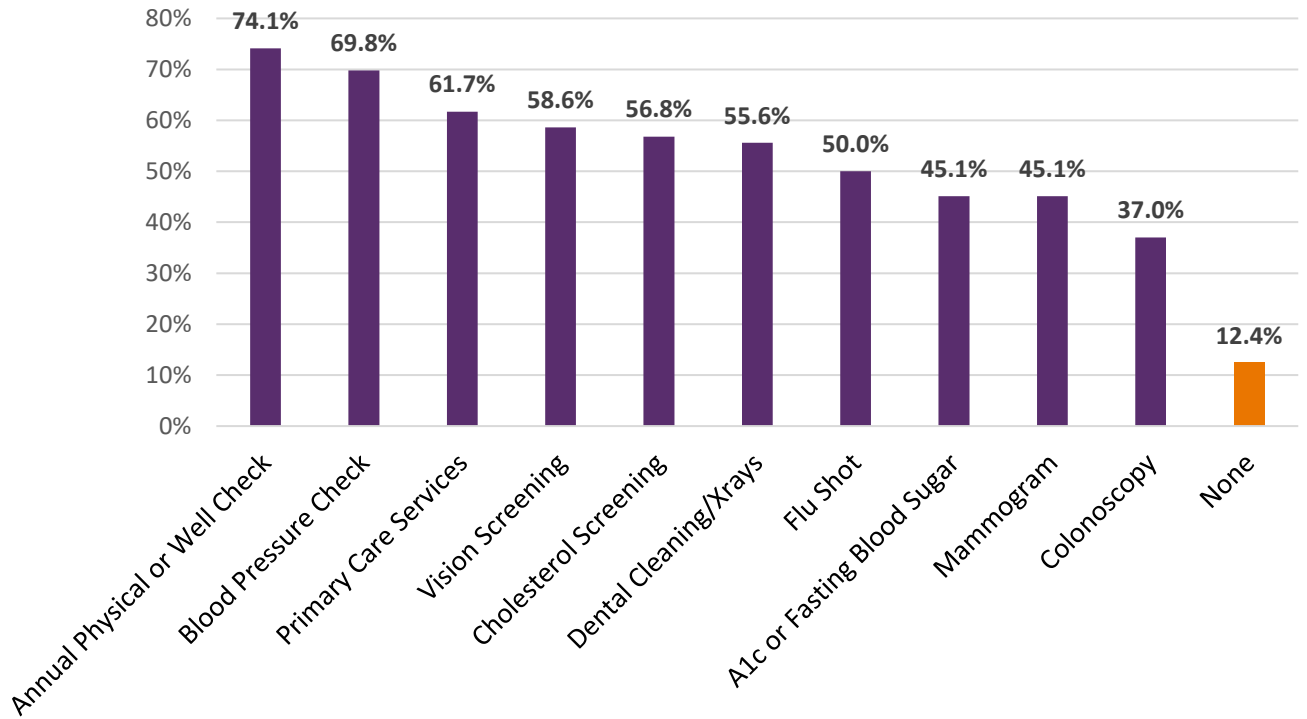
- Where resident respondents go to get primary care,
- Where they accessed dental services,
- Which hospital they used,
- If they have used the Emergency Department for routine, non-urgent care, and
- What preventive screenings they have used





Other: VA in Wilmington, Naval Hospital

Q29: Which of the following tests/screenings do you include in your health care?



II. Prioritized Health Needs

Identified Significant Health Needs

Utilizing the Community Health Opinion Survey (CHOS), residents from the Novant Health Pender Medical Center primary and secondary service areas were asked to rank 15 health issues from very important to least important. Health disparities and social determinants of health are not called out specifically as health issues but rather incorporated within each issue. The following 15 health issues are identified and ranked from very important to least important:

