



Cecil County
**Community Health
Needs Assessment**

May 5, 2022



ChristianaCare[®]



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EXECUTIVE SUMMARY

Introduction

This Community Health Needs Assessment (CHNA) was conducted by ChristianaCare, Union Hospital in collaboration with the Cecil County Health Department and the Cecil County Community Health Advisory Committee (CHAC) to identify significant community health needs and to inform development of an Implementation Strategy to address current needs. These organizations collaborated through gathering and assessing secondary data; conducting community meetings and key stakeholder interviews; and relying on shared methodologies, report formats, and staff to manage the CHNA process.

ChristianaCare, Union Hospital (Union Hospital or the hospital) is a 72-bed, full-service community hospital located in downtown Elkton, Maryland. Union Hospital provides an assortment of specialty care services, including oncology, gastroenterology, and audiology, along with imaging and laboratory services. Additional information about Union Hospital is available at: <https://www.uhcc.com/>.

Union Hospital is part of the ChristianaCare Health System (ChristianaCare). ChristianaCare is comprised of three hospitals (which together operate more than 1,200 beds) and a variety of outpatient and other services. The primary campuses are in Wilmington and Newark, Delaware and in Elkton, Maryland. Additional information on Christiana Care Health System and its three hospital facilities can be found at: <https://christianacare.org/about/>.

The Cecil County Health Department works to promote, protect, and advance the health and wellness of Cecil County, Maryland. The department offers services to all county residents through six divisions: Administrative Services, Addictions Services, Community Health Services, Environmental Health Services, Health Promotion, and Special Populations Services. The department's responsibilities include preventing epidemics and the spread of disease, protecting against environmental hazards, preventing injury, promoting, and encouraging healthy behavior and mental health, responding to disasters, assisting communities in recovery, and assuring the quality and accessibility of health services.

CHAC is a partnership of community organizations, government, groups, and individuals committed to improving the overall quality of health in Cecil County. CHAC serves as Cecil County's Local Health Improvement Coalition (LHIC) and works closely with several task forces and councils including Cancer Task Force; Tobacco Task Force; Behavioral Health Advisory Council; and Healthy Lifestyles Task Force.

This CHNA has been conducted using widely accepted methodologies to identify the significant health needs of a specific community. The assessment also has been conducted to comply with federal and state laws and regulations.

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Community Assessed

For purposes of this CHNA, the community is defined as Cecil County, Maryland. During the year ended June 30, 2021, Cecil County accounted for approximately 85 percent of the hospital's total inpatient volumes and 84 percent of total emergency department visits.

The total population of Cecil County in 2021 was approximately 102,700 persons.

The following map portrays the community assessed by Union Hospital and the location of its main campus.



Source: Caliper Maptitude, 2021.

Significant Community Health Needs

As determined by analyses of quantitative and qualitative data, an overarching focus on advancing racial and ethnic health equity, recognizing the impact of structural racism on measurable health disparities, has the best potential to improve community health. Within

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this context, significant health needs in the community served by ChristianaCare, Union Hospital are:

- Access to health services
- Cancer
- Childhood trauma/Adverse Childhood Experiences (ACE)
- LGBTQ+ health disparities
- Mental health
- Nutrition, obesity, and physical inactivity
- Smoking, tobacco, and vape product use
- Substance use disorders

Significant Community Health Needs: Discussion

Access to Health Services

Accessing health care services is challenging for some members of the community, particularly low-income people, racial and ethnic minorities, those with limited English language ability, uninsured and underinsured persons, and the LGBTQ+ community. Barriers to accessing care and services are numerous and inter-related.

The per-capita supply of primary care, dental health, and mental health professionals is low compared to national averages. The federal government has designated all of Cecil County a Health Professional Shortage Area (HPSA) for mental health. Stakeholders and community residents confirmed that mental health providers are in short supply and high demand. Teens who participated in a community input meeting for this CHNA described difficulties in getting appointments with mental health providers and challenges establishing ongoing care.

The CHNA process included asking Cecil County residents to respond to a community health survey and 544 responses were received. Respondents identified access to health services as among the top three most important health issues in Cecil County. Cost, copayments, and challenges in navigating provider networks and insurance benefits across state lines were mentioned as contributing factors. Access to mental health services for children and adolescents is particularly challenging.

Poverty rates for Black and for Hispanic populations are well above the overall Cecil County average. Stakeholders who provided input (in meetings and interviews) emphasized that access to health services is most challenging for those with limited financial resources and transportation options. Many lower-income people are unable to take time off work to obtain medical care.

The senior population is projected to grow substantially. The 65+ population is projected to grow 43.1 percent between 2020 and 2030 compared to 8.5 percent for Cecil County as a whole. More health and seniors-focused social services will be needed.

Drug poisoning deaths (per-capita) are significantly higher in Cecil County than in the U.S. Stakeholders indicated that access to treatment services is problematic due to stigmas and inadequate treatment options. Only one residential treatment facility is available in

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the county (in Elkton) and the facility is not accessible to many. Cost and insurance-related barriers are present.

Transportation barriers are significant in the county. Stakeholders and survey respondents described a lack of public and private transportation options. No public transportation infrastructure exists, and ride share applications and taxis are limited. The rising cost of used cars and fuel has significantly impacted residents' ability to drive to medical appointments and services. According to the CDC's Social Vulnerability Index, approximately 65 percent of Cecil County's population lives in census tracts with high vulnerability for housing and transportation issues.

Cancer

Cancer rates in Cecil County are above Maryland and U.S. averages (age adjusted rates per 100,000 of 525, 453, and 449 respectively have been reported). Cecil County rates have been above the U.S. average for the following cancer types:

- Bladder
- Cervix
- Colon and rectum
- Corpus and uterus, NOS
- Esophagus
- Kidney and renal pelvis
- Liver and bile duct
- Lung and bronchus
- Melanoma of the skin
- Non-Hodgkin lymphoma
- Oral cavity and pharynx
- Ovary
- Prostate

Cecil County has a particularly high (age-adjusted) rate of lung and bronchus cancer mortality (87.1 per 100,000 – more than 50 percent above the U.S. average of 57.3 per 100,000).

Childhood Trauma/Adverse Childhood Experiences (ACE)

The Centers for Disease Control and Prevention defines adverse childhood experiences, or ACEs, as potentially traumatic events that occur in childhood (0-17 years). These may include experiencing violence, abuse, or neglect, witnessing violence in the home, and/or having a family member attempt or die by suicide.

ACEs also can include other aspects of the child's environment that undermine a sense of safety, such as substance use or mental health problems in the home, or instability due to parental separation or a household member being in jail or prison.

ACEs can have long-term, negative effects on health, wellbeing, and future life opportunities such as education and employment. They also can increase the risk of injury, sexually transmitted infections, maternal and child health problems (including teen

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pregnancy, pregnancy complications, and fetal death), involvement in sex trafficking, and a wide range of chronic diseases and leading causes of death such as cancer, diabetes, heart disease, and suicide.¹

A comparatively high percentage of Cecil County adults (33.7 percent) have reported 3-8 ACEs during childhood – well above the averages in Maryland (23.0 percent) and the U.S. (16.6 percent). Stakeholders emphasized that the impact of ACEs can be generational, particularly those associated with substance use or mental health problems.

Childhood trauma is one of the four priority areas identified in the Cecil County Health Department's 2019 Community Health Improvement Plan. The Local Management Board's Childhood Trauma Subcommittee, with the support of the CHAC, has focused on the following goals:

- Increase education opportunities for the community on childhood trauma,
- Educate and empower health care providers to recognize and treat the effects of childhood trauma, and
- Enhance parenting skills to promote healthy child development.

LGBTQ+ Health Disparities

Research suggests that LGBTQ+ individuals face health inequities due to social stigma, discrimination, and denial of civil rights. Discrimination has been linked to high rates of psychiatric disorders, substance use, and suicide. Experiences of violence and victimization are common for LGBTQ+ individuals. Mental health and personal safety are often compromised by lack of family and social acceptance of sexual orientation and/or gender identity.²

In Cecil County, LGBTQ+ youth are more than twice as likely to be bullied and threatened with a weapon on school property compared to youth who identify as straight. Queer youth also are much more likely to engage in high-risk behaviors such as tobacco, alcohol, and other drug use and to report significantly lower rates of physical activity.

Community health survey respondents identified the LGBTQ+ community as an underserved population for health needs.

Stakeholders from West Cecil Health Center (a local FQHC) reported historical challenges with the queer community accessing care due to stigma and long-standing, underlying discrimination. Administrators and providers expressed a deliberate effort in recent years to engage the LGBTQ+ community and create culturally competent, accessible, and relevant health care.

Mental Health

Poor mental health status is a significant health concern in Cecil County. In 2018, the number of mentally unhealthy days in the county (in the last 30 days) was 4.5. This

¹ <https://www.cdc.gov/injury/>

² <https://www.healthypeople.gov/2020/topics-objectives/topic/lesbian-gay-bisexual-and-transgender-health>

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compares to 3.7 in Maryland and 4.1 in the U.S. CDC data indicate particularly high rates of “mental health not good” in Elkton (ZIP Code 21921) and North East (ZIP Code 21901).

The supply of mental health providers is also a significant issue. Cecil County has a comparatively low per-capita supply of providers, and the county is a health professional shortage area (HPSA) for mental health.

Forty-six percent of survey respondents identified mental health as a “top three” most important community health need in Cecil County.

Community meeting participants and interviewees stressed the residents have problems accessing mental health services, getting timely appointments, and establishing ongoing care. Mental health services for children and adolescents are in short supply. Stigma, childhood trauma, substance use, and the impact of the COVID-19 pandemic were noted as contributing factors.

Nutrition, Obesity, and Physical Inactivity

According to County Health Rankings, the following Cecil County indicators benchmark unfavorably compared to the U.S.:

- Adults with body mass index (BMI) greater than 30
- Percentage of adults reporting no leisure-time physical activity
- Percentage of adults with access to locations for physical activity

Youth Risk Behavioral Surveillance System (YRBSS) data also show that fruit and vegetable consumption is comparatively low for Cecil County youth.

Stakeholders and providers noted the high prevalence of chronic conditions associated with poor nutrition, obesity, and physical inactivity such as diabetes, hypertension, and heart disease. Providers shared their difficulties in assisting patients with providing the right amount and type of education and skills development to manage these conditions due to limited face-to-face time and reimbursement structures that disincentivize this work.

Smoking, Tobacco, and Vape Product Use

Adult smoking rates have been higher in Cecil County (18.6 percent) than in Maryland (12.6 percent) and the U.S. (17.0 percent).

Youth tobacco/nicotine use also compares unfavorably in Cecil County compared to national averages. The following indicators for youth have been above U.S. averages:

- Currently smoke cigarettes
- Currently frequently smoke cigarettes
- Ever used a vape product
- Currently use smokeless tobacco

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The percent of Cecil County youth that currently use smokeless tobacco is more than 50 percent above the U.S. average.

Substance Use Disorders

Drug poisoning deaths rate per 100,000 population (age-adjusted) was significantly higher in Cecil County (74.1 percent) than in Maryland (39.4 percent) and the U.S. (24.0 percent). The drug overdose death rate in Cecil County more than doubled between 2016 and 2020.

Binge drinking rates have been higher than U.S. averages in several Cecil County ZIP Codes, including 21904, 21911, 21921, 21901, and 21917.

For Cecil County's youth population, the following measures have compared unfavorably to U.S. averages:

- Currently drink alcohol
- Current binge drinking
- Currently use marijuana
- Ever used heroin
- Ever used methamphetamines

Community health survey respondents (particularly those in higher income households) listed substance use as the top concern in Cecil County. Respondents also identified "community members dealing with substance use disorders" as an underserved population.

Interviewees and community meetings participants identified substance use as a top health concern. Stigma and the lack of available and affordable treatment options have contributed to this significant community health need.

DATA AND ANALYSIS

Community Definition

This section identifies the community that was assessed by Union Hospital. The community was defined by considering the geographic origins of the hospital's discharges and emergency room visits during the year ended June 30, 2021.

On that basis, Union Hospital's community was defined as Cecil County. The county accounted for approximately 85 percent of the hospital's 2021 inpatient volumes and 84 percent of its emergency room visits (**Exhibit 1**).

Exhibit 1: Union Hospital Discharges and Emergency Room Visits, 2021

ZIP Code	Town/Area	Inpatient Discharges	Percent Discharges	ER Visits	Percent ER Visits
21921	Elkton	2,182	48.3%	12,501	50.2%
21901	North East	703	15.6%	4,088	16.4%
21911	Rising Sun	359	8.0%	1,468	5.9%
21919	Earleville	118	2.6%	402	1.6%
21915	Chesapeake City	103	2.3%	494	2.0%
21903	Perryville	93	2.1%	475	1.9%
21904	Port Deposit	85	1.9%	592	2.4%
21918	Conowingo	54	1.2%	240	1.0%
21917	Colora	43	1.0%	192	0.8%
21914	Charlestown	35	0.8%	140	0.6%
21913	Cecilton	27	0.6%	133	0.5%
21912	Warwick	20	0.4%	67	0.3%
21920	Elk Mills	13	0.3%	76	0.3%
21916	Childs	13	0.3%	29	0.1%
21902	Perry Point	7	0.2%	18	0.1%
Cecil County		3,855	85.4%	20,915	84.0%
Other Areas		658	14.6%	3,972	16.0%
Total Discharges and ER Visits		4,513	100.0%	24,887	100.0%

Source: Analysis of Union Hospital's utilization data, 2021.

The total population of Cecil County in 2021 was approximately 102,722 persons (**Exhibit 2**).

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Exhibit 2: Community Population by ZIP Code

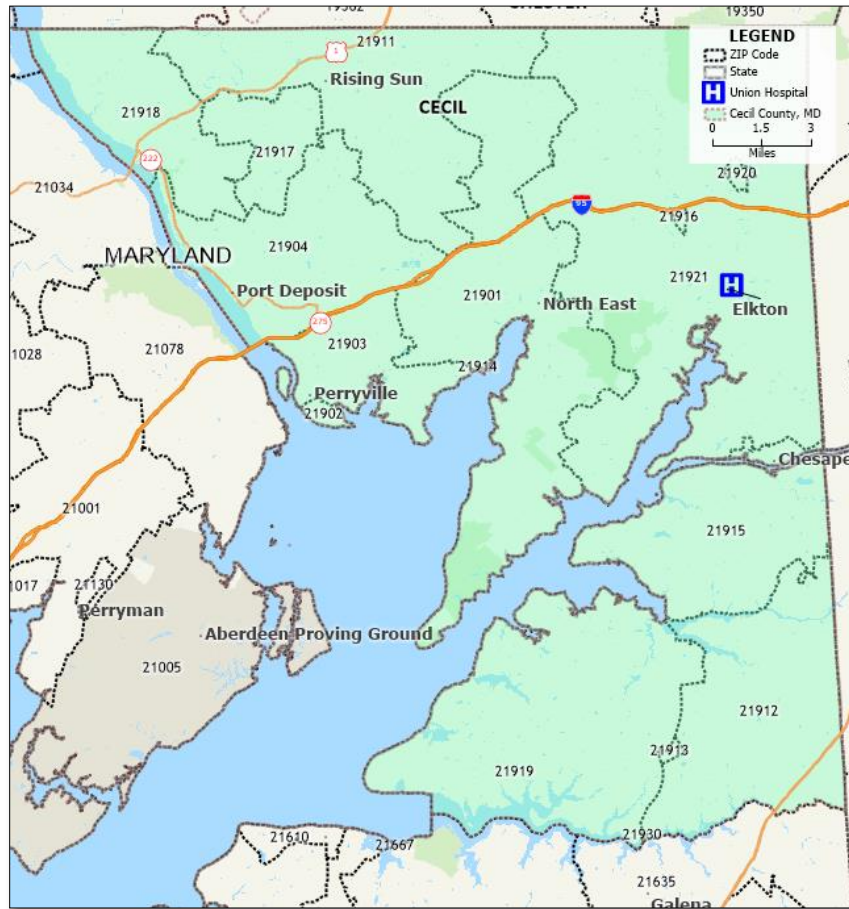
ZIP Code	City/Town	Total Population	Percent Population
21921	Elkton	45,225	44.0%
21901	North East	17,694	17.2%
21911	Rising Sun	11,103	10.8%
21904	Port Deposit	6,484	6.3%
21903	Perryville	5,794	5.6%
21918	Conowingo	4,321	4.2%
21915	Chesapeake City	2,739	2.7%
21919	Earleville	2,905	2.8%
21917	Colora	2,017	2.0%
21912	Warwick	1,520	1.5%
21913	Cecilton	901	0.9%
21914	Charlestown	804	0.8%
21920	Elk Mills	953	0.9%
21902	Perry Point	262	0.3%
Summary:		102,722	100.0%

Source: U.S. Census, ACS 5-Year Estimates, 2020

The hospital is located in Elkton, Maryland (Cecil County ZIP Code 21921). **Exhibit 3** portrays the community and ZIP Code boundaries within the county.

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Exhibit 3: Union Hospital Community



Source: Caliper Maptitude, 2021.

Secondary Data Summary

The following section summarizes principal observations from the secondary data analysis. See Appendix B for more detailed information.

Demographics

Demographic characteristics and trends directly influence community health needs. The total population in the community is expected to grow 8.5 percent from 2020 to 2030 (approximately 8,623 persons). The population 65 years of age and older is anticipated to grow much more rapidly (by 43.1 percent, or 7,058 persons) during that time. This development could contribute to greater demand for health services, since older individuals typically need and use more services than younger persons.

The community has substantial variation in demographic characteristics (e.g., age, race/ethnicity, and income levels) throughout the county.

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The percent of population identifying as Black was highest in three ZIP Codes (21902, 21913 and 21921). Perry Point (21902) has the highest percentage of the population identifying as Black (69.5 percent). Cecilton (21913) and Elkton (21921) had 15.4 percent and 10.2 percent, respectively. All other areas of Cecil County have under 10 percent population identifying as Black.

The percent of the population identifying as Hispanic has been under five percent in most areas of Cecil County. Exceptions include Elk Mills with 16.7 percent identifying as Hispanic and Elkton with 6.1 percent.

Socioeconomic Indicators

People living in low-income households generally are less healthy than those living in more prosperous areas. Overall poverty rates in Cecil County were slightly above the Maryland average but below the U.S. average. However, poverty rates for Black and for Hispanic (or Latino) county residents have been substantially higher than rates for White residents.

Low-income census tracts are most prevalent in Elkton, North East, and Port Deposit. Most of these census tracts are where more than one-half of households are “rent burdened,” are categorized as “high need” by the Dignity Health Community Need Index™ (CNI) and are in the top quartile nationally for “social vulnerability” according to the Centers for Disease Control Social Vulnerability Index.

The CNI is calculated for every ZIP Code in the United States. The median score for the U.S. is 3.0, and ZIP Codes are assigned to five categories ranging from “Lowest Need” (scores of 1.0 to 1.7) to “Highest Need” (scores ranging from 4.2 to 5.0). At 3.2 (weighted by the population of each ZIP Code), the weighted average CNI score for ZIP Code 21921, Elkton, is above the U.S. median. All other Cecil County ZIP Codes have a CNI score below the median.

Between 2016 and 2019, unemployment rates in Cecil County, Maryland, and the United States declined. However, the COVID-19 pandemic led to significant increases in unemployment in 2020. In 2021, rates declined as the economy began to recover from the pandemic. Because many have employer-based health insurance coverage, continued economic recovery will be important to maintaining access to care.

Cecil County's crime rates have been lower than Maryland and U.S. rates in all categories except larceny and theft.

In recent years, the county has had a lower percentage (4.2 percent) of the population without health insurance than Maryland (5.9 percent) and the United States (8.7 percent). Maryland expanded Medicaid eligibility effective January 1, 2014. According to an analysis published by the Kaiser Family Foundation, 306,700 uninsured adults became eligible for Medicaid as a result of the expansion.

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Other Local Health Status and Access Indicators

In the 2021 *County Health Rankings*, Cecil County:

- Ranked in the bottom quartile of Maryland's 24 counties for Health Outcomes,
- Ranked in the bottom half for Health Factors (which represents a composite of measures for Health Behaviors, Clinical Care, Social and Economic Factors, and Physical Environment),
- Ranked in the bottom quartile for 11 of the 42 indicators, including length of life, premature death, poor physical health days, physical inactivity, ration of population to primary care and dental providers, mammography screening, social associations, violent crime, injury deaths, and driving alone to work.

Community Health Status Indicators (CHSI) compares *County Health Rankings* indicators for each county with those for peer counties across the United States. Each county is compared to 30 to 35 of its peers, which are selected based on socioeconomic characteristics such as population size, population density, percent elderly, per-capita income, and poverty rates. In CHSI, Cecil County compared unfavorably to peer counties for 18 of the 34 benchmark indicators. Cecil County was in the bottom quartile compared to peer counties for the following indicators:

- Years of potential life lost
- Newly diagnosed chlamydia cases per 100,000
- Percent of females 65-74 receiving an annual mammogram
- Income inequality (ratio of income at the 80th percentile to the 20th percentile)
- Percent of children in single-parent households
- Membership associations per 10,000
- Reported violent crime offenses per 100,000
- Deaths due to injury per 100,000
- Percent of households with severe housing problems

Secondary data from the Maryland Department of Health, the Centers for Disease Control, the Health Resources and Services Administration, the United States Department of Agriculture, and others also have been assessed. Based on an assessment of available secondary data, the indicators presented in **Exhibit 4** appear to be most significant in Cecil County.