1. Access to Healthcare (87.3%)
2. Health Insurance (84.7%)
3. Mental Health (82.8%)
4. Cancer (80.4%)
5. Health Resource Information (79.5%)
6. Chronic Disease (79.0%)
7. Elder Care Options (78.4%)
8. Counseling/Support Groups for Mental Health (77.5%)
9. Teen Births (76.8%)
10. Pregnancy and Infant Wellness (75.8%)
11. Dental Health (73.6%)
12. Infant Mortality (72.8%)
13. Child & Adult Immunizations (72.2%)
14. Asthma/Lung Disease (71.6%)
15. Low Birth Weight Infants (71.0%)

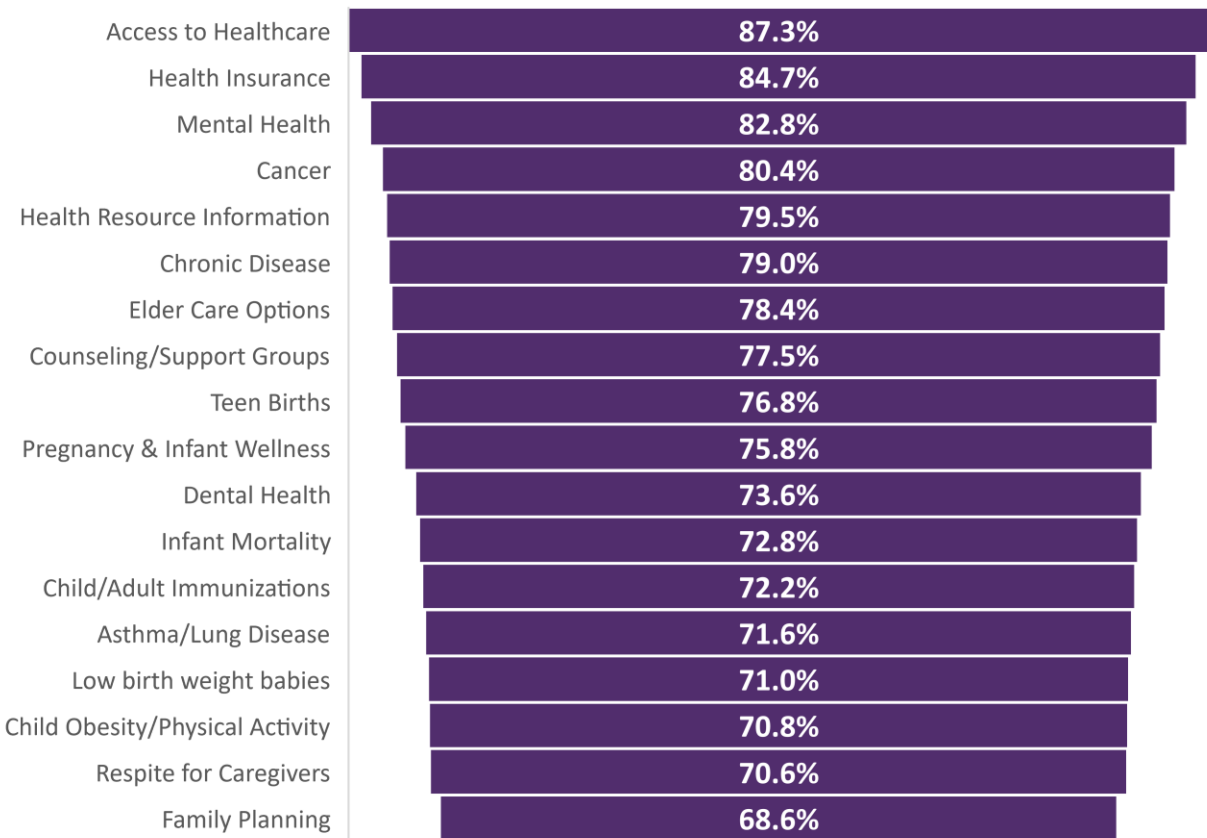
These 15 ranked health issues are categorized into the following broader categories, and represent the top identified significant health needs for NHP EMC's 2022-2024 CHNA.

- Access to healthcare
- Mental health
- Chronic disease
- Dental health
- Elder care options
- Family planning
- Pregnancy & infant wellness

These categories informed the prioritized needs discussed below. See Appendix B & C for additional supporting information.

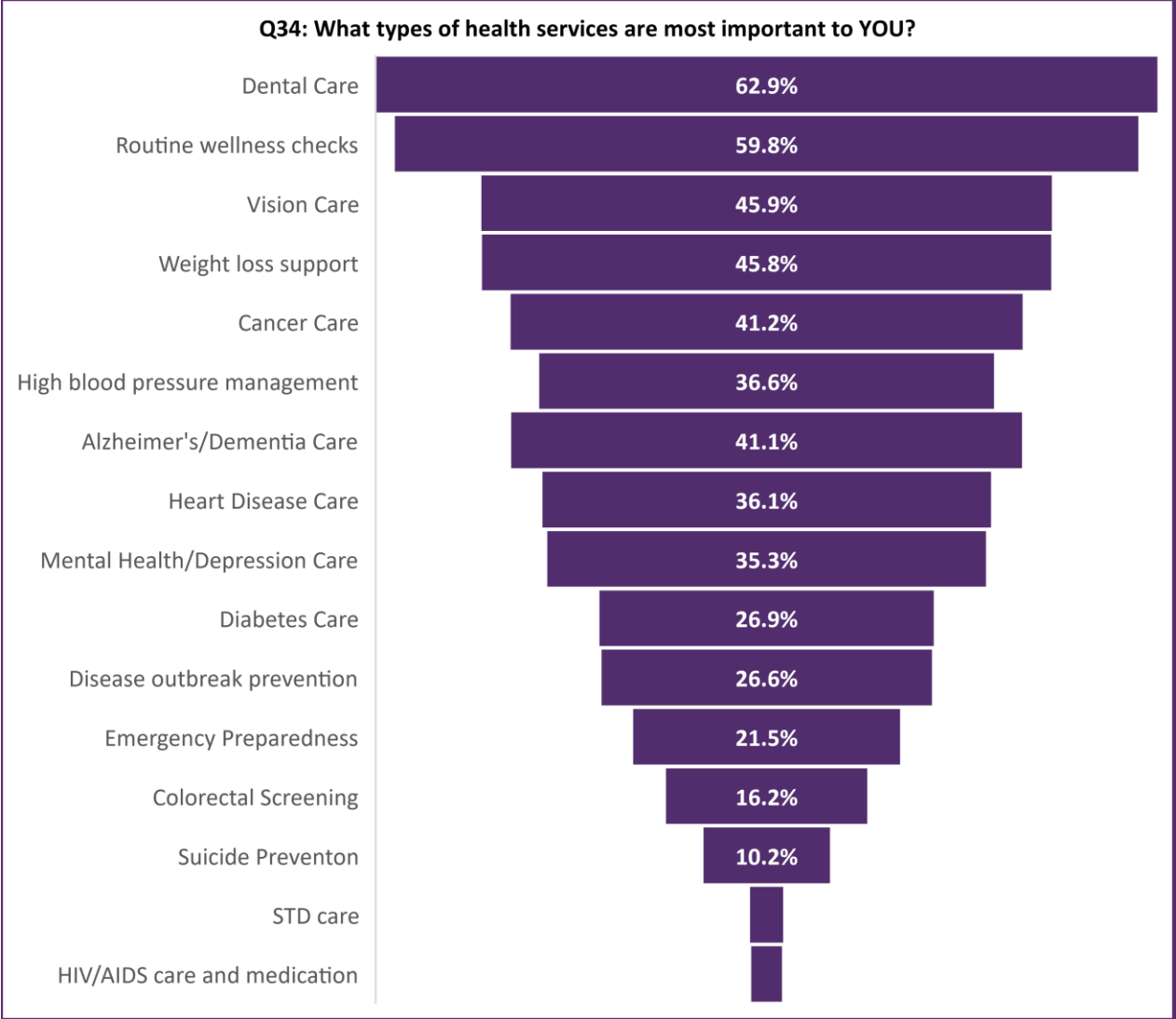
Pender County Health Department is in the process of completing its own Community Health Needs Assessment with an estimated completion time of March 2023.