An indicator is considered *significant* if it was found to vary materially from a benchmark statistic (e.g., an average value for Maryland, for peer counties, or for the United States). For example, the drug poisoning rate in the county was 74.1 per 100,000, significantly higher than the U.S. average of 24.0 per 100,000. The last column identifies exhibits in the report where more information regarding the data sources can be found.

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Exhibit 4: Significant Indicators

Indicator	Area	Value	Benchmark		Exhibit
			Value	Area	
65+ population change, 2020-2030	Cecil County	43.1%	8.5%	Community total	6
Poverty rate, Black, 2016-2020	Cecil County	15.8%	12.8%	U.S., All races/ethnicities	12
Poverty rate, Hispanic, 2016-2020	Cecil County	18.1%	12.8%	U.S., All races/ethnicities	12
Percent of households rent burdened (> 30% income on housing)	Perry Point	100.0%	49.1%	United States	18
	Warwick	66.7%	49.1%	United States	18
	Elk Mills	100.0%	49.1%	United States	18
	Elkton	55.6%	49.1%	United States	18
Community Need Index™	Elkton	3.2	3.0	United States median	20
Housing type and transportation vulnerability	Rising Sun, Port Deposit, Perryville, North East, Elkton, Chesapeake City	Bottom Quartile	NA	All U.S. Census Tracts	25
Ratio of population to primary care physicians	Cecil County	2,391:1	1,320:1	United States	27
Ratio of population to dentists	Cecil County	2,449:1	1,259:1	United States	27
Ratio of population to mental health providers	Cecil County	461:1	380:1	United States	27
Years of Potential Life Lost Before 75 Per 100,000	Cecil County	9,841	7,896	Peer counties	28
Newly diagnosed Chlamydia Cases per 100,000	Cecil County	327.0	272.9	Peer counties	28
Percent of Females 65-74 With Annual Mammogram	Cecil County	39.0%	42.1%	Peer counties	28
Income Inequality (Income at 80th percentile/20th percentile)	Cecil County	4.2	3.9	Peer counties	28
Percent Children in Single-Parent Households	Cecil County	23.4%	19.6%	Peer counties	28
Membership Associations per 10,000	Cecil County	6.5	10.1	Peer counties	28
Reported Violent Crime Offenses per 100,000	Cecil County	426.8	166.6	Peer counties	28
Deaths Due to Injury Per 100,000	Cecil County	112.2	86.7	Peer counties	28
Percent of Households with Severe Housing Problems	Cecil County	13.3%	11.2%	Peer counties	28
Causes of Death (per 100,000)					
Malignant neoplasms of trachea, bronchus and lung	Cecil County	49.7	31.9	United States	30
Hypertensive heart disease	Cecil County	46.0	16.0	United States	30
Atherosclerotic cardiovascular disease	Cecil County	31.2	18.4	United States	30
Transport accidents	Cecil County	21.8	13.3	United States	30
Parkinson's disease	Cecil County	18.3	9.9	United States	30
Diseases of respiratory system	Cecil County	17.4	10.9	United States	30
Motor vehicle accidents	Cecil County	19.7	12.5	United States	30
Drug poisoning	Cecil County	74.1	24.0	United States	32
Youth Health Factors and Behaviors					
Births per 1,000 females 15-19 years, Non-Hispanic White	Cecil County	18.2	13.6	United States	32
Currently use smokeless tobacco, youth	Cecil County	6.1%	3.8%	United States	41
Did not eat fruit or drink fruit juice in the last week	Cecil County	9.8%	6.3%	United States	41
Threatened with weapon at school, LGBT youth	Cecil County	18.9%	6.0%	Straight youth	42
Electronically bullied, LGBT youth	Cecil County	33.0%	14.2%	Straight youth	42
Currently use a vape, LGBT youth	Cecil County	63.4%	53.3%	Straight youth	42
Currently drink alcohol (at least one drink), LGBT youth	Cecil County	42.1%	32.3%	Straight youth	42
Not physically active in last 5 days, LGBT youth	Cecil County	74.9%	52.1%	Straight youth	42

Source: Verité Analysis.

When available Cecil County community health data are arrayed by race and ethnicity, significant differences are observed, for:

- Poverty rates
- Uninsured rates
- Educational achievement
- Teen birth rate

These differences indicate the presence of racial and ethnic health inequities and disparities.

Ambulatory Care Sensitive Conditions

Ambulatory Care Sensitive Conditions (ACSCs) include thirteen health conditions (also referred to as Prevention Quality Indicators (PQIs) “for which good outpatient care can potentially prevent the need for hospitalization or for which early intervention can prevent complications or more severe disease.”³ Among these conditions are: diabetes, perforated appendixes, chronic obstructive pulmonary disease (COPD), hypertension, congestive heart failure, dehydration, bacterial pneumonia, urinary tract infection, and asthma.

In 2021, there were approximately 211 ACSC discharges at Union Hospital. Most were for heart disease or diabetes-related causes.

Food Deserts

The U.S. Department of Agriculture's Economic Research Service identifies census tracts that are considered “food deserts” because they include lower-income persons without supermarkets or large grocery stores nearby. Food deserts are present in Elkton and Port Deposit.

Medically Underserved Areas and Populations

Medically Underserved Areas and Populations (MUA/Ps) are designated by the Health Resources and Services Administration based on an “Index of Medical Underservice.” Conowingo and Perryville contain census tracts designated as medically underserved.

Health Professional Shortage Areas

A geographic area can receive a federal Health Professional Shortage Area (HPSA) designation if a shortage of primary medical care, dental care, or mental health care professionals is present.

- All of Cecil County is designated a shortage area for mental health professionals.
- Both Beacon Health Center and West Cecil Health Center are HPSA designated Federally Qualified Health Centers (FQHC) for primary care, mental health, and dental health professionals.

COVID-19 Prevalence and Mortality Findings

The Centers for Disease Control and Prevention (CDC) provides information, data, and guidance regarding the COVID-19 pandemic. The pandemic has been a public health emergency for the Cecil County, the nation, and the world. The pandemic also has exposed the significance of problems associated with long-standing community health issues, including racial health inequities, chronic disease, access to health services, mental health, and related issues.

³Agency for Healthcare Research and Quality (AHRQ) Prevention Quality Indicators.

DATA AND ANALYSIS

Part of the CDC's work has included identifying certain populations that are most at risk for severe illness and death due to the pandemic. Based on that work, many at-risk people live in the community served by Union Hospital. Populations most at risk include:

- Older adults;
- People with certain underlying medical conditions, including cancer, chronic kidney disease, COPD, obesity, serious heart conditions, diabetes, sickle cell disease, asthma, hypertension, immunocompromised state, and liver disease;
- People who are obese and who smoke;
- Pregnant women; and,
- Black and Hispanic (or Latino)

According to the CDC, "long-standing systemic health and social inequities have put some members of racial and ethnic minority groups at increased risk of getting COVID-19 or experiencing severe illness, regardless of age."

As of March 2022, COVID-19 incidence and mortality rates in Cecil County have been lower than U.S. averages. However, there have been 15,423 cases and 258 deaths since the pandemic began.

Findings of Other CHNAs

Union Hospital and the Cecil County Health Department conducted a collaborative Community Health Assessment in 2019. The following list indicates issues identified as *significant* in that assessment (presented in alphabetical order):

- Access to Care
- Behavioral/Mental Health
 - Substance Use
 - Opioid Use, Overdose and Death
 - Youth Substance Use
 - Drug & Alcohol Related Intoxication Deaths
 - Depression and Suicide
- Cancer
 - Lung
 - Prostate
 - Breast
 - Colorectal
- Childhood Trauma
- Chronic Disease
- Dental Health
- Homelessness
- Infectious and Communicable Diseases
- Injuries
- Social Determinants of Health
- Tobacco Use
- Vaccination
- Violent Crime

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This CHNA report has found that a number of the above issues remain problematic in Cecil County.

Primary Data Summary

Primary data were gathered through interviews, community meetings, and a community health survey. Six online community input meetings and two interviews were conducted. 544 survey responses were received.

See Appendix C for information regarding those who participated in the community meetings and interviews.

Key Stakeholder Interviews

Interviews were conducted with seven stakeholders to learn about community health issues in Cecil County. Participants included health officers from the Cecil County Health Department and administrative and clinical staff from West Cecil Health Center, a local federally qualified health center (FQHC).

Questions focused first on identifying and discussing health issues in the community before the COVID-19 pandemic began. Interviews then focused on the pandemic's impacts and on what has been learned about the community's health given those impacts. Stakeholders also were asked to describe the types of initiatives, programs, and investments that should be implemented to address the community's health issues and to be better prepared for future risks.

Stakeholders most frequently identified the following issues as significant before the COVID-19 pandemic began.

- **Behavioral and Mental Health.** Interviewees noted behavioral and mental health as a major health concern in Cecil County. They reported this as an underlying concern which precipitated and exacerbated many other issues such as substance use and lifestyle choices that impact wellbeing. A lack of mental health services for children and adolescents was named as a primary concern. There was a reported gap in early childhood health and wellness interventions which then affect the emotional and physical development of the child and taxes the family. Stigma and disparity in resources were two barriers stated as preventing people from getting mental health care and assistance. Interviewees also reported the prevalence of grandparents raising children and the social, financial, and mental health impact of this dynamic.
- **Substance Use.** Alcohol and drug use, specifically opioid use, were identified as significant public health concerns. High overdose rates attributed to both opioids and alcohol were noted. Cecil County experienced a spike in overdose rate a little more than 10 years ago and rates have remained high. Stakeholders attributed proximity to Interstate-95 as a factor that increases drug traffic in the community. Several large employers closed in 2012 which caused considerable employment issues which is linked to worsening substance use. Treatment options have improved over time; however, more availability for treatment options would be

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helpful. There is only one residential treatment facility which is in Elkton. Transportation and cost were identified as barriers to accessing services. A large stigma around opioid was stated as an issue for access to care. Interviewees reported seeing an improvement with overdose fatalities due to Narcan availability.

- **Digital Divide.** Internet access was identified as lacking and/or sub-optimal in some areas of the county. According to interviewees, there is only one internet service provider, and it is expensive and unreliable. This affects access to health information and education and access to telehealth services.
- **Chronic Conditions.** Chronic disease management was raised as a major community health issue. Diabetes was listed as a specific concern. The African American community has been difficult to reach. There are gaps in health education and disease management skills in patient populations. Healthcare providers struggle to educate and inform patients due to lack of time and reimbursement structures that discourage providing these services.
- **High-Risk Lifestyle Choices.** Interviewees indicated that smoking rates are high and often generational. High-risk sexual behaviors also are occurring in certain populations.
- **Environmental Issues.** Some residents are unable to access safe places for exercise opportunities such as walking and biking. Cars are necessary to reach parks, greenways, and fitness facilities, so community members without transportation are limited. Public transportation is limited or non-existent. There is a lack of sidewalks in many rural areas. Lack of access to healthy food was also identified as an issue with transportation challenges presenting major barriers.
- **Health Disparities.** Health disparities are a major issue. Many concerns disproportionately affect racial and ethnic minorities, low-income individuals/families, and the LGBTQ+ community. Lack of living wages and decreased employment in the area was identified as creating significant health care access problems. Many residents do not have health insurance coverage offered through their work and have difficulty taking time off for medical appointments and services.

The LGBTQ+ community has faced discrimination in healthcare and as a result frequently avoid seeking health care services. Interviewees noted recent positive changes, however. West Cecil Health Center has purposefully hired more culturally competent staff and has worked to create a safer environment for care.

- **Dental Care.** Significant concerns with dental health and access to dental care services were discussed. Patients cannot afford dental care and many lack dental insurance. Medicaid only provides dental benefits for pregnant women and children. Comparatively few households have access to fluoridated water and most residents are on wells. Smoking and drug use also contribute dental health problems. Need is high and providers are in short supply. One large, free dental clinic closed in the last year. Some community members without resources are unable to travel to receive dental care outside the area.

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- **Specialty Care.** Patients often must travel to Baltimore, Delaware, or Newark when they need specialty care. Rheumatology is particularly difficult to access. Women (particularly those with lower-incomes) experience long waits when seeking to access health procedures such as LARC (long-acting reversible contraception) and colposcopy. Obstetric services are unstable and difficult to access. Only one obstetrics provider is available for all of Cecil County.

Interviewees also were asked to describe the impacts of the COVID-19 pandemic on providers, social service organizations, and the community. They responded as follows.

- **Telehealth Expansion.** Expanded telehealth services were described as a positive development. The ability to reach patients online has expanded greatly. Many patients like the convenience as well. Interviewees however expressed concerns that those in rural communities could be left behind due to socioeconomic status and poor broadband. They expressed hope that telehealth expansion will continue, reducing travel, time, and other access barriers – particularly for residents of rural communities. Adjustments to reimbursement rates and rules are needed to sustain and enhance this positive development.
- **Highlighting Inequities for Minority Populations.** Interviewees described Black and Hispanic communities as “hardest hit” by the pandemic, largely due to longstanding health and socioeconomic inequities. Minority populations are more likely to have pre-existing conditions that put them at risk for poor outcomes due to COVID-19 and are less likely to seek care due to distrust of the health system stemming from historic racism. Black and Hispanic residents also are more likely to be essential employees, increasing exposure risks, and for those Hispanic residents who are seasonal workers, long-term follow-up is difficult. Language barriers are also present and it is challenging to recruit bi-lingual staff and providers..
- **Patients deferring and delaying non-COVID-19 care.** Due to the pandemic, visits to emergency rooms and for other health services have declined drastically. At the request of the Centers for Disease Control and Prevention, government officials, and other public health entities, hospitals (and their medical staffs) postponed elective surgeries and other procedures so that capacity is available to treat patients with COVID-19. Patients are reluctant to visit hospitals and physician practices due to potential exposure to the virus.

Interviewees expressed concerns that needed treatment is being delayed, including visits for diabetes management and for cancer screenings. Patients whose treatments have been delayed are likely to present with more acute problems.

- **Economic and employment impact on residents.** Interviewees also described severe and worsening economic impacts on community residents. Unemployment rose rapidly, risking insurance coverage, housing, and access to basic needs. The pandemic is highlighting how many families are “one paycheck away” from financial devastation.

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- **Impacts on providers.** Social service and health care providers also are experiencing significant challenges due to the pandemic. Hospitals are experiencing dramatic revenue losses and are needing to reduce operating expenses. Community clinics are striving to acquire telehealth and other technologies needed to serve residents effectively. Social services (including food banks) are experiencing unprecedented levels of demand, taxing their resources and ability to serve the community.
- **Worsening behavioral health.** Pandemic-induced isolation and financial stress has negatively affected mental health – particularly for seniors and for those living alone. Substance use has been increasing due to the pandemic, especially alcohol abuse. Interviewees note that the pandemic has heightened and worsened many pre-existing public health concerns.
- **Digital divide.** Low-income residents have been disproportionately affected due to a digital divide – since many services such as health care visits and educational opportunities have been moving online. Households that are unable to afford equipment and broadband connections are being left behind.

Interviewees identified several types of programs and initiatives that would help fill gaps and improve community health. These include general wellness centers and services, particularly if they serve specific regions and offer nutrition, mental health, mindfulness, chronic disease management education, and physical activity opportunities.

Free or reduced cost (and centrally located) dental services are greatly needed.

Services for families with young children are needed. Early childhood health and wellness interventions could be offered by Community Health Centers and could support the development and emotional health of children.

Community and Internal Hospital Meetings

We faced an uncertain challenge in planning sessions for the community, as the United States was in the fifth wave of the COVID-19 pandemic, where the positivity reached a new peak, along with hospitalizations. In addition, ChristianaCare was forced to issue Crisis Standards of Care for the first time in its 100+ year history. With community transmission at an all-time high, and so much unclear, Office of Health Equity cautiously proceeded in organizing virtual sessions to ensure safety for all involved.

Six community meetings were conducted in March 2022 to obtain community input.

Four community stakeholder meetings were held. Forty-three (43) individuals participated. These individuals represented organizations including the Cecil County Health Department, non-profit organizations, local businesses, health care providers, local policymakers, and school systems.

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Sixteen (16) individuals participated in a meeting with Union Hospital staff. Individuals from administration, nursing, case management, social services, project management, and health equity participated.

A meeting also was held with four (4) teenagers who serve on the Teen Advisory Board for the local public library. That meeting focused on needs pertaining to Cecil County youth.

Each meeting began with a presentation that discussed the CHNA process and the purpose of the meetings. Secondary data were presented including a summary of unfavorable community health indicators. Meeting participants then were asked for feedback on the secondary data analysis and to identify community health issues that may not have been found based on the data. Participants then were asked to complete an online survey and to identify “three to five” community health issues they consider to be most significant.

Through this process, meeting participants identified the following community health needs as most significant in Cecil County:

- Access to health services (including cost, transportation, and language barriers),
- Childhood trauma/Adverse Childhood Experiences (ACEs),
- LGBTQ+ health disparities (including discrimination and lack of culturally competent care),
- Mental health (including stigma as a barrier to care),
- Nutrition, obesity, and physical inactivity (including food insecurity, exercise opportunities, cultural norms, and lack of health education and skills),
- Smoking, tobacco, and vape product use (by adults and youth),
- Substance use disorders (including lack of accessible treatment options), and
- Supply of providers (particularly mental health and dental providers).

Community Health Survey

An online community health survey was conducted during February and March of 2022. The survey consisted of twenty questions organized into the following topics: demographics, community health, quality of life, and access to health care services. Five hundred forty-four (544) participants completed the survey.

Survey responses indicated that the following health needs are most significant in Cecil County:

- Mental health services

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- Services for substance use disorders
- Services for children/youth
- Social support for low income/uninsured populations
- Social support for children/youth in neglectful or challenging social situations
- Health representation for the LGBTQ+ community
- Accessible public transportation
- Services for aging and disabled populations
- Access to quality, trusted, and affordable health and social services

The following five exhibits provide additional information regarding survey respondents and findings.

Community Health Survey Percentage of Respondents by ZIP Code

ZIP Code	Percentage of Respondents
21921	40.69%
21901	23.61%
21911	10.56%
21904	5.18%
21903	4.03%
21918	3.26%
21919	3.26%
21915	2.88%
21917	1.73%
21912	1.15%
21913	0.96%
21914	0.96%
21920	0.58%
21902	0.19%
21916	0.19%

About 64 percent of survey responses were received from residents of Elkton and North East.

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Respondent Demographics

Gender	
Female	87.6%
Male	12.5%
Race	
American Indian or Alaska Native	1.7%
Asian	2.3%
Black or African American	2.5%
Native Hawaiian or Other Pacific Islander	0.4%
White	95.8%
Some Other Race	1.9%
Ethnicity	
Hispanic, Latino, or Spanish Origin	2.3%
Marital Status	
Married	67.1%
Divorced	12.9%
Widowed	6.0%
Separated	1.2%
Never Married	12.9%
Household Income	
Less than \$15,000	3.0%
\$15,000 to \$24,999	4.2%
\$25,000 to \$34,999	6.9%
\$35,000 to \$49,999	10.3%
\$50,000 to \$74,999	17.9%
\$75,000 to \$99,999	14.7%
\$100,000 or more	43.1%

Most respondents identify as female (87.6 percent), White (95.8 percent) and married (67.1 percent). The majority also reported household incomes of more than \$50,000 annually. Over 43 percent reported an annual household income \$100,000 or more. On average, respondents reported household incomes above the Cecil County median of \$79,415.⁴

⁴ <https://www.census.gov/quickfacts/cecilcountymaryland>

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Identified Significant Health Needs

Community Health Need	Number of Responses	Percent of All Respondents	Respondents Identifying as Male	Respondents Identifying as Female
Substance Abuse	318	61%	69%	60%
Mental Health	229	44%	31%	46%
Access to Health Services	113	22%	12%	23%
Homelessness	109	21%	17%	21%
Child Abuse and Neglect	91	17%	11%	18%
Obesity	85	16%	26%	15%
Affordable Housing	79	15%	9%	16%
Poverty	73	14%	14%	14%
Dental Health	54	10%	2%	12%
Childhood Trauma	52	10%	8%	10%
Violent Crime	51	10%	17%	9%
Cancer	33	6%	15%	5%
Educational Attainment	32	6%	3%	7%
Domestic Violence	30	6%	5%	6%
Immunization and Infectious Disease	29	6%	8%	5%
Heart Disease and Stroke	28	5%	11%	5%
Unemployment	27	5%	8%	5%
Diabetes	24	5%	8%	4%
Environmental Health	23	4%	3%	5%
Other	23	4%	5%	4%
Tobacco Use	21	4%	8%	4%
Maternal, Infant, and Child Health	20	4%	5%	4%
Motor Vehicle/ Pedestrian Injuries	19	4%	5%	4%
High Blood Pressure	18	3%	8%	3%
Suicide	18	3%	8%	3%
Respiratory/Lung Disease	9	2%	2%	2%
Sexually Transmitted Diseases (STDs)	5	1%	3%	1%

Survey respondents were asked to choose the top three to five most significant health concerns in Cecil County. The above exhibit includes results for all respondents and by gender.