Q22: How do you rate the importance of the following HEALTH issues for Pender County?



The following is a list of identified health issues that are of personal importance to survey respondents. This list helped influence the overall health needs of the community.

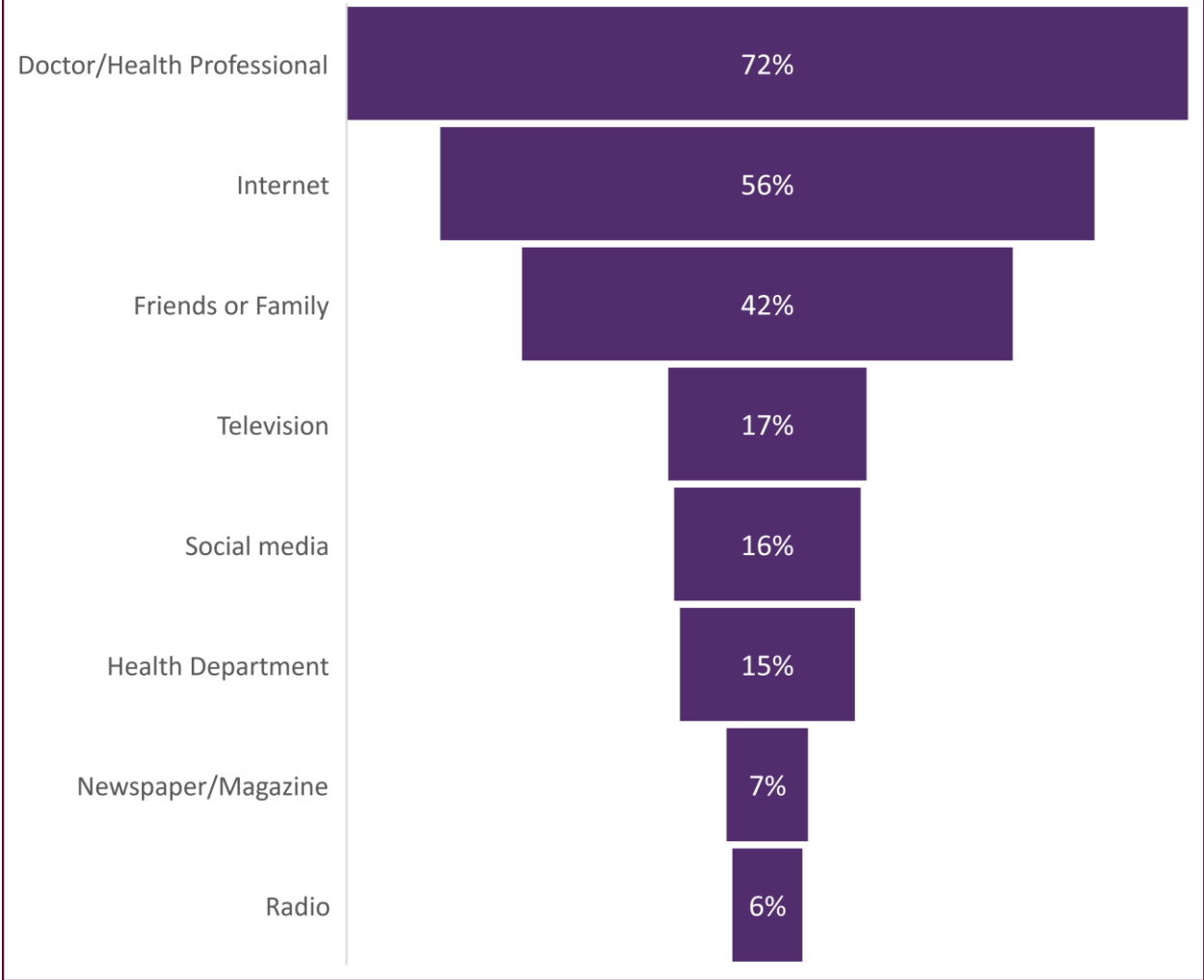
1. Dental Care (62.9%)
2. Routine/Wellness checks (59.8%)
3. Vision Care (45.9%)
4. Weight Loss Support (45.8%)
5. Cancer Care (41.2%)
6. High Blood Pressure management (36.6%)
7. Alzheimer's/Dementia Care (41.1%)
8. Heart Disease Care (36.1%)
9. Mental Health/Depression Care (35.3%)
10. Diabetes Care (26.9%)
11. Disease Outbreak Prevention (26.6%)
12. Emergency Preparedness (21.5%)
13. Colorectal Screening (16.2%)
14. Suicide Prevention (10.2%)
15. Sexually Transmitted Diseases (2.7%)
16. HIV/AIDS care and medication (2.5%)