- Almost two-thirds (64 percent) of respondents chose Substance Abuse as a significant community health issue.
- Almost half (46 percent) of respondents chose mental health as a significant health issue in Cecil County.
- Other commonly chosen health issues were Access to Health Services (22 percent), Homelessness (21 percent), Child Abuse and Neglect (17 percent), and Obesity (16 percent).

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- Proportionately more female respondents chose mental health than males.
- More males than females identified certain chronic health conditions as significant, such as obesity, heart disease and stroke, and diabetes.
- More females also selected Social Determinants of Health as significant health needs than males (including homelessness and affordable housing).
- More males than females chose violent crime.

Respondents also were asked to identify the frequency of certain barriers to accessing health services.

Barriers to Accessing Health Services

Significant Health Barrier	Percentage of Respondents
Inability to pay out of pocket expenses (Co-pays, prescriptions, etc.)	48.2%
Availability of doctors or other providers/ appointments	43.2%
Time limitations (Long wait times, limited office hours, time off work, etc.)	40.1%
Health care coverage does not cover needed services	33.7%
Lack of transportation	23.4%
Basic needs not met (food, shelter, etc.)	22.4%
Lack of trust in medical services	21.5%
Difficult to understand/navigate health care system	21.2%
Lack of dental insurance	20.1%
Lack of health insurance	17.4%
Lack of childcare	11.2%
No barriers	5.0%
Language/cultural barriers	3.3%

Cost (including co-pays) was identified as the top barrier to accessing care. Availability of doctors, getting appointments, long wait times, limited office hours, and being able to take time off work also were found to be significant barriers.

OTHER FACILITIES AND RESOURCES IN THE COMMUNITY

This section identifies other facilities, clinics, and resources available in the Union Hospital community that are available to address community health needs.

Hospitals

Union Hospital is the only hospital located in Cecil County, Maryland.

Federally Qualified Health Centers

Federally Qualified Health Centers (FQHCs) are established to promote access to ambulatory care in areas designated as “medically underserved.” These clinics provide primary medical care and can offer mental health and dental services for lower-income members of the community. FQHCs receive enhanced reimbursement for Medicaid and Medicare services and most also receive federal grant funds under Section 330 of the Public Health Service Act. There currently are two FQHC sites operating in Cecil County (Exhibit 5).

Exhibit 5: Federally Qualified Health Centers Located in Community, 2022

Name	Address	City	ZIP Code
Cecil County, Maryland			
West Cecil Health Center	200 Road B	Elkton	21921
Beacon Health Center	253 Lewis Lane	Havre De Grace	21078

Source: Health Resources and Services Administration, 2022.

According to 2020 data published by Health Resources and Services Administration (HRSA), FQHCs served eight (8) percent of uninsured persons and eleven (11) percent of Medicaid recipients in Cecil County

Nationally, FQHCs served 22 percent of uninsured patients and 19 percent of the Medicaid recipients.⁵

Other Community Resources

A variety of social services and resources are available in Cecil County to assist Cecil County residents. 2-1-1 MD serves as Maryland’s central connector, overseeing a statewide network of call centers. Callers are routed to regional centers for assistance and are connected to a larger group of crisis centers when needed.

2-1-1 MD is available 24 hours a day, seven days a week by phone, text and chat and has resources in the following categories:

- Aging and Disability

⁵ See: <http://www.nachc.org/research-and-data/research-fact-sheets-and-infographics/chartbook-2020-final/> and <https://www.udsmapper.org/>.

OTHER FACILITIES AND RESOURCES IN THE COMMUNITY

- Children and Families
- COVID-19 Resources
- Domestic/Family Violence
- Employment
- Food
- Health Care
- Housing and Shelter
- Legal Services
- Mental Health
- Substance Use
- Tax Services
- Utility Assistance
- Veterans

Additional information about these resources and participating providers can be found at: <https://211md.org/>.

In addition to 2-1-1 MD, ChristianaCare's Office of Health Equity (OHE) partners with Unite Us, to provide a technology platform that enables impactful social care coordination. Unite Us leverages existing community resources to address social determinants of health. Unite Us eases the process of referrals to community-based organizations and allows for efficient connection between client's healthcare and social services. Participating providers can view, coordinate, and collaborate on their clients' care across organizations and types of service. Unite Us connects clients with resources and services in the following categories:

- Benefits navigation
- Clothing and household goods
- Education
- Food assistance
- Housing and shelter
- Individual and family support
- Mental and behavioral health
- Physical health
- Social enrichment
- Spiritual enrichment
- Substance use
- Transportation
- Wellness

APPENDIX A – OBJECTIVES AND METHODOLOGY

Regulatory Requirements

Federal law requires that tax-exempt hospital facilities conduct a CHNA every three years and adopt an Implementation Strategy that addresses significant community health needs.⁶ In conducting a CHNA, each tax-exempt hospital facility must:

- Define the community it serves;
- Assess the health needs of that community;
- Solicit and take into account input from persons who represent the broad interests of that community, including those with special knowledge of or expertise in public health;
- Document the CHNA in a written report that is adopted for the hospital facility by an authorized body of the facility; and,
- Make the CHNA report widely available to the public.

The CHNA report must include certain information including, but not limited to:

- A description of the community and how it was defined,
- A description of the methodology used to determine the health needs of the community, and
- A prioritized list of the community's health needs.

Methodology

CHNAs seek to identify significant health needs for specific geographic areas and populations by focusing on the following questions:

- **Who** in the community is most vulnerable in terms of health status or access to care?
- **What** are the unique health status and/or access needs for these populations?
- **Where** do these people live in the community?
- **Why** are these problems present?

The focus on **who** is most vulnerable and **where** they live is important to identifying groups experiencing health inequities and disparities. Understanding **why** these issues are present is challenging but is important to designing effective community health improvement initiatives. The question of **how** each hospital can address significant community health needs is the subject of the separate Implementation Strategy.

Federal regulations allow hospital facilities to define the community they serve based on “all of the relevant facts and circumstances,” including the “geographic location” served by the hospital facility, “target populations served” (e.g., children, women, or the aged), and/or the hospital facility’s principal functions (e.g., focus on a particular specialty area or

⁶ Internal Revenue Code, Section 501(r).

APPENDIX A – OBJECTIVES AND METHODOLOGY

targeted disease).⁷ Accordingly, the community definition considered the geographic origins of the hospital's patients and also the hospital's mission, target populations, principal functions, and strategies.

Data from multiple sources were gathered and assessed, including secondary data⁸ published by others and primary data obtained through community input. Input from the community was received through key stakeholder interviews and online community meetings (including a meeting conducted with internal hospital staff). Stakeholders and community meeting participants represented the broad interests of the community and included individuals with special knowledge of or expertise in public health. *See* Appendix C. Considering a wide array of information is important when assessing community health needs to ensure the assessment captures a wide range of facts and perspectives and to increase confidence that significant community health needs have been identified accurately and objectively.

Certain community health needs were determined to be "significant" if they were identified as problematic in at least two of the following three data sources: (1) the most recently available secondary data regarding the community's health, (2) recent assessments developed by state and local health departments, and (3) input from community stakeholders who participated in the community meeting and/or interview process.

In addition, data were gathered to evaluate the impact of various services and programs identified in Cecil County's previous CHNA process. *See* Appendix E.

Collaborating Organizations

For this community health assessment, Union Hospital collaborated with the Cecil County Health Department and the Cecil County Community Health Advisory Committee (CHAC). These organizations collaborated through gathering and assessing secondary data together, conducting community meetings and key stakeholder interviews, relying on shared methodologies, report formats, and staff to manage the CHNA process.

Data Sources

Community health needs were identified by collecting and analyzing data from multiple sources. Statistics for numerous community health status, health care access, and related indicators were analyzed, including data provided by local, state, and federal government agencies, local community service organizations, and ChristianaCare Health System. Comparisons to benchmarks were made where possible. Findings from recent assessments of the community's health needs conducted by other organizations (e.g., local health departments) were reviewed as well.

Input from persons representing the broad interests of the community was taken into account through key informant interviews (7 participants) and community meetings (56 participants). Stakeholders included: individuals with special knowledge of or expertise in

⁷ 501(r) Final Rule, 2014.

⁸ "Secondary data" refers to data published by others, for example the U.S. Census and the Maryland Department of Health. "Primary data" refers to data observed or collected from first-hand experience, for example by conducting interviews.

APPENDIX A – OBJECTIVES AND METHODOLOGY

public health; local public health departments; hospital staff and providers; representatives of social service organizations; and leaders, representatives, and members of medically underserved, low-income, and minority populations.

ChristianaCare Health System posts CHNA reports and Implementation Plans online at <https://christianacare.org/about/howweare/communitybenefit/community-health-needs-assessment/>.

Consultant Qualifications

Verité Healthcare Consulting, LLC (Verité) was founded in May 2006 and is located in Arlington, Virginia. The firm serves clients throughout the United States as a resource that helps hospitals conduct Community Health Needs Assessments and develop Implementation Strategies to address significant health needs. Verité has conducted more than 100 needs assessments for hospitals, health systems, and community partnerships nationally since 2012.

The firm also helps hospitals, hospital associations, and policy makers with community benefit reporting, program infrastructure, compliance, and community benefit-related policy and guidelines development. Verité is a recognized national thought leader in community benefit and Community Health Needs Assessments.

APPENDIX B – SECONDARY DATA ASSESSMENT

This section presents an assessment of secondary data regarding health needs in the Union Hospital community. The Union Hospital community is defined as Cecil County, Maryland.

Demographics

Exhibit 6: Change in Community Population by Age/Sex Cohort, 2020 to 2030

Age / Sex Cohort	Total Population 2020	Total Population 2030	Percent Change 2020-2030
0-17	21,776	22,631	3.9%
Female 18-44	16,048	17,485	9.0%
Male 18-44	16,548	18,588	12.3%
45-64	30,597	27,830	-9.0%
65+	16,383	23,441	43.1%
Community Total	101,352	109,975	8.5%

Source: Department of Planning, Maryland State Data Center; Population and Household Projections

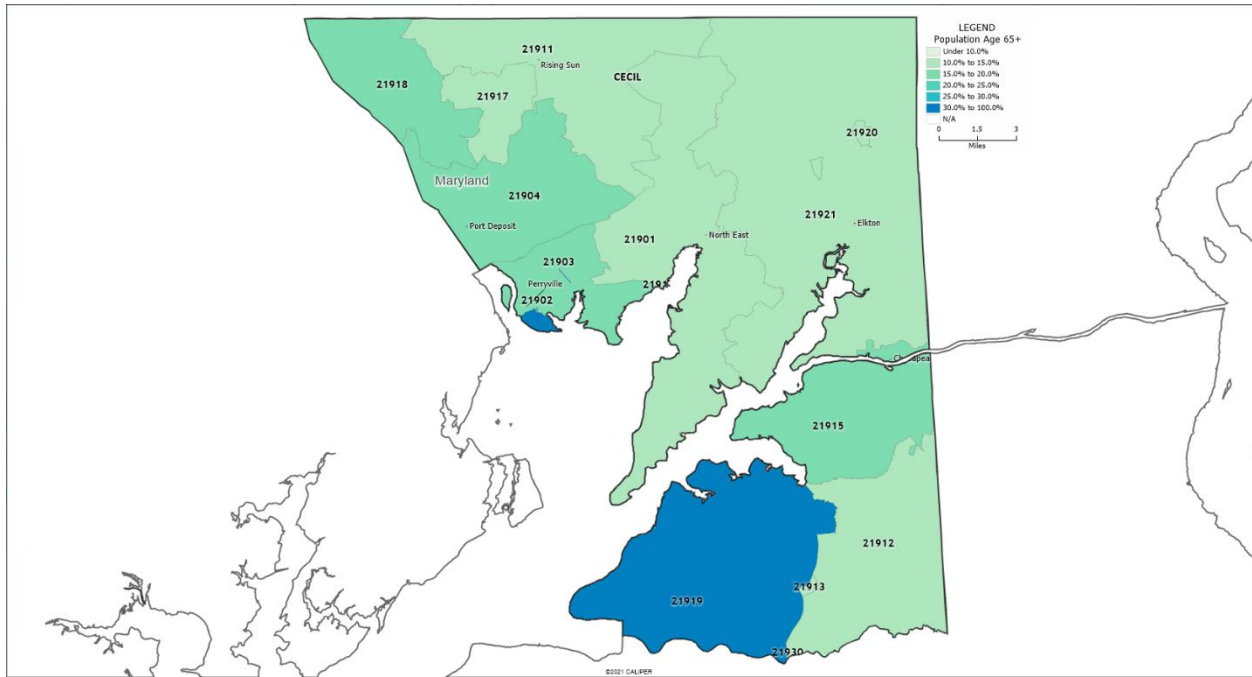
Description

Exhibit 6 portrays the estimated population by age and sex cohort in 2020 and projected to 2030.

Observations

- Between 2020 and 2030, the community's population is expected to grow by approximately 8,623 people, or 8.5 percent.
- The population 65 years and older is projected to grow much more rapidly (43.1 percent) than the total population (8.5 percent).
- The growth of older populations is likely to lead to greater demand for health services, since older individuals typically need and use more services than younger persons.

Exhibit 7: Percent of Population – Aged 65+, 2020



Source: U.S. Census, ACS 5-Year Estimates, 2020 and Caliper Maptitude, 2021.

Description

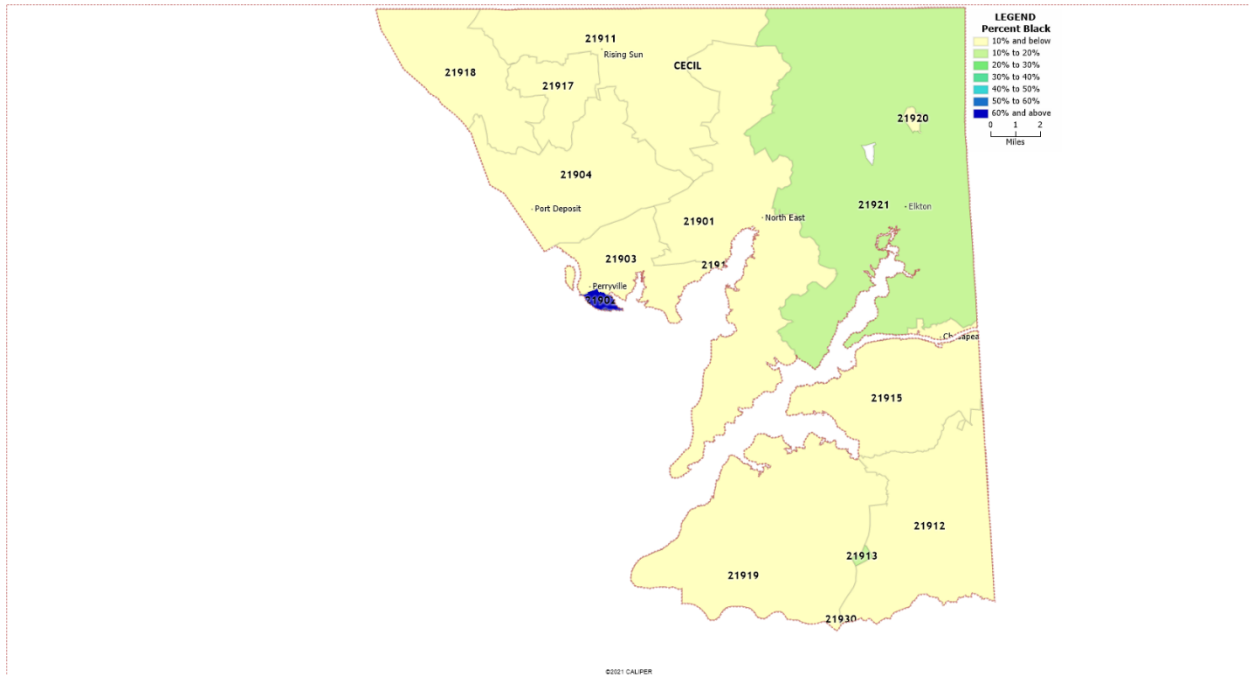
Exhibit 7 portrays the percent of the population 65 years of age and older by ZIP Code.

Observations

- The highest percentages are in Perry Point (ZIP Code 21902) and Earleville (ZIP Code 21919), 26 percent and 35 percent, respectively.

APPENDIX B – SECONDARY DATA ASSESSMENT

Exhibit 8: Percent of Population – Black, 2020



Source: U.S. Census, ACS 5-Year Estimates, 2020 and Caliper Maptitude, 2021.

Description

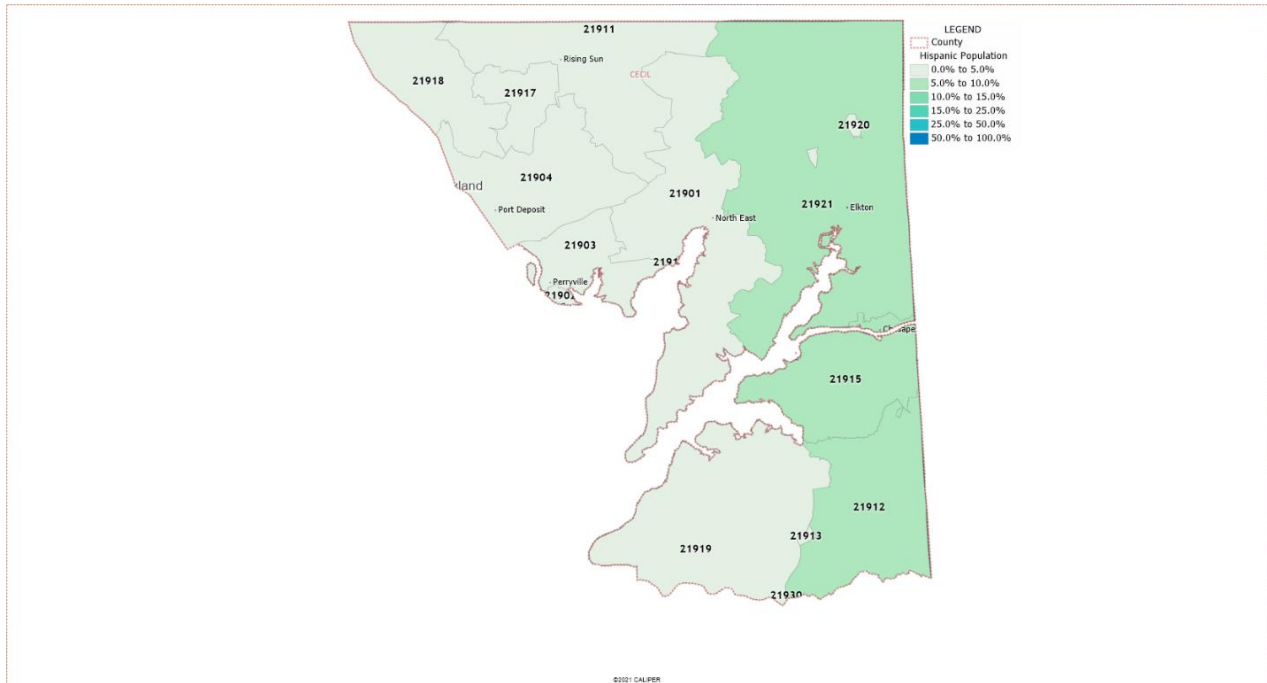
Exhibit 8 portrays the percent of the population – Black by ZIP Code.

Observations

- The highest percentage of population identifying as Black reside in Perry Point (ZIP Code 21902) at 69.5 percent of population.
- Cecilton (ZIP Code 21913) reports 15.4 percent of population identifying as Black and Elkton (ZIP Code 21921) reports 10.2 percent of population identifying as Black.

APPENDIX B – SECONDARY DATA ASSESSMENT

Exhibit 9: Percent of Population – Hispanic (or Latino), 2020



Source: U.S. Census, ACS 5-Year Estimates, 2020 and Caliper Maptitude, 2021.

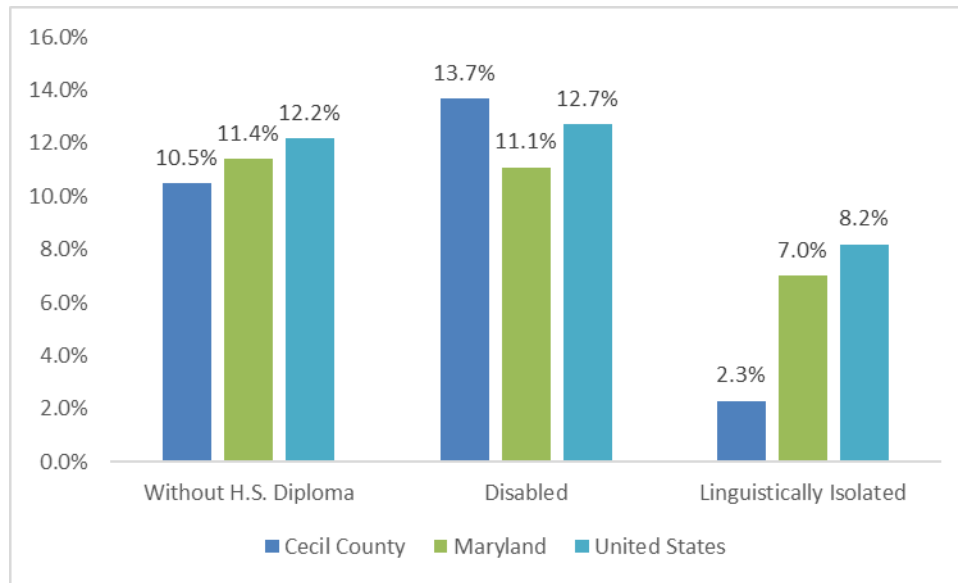
Description

Exhibit 9 portrays the percent of the population – Hispanic (or Latino) by ZIP Code.

Observations

- Elk Mills (ZIP Code 21920) has 16.7 percent of population identifying as Hispanic (or Latino), the highest percentage for the county.
- Elkton (ZIP Code 21921) has 6.1 percent Hispanic (or Latino) population and Chesapeake City (ZIP Code 21915) has 5.5 percent Hispanic (or Latino) population.
- All other Cecil County ZIP Codes report a Hispanic (or Latino) population of less than 5.0 percent.

Exhibit 10: Selected Socioeconomic Indicators, 2016-2020



Source: U.S. Census, ACS 5-Year Estimates, 2020.

Description

Exhibit 10 portrays the percent of the population (aged 25 years and above) without a high school diploma, with a disability, and linguistically isolated in Cecil County, Maryland, and the United States. Linguistic isolation is defined as residents who speak a language other than English and who speak English less than “very well.”

Observations

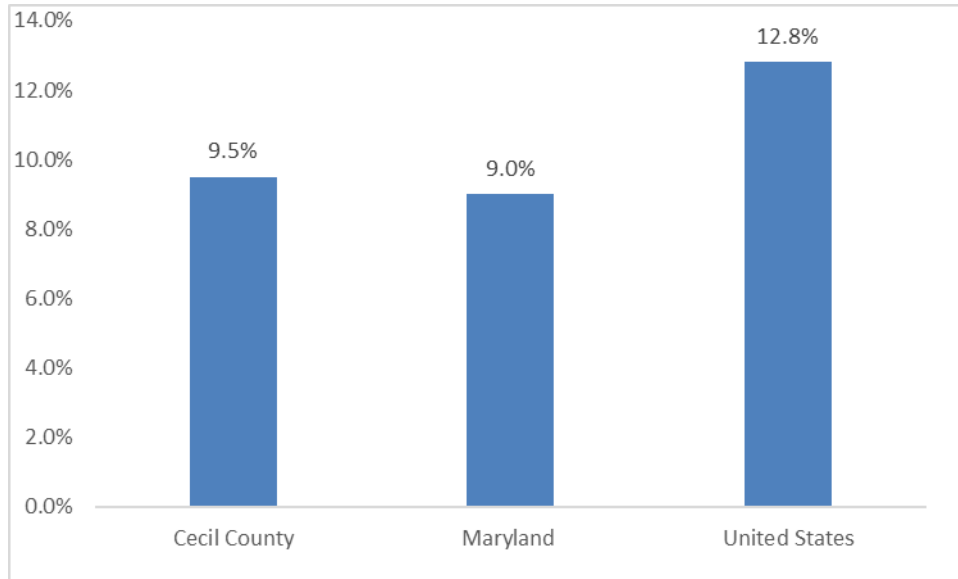
- In 2016-2020, Cecil County had a higher percentage of residents living with a disability than both Maryland and the United States.

Socioeconomic Indicators

This section includes indicators for poverty, unemployment, health insurance status, crime, housing affordability, and “social vulnerability.” All have been associated with health status.

People in Poverty

Exhibit 11: Percent of People in Poverty, 2016-2020



Source: U.S. Census, ACS 5-Year Estimates, 2020.

Description

Exhibit 11 portrays poverty rates in Cecil County, Maryland, and the United States.

Observations

- In 2016-2020, the poverty rate in Cecil County was slightly above the Maryland average and below the rate overall for the United States.

Exhibit 12: Poverty Rates by Race and Ethnicity, 2016-2020

Area	White	Black	Asian	Hispanic (or Latino)	All Races/Ethnicities
Cecil County	8.5%	15.8%	10.7%	18.1%	9.5%
Maryland	6.5%	13.0%	7.2%	12.0%	9.0%
United States	10.6%	22.1%	10.6%	18.3%	12.8%

Source: U.S. Census, ACS 5-Year Estimates, 2020.

Description

Exhibit 12 portrays poverty rates by race and ethnicity. Light grey shading indicates rates above the U.S.-wide average (12.8 percent for all races/ethnicities).

Observations

- In 2016-2020, poverty rates were above the U.S. average for Black, Asian, and Hispanic (or Latino) populations than for both White population and all races/ethnicities combined in Cecil County.
- In Cecil County, poverty rates for Black and for Hispanic (or Latino) people were significantly above U.S. rates for White persons and all races/ethnicities combined.

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Exhibit 13: Child Poverty Rates, 2016-2020

Area	Child Population	Percent of Population Under 18	Percent Children in Poverty
Cecil County	22,960	22.6%	14.1%
Maryland	1,319,572	22.4%	11.6%
United States	72,065,774	22.6%	17.5%

Source: U.S. Census, ACS 5-Year Estimates, 2020.

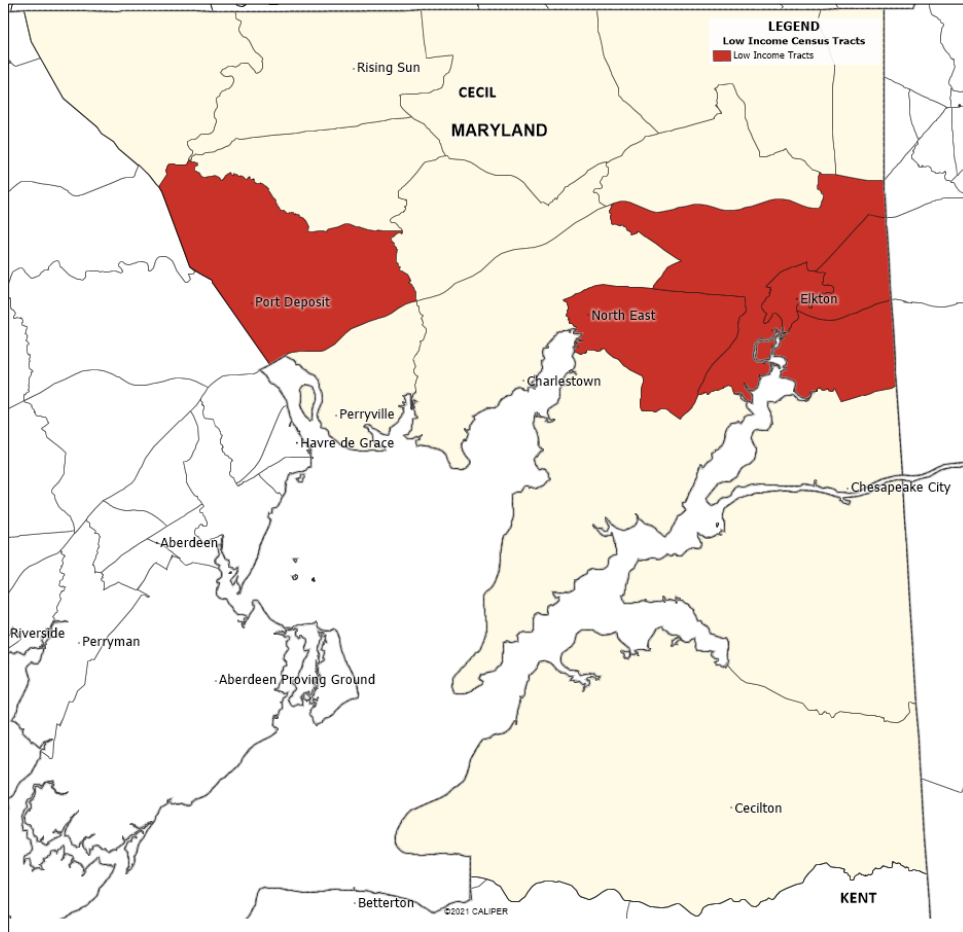
Description

Exhibit 13 portrays rates for children living in poverty (aged 0-17).

Observations

- In 2016-2020, the percentage of children in poverty in Cecil County was higher than the Maryland state average and below the U.S. average.

Exhibit 14: Low Income Census Tracts, 2019



Source: U.S. Department of Agriculture, Economic Research Service, 2019 and Maptitude, 2021.

Description

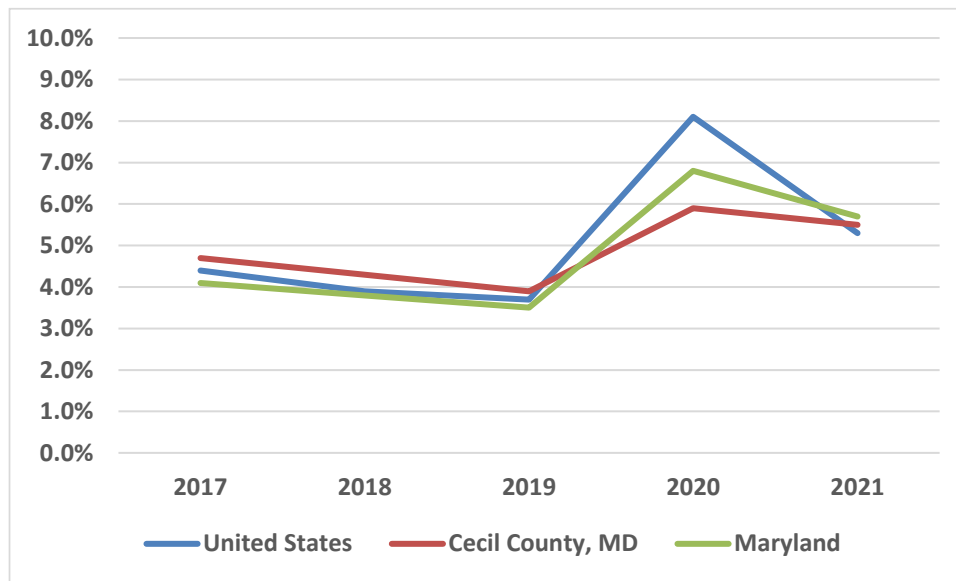
Exhibit 14 portrays the location of federally designated low-income census tracts.

Observations

- In 2019, low-income census tracts were located in Elkton (proximate to Union Hospital), North East, and in Port Deposit.

Unemployment

Exhibit 15: Unemployment Rates, 2017 to 2021



Source: U.S. Bureau of Labor Statistics

Description

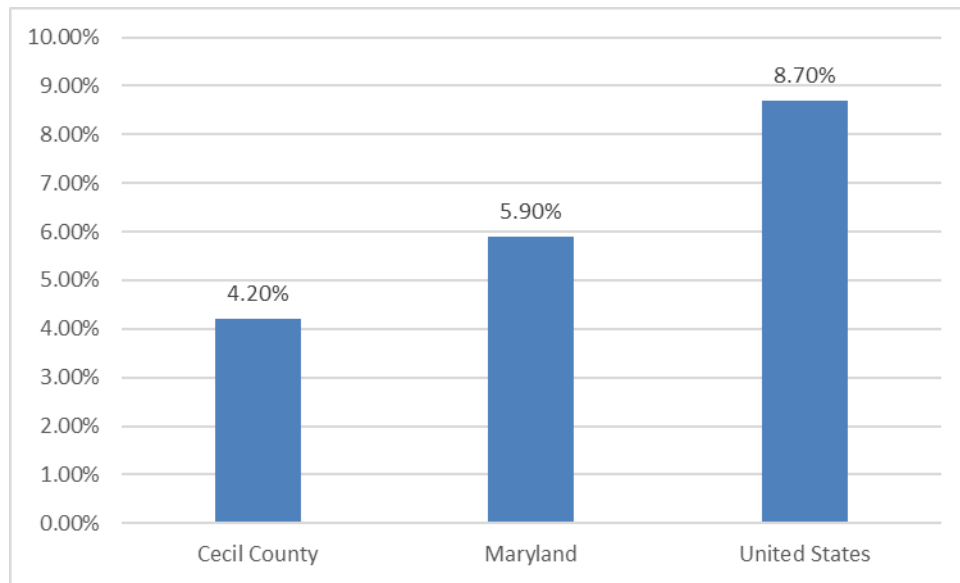
Exhibit 15 shows unemployment rates in Cecil County, Maryland and the United States from 2017 through 2021.

Observations

- Between 2016 and 2019, unemployment rates in Cecil County, Maryland, and the United States declined. However, the COVID-19 pandemic led to significant increases in unemployment in 2020.
- In 2021, rates declined as the economy began to recover from the pandemic.
- Because many have employer-based health insurance coverage, continued economic recovery will be important to maintaining access to care. Due to fallout from the COVID-19 pandemic, unemployment rates have risen substantially.

Health Insurance Status

Exhibit 16: Percent of Population without Health Insurance, 2016-2020



Source: U.S. Census, ACS 5-Year Estimates, 2020.

Description

Exhibit 16 presents the estimated percent of population without health insurance.

Observations

- Cecil County has a lower percentage of the population without health insurance compared to both state and national averages.
- Maryland Medicaid expansion was authorized in May 2013 and became effective January 1, 2014. According to an analysis published in October 2019 by the Kaiser Family Foundation, 306,700 adults became eligible for coverage under Maryland Medicaid expansion.⁹

⁹ <http://files.kff.org/attachment/fact-sheet-medicaid-state-MD>

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Crime Rates

Exhibit 17: Crime Rates by Type and Jurisdiction, Per 100,000, 2019

Area	Violent Crime	Murder	Rape	Robbery	Aggravated Assault	Property Crime	Burglary (Breaking and Entering)	Larceny and Theft	Motor Vehicle Theft
Cecil County	298.5	2.0	19.5	61.5	215.6	2,032.7	322.9	1,570.4	139.5
Maryland	459.3	9.0	32.7	153.2	264.4	1,952.6	279.0	1,487.5	186.2
United States	366.7	5.0	42.6	81.6	250.2	2,109.9	340.5	1,549.5	219.9

Source: Maryland Governor’s Office of Crime Prevention, Youth and Victim Services, and Federal Bureau of Investigation, 2019.

Description

Exhibit 17 provides crime statistics available from the Maryland Statistical Analysis Center within the Governor’s Office of Crime Prevention, Youth and Victim Services and the Federal Bureau of Investigation. Light grey shading indicates rates above the United States averages; dark grey shading indicates rates more than 50 percent above the average.

Observations

- 2019 Cecil County crime rates were lower than Maryland and U.S. rates in all categories except larceny and theft.

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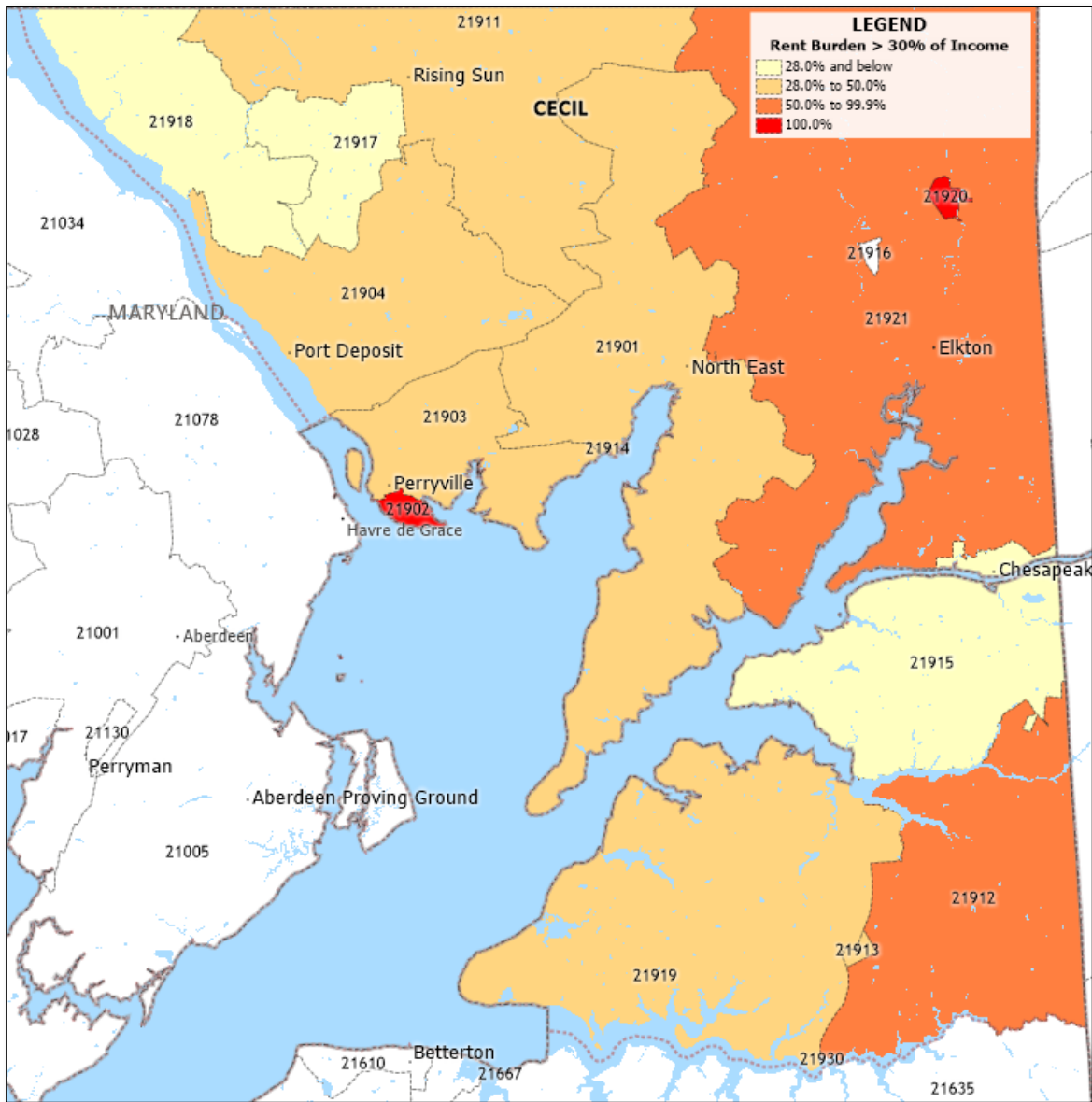
Housing Affordability

Exhibit 18: Percent of Rented Households Rent Burdened, 2016-2020

ZIP Code	Town/Area	Occupied Units Paying Rent	Households Paying >30%	Rent Burden > 30% of Income
21901	North East	1,581	583	37.2%
21902	Perry Point	90	90	100.0%
21903	Perryville	654	281	44.0%
21904	Port Deposit	256	108	42.2%
21911	Rising Sun	742	346	47.4%
21912	Warwick	78	52	66.7%
21913	Cecilton	109	46	42.2%
21914	Charlestown	131	59	45.0%
21915	Chesapeake City	169	24	14.2%
21917	Colora	44	0	0.0%
21918	Conowingo	146	36	24.6%
21919	Earleville	66	19	28.8%
21920	Elk Mills	31	31	100.0%
21921	Elkton	4,835	2,655	55.6%
Cecil County		8,975	4,330	48.8%
Maryland		708,422	342,637	49.2%
United States		41,390,514	19,886,052	49.1%

Source: U.S. Census, ACS 5-Year Estimates, 2020.

Exhibit 19: Map of Percent of Rented Households Rent Burdened, 2016-2020



Source: U.S. Census, ACS 5-Year Estimates, 2020, and Caliper Maptitude, 2021.

Description

The U.S. Department of Housing and Urban Development (HUD) has defined “rent burdened” households as those spending more than 30 percent of income on housing.¹⁰ Exhibits 18 and 19 portray the percent of rented households that meet this definition. Light grey shading in Exhibit 18 indicates ZIP Codes that are above the U.S. average of 49.1 percent for rent burdened households and dark grey indicates ZIP Codes that are more than 50 percent above the average.

¹⁰ <https://www.federalreserve.gov/econres/notes/feds-notes/assessing-the-severity-of-rent-burden-on-low-income-families-20171222.htm>

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Observations

As stated by the Federal Reserve, “households that have little income left after paying rent may not be able to afford other necessities, such as food, clothes, health care, and transportation.”¹¹

- Elk Mills (ZIP Code 21920) and Perry Point (ZIP Code 21902), two small communities, both reported 100 percent of households experiencing rent burden.
- Elkton (ZIP Code 21921) had 55.6 percent of households experiencing rent burden and Warwick (ZIP Code 21912) had 66.7 percent, both exceeding the U.S. average of 49.1 percent.
- Housing insecurity is known to have become more problematic due to the COVID-19 pandemic.