Based on the CHOS, the list below demonstrates where survey respondents obtain health information:

1. Doctor/Health Professional (72%)
2. Internet (56%)
3. Friends or Family (42%)
4. Television (17%)
5. Social Media (16%)
6. Health Department (15%)
7. Newspaper/Magazine (7%)
8. Radio (6%)

Q38: Where do you get your Health Information?

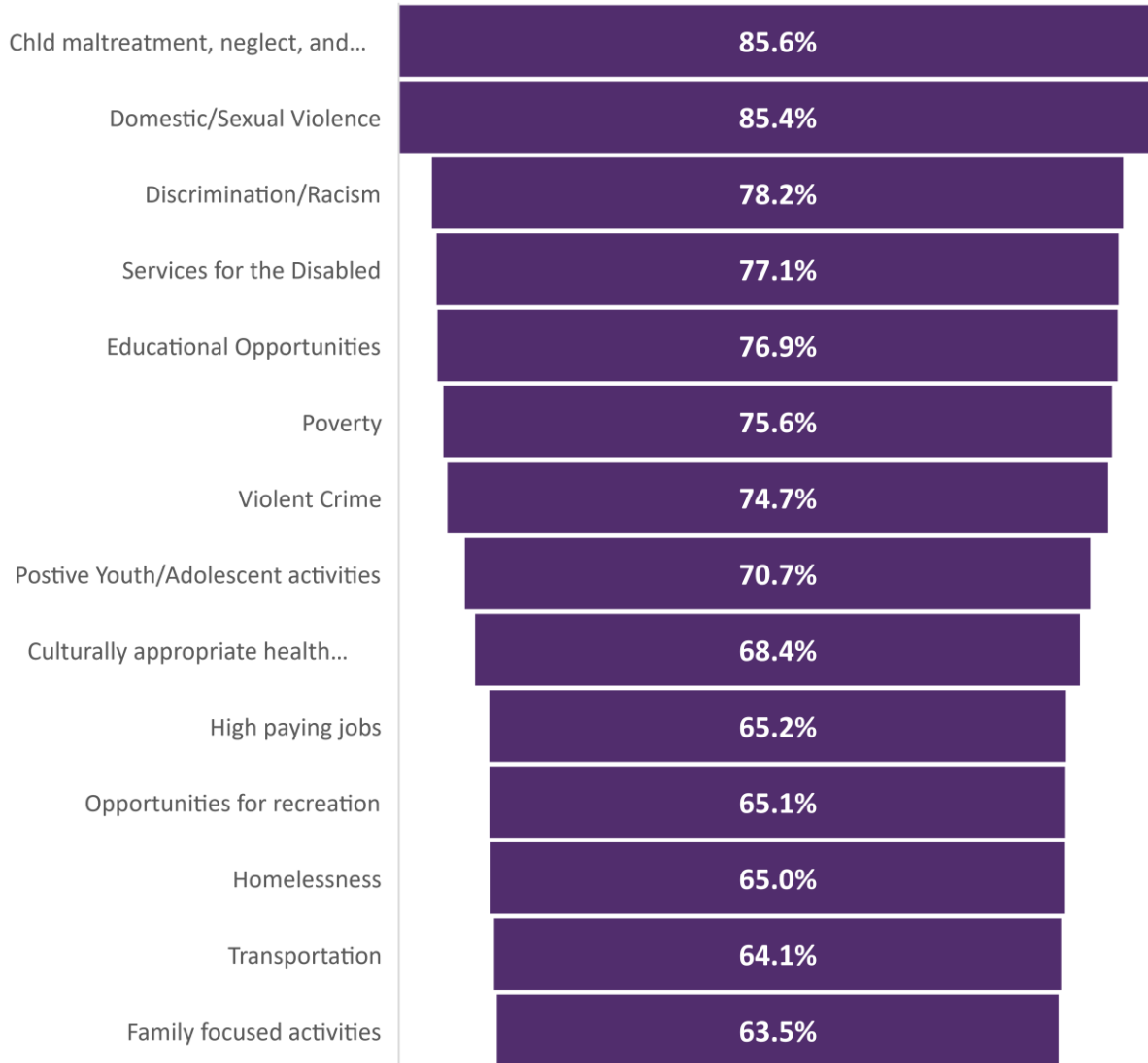


Based on the CHOS responses the following list identified the most important community issues by CHOS survey respondents:

- 1.** Domestic/Sexual Violence (85.4%)
- 2.** Discrimination/Racism (78.2%)
- 3.** Services for the Disabled (77.1%)
- 4.** Educational Opportunities (76.9%)
- 5.** Poverty (75.6%)
- 6.** Violent Crime (74.7%)
- 7.** Child maltreatment, neglect, and abuse (74.4%)
- 8.** Positive Youth/Adolescent Activities (70.7%)
- 9.** Culturally appropriate health services (68.4%)
- 10.** High paying jobs (65.2%)
- 11.** Opportunities for recreation (65.1%)
- 12.** Homelessness (65.0%)
- 13.** Transportation (64.1%)
- 14.** Family focused activities (63.5%)

Issues listed above influenced the final priorities.

Q21: How do you rate the importance of the following COMMUNITY issues for Pender County?



Based on CHOS survey responses, the following list identified the environmental issues of importance:

1. Safe drinking water – 71%
2. Housing – 67%
3. Water Pollution – 64%
4. Over-development – 63%
5. Accidents – 61%
6. Violence – 60%

a) County Prioritized Health Outcomes

Pender County Health Department is in the process of completing its own Community Health Needs Assessment with an estimated completion time of March 2023.