Dignity Health Community Need Index™

Exhibit 20: Community Need Index™ Score by ZIP Code

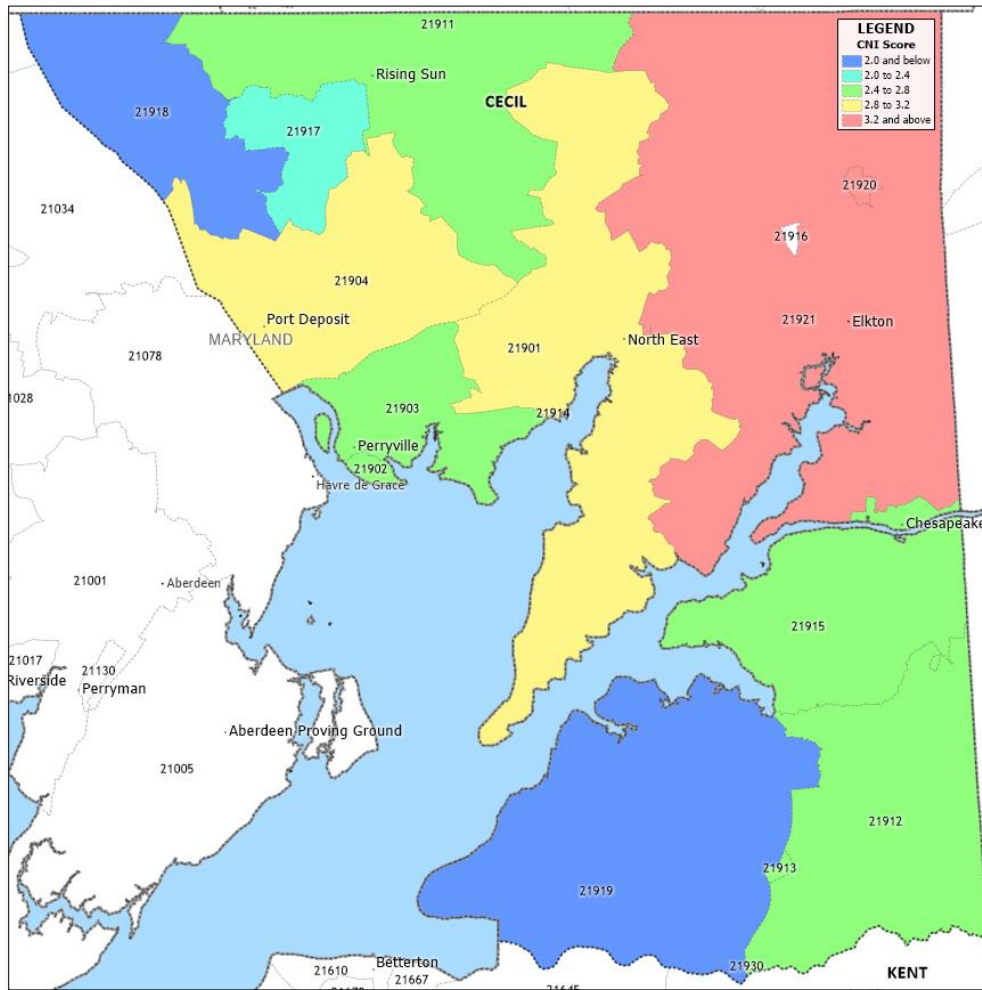
ZIP Code	Town/Area	CNI Score
21901	North East	2.8
21903	Perryville	2.6
21904	Port Deposit	2.8
21911	Rising Sun	2.4
21912	Warwick	2.6
21913	Cecilton	2.6
21914	Charlestown	2.0
21915	Chesapeake City	2.4
21917	Colora	2.0
21918	Conowingo	1.8
21919	Earleville	1.6
21921	Elkton	3.2
United States		3.0

Source: Dignity Health, 2021.

Note: ZIP Codes with small population size are eliminated or included in surrounding areas.

¹¹ *Ibid.*

Exhibit 21: Community Need Index™



Source: Dignity Health, 2021 and Caliper Maptitude, 2021.

Description

Exhibits 20 and 21 present *Community Need Index™* (CNI) scores. Higher scores (e.g., 4.2 to 5.0) indicate the highest levels of community need. The index is calibrated such that 3.0 represents a U.S.-wide median score. Light grey shading in Exhibit 20 indicates CNI scores that are above U.S. median score of 3.0.

Dignity Health developed the CNI to assess barriers to health care access. The index, available for every ZIP Code in the United States, consists of five social and economic indicators:

- The percentage of elders, children, and single parents living in poverty;
- The percentage of adults over the age of 25 with limited English proficiency, and the percentage of the population that is non-White;
- The percentage of the population without a high school diploma;
- The percentage of uninsured and unemployed residents; and

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- The percentage of the population renting houses.

CNI scores are grouped into “Lowest Need” (1.0-1.7) to “Highest Need” (4.2-5.0) categories.

Observations

- Elkton (ZIP Code 21921), with a CNI score of 3.2, is the only area in Cecil County that is above the U.S. median score of 3.0.
- No ZIP Codes in Cecil County are in the “Highest Need” category.

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Centers for Disease Control and Prevention Social Vulnerability Index (SVI)

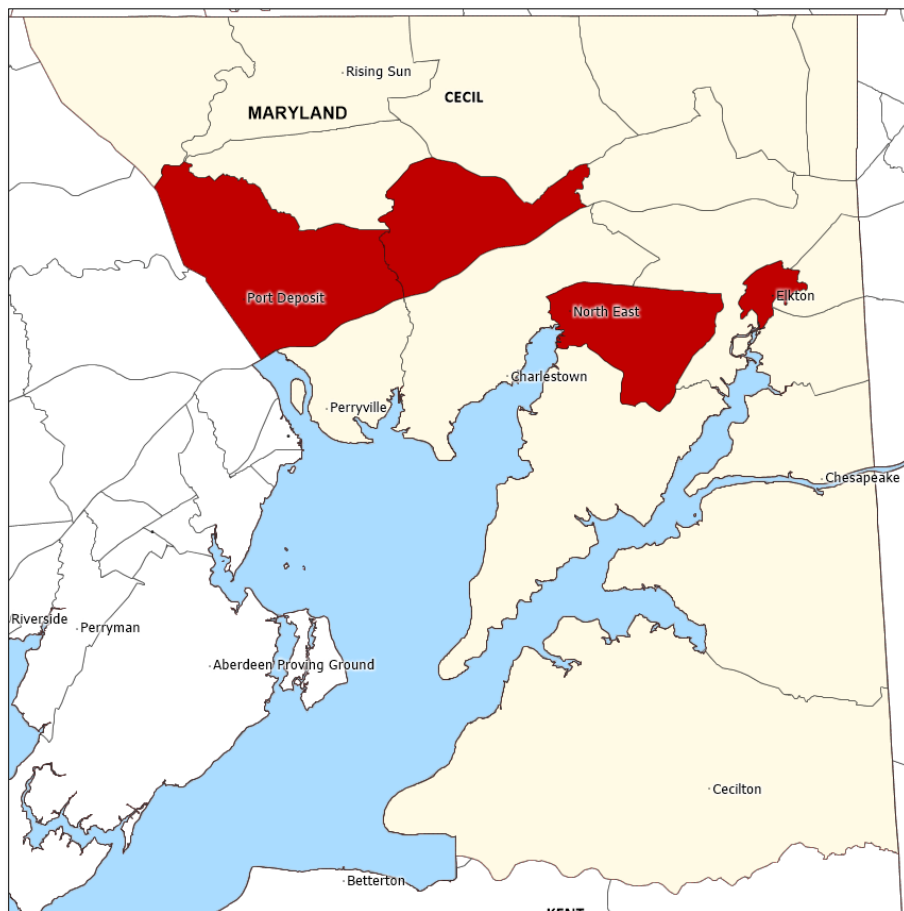
Exhibits 22 through 25 show the Centers for Disease Control and Prevention's *Social Vulnerability Index* (SVI) scores for census tracts throughout the community. Red highlighted census tracts are in the bottom quartile nationally for different indicators on which the SVI is based.

The overall SVI is based on 15 variables derived from U.S. census data. Variables are grouped into four themes, including:

- Socioeconomic status;
- Household composition;
- Race, ethnicity, and language; and
- Housing and transportation.

Exhibits 22 through 25 highlight SVI scores for each of these themes.

Exhibit 22: Socioeconomic Status Index – Bottom Quartile Census Tracts



Source: Centers for Disease Control and Prevention, 2018, and Caliper Maptitude, 2021.

Description

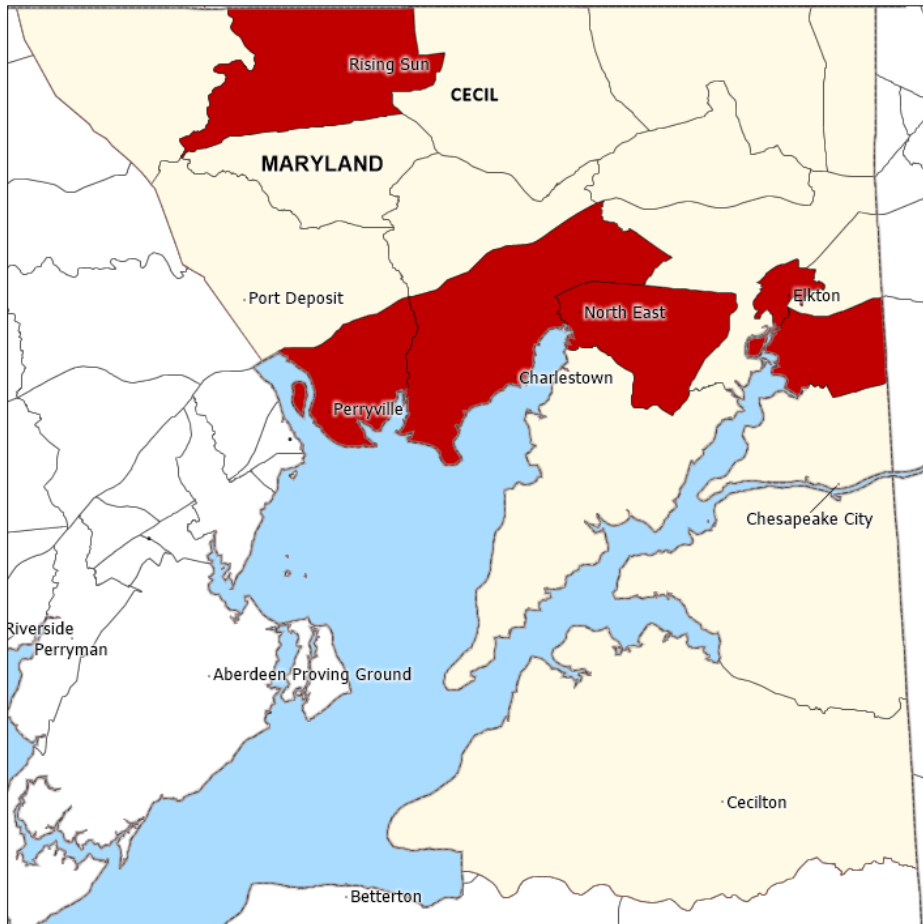
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Exhibit 22 identifies census tracts in the bottom quartile nationally for socioeconomic vulnerability.

Observations

- Census tracts with the highest levels of socioeconomic vulnerability are located in Port Deposit, North East, and Elkton.
- About 19 percent of the community's total population live in the four highlighted census tracts.

Exhibit 23: Household Composition and Disability Index – Bottom Quartile Census Tracts



Source: Centers for Disease Control and Prevention, 2018, and Caliper Maptitude, 2021.

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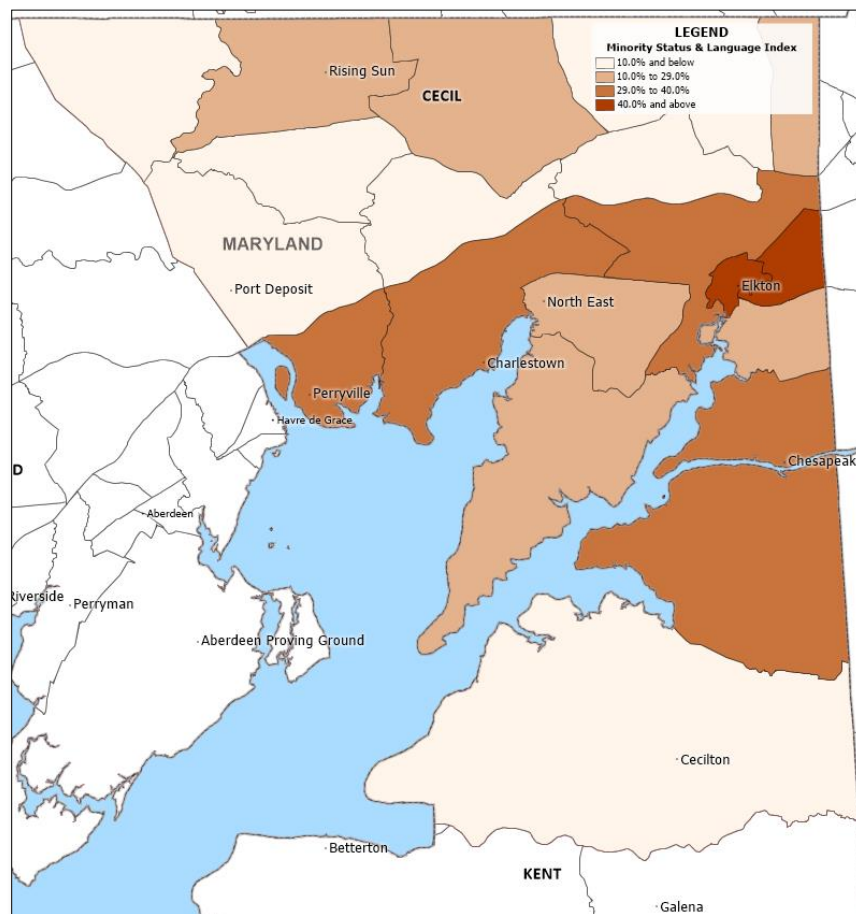
Description

Exhibit 23 identifies census tracts in the bottom quartile nationally for household composition and disability vulnerability.

Observations

- Census tracts with the highest household composition and disability index are in Rising Sun, Perryville, North East, and Elkton.
- About 37 percent of the community's total population lives in the six highlighted census tracts.

Exhibit 24: Minority Status and Language Index



Source: Centers for Disease Control and Prevention, 2018, and Caliper Maptitude, 2021.

Description

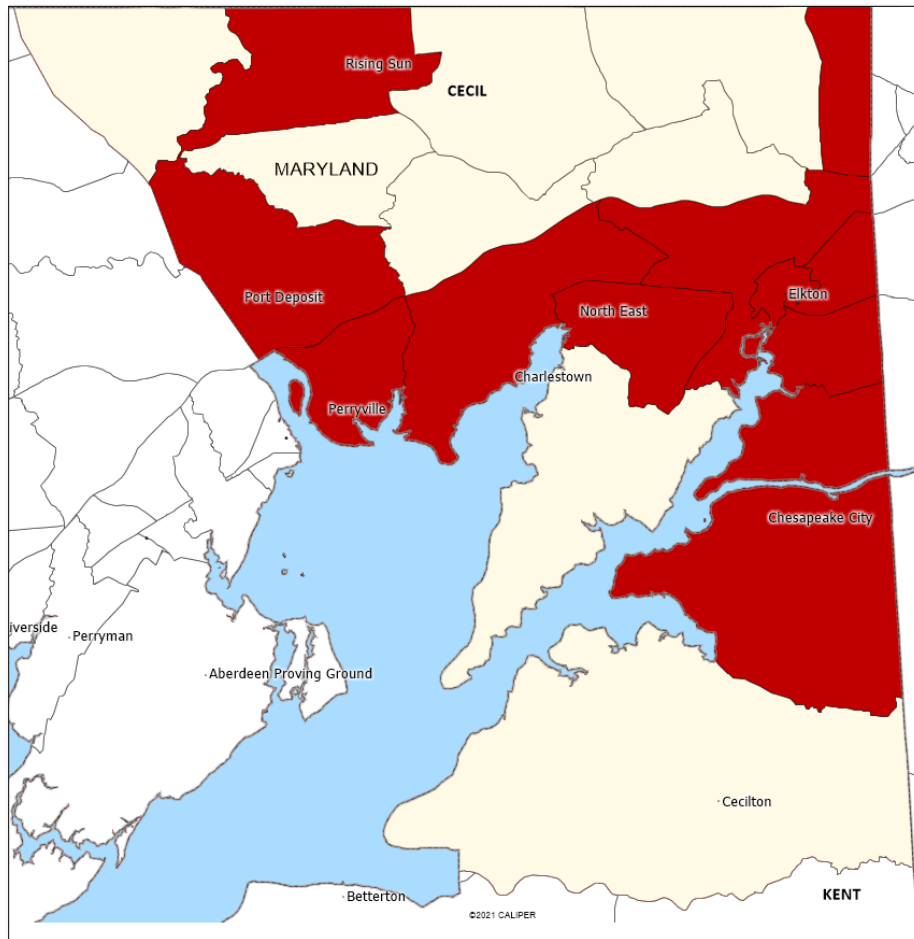
Exhibit 24 portrays minority status and language vulnerability by census tract.

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Observations

- No census tracts in Cecil County are in the bottom quartile nationally for this measure.
- One census tract in Elkton has the highest percentage (50.2 percent) minority population and individuals who report speaking English “less than well”.
- About 8 percent of the community's total population lives in the census tract with the highest Minority Status and Language Index score.

Exhibit 25: Housing Type and Transportation Index – Bottom Quartile Census Tracts



Source: Centers for Disease Control and Prevention, 2018, and Caliper Maptitude, 2021.

Description

Exhibit 25 identifies census tracts in the bottom quartile nationally for housing type and transportation vulnerability.

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Observations

- More than half the census tracts in Cecil County are in the bottom quartile for housing and transportation vulnerability.
- About 65 percent of the community's total population lives in a census tract with high vulnerability for housing type and transportation issues.

Other Health Status and Access Indicators

County Health Rankings

Exhibit 26: County Health Rankings, 2021

Measure	Cecil County, MD
Health Outcomes	8
Health Factors	13
Length of Life	22
Quality of Life	13
Premature death	22
Poor or fair health	15
Poor physical health days	19
Poor mental health days	16
Low birthweight	11
Health Behaviors	15
Adult smoking	17
Adult obesity	15
Food environment index	16
Physical inactivity	19
Access to exercise opportunities	13
Excessive drinking	15
Alcohol-impaired driving deaths	7
Sexually transmitted infections	7
Teen births	16
Clinical Care	16
Uninsured	8
Primary care physicians	19
Dentists	23
Mental health providers	14
Preventable hospital stays	18
Mammography screening	19
Flu vaccinations	14
Social & Economic Factors	15
High school completion	13
Some college	14
Unemployment	16
Children in poverty	14
Income inequality	12
Children in single-parent households	12
Social associations	21
Violent crime	19
Injury deaths	23
Physical Environment	8
Air pollution - particulate matter	9
Severe housing problems	9
Driving alone to work	20
Long commute - driving alone	12

Source: County Health Rankings, 2021.

Description

Exhibit 26 presents *County Health Rankings*, a University of Wisconsin Population Health Institute initiative funded by the Robert Wood Johnson Foundation that incorporates a variety of health status indicators into a system that ranks each county/city within each state in terms of “health factors” and “health outcomes.” The health factors and outcomes are composite measures based on several variables grouped into the following categories: health behaviors, clinical care,¹² social and economic factors, and physical environment.¹³ *County Health Rankings* is updated annually. *County Health Rankings 2021* relies on data from 2010 to 2020. Most data are from 2015 to 2019.

The exhibit presents 2021 rankings for each available indicator category. Rankings indicate how Cecil County ranked in relation to all 24 counties in Maryland. The lowest numbers indicate the most favorable rankings. Light grey shading indicates rankings in the bottom half of the state's counties; dark grey shading indicates rankings in bottom quartile.

Observations

- In 2021, Cecil County ranked in the bottom quartile for the following indicators:
 - Length of life;
 - Poor physical health days;
 - Physical inactivity;
 - Ratio of primary care physicians to population;
 - Ratio of dentists to population;
 - Mammography screening;
 - Social associations;
 - Violent crime;
 - Injury deaths; and
 - Driving alone to work.
- Cecil County ranked in the bottom half of Maryland counties for the following composite measures: health factors, length of life, quality of life, clinical care, and social and economic factors.
- Cecil County ranked in the top third of (number 8 out of 24) Maryland counties for overall health outcomes and for physical environment.

¹²A composite measure of Access to Care, which examines the percent of the population without health insurance and ratio of population to primary care physicians, and Quality of Care, which examines the hospitalization rate for ambulatory care sensitive conditions, whether diabetic Medicare patients are receiving HbA1C screening, and percent of chronically ill Medicare enrollees in hospice care in the last 8 months of life.

¹³A composite measure that examines Environmental Quality, which measures the number of air pollution-particulate matter days and air pollution-ozone days, and Built Environment, which measures access to healthy foods and recreational facilities and the percent of restaurants that are fast food.

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Exhibit 27: County Health Rankings Data Compared to State and U.S. Averages, 2021

Indicator Category	Data	Cecil County, MD	Maryland	United States
Health Outcomes				
Length of Life	Years of potential life lost before age 75 per 100,000 population	9,841	7,198	6,900
Quality of Life	Percentage of adults reporting fair or poor health	17.1%	15.2%	17.0%
	Average number of physically unhealthy days reported in past 30 days	4.2	3.4	3.7
	Average number of mentally unhealthy days reported in past 30 days	4.5	3.7	4.1
	Percentage of live births with low birthweight (< 2,500 grams)	7.6%	8.7%	8.0%
Health Factors				
Health Behaviors				
Adult Smoking	Percentage of adults who are current smokers	18.6%	12.6%	17.0%
Diet and Exercise	Percentage of the adult population (age 20 and older) with BMI >=30	35.7%	31.6%	30.0%
	Index of factors that contribute to a healthy food environment, from 0 (worst) to 10 (best)	8.1	8.7	7.8
	Percentage of adults age 20 and over reporting no leisure-time physical activity	27.5%	21.9%	23.0%
	Percentage of population with adequate access to locations for physical activity	81.2%	92.6%	84.0%
Alcohol and Drug Use	Percentage of adults reporting binge or heavy drinking	17.9%	15.4%	19.0%
	Percentage of driving deaths with alcohol involvement	24.8%	28.8%	27.0%
Sexual Activity	Number of newly diagnosed chlamydia cases per 100,000 population	327.0	586.3	539.9
	Number of births per 1,000 female population ages 15-19	19.0	16.1	21.0
Clinical Care				
Access to Care	Percentage of population under age 65 without health insurance	5.3%	6.9%	10.0%
	Ratio of population to primary care physicians	2,391:1	1,129:1	1,320:1
	Ratio of population to dentists	2,449:1	1,259:1	1,400:1
	Ratio of population to mental health providers	461:1	364:1	380:1
Quality of Care	Rate of hospital stays for ambulatory-care sensitive conditions	4,326	4,134	4,236
	Percentage of Medicare enrollees that received an annual mammography screening	39.0%	42.0%	42.0%
	Percentage of fee-for-service (FFS) Medicare enrollees that had an annual flu vaccination	51.0%	52.0%	48.0%

Source: County Health Rankings, 2021.

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Exhibit 27: County Health Rankings Data Compared to State and U.S. Averages, 2021 (continued)

Indicator Category	Data	Cecil County, MD	Maryland	United States
Social & Economic Factors				
Education	Percentage of adults ages 25 and over with a high school diploma or equivalent	89.5%	90.2%	88.0%
	Percentage of adults ages 25-44 with some post-secondary education	58.0%	70.0%	66.0%
Employment	Percentage of population ages 16 and older unemployed but seeking work	4.0%	3.6%	3.7%
Income	Percentage of people under age 18 in poverty	13.6%	12.6%	17.0%
	Ratio of household income at the 80th percentile to income at the 20th percentile	4.2	4.5	4.9
Family and Social Support	Percentage of children that live in a household headed by single parent	23.4%	26.4%	26.0%
	Number of membership associations per 10,000 population	6.5	9.0	9.3
Community Safety	Number of reported violent crime offenses per 100,000 population	426.8	459.1	386.0
	Number of deaths due to injury per 100,000 population	112.2	81.9	72.0
Physical Environment				
Air Pollution	Average daily density of fine particulate matter in micrograms per cubic meter (PM2.5)	7.8	8.0	7.2
Severe Housing Problems	Percentage of households with at least 1 of 4 housing problems: overcrowding, high housing costs, lack of kitchen facilities, or lack of plumbing facilities	13.3%	16.2%	18.0%
Driving Alone to Work	Percentage of the workforce that drives alone to work	83.0%	74.0%	76.0%
Long Commute - Drive Alone	Among workers who commute in their car alone, the percentage that commute more than 30 mi	45.6%	50.2%	37.0%

Source: County Health Rankings, 2021.

APPENDIX B – SECONDARY DATA ASSESSMENT

Description

Exhibit 27 provides data that underlie the County Health Rankings and compares indicators to statewide and national averages.¹⁴ Light grey shading highlights indicators found to be worse than the national average; dark grey shading highlights indicators more than 50 percent worse.

Note that higher values generally indicate that health outcomes, health behaviors, and other factors for a given county are unfavorable when compared to averages for the United States. However, for several indicators, lower values are more problematic, including:

- Food environment index,
- Percent with access to exercise opportunities,
- Percent receiving mammography screening,
- Percent receiving flu vaccination,
- High school graduation rate, and
- Percent with some college.

Observations

- Cecil County population to provider ratios for both primary care physicians and dentists are more than 50 percent worse than U.S. averages.
- The following indicators compared particularly unfavorably to U.S. averages:
 - Years of potential life lost before age 75
 - Average number of physically unhealthy days
 - Average number of mentally unhealthy days
 - Adult smoking
 - Adult obesity
 - Physical inactivity
 - Ratio of population to provider for primary care, dentists, and mental health
 - Adults with post-secondary education
 - Violent crime
 - Deaths due to injury

¹⁴ County Health Rankings provides details about what each indicator measures, how it is defined, and data sources at http://www.countyhealthrankings.org/sites/default/files/resources/2013Measures_datasources_years.pdf

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Community Health Status Indicators

Exhibit 28: Community Health Status Indicators, 2021
(Light Grey Shading Denotes Bottom Half of Peer Counties; Dark Grey Denotes Bottom Quartile)

Category	Indicator	Cecil County	Peer Counties Average	Quartile Ranking
Length of Life	Years of Potential Life Lost Before 75 Per 100,000	9,841	7,896	4
Quality of Life	% of Adults Reporting Fair or Poor Health	17.1%	17.6%	2
	Average Number of Physically Unhealthy Days Per Month	4.2	4.2	3
	Average Number of Mentally Unhealthy Days Per Month	4.5	4.7	1
	% of Live Births with Low Birthweight	7.6%	7.4%	3
Health Behaviors	% of Adults who Smoke	18.6%	22.3%	1
	% Adults with Obesity	35.7%	34.4%	3
	Food Environment Index	8.1	8.3	3
	% Physically Inactive	27.5%	27.0%	3
	% With Access to Exercise Opportunities	81.2%	62.9%	1
	% of Adults Reporting Binge or Heavy Drinking	17.9%	19.8%	1
	% Driving Deaths with Alcohol Involvement	24.8%	24.3%	2
	Newly Diagnosed Chlamydia Cases per 100,000	327.0	272.9	4
Clinical Care	Births per 1,000 Females Aged 15-19 Years	19.0	20.1	2
	% of Population Under 65 Uninsured	5.3%	7.7%	1
	Primary Care Physicians Per 100,000	41.8	39.6	2
	Dentists Per 100,000	40.8	39.4	2
	Mental Health Providers Per 100,000	216.8	104.2	1
	Preventable Hospitalizations Per 100,000 Medicare Enrollees	4,326	5,070	1
	% of Females 65-74 With Annual Mammogram	39.0%	42.1%	4
Social & Economic Factors	% of FFS Medicare Beneficiaries with Annual Flu Vaccination	51.0%	48.0%	2
	% of Adults 25+ Who Completed High School	89.5%	89.8%	3
	% of Adults 25-44 with Some College	58.0%	59.8%	3
	% Unemployed	4.0%	3.7%	3
	% Children in Poverty	13.6%	12.4%	3
	Ratio of Income at 80th Percentile to 20th Percentile	4.2	3.9	4
	% Children in Single-Parent Households	23.4%	19.6%	4
	Membership Associations per 10,000	6.5	10.1	4
Physical Environment	Reported Violent Crime Offenses per 100,000	426.8	166.6	4
	Deaths Due to Injury Per 100,000	112.2	86.7	4
	Average Daily Density of Fine Particulate Matter (PM2.5) Per 100,000	7.8	8.5	1
	% of Households with Severe Housing Problems	13.3%	11.2%	4
	% Drive Alone to Work	83.0%	84.3%	1
	% Long Commute - Drives Alone	45.6%	47.3%	2

Source: County Health Rankings and Verité Analysis, 2021.

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Description

County Health Rankings has assembled community health data for all 3,143 counties in the United States. Following a methodology developed by the Centers for Disease Control's *Community Health Status Indicators* Project (CHSI), County Health Rankings also publishes lists of "peer counties," so comparisons with peer counties in other states can be made. Each county in the U.S. is assigned 30 to 35 peer counties based on 19 variables including population size, population growth, population density, household income, unemployment, percent children, percent elderly, and poverty rates.

CHSI formerly was available from the CDC. Because comparisons with peer counties (rather than only counties in the same state) are meaningful, Verité Healthcare Consulting rebuilt the CHSI comparisons for this and other CHNAs.

Exhibit 28 compares each county to its respective peer counties and highlights community health issues found to rank in the bottom half and bottom quartile of the counties included in the analysis. Light grey shading indicates rankings in the bottom half of peer counties; dark grey shading indicates rankings in the bottom quartile of peer counties. Underlying statistics also are provided.

See Appendix D for lists of peer counties.

Note that higher values generally indicate that health outcomes, health behaviors, and other factors are worse in the county than in its peer counties. However, for several indicators, lower values are more problematic, including:

- Food environment index,
- Percent with access to exercise opportunities,
- Percent receiving mammography screening,
- Percent receiving flu vaccination,
- High school graduation rate, and
- Percent with some college.

Observations

- Cecil County compares unfavorably to peer counties for 18 of the 34 benchmark indicators.
- Cecil County compares particularly unfavorable to peer counties for the following indicators:
 - Years of potential life lost
 - Newly diagnosed chlamydia cases per 100,000
 - Percent of females 65-74 receiving an annual mammogram
 - Income inequality (ratio of income at the 80th percentile to the 20th percentile)
 - Percent of children in single-parent households
 - Membership associations per 10,000
 - Reported violent crime offenses per 100,000

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- Deaths due to injury per 100,000
- Percent of households with severe housing problems

COVID-19 Incidence and Mortality

Exhibit 29: COVID-19 Incidence and Mortality (As of March 31, 2022)

Area	Cases	Deaths	Incidence Rate per 100,000	Mortality Rate per 100,000
Cecil County	15,423	258	14,999.1	250.9
Maryland	1,011,498	14,311	16,739.1	236.8
United States	78,606,458	962,264	24,093.0	294.9

Source: Johns Hopkins University, 2022.

Description

Exhibit 29 presents data regarding COVID-19 incidence and mortality.

Observations

- Cecil County has experienced a COVID-19 incidence rate and mortality rate lower than both the state of Maryland and the United States.
- However, there have been 15,423 cases and 258 deaths due to the pandemic since it began in March 2020.

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Causes of Death

Exhibit 30: Selected Causes of Death, Age-Adjusted Rates per 100,000 Population, 2020

Condition	Cecil County	Maryland	United States
Major cardiovascular diseases	296.3	227.5	223.0
Diseases of heart	231.1	168.3	168.2
Malignant neoplasms	160.3	142.3	144.1
Ischemic heart diseases	115.9	92.4	91.8
All other diseases	98.7	110.1	96.7
Unspecified infectious and parasitic diseases and their sequelae	77.8	83.6	87.8
COVID-19	76.2	80.9	85.0
Accidents (unintentional injuries)	80.3	44.4	57.6
Malignant neoplasms of trachea, bronchus and lung	49.7	29.0	31.9
Chronic lower respiratory diseases	50.0	27.7	36.4
Cerebrovascular diseases	51.4	42.5	38.8
Other chronic lower respiratory diseases	46.4	25.1	33.4
Hypertensive heart disease	46.0	19.0	16.0
Nontransport accidents	58.5	33.7	44.3
Atherosclerotic cardiovascular disease	31.2	31.1	18.4
Accidental poisoning and exposure to noxious substances	39.7	16.6	26.9
Diabetes mellitus	24.6	23.9	24.8
Alzheimer disease	28.1	15.8	32.4
Acute myocardial infarction	18.1	22.2	26.3
Chronic liver disease and cirrhosis	16.1	9.5	13.3
Transport accidents	21.8	10.7	13.3
Parkinson's disease	18.3	8.7	9.9
Other diseases of respiratory system	17.4	7.6	10.9
Motor vehicle accidents	19.7	10.2	12.5

Source: Centers for Disease Control and Prevention, National Center for Health Statistics, Underlying Cause of Death, 2020.

Description

Exhibit 30 provides age-adjusted mortality rates for selected causes of death. Light grey shading indicates rates above U.S. averages; dark grey shading indicates rates more than 50 percent above the U.S.

Observations

- In Cecil County, rates for 19 out of 24 causes of death were above U.S. averages.
- Rates for malignant neoplasms of the trachea, bronchus and lung and hypertensive heart disease were particularly high compared to state and U.S. averages.

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Exhibit 31: Age-Adjusted Cancer Mortality Rates per 100,000 Population, 2014-2018

Type of Cancer	Cecil County	Maryland	United States
All cancer sites	525.1	452.5	448.6
Bladder	27.1	18.3	19.7
Brain and other nervous system	5.6	6.0	6.5
Breast (female)	124.4	132.2	126.8
Cervix	8.5	6.7	7.7
Colon and rectum	43.6	36.4	38.0
Corpus and uterus, NOS	31.5	28.4	27.4
Esophagus	5.9	4.3	4.5
Kidney and renal pelvis	19.2	15.3	17.1
Leukemia	15.0	12.5	14.2
Liver and bile duct	9.2	8.8	8.6
Lung and bronchus	87.1	55.1	57.3
Melanoma of the skin	33.1	24.1	22.6
Non-Hodgkin lymphoma	22.2	17.9	19.1
Oral cavity and pharynx	15.3	11.2	11.9
Ovary	12.3	10.7	10.7
Pancreas	12.0	13.7	13.1
Prostate	115.1	128.1	106.2
Stomach	6.4	6.9	6.5

Source: Centers for Disease Control and Prevention, 2020.

Description

Exhibit 31 provides age-adjusted mortality rates for selected forms of cancer in 2014-20.

Observations

- Cecil County had above average, overall cancer mortality rates than both Maryland and the U.S.
- Cecil County had a particularly high rate of lung and bronchus cancer mortality compared to Maryland and U.S. averages.

Exhibit 32: Drug Poisoning Mortality per 100,000, 2016-2020

Report Area	Total Population	Five Year Total Deaths	Crude Death Rate	Age-Adjusted Death Rate
Cecil County	102,890	361	70.2	74.1
Maryland	6,042,565	12,213	40.4	39.4
United States	326,747,554	389,651	23.9	24.0

Source: Centers for Disease Control and Prevention, National Vital Statistics System, 2020.

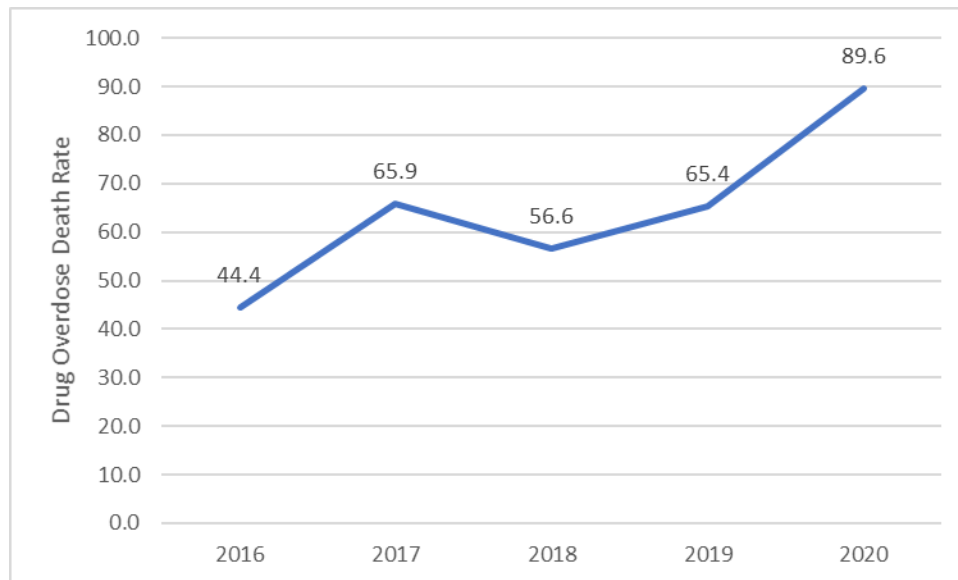
Description

Exhibit 32 provides mortality rates for drug poisoning for 2016-2020. Dark grey shaded indicates rates more than 50 percent above U.S. rates.

Observations

- Cecil County's drug poisoning mortality rate is more than triple the rate of that of the U.S.

Exhibit 33: Cecil County Drug Overdose Death Rate, 2016-2020



Source: Centers for Disease Control and Prevention, National Vital Statistics System, 2020.

Description

Exhibit 33 provides drug overdose, model-based death rates for Cecil County from 2016 to 2020.

Observations

- Cecil County's drug overdose rate increased by more than 50 percent since 2016.

Communicable Diseases

Exhibit 34: Communicable Disease Incidence Rates per 100,000 Population, 2019

Measure	Cecil County	Maryland	United States
HIV prevalence	166.0	656.2	378.0
Chlamydia	361.7	624.9	551.0
Early latent syphilis	6.8	16.4	12.7
Gonorrhea	125.4	191.8	187.8
Primary and secondary syphilis	3.9	14.4	11.9

Source: Centers for Disease Control and Prevention, 2019.

Description

Exhibit 34 presents incidence rates for certain communicable diseases.

Observations

- In 2019, Cecil County incidence rates for communicable diseases were lower than U.S. averages for all measures.
- The state of Maryland's incidence rates for communicable diseases are significantly higher than U.S. averages for all measures.

Maternal and Child Health

Exhibit 35: Percentage Low Birthweight Births, 2013-2019

Area	Total Live Births	Low Birthweight Births	Low Birthweight Births	Low Birthweight Births Non-Hispanic White	Low Birthweight Births Non-Hispanic Black	Low Birthweight Births Hispanic or Latino
Cecil County	7,998	605	7.6%	6.9%	12.9%	9.0%
Maryland	1,010,490	87,460	8.7%	6.6%	12.3%	7.0%
United States	54,416,819	4,440,508	8.2%	6.8%	13.5%	7.3%

Source: National Center for Health Statistics - Natality Files, 2021

Description

Exhibit 35 provides portraits percentage of low-birth-weight births by race. Light grey shading indicates measures that are above U.S. averages.

Observations

- Cecil County had a higher percentage of low-birth weight babies for both Non-Hispanic White and Hispanic (or Latino) populations than the U.S. as a whole.

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Exhibit 36: Number of Births per 1,000 Female Population Age 15-19, 2013-2019

Area	Female Population Age 15-19	Teen Births, Rate per 1,000 Female Population	Teen Births Non-Hispanic White	Teen Births Non-Hispanic Black	Teen Births Hispanic or Latino
Cecil County	22,457	19.0	18.2	30.9	17.6
Maryland	2,640,652	16.1	8.7	21.7	38.7
United States	144,319,360	20.9	13.6	30.3	32.1

Source: Centers for Disease Control and Prevention, National Vital Statistics System, 2021

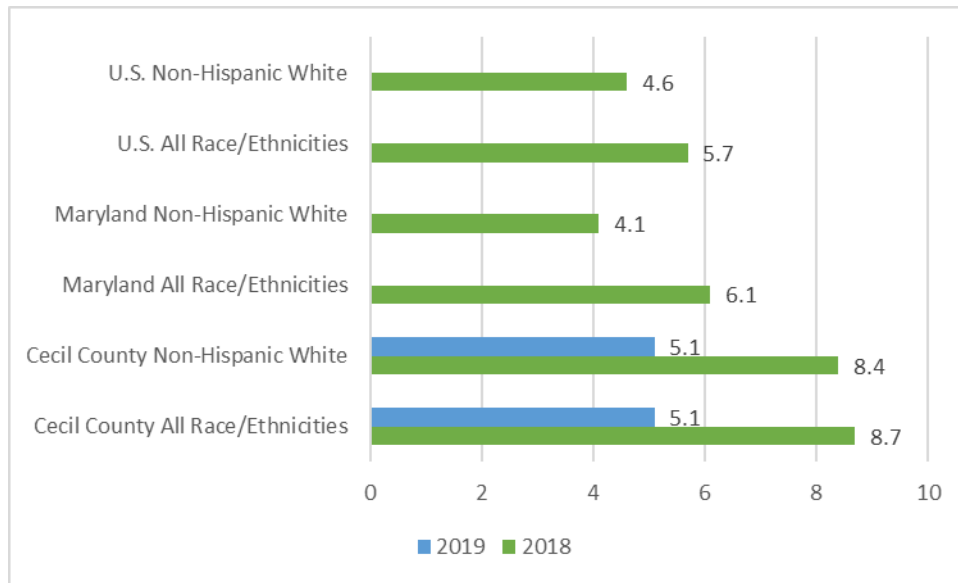
Description

Exhibit 36 provides rates of babies born to teen mothers from 2013-2019 by race.

Observations

- Rates for teen mothers giving birth were higher in Cecil County for both Non-Hispanic White and Non-Hispanic Black mothers than in the U.S. as a whole.

Exhibit 37: Infant Mortality Rates per 1,000 Live Births by Race, 2018-2019



Source: Maryland Department of Health, Vital Statistics Report, 2020.