b) Facility Prioritization

In addition to the primary and secondary data described above, NHPMC leadership reviewed the Top 5 diagnosis codes for inpatient and outpatient hospital emergency department visits from July 2021 to June 2022.

Novant Health Pender Medical Center Emergency Department
Top 5 Diagnoses July 2021-June 2022

The top 5 Diagnoses from July 2021 to June 2022 were impacted by the COVID-19 Pandemic in the outpatient and inpatient settings. As a result of COVID-19 and encouraging virtual visits for patient safety, the inpatient diagnosis trend was more serious, including heart and kidney failure. Outpatient trending diagnoses were severe symptoms and side effects of COVID-19.

Novant Health Pender Medical Center Top 5 Diagnoses for Inpatient Admissions and Emergency Department Visits from July 2021 - June 2022			
Inpatient		Emergency**	
Diagnosis	Volume	Diagnosis	Volume
R53.81-Other malaise	34	U07.1-COVID-19	1,231
Z48.812-Encounter for surgical aftercare following surgery on the circulatory system	22	J06.9-Acute upper respiratory infection, unspecified	643
A41.9-Sepsis, unspecified organism	15	R07.89-Other chest pain	363
I13.0-Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	14	B34.9-Viral infection, unspecified	362
J18.9-Pneumonia, unspecified organism	13	R07.9-Chest pain, unspecified	302

**Emergency diagnosis only include those patients discharged as emergency patients (not admitted to Inpatient from Emergency Department) and excludes LWOB (Left Without Being Seen).