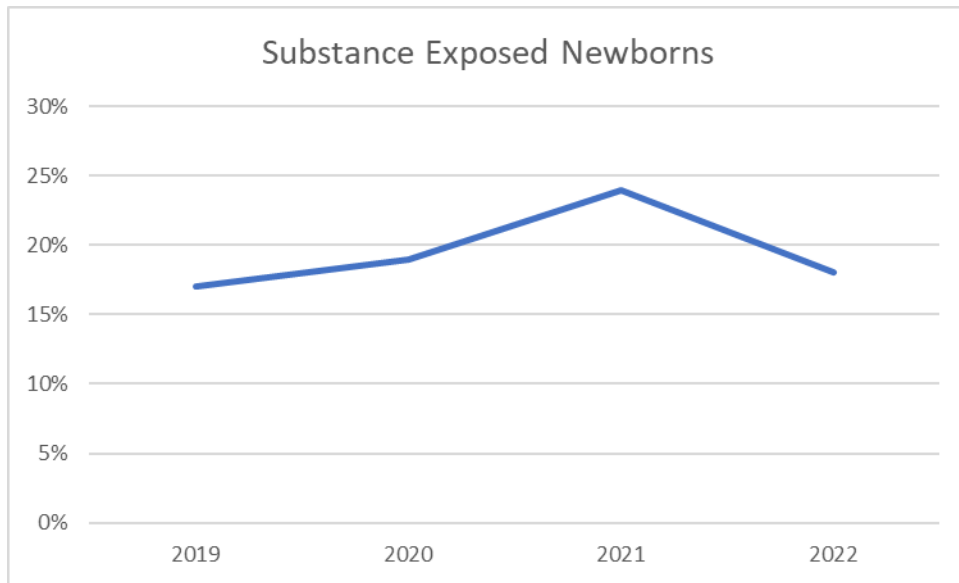
Description

Exhibit 37 compares infant mortality rates in Cecil County, Maryland, and the United States for 2018-2019. Maryland and the U.S. rates are for 2018 only, as that is the most recent year national data is available. Infant mortality rates for Non-Hispanic Black and for Hispanic populations are not available for Cecil County due to statistical unreliability.

Observations

- In Cecil County, infant mortality rates for all races/ethnicities declined between 2018 and 2019.
- In 2019, the Cecil County infant mortality rate is lower than both Maryland and U.S. averages.

Exhibit 38: Substance-Exposed Newborns, 2018-2022



Source: Union Hospital, Cecil County Health Data, 2022

Description

Exhibit 38 shows the percentage of substance-exposed newborns (SEN) from July 2019 to current year to date (4/8/22). Under Maryland law, a newborn under 30 days old must be reported as SEN if the infant:

- Displays a positive toxicology screen for a controlled substance as evidenced by any appropriate test after birth;
- Displays the effects of controlled drug use or symptoms of withdrawal resulting from prenatal controlled drug exposure as determined by medical personnel; or
- Displays the effects of Fetal Alcohol Spectrum Disorders (FASD).

Observations

- In Cecil County, the rate of SEN rose steadily from 2019 to 2021 and then experienced a slight decline.

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Behavioral Risk Factor Surveillance System

Exhibit 39: Behavioral Risk Factor Surveillance System, 2019

Category	Indicator	Maryland	United States
Alcohol Consumption	At least one drink of alcohol within the past 30 days	53.0%	54.1%
	Binge drinking	13.8%	16.8%
	Heavy drinkers	5.2%	6.5%
Cholesterol Awareness	Never had cholesterol checked	5.4%	8.6%
	Not checked in past 5 years	2.9%	3.9%
	Had their blood cholesterol checked and have been told it was high	34.9%	33.1%
Chronic Health Indicators	Told they have arthritis	24.0%	26.0%
	Limited in any way in any of your usual activities because of arthritis	9.6%	10.7%
	Affect work - Have arthritis and have limited work	7.1%	8.2%
	Told currently have asthma	9.0%	9.7%
	Ever been told have asthma	14.6%	14.9%
	Ever told have COPD	5.4%	6.5%
	Ever told have a form of depression	15.8%	19.9%
	Ever told had angina or coronary heart disease	3.1%	3.9%
	Ever reported coronary heart disease (CHD) or myocardial infarction (MI)	5.1%	6.3%
	Ever told had a heart attack (myocardial infarction)	3.5%	4.3%
	Ever told had a stroke	3.1%	3.2%
	Ever told have diabetes	11.0%	10.7%
	Ever told have pregnancy-related diabetes	0.9%	1.0%
	Ever told have kidney disease	2.8%	2.9%
Ever told had skin cancer	5.1%	6.6%	
Ever told had any other types of cancer	7.2%	7.3%	
Demographics	Reported being deaf	4.4%	6.9%
	Blind or have serious difficulty seeing, even when wearing glasses	3.9%	4.9%
	Have serious difficulty concentrating, remembering, or making decisions	9.5%	11.6%
	Have serious difficulty walking or climbing stairs	11.3%	13.5%
	Have difficulty doing errands alone	6.0%	7.1%
	Have difficulty dressing or bathing	2.9%	3.8%

Source: Behavioral Risk Factor Surveillance System, 2019.

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Exhibit 39: Behavioral Risk Factor Surveillance System, 2019 (continued)

Category	Indicator	Maryland	United States
Fruits and Vegetables	Consumed fruit less than one time per day	37.2%	39.3%
	Consumed vegetables less than one time per day	21.3%	20.3%
Health Care Access/Coverage	Never visited a doctor for a routine checkup	0.5%	0.7%
	Last visited a doctor for a routine checkup 5 or more years ago	3.1%	5.5%
	Aged 18-64 who do not have any kind of health care coverage	11.6%	13.6%
	Have no health care coverage	9.4%	11.0%
	Do not have personal doctor or health care provider	15.2%	23.0%
Health Status	Fair or Poor Health	14.8%	18.0%
	Poor Health	3.3%	4.5%
	Fair Health	11.5%	13.4%
HIV-AIDS	Never been tested for HIV	50.1%	60.1%
Hypertension	Told they have high blood pressure	34.3%	32.3%
Immunization	Adults aged 65+ who have not had a flu shot within the past year	31.3%	36.0%
	Adults aged 65+ who have never had a pneumonia vaccination	23.4%	26.7%
Overweight and Obesity (BMI)	Obese (BMI 30.0 - 99.8)	32.2%	32.1%
	Overweight (BMI 25.0-29.9)	34.4%	34.6%
Physical Activity	Did not participate in any physical activities in past month	23.4%	26.3%
	Did not participate in muscle strengthening exercises two or more times per week	63.4%	64.4%
	Did not participate in 150 minutes or more of aerobic physical activity per week	48.4%	50.0%
	Did not participate in enough aerobic and muscle strengthening exercises to meet guidelines	76.0%	76.8%
Tobacco Use	Current smokers	12.7%	16.0%
	Smoke everyday	8.2%	11.1%
	Smoke some days	4.5%	4.7%
	Use chewing tobacco, snuff, or snus every day	0.9%	2.2%
	Use chewing tobacco, snuff, or snus some days	1.3%	1.8%

Source: Behavioral Risk Factor Surveillance System, 2019.

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Description

The Centers for Disease Control and Prevention’s Behavioral Risk Factor Surveillance System (BRFSS) gathers data through a telephone survey regarding health risk behaviors, health care access, and preventive health measures. Data are collected for the entire United States. Analysis of BRFSS data can identify localized health issues, trends, and health disparities, and can enable county, state, or nation-wide comparisons. Cecil County specific BRFSS data is currently unavailable due to a recent cyber-attack on Maryland Department of Health website.

Exhibit 39 presents BRFSS data for the state of Maryland and the United States for comparison.

Observations

- The state of Maryland compared unfavorably to national averages for several indicators, including:
 - Obesity
 - Chronic conditions such as diabetes and hypertension
 - Consumption of vegetables

Exhibit 40: BRFSS Measures by Cecil County ZIP Code

ZIP Code	BRFSS Measures (N=30)	
	In Bottom Quartile	Below U.S. Average
21902	10	11
21904	1	11
21911	1	11
21921	1	11
21901	1	11
21917		11
21918	2	10
21914	2	10
21920	1	9
21912		9
21919	3	8
21915	1	7
21913	1	7
21903		7

Source: Verité Analysis of PLACES, Centers for Disease Control and Prevention, 2022.

Description

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Exhibit 40 presents the number of BRFSS measures that fall below U.S. average and in the bottom quartile nationally by Cecil County ZIP Code. There are a total of 30 BRFSS measures in CDC PLACES data.

Observations

- ZIP Codes 21902, 21904, 21911, 21921, 21901 and 21917 (Perry Point, Port Deposit, Rising Sun, Elkton, North East, and Colora) each had 11 out of 30 BRFSS measures below U.S. averages.
- Perry Point (21902) had a third of BRFSS measures in the bottom quartile nationally.

Exhibit 41: Cecil County BRFSS Measures by ZIP Code Compared to United States

BRFSS Measure	21902	21904	21911	21921	21901	21917
Heart disease among adults						
Sleeping less than 7 hours among adults						
High blood pressure (HBP) among adults						
Obesity among adults						
High cholesterol among adults						
Chronic kidney disease among adults						
Arthritis among adults						
Stroke among adults						
Cancer (excluding skin cancer) among adults						
Diagnosed diabetes among adults						
Mammography - women aged 50-74 years						
Current smoking among adults						
Binge drinking among adults						
Taking HBP medicine among adults						
Routine doctor visit past year among adults						
Visits to dentist/dental clinic among adults						
Mental health not good >=14 days - adults						
Colon cancer screening among adults						

Source: Verité Analysis of PLACES, Centers for Disease Control and Prevention, 2022.

Description

Exhibit 41 presents the BRFSS measures for ZIP Codes that have benchmarked comparatively poorly. The exhibit shows the BRFSS measures by type. Light grey shading

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indicates measures that are below U.S. averages and dark grey shading shows measures in the bottom quartile.

- Four out of the six ZIP Codes rank in the lowest quartile for adults sleeping fewer than seven hours per night.
- Perry Point had 10 measures in the lowest quartile including heart disease, sleeping less than seven hours, chronic conditions (high blood pressure, cholesterol, kidney disease), cancer, smoking and binge drinking.

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Youth Risk Behavior Surveillance System

Exhibit 42: YRBSS Data for Cecil County, Maryland, and the U.S., 2019

Category	Indicator	Time Period	Cecil County	Maryland	United States
Unintentional Injuries and Violence	Rode with a driver who had been drinking alcohol	Month	15.7%	15.2%	16.7%
	Drove when they had been drinking alcohol	Month	7.3%	5.2%	5.4%
	Texted or e-mailed while driving a car or other vehicle	Month	35.5%	26.2%	39.0%
	Were in a physical fight on school property	Year	9.8%	12.0%	8.0%
	Were electronically bullied	Year	16.5%	13.5%	15.7%
	Were bullied on school property	Year	20.6%	16.7%	19.50%
	Experienced physical dating violence	Year	10.6%	11.6%	8.2%
	Felt sad or hopeless most days for more than 2 weeks in a row	Year	34.4%	32.0%	36.7%
	Seriously considered attempting suicide	Year	18.0%	18.0%	18.8%
Tobacco Use	Currently smoked cigarettes (on at least 1 day)	Month	6.6%	5.0%	6.0%
	Currently frequently smoked cigarettes (>=20 days)	Month	1.7%	1.1%	1.3%
	Ever used an electronic vapor product	Ever	54.0%	39.7%	50.1%
	Currently used smokeless tobacco	Month	6.1%	4.6%	3.8%
Alcohol and Other Drug Use	Currently drank alcohol (at least one drink of alcohol)	Month	33.1%	24.1%	29.2%
	Reported current binge drinking	Month	19.1%	12.0%	13.7%
	Currently used marijuana	Month	23.3%	17.6%	21.7%
	Ever used heroin	Ever	2.5%	3.7%	1.8%
	Ever used methamphetamines	Ever	2.7%	3.7%	2.1%
	Ever took prescription pain medicine without doctor's order or different than doctor's order	Ever	13.4%	14.6%	14.3%
Sexual Behaviors	Ever had sexual intercourse	Ever	38.7%	31.3%	38.4%
	Were currently sexually active	Three Months	28.8%	22.0%	27.4%
	Did not use any method to prevent pregnancy during last sexual intercourse	Unspecified	13.2%	15.8%	11.9%
Dietary Behaviors	Did not eat fruit or drink 100% fruit juice	Week	9.8%	8.4%	6.3%
	Did not eat vegetables	Week	8.0%	9.0%	7.9%
Physical Activity	Were not physically active at least 60 minutes per day on 5 or more days	Week	44.9%	63.5%	55.9%
	Played video or computer games or used a computer for 3 or more hours per day	Day	43.9%	42.4%	46.1%
	Watched television 3 or more hours per day	Day	18.2%	19.7%	19.8%
Obesity	Had obesity	Unspecified	12.8%	12.8%	15.5%
	Were overweight	Unspecified	15.4%	15.7%	16.1%
Other Health Behaviors	Did not get 8 or more hours of sleep	Day	25.0%	79.0%	77.9%

Source: Centers for Disease Control and Prevention, 2019 and Maryland Department of Health, 2018-2019

Description

The Centers for Disease Control and Prevention's Youth Risk Behavior Surveillance System (YRBSS) is a national school-based survey conducted by CDC and state, territorial, and local education and health agencies and tribal governments. Analysis of YRBSS data can identify localized health issues among youth and enable nation-wide comparisons.

Exhibit 42 presents YRBSS data for Cecil County, Maryland, and the United States.

Observations

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- 9 out of 10 indicators in the categories of “tobacco use” and “alcohol and other drug use” are worse than U.S. averages.
- All indicators for the “sexual behaviors” category also are above U.S. averages.

Exhibit 43: YRBSS Data for Cecil County LGBTQ+ Youth, 2019

Category	Indicator	Time Period	Straight (Heterosexual)	LGBTQ+
Unintentional Injuries and Violence	Rode with a driver who had been drinking alcohol	Month	14.6%	24.2%
	Were threatened with a weapon on school property	Year	6.0%	18.9%
	Were electronically bullied	Year	14.2%	33.0%
	Were bullied on school property	Year	17.1%	44.8%
	Experienced physical dating violence	Year	8.9%	22.1%
	Felt sad or hopeless most days for >=2 weeks in a row	Year	30.1%	66.3%
	Seriously considered attempting suicide	Year	14.9%	43.8%
Tobacco Use	Currently frequently smoked cigarettes (>=20 days)	Month	5.4%	13.3%
	Currently use a vape	Ever	53.3%	63.4%
Alcohol and Other Drug Use	Currently drank alcohol (at least one drink of alcohol)	Month	32.3%	42.1%
	Currently used marijuana	Month	7.2%	12.3%
	Ever took prescription pain medicine without doctor's order	Ever	11.8%	22.9%
Sexual Behaviors	Had sexual intercourse with four or more persons in life	Ever	6.4%	13.2%
Physical Activity	Were not physically active at least 60 minutes	5 Days	52.1%	74.9%
	Played video or games or used a computer for >=3 hrs	Day	42.6%	55.7%

Source: Centers for Disease Control and Prevention, 2019 and Maryland Department of Health, 2018-2019

Description

Exhibit 43 presents YRBSS data for Cecil County high school respondents identifying as LGBTQ+ (lesbian, gay, bisexual, transgender, or queer). According to the Centers for Disease Control's 2017 Youth Risk Behavior Survey, substantial health disparities exist among sexual minority students, placing them at risk for negative health outcomes, including HIV infection and other sexually transmitted diseases (STDs).¹⁵

Observations

- LGBTQ+ youth are more than twice as likely to be bullied and threatened with a weapon on school property compared to youth who identify as straight.
- LGBTQ+ youth are more much more likely to engage in high-risk behaviors such as tobacco, alcohol, and other drug use.
- LGBTQ+ youth report significantly lower rates of physical activity.

Ambulatory Care Sensitive Conditions

¹⁵ <https://www.cdc.gov/healthyyouth/data/yrbs/pdf/2017/ss6708.pdf>

Exhibit 44: Union Hospital ACSC (PQI) Discharges by Age, 2021

Condition	Total Cases
Asthma in Young Adults	4
Chronic Obstructive Pulmonary Disease	14
Community-Acquired Pneumonia	20
Dehydration	15
Diabetes Long-Term Complications	26
Diabetes Short-Term Complications	20
Heart Failure	66
Hypertension	5
Lower Extremity Amputation with Diabetes	9
Uncontrolled Diabetes	21
Urinary Tract Infection	11

Source: Analysis of Union Hospital Discharges, 2021.

Description

Exhibit 44 provide information based on an analysis of discharges from Union Hospital. The analysis identifies discharges for Ambulatory Care Sensitive Conditions (ACSCs).

ACSCs are health “conditions for which good outpatient care can potentially prevent the need for hospitalization or for which early intervention can prevent complications or more severe disease.”¹⁶ As such, rates of hospitalization for these conditions can “provide insight into the quality of the health care system outside of the hospital,” including the accessibility and utilization of primary care, preventive care, and health education.

These conditions include angina without procedure, diabetes, perforated appendixes, chronic obstructive pulmonary disease (COPD), hypertension, congestive heart failure, dehydration, bacterial pneumonia, urinary tract infection, and asthma.

Disproportionately high rates of discharges for ACSC indicate potential problems with the availability or accessibility of ambulatory care and preventive services and can suggest areas for improvement in the health care system and ways to improve outcomes.

Observations

- In 2021, there were approximately 211 ACSC discharges. Most were for heart disease or diabetes-related causes.

Food Deserts

¹⁶Agency for Health care Research and Quality (AHRQ) Prevention Quality Indicators.

Exhibit 45: Locations of Food Deserts, 2019



Source: U.S. Department of Agriculture, Economic Research Service, 2019 and Maptitude, 2021.

Description

Exhibit 45 identifies where food deserts are present in the defined Union Hospital community.

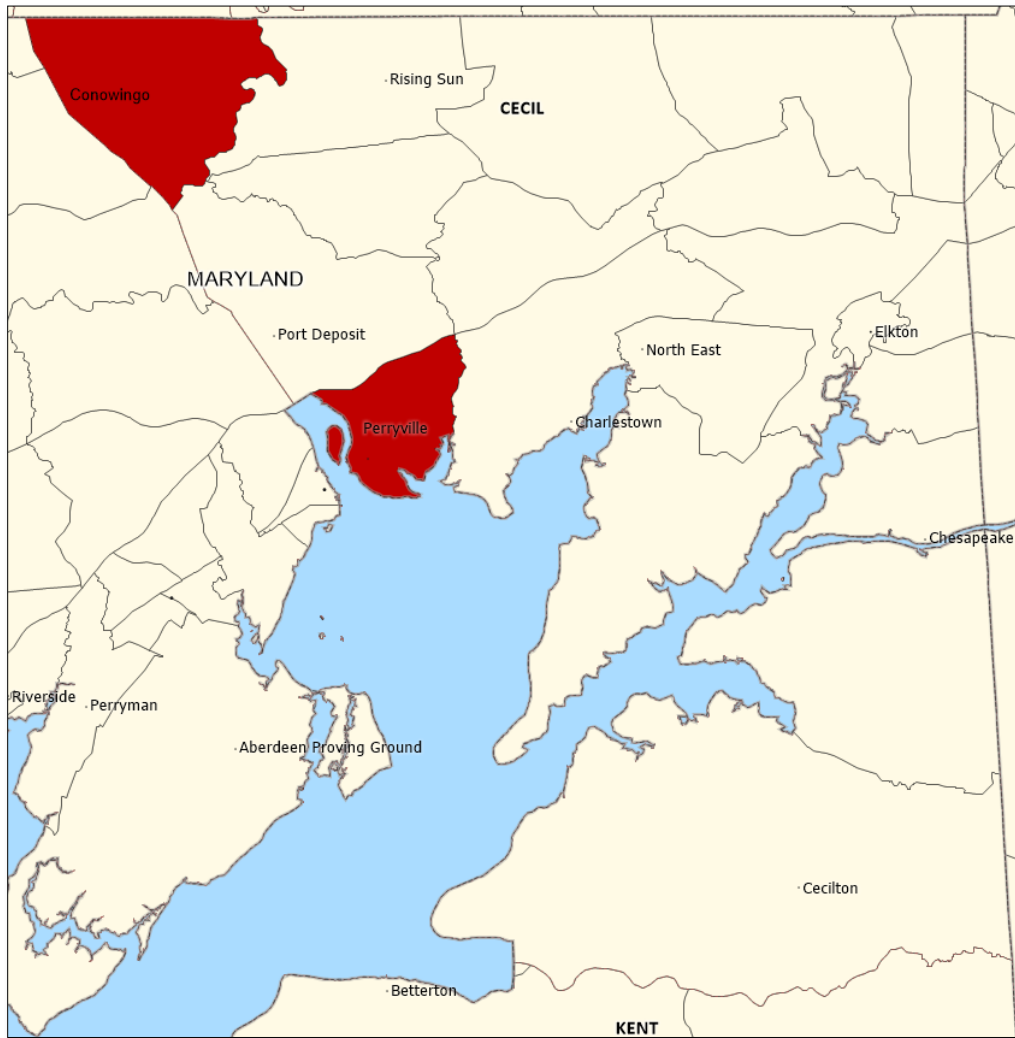
The U.S. Department of Agriculture's Economic Research Service defines urban food deserts as low-income areas more than one mile from a supermarket or large grocery store, and rural food deserts as more than 10 miles from a supermarket or large grocery store. Many government-led initiatives aim to increase the availability of nutritious and affordable foods to people living in these areas.