Upon a comprehensive review of the primary and secondary data and NHP EMC's ED top 5 diagnosis codes, the leadership team and Pender Memorial Hospital Board of Trustees evaluated this information based on the scope, severity, health disparities associated with the need, and the estimated feasibility and effectiveness of possible interventions. Through this thorough evaluation, the team agreed on the following health priorities for NHP EMC:

1. Chronic Disease: with a focus on Hypertension and Diabetes
2. Mental Health and Substance Use: with a focus on depression and opioid use
3. Social Determinant of Health: Transportation

Further information on prioritized health outcomes is summarized below:

- **Substance misuse:** In 2017, the North Carolina Department of Health and Human Services (NC DHHS) released the North Carolina Opioid Action Plan (OAP), a detailed plan to combat the opioid crisis. Since 2017, the OAP has been updated three times and now the Opioid and Substance Use Action Plan (OSUAP) captures polysubstance use and encompasses a greater focus on equity and lived experiences. The OSUAP outlines strategies that are proven to be effective and focus on equity, prevention, harm reduction, and connection. The action plan also identifies metrics that allow for tracking progress and transparency of data. Routine updates from local health department and other agencies across North Carolina allow for progress to be measured at the county level and reflected in a dashboard on the NC DHHS website.
- **Mental health:** Mental health was identified as a top priority in the Pender Memorial Hospital CHNA for 2019-2021, before it became Novant Health Pender Medical Center.
- **Chronic disease:** Cardiac issues, including coronary heart disease (CHD) and Hypertension, were the leading cause of death in Pender County in 2019 and the 2nd leading cause in the preceding five-year period (2015-2019). Diabetes is one of the leading causes of preventable disease in Pender County and ranks #7 for cause of death in 2019. Rates of diabetes related death have consistently increased over time, not only in Pender County and across North Carolina. Data from the US Diabetes Surveillance System shows that there is a higher prevalence of diabetes among men than women.
- **Transportation:** Transportation was consistently referenced as an issue in accessing health and human services, exacerbated by the rural nature of Pender County, large geographic distances, and the need to use many services out-of-county. Rural and Western Pender County referenced these concerns more than Eastern Pender County residents.

III. Addressing needs

Novant Health Pender Medical Center is committed to working to address each of the identified areas of need through resource allocation and support of the following programs and actions:

Priority Need:	Program:	Action:	Intended Outcome:
Mental Health and Substance Use: focus on Depression & Opioid Use	Mental Health First Aid	Provide information and train individuals from various sectors including the nonprofit, faith community and our own team members	Awareness of ways to access resources and increased number of individuals connected to appropriate treatment and services within the community
	Opioid Stewardship Task Force		
	Outpatient Peer Support Program	Alignment of system regarding treatment of those with Opioid Use Disorder to include education on stigma reduction, monitoring metrics related to use of opioids, and development of pathways for treatment with community partners	50 Individuals trained in Mental Health First Aid
	Psychiatric Residency Program		
	Screening, Brief Intervention and Referral to Treatment in Primary Care (SBIRT using PHQ-9 or Patient Health Questionnaire – 9 questions)	Implementation of outpatient peer support program in partnership with Behavioral Health Institute leaders and Emergency Services	Community based teams (Home Health, Community Paramedics, CHWs, and other outreach workers) trained on use of Narcan
		Establishment of psychiatric residency program in partnership with UNC School of Medicine	Increase in number of patients treated for opioid use disorder in the acute and ambulatory settings
	Utilize Community Care Cruiser in Pender County to engage with residents for primary care and screening for substance use disorder	Reduction in adverse drug events related to opioids Reduction in readmission for those with mental health diagnosis recently discharged from hospital	
		Increased provider base for psychiatric care in our region	
		Increase rate of depression screenings for adults and children at Pender Medical Center and Novant Pender primary care offices	

<p>Chronic Disease: focus on Hypertension and Diabetes</p>	<p>Wellness Education Health Screenings Rural residency program</p>	<p>Host screenings and provide related referrals, and assessment of resources via Community Care Cruiser Support community organizations and events aligned with this work Establishment of a rural residency program in partnership with Black River Health Services</p>	<p>Increased number of community stakeholders connected to a primary medical home and appropriate care Decrease emergency department use for those connected to health screening events and mobile health Improve health outcomes for those connected to Community Engagement team as it relates to A1c, BMI, and Blood Pressure Increased availability of primary care in areas of most need</p>
<p>Social Determinant of Health: Transportation</p>	<p>Ride Health Program Social responsibility/ Charitable contributions SDOH Screening</p>	<p>Support community organizations and events aligned with this work through capacity building and charitable contributions Creation of continuing education opportunities for team members regarding social determinants of health in our health system and our community Train staff and implement social determinant of health screening at Pender primary care offices</p>	<p>Decrease number of Pender county residents missing appointments due to transportation barriers Increase contributions to Pender county service providers offering transportation to residents</p>

Again, NHPEMC will focus resource allocation on these prioritized needs based on careful consideration of estimated feasibility and effectiveness of possible interventions. While NHPEMC will not prioritize the remaining significant health needs (listed above in Section II), it will support and collaborate with community partners as appropriate for the purpose of improving outcomes for identified needs that are better aligned with their scope of service.

In addition to the programs and services offered to the community through Novant Health Pender Medical Center, there are existing community assets available throughout the Pender County community that have additional programs and resources tailored to meet the identified health needs. The following is a list of community agencies that address those prioritized and non-prioritized needs:

Identified Significant Health Needs	Local Community Resources Addressing Needs
Access to healthcare Chronic disease Dental health	Pender County Health Department Cape Fear Healthnet Black River Health Services Mt. Calvary Center for Leadership Development
Mental health	Coastal Horizons June 10-Roots to Recovery
Pregnancy and infant wellness Family planning	Pender County Health Department NC Catholic Charities
Elder care options	Pender Adult Services Lower Cape Fear Lifecare

For all community resources, visit www.novanthealth.org/mycommunity

IV. Role of the board and administration

The Pender Memorial Hospital Board of Trustees and Novant Health Pender Medical Center administration are active participants in the community benefit process. Through strategic planning initiatives, leadership provides direction on actions and intended impact, and serves as the approving body for the community health needs assessment and community benefit implementation plan. Administrative leaders serve on the County assessment planning team and hospital board members participate and provide influence on the community benefit plans. All members are actively involved in the priority setting discussion and outreach planning process. Additionally, community benefit reports are provided to the board and facility leadership teams throughout the calendar year for ongoing education.

V. Appendix:

Novant Health Pender Medical Center Steering Committee	
Name	Organization
Dawn Ellis	Share the Table
Vanessa Lacer	Pender County Government
Amy Feath	Carousel Center
Jessica Biel	Pender County Schools
Dr. Lisa Robinson	Mt. Calvary Center for Leadership
Kenny House	Coastal Horizons
Lori Kirkpatrick	Save Haven
Wes Davis	Pender Adult Services
Sandy Harris	Pender Christian Services
Emily Baker	Burgaw Area Chamber of Commerce
Sandy Rowe	Pender Alliance for Teen Health
Velva Jenkins	Lower Cape Fear YWCA
Dr. Steven Hill (or designee)	Pender County Schools
O. Wesley Stewart	Department of Social Services
Judith Bullart	Woodbury Wellness
Bishop James Malloy	Town of Burgaw Commissioners
Edelmira Segovia	UNC-Wilmington
Chief Jim Hocke	Burgaw Police Department
Mostofa Rezk	Medical Director, NHPEMC
Mark Seitz	Pender County Cooperative Extension
Heather Davis	Novant Health Pender Medical Center (NHPEMC)
Cynthia Faulkner	Novant Health Pender Medical Center (NHPEMC)
Ruth Glaser	Novant Health Pender Medical Center (NHPEMC)
Sarah Arthur	Novant Health
Michele Bennett	Novant Health

For list of agencies involved in the Pender County CHA process, please see the Pender County Health Department’s full report, with anticipated completion in March 2023. Please note that Novant Health’s leadership is in the Pender County CHA steering committee.