Observations

- In Cecil County, food deserts are present in Port Deposit and Elkton.
- Approximately 40 percent of Cecil County's population lives in these census tracts.

Medically Underserved Areas and Populations

Exhibit 46: Locations of Medically Underserved Areas and Populations, 2022



Source: Health Resources and Services Administration, 2022 and Caliper Maptitude, 2021.

Description

Exhibit 46 identifies the location of Medically Underserved Areas (MUAs) and Medically Underserved Populations (MUPs).

Medically Underserved Areas and Populations (MUA/Ps) are designated by HRSA based on an "Index of Medical Underservice." The index includes the following variables: ratio of primary medical care physicians per 1,000 population, infant mortality rate, percentage of the population with incomes below the poverty level, and percentage of the population age 65 or over.¹⁷ Areas with a score of 62 or less are considered "medically underserved."

¹⁷ Health Resources and Services Administration. See <http://www.hrsa.gov/shortage/mua/index.html>

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Populations receiving MUP designation include groups within a geographic area with economic barriers or cultural and/or linguistic access barriers to receiving primary care. If a population group does not qualify for MUP status based on the IMU score, Public Law 99-280 allows MUP designation if “unusual local conditions which are a barrier to access to or the availability of personal health services exist and are documented, and if such a designation is recommended by the chief executive officer and local officials of the state where the requested population resides.”¹⁸

Observations

- Conowingo and Perryville contain census tracts designated as Medically Underserved Areas and Populations.

Health Professional Shortage Areas

Exhibit 47: Health Professional Shortage Areas (HPSAs), 2022

Discipline	HPSA Source Name	HPSA Type Description	County	State
Primary Care	Beacon Health Center	Federally Qualified Health Center	Cecil County	Maryland
	West Cecil Health Center	Federally Qualified Health Center		
Mental Health	Beacon Health Center	Federally Qualified Health Center		
	West Cecil Health Center	Federally Qualified Health Center		
Dental Health	Beacon Health Center	Federally Qualified Health Center		
	West Cecil Health Center	Federally Qualified Health Center		
Mental Health	Geographic HPSA	Single County		

Source: Health Resources and Services Administration, 2022.

Description

Exhibit 47 identifies the locations of federally designated primary care, mental health and dental health, Health Professional Shortage Areas (HPSAs).

A geographic area can be designated a HPSA if a shortage of primary medical care, dental care, or mental health care professionals is found to be present. In addition to areas and populations that can be designated as HPSAs, a health care facility can receive federal HPSA designation and an additional Medicare payment if it provides primary medical care services to an area or population group identified as having inadequate access to primary care, dental, or mental health services.

HPSAs can be: “(1) An urban or rural area (which need not conform to the geographic boundaries of a political subdivision, and which is a rational area for the delivery of health services); (2) a population group; or (3) a public or nonprofit private medical facility.”¹⁹

Observations

¹⁸ *Ibid.*

¹⁹ U.S. Health Resources and Services Administration, Bureau of Health Professionals. (n.d.). *Health Professional Shortage Area Designation Criteria*. Retrieved 2012, from <http://bhpr.hrsa.gov/shortage/hpsas/designationcriteria/index.html>

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- All of Cecil County is designated a shortage area for mental health professionals.
- Both Beacon Health Center and West Cecil Health Center are HPSA designated Federally Qualified Health Centers (FQHC) for primary care, mental health, and dental health professionals.

Findings of Other Assessments

Cecil County Community Health Improvement Plan – 2020-2022

The Cecil County Health Department began working on a Community Health Assessment (CHA) of Cecil County in 2019 in partnership with the Community Health Advisory Committee (CHAC). This led to the creation of the Cecil County Community Health Improvement Plan (CHIP) in fiscal year 2020. The purpose of the plan is to provide a roadmap for how Cecil County Health Department, Union Hospital, partner organizations, and the community will work together to advance the health of Cecil County residents.

Health priority areas that received both broad community and CHAC membership support were objectively scored by the CHNA planning team using the Hanlon Method, resulting in the selection of the following health priorities:

- Behavioral Health;
- Cancer; and
- Childhood Trauma.

A fourth priority, Diabetes, was added to align with Maryland's Diabetes Action Plan in January 2020. Work plans to address priority areas were developed in consultation with community groups in Cecil County currently working to address these health issues.

The CHIP identified priority issues and included an action plan to address significant health concerns in Cecil County. The key indicators and goals are outlined below.

The Cecil County Community Health Improvement Plan for Fiscal Years 2020-2022 can be accessed at <https://cecilcountyhealth.org/wp-content/uploads/2021/04/Cecil-County-Community-Health-Improvement-Plan-FY-2020-2022-rev.-2.12.2021-1.pdf>.

- I. Cancer
 - a. Key Indicators
 - i. Lung cancer incidence
 - ii. Lung cancer mortality rate
 - iii. Prevalence of smoking
 - b. Goal
 - i. Reduce cancer mortality in Cecil County
- II. Behavioral Health
 - a. Key Indicators
 - i. Prevalence of youth substance use
 - ii. Drug induced death rate
 - iii. Rate of emergency department (ED) visits related to Substance Use Disorders (SUD)
 - iv. Rate of ED visits related to mental health conditions
 - v. Prevalence of depression among youth
 - vi. Suicide death rate
 - b. Goals
 - i. Prevent the initiation of substance use among youth and support youth in treatment and recovery

APPENDIX B – SECONDARY DATA ASSESSMENT

- ii. Increase recovery support capacity
 - iii. Provide support for individuals with behavioral health conditions re-entering the community
 - iv. Integrate behavioral health services to improve outcomes for individuals with co-occurring disorders
- III. Childhood Trauma
 - a. Key Indicators
 - i. Prevalence of ACES
 - ii. Child maltreatment incidence rate
 - iii. Domestic violence incidence rate
 - b. Goals
 - i. Increase education opportunities for the community on childhood trauma
 - ii. Educate and empower health care providers to recognize and treat the effects of childhood trauma
 - iii. Enhance parenting skills to promote healthy child development
- IV. Diabetes
 - a. Key Indicators
 - i. Prevalence of type 2 diabetes
 - ii. Prevalence of prediabetes
 - iii. Age-adjusted death rate due to diabetes
 - b. Goals
 - i. Establish CHAC as a 501c3 organization
 - ii. Complete a Health Literacy Needs Assessment for Cecil County

Maryland State Health Improvement Process

The State Health Improvement Process (SHIP) seeks to provide a framework for accountability, local action, and public engagement to advance the health of Maryland residents. The SHIP measures represent what it means for Maryland to be healthy. This is illustrated through a dashboard that captures data for 39 health-related measures. The focus areas of SHIP include:

- Healthy Beginnings
 - Low birth weight babies
 - Children receiving blood lead screening
 - Early prenatal care
 - High school graduation rate
 - Students entering kindergarten ready to learn
 - Sudden unexpected infant death rate
 - Teen birth rate
- Healthy Living
 - Adolescents who have obesity
 - Adolescents who use tobacco products
 - Adults who are not overweight or obese
 - Adults who currently smoke
 - Chlamydia infection rate
 - HIV incidence rate
 - Increase physical activity

APPENDIX B – SECONDARY DATA ASSESSMENT

- Life expectancy
- Healthy Communities
 - Children with elevated blood lead levels
 - Child maltreatment rate
 - Domestic violence
 - Fall-related death rate
 - Pedestrian injury rate on public roads
 - Suicide rate
- Access to Health Care
 - Adolescents with wellness check-up in last year
 - Children with dental care in last year
 - Persons with a usual primary care provider
 - Uninsured ED visits
- Quality Preventative Care
 - Annual flu vaccinations
 - Cancer mortality rate
 - Children who receive recommended vaccinations
 - Drug induced death rate
 - ED visits for addiction related conditions
 - ED visits for asthma
 - ED visits for dental
 - ED visits for diabetes
 - ED visits for hypertension
 - ED visits for mental health
 - Hospitalizations for Alzheimer's or other dementias

For detailed information on the 39 measures, visit <https://health.maryland.gov/pophealth/Pages/SHIP-Lite-Home.aspx>.

APPENDIX C – COMMUNITY INPUT PARTICIPANTS

Exhibit 48: Community Meeting Participants

Organization	
Acadia Healthcare	Deep Roots, Inc.
Affiliated Sante' Group- Eastern Shore Crisis Response	Department of Juvenile Services
APG Federal Credit Union and Local Management Board	Department of Social Services - Workforce Development
Bayside Community Network, Inc	Heritage Pregnancy and Family Health Center
Bee My Voice Inc	Hollingsworth Landing Association
Bodhi Counseling	Maryland Department of Health
Calvert Manor Center for Rehabilitation & Healthcare	Maryland EXCELS
Cecil Community Recovery Center	Meeting Ground
Cecil County Circuit Court Drug Court Program	NAACP
Cecil County Community Mediation Center	North East Police Department
Cecil County Community Supported Agriculture	On Our Own of Cecil County, Inc.
Cecil County Council	Shorehaven
Cecil County Department of Community Services	Stone Run Family Medicine
Cecil County Department of Social Services	Stone Run Family Medicine
Cecil County Detention Center	The Judy Center of Cecil County
Cecil County Family YMCA	The Paris Foundation
Cecil County Government	The Tome School
Cecil County Health Department	Tomlinson Writer
Cecil County Men's Shelter, Inc.	Upper Bay Counseling & Support Services
Cecil County Public Schools	Voices of Hope, Inc
Cecil Pregnancy & Family Resource Center	Voices of Hope, Inc
Christiana Care Union Hospital of Cecil County	Wayfarers' House
ChristianaCare Office of Health Equity	West Cecil Health Center
Clínica Médica Primaria de Rising Sun	Youth Empowerment Source
Court Appointed Special Advocates for Cecil County	

APPENDIX D – CHSI PEER COUNTIES

County Health Rankings has assembled community health data for all 3,143 counties in the United States. Following a methodology developed by the Centers for Disease Control's *Community Health Status Indicators* Project (CHSI), County Health Rankings also publishes lists of "peer counties," so comparisons with peer counties in other states can be made. Each county in the U.S. is assigned 30 to 35 peer counties based on 19 variables including population size, population growth, population density, household income, unemployment, percent children, percent elderly, and poverty rates. **Exhibit 49** lists peer counties for Cecil County, Maryland.

APPENDIX D – CHSI PEER COUNTIES

Exhibit 49: CHSI Peer Counties

Cecil County, MD
Clinton County, Illinois
Grundy County, Illinois
Jersey County, Illinois
Madison County, Illinois
Dearborn County, Indiana
Harrison County, Indiana
Jasper County, Indiana
Morgan County, Indiana
Newton County, Indiana
Porter County, Indiana
Putnam County, Indiana
Shelby County, Indiana
Union County, Indiana
Bullitt County, Kentucky
Spencer County, Kentucky
Cecil County, Maryland
Barry County, Michigan
Lapeer County, Michigan
Isanti County, Minnesota
Mille Lacs County, Minnesota
Sibley County, Minnesota
Clinton County, Missouri
Franklin County, Missouri
Jefferson County, Missouri
Lafayette County, Missouri
Wayne County, New York
Clermont County, Ohio
Fairfield County, Ohio
Licking County, Ohio
Madison County, Ohio
Morrow County, Ohio
Pickaway County, Ohio
Cheatham County, Tennessee

APPENDIX E – IMPACT EVALUATION

Impact State Introduction

In January 2020, ChristianaCare expanded its reach with the acquisition of Union Hospital, in Cecil County, Maryland. This addition to the organization's portfolio solidifies its place as one of the country's most dynamic health care systems, centered on improving outcomes, making high-quality care more accessible and lowering costs. ChristianaCare also abides by the ChristianaCare Way:

We serve our neighbors as respectful, expert, caring partners in their health. We do this by creating innovative, effective, affordable systems of care that our neighbors value.

Impacts of COVID-19

ChristianaCare is guided by its commitment to partnering with our *neighbors* to better understand their needs and goals for health.

In March 2020, shortly after Union Hospital joined the ChristianaCare family, the COVID-19 pandemic was declared. Our focus, across the system, was an all-out response to support testing and expert-informed care to ensure all aspects of patient safety were addressed. ChristianaCare was a regional leader with our pandemic response, especially with the introduction of COVID-19 vaccinations. In Cecil County, Union Hospital hosted 196 vaccination clinics beginning on December 21, 2020. Caregivers also participated in community vaccination events like the Cecil County Fair and National Night Out in collaboration with the Cecil County Health Department and worked with large local businesses to provide vaccinations at locations in the community. Union Hospital also hosted 26 vaccination clinics at Cecil County public schools. In fiscal year 2021, Union Hospital provided a total of 30,841 vaccinations to community members. Of that number, 20,659 were first doses.

As we continued to work on integrating Union Hospital into ChristianaCare and serve our community with over 200 vaccination clinics, many of the community benefit activities typically undertaken, like community cancer screenings and student education at Union Hospital, had to be cancelled. It became apparent how much we relied upon being community-based to provide education, screenings, and other resources to our communities when these avenues for providing community benefit were no longer an option. Simply put: the specter of COVID-19 on almost all aspects of life are impossible to ignore; and many areas of work which were community-based were the first to shut down.

Reflection on Community Health Improvement Plan from 2019 CHNA

Union Hospital's 2019 CHIP included work plans in each of the three areas of need: cancer, behavioral health, and childhood trauma that were designed to be led by the CHAC without significant detail of how Union Hospital would address these areas of need either in partnership or independently. At ChristianaCare, we firmly believe that we can best serve our community through partnerships, however, going forward we want to share with our community our specific intentions to address the prioritized areas of need.

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Union Hospital's 2019 CHNA prioritized the following health needs in collaboration with the Cecil County Health Department (CCHD) and the Cecil County Community Health Advisory Committee (CHAC):

- Cancer
- Behavioral Health (comprised of mental health and substance use)
- Childhood Trauma

Cancer incidence rates have steadily declined in Cecil County over the last several years, but the incidence rate remains high in comparison to the state and nation. Unfortunately, cancer has had an impact on many Cecil County residents.

For the last ten years, behavioral health has been prioritized as an area of need. In the 2013 and 2016 CHNAs, substance use was identified as the number one health priority followed by mental health. Illicit drug use has been increasing in Cecil County in recent years, with opioid use and overdoses having a significant impact in our community.

Finally, childhood trauma was identified as an area of need because of the likelihood that members in our community suffered a trauma in childhood and the damaging impact it has throughout life. Adverse Childhood Experiences (ACE) is the term commonly used to describe all types of abuse, neglect, and other potentially traumatic experiences that occur to people under the age of 18. ACEs have been linked to risky behaviors, chronic health conditions, low life potential and premature death.

Cancer

Union Hospital's comprehensive cancer services include prevention, detection, inpatient and outpatient treatment, follow-up care, and ongoing support through a dedicated oncology social worker and the opportunity to participate in support groups such as the Breast Cancer Support Group. The Union Hospital cancer program is certified by the Commission on Cancer of the American College of Surgeons and is a recipient of its prestigious outstanding achievement award. Inpatient and outpatient services are offered at Union Hospital, at ChristianaCare's Helen F. Graham Cancer Center & Research Institute, and Radiation Oncologists, PA.

Union Hospital provides screenings for lung, breast, colorectal, and prostate cancers which are cancers that were the focus of our 2019 CHNA. Caregivers at Union Hospital also provide information to patients about screenings provided by the Cecil County Health Department. For the past several years prior to the 2019 CHNA, Union Hospital had provided free screenings for head and neck cancers and prostate screenings. Due to the coronavirus pandemic, these screenings were not held in fiscal years 2020 or 2021. A bright spot during the pandemic was a collaborative event with Cecil County Public Schools and the Union Hospital Breast Center in August 2020. Forty-one Cecil County educators received a mammogram at Union Hospital. Due to the success of that event, another event was planned for fiscal year 2022.

Union Hospital continues to provide low-dose CT (LDCT) screenings for lung cancer which detect malignant tumors before symptoms appear. This screening is significant because the earlier lung cancer can be detected, the better the chance of survival.

APPENDIX E – IMPACT EVALUATION

In fiscal year 2021, 298 patients received the LDCT scan at Union Hospital. We had expected fewer LDCT scans due to the pandemic, but this is significantly higher than the 241 scans completed in fiscal year 2020. Because smoking in adults in Cecil County is persistently high, this screening is a critically important offering for the community.

Due to the increase in smoking in Cecil County, and community concern with respiratory diseases including lung cancer, Union Hospital implemented the ability to refer patients through their electronic health record to Cecil County Health Department tobacco cessation programs. This development occurred in fiscal year 2020.

Another important aspect of the 2020 – 2022 CHIP was to support the work of Cecil County Cancer Task Force, which is comprised of leaders in cancer care, community health, social supports, public health, and the faith-based community. Representatives from Union Hospital participate on this committee and a Union Hospital caregiver chaired the committee in fiscal year 2021. Through participation in this committee, Union Hospital works with its community partners to promote education and awareness of cancer prevention and screenings and collaborates to meet objectives set by community partners.

Behavioral Health

Union Hospital works to address behavioral health issues within its community through direct programming and collaboration with community partners. Union Hospital has a 12-bed inpatient unit, an outpatient practice, and an Intensive Outpatient Program for adults struggling to manage mental health disorders. All these offerings seek to address the patients' needs holistically with a person-centered approach that relies on multi-disciplinary teams.

Union Hospital has continued to operate the Peer Recovery Advocates Program in collaboration with the Cecil County Health Department. Union Hospital caregivers identify individuals in the emergency department and the psychiatric unit who may suffer from a substance use disorder and then coordinate with the peer program to ensure those individuals connect with a peer. The peer then works to identify the individual's needs, get them into treatment, and get them connected with the appropriate community resources. Importantly, the peers remain in communication with these individuals to ensure continued success.

Unfortunately, the pandemic led to the peers not being able to serve patients on-site at the hospital. As a result, referrals dropped significantly from a high of 585 individuals referred to the peers in fiscal year 2019 to 285 individuals referred in fiscal year 2020, and only 119 individuals were referred to the peer program in fiscal year 2021. However, peers returned to the hospital in late June 2021.

Another positive development to address substance use disorder among families in Cecil County is our partnership with Serenity Health and Elkton Treatment Center. Prior to fiscal year 2020, Union caregivers volunteered at these two treatment providers in Elkton to provide expectant and new mothers with education on caring for infants and Neonatal Abstinence Syndrome (NAS). In fiscal year 2020, the decision was made to pay caregivers for their time providing education at Serenity Health. Due to very low attendance, this service was discontinued at Elkton Treatment Center. Serenity Health classes were

APPENDIX E – IMPACT EVALUATION

suspended in the latter months of fiscal year 2020 due to the pandemic, but the classes resumed in June 2021.

Childhood Trauma

Union Hospital caregivers participate on the Local Management Board of Cecil County which serves as the coordinator of collaboration for child and family services. The expectation is also that the NAS parenting education provided at Serenity Health, described previously, will also serve to prevent the occurrence of ACEs for a younger generation.

Union Hospital has also long supported the Child Advocacy Center (CAC), an organization whose mission is to partner for better investigation and assessment of abuse allegations, prosecution of offenders, and treatment for children and families impacted by child abuse and neglect. The CAC is a collaboration of agencies that facilitate multidisciplinary team investigations of child maltreatment and offers direct services to the child and family during and after the investigation. A Registered Nurse and Doctor attend meetings of the CAC to provide their expertise as well as perform examinations when there are abuse allegations.

Reimagining Opportunities with the 2022 CHNA

The CHNA for 2022 is the first ChristianaCare has undertaken in Cecil County. Fortunately, the spirit of collaboration is as strong in Maryland as it is in Delaware. We are pleased to complete this CHNA in partnership with the Cecil County Health Department (CCHD) and the Cecil County Community Health Advisory Committee (CHAC) just as Union Hospital had done before joining ChristianaCare. However, ChristianaCare Office of Health Equity, which is responsible for completing the CHNAs and Community Health Improvement Plans (CHIP) for ChristianaCare hospitals, will be making a significant adjustment from Union Hospital's prior Improvement Plan. In its 2022 CHIP, Union Hospital will prioritize areas of need based on community input and secondary data, and of equal importance will be Union Hospital's ability to address these needs independently of the CHAC or CCHD. Further, the 2022 CHIP will include specific Union Hospital activities to address the areas of need.

We are pleased to share that we are already responding to our community's needs with new programming and partnerships. Below is just a sample of some of that work.

- ChristianaCare's Office of Health Equity is training Union Hospital's first Pride Ambassadors. Earlier in the year, an inaugural class of 20 caregivers learned about LGBTQIA+ health topics as they relate to creating more equitable healthcare for LGBTQIA+ patients and families. Given the disparities we uncovered in the CHNA among this population, this was a prescient activity.
- Representatives from Union Hospital have also been working in partnership with Cecil County's Department of Emergency Services to develop a Mobile Integrated Health program which will address repetitive calls for ambulance service by working with the patient to address their illness. The outcome will be a healthier community and less stress on emergency services.

APPENDIX E – IMPACT EVALUATION

- ChristianaCare has launched Unite Maryland, a Unite Us network, in Cecil County. Unite Us is a coordinated care network of health and social service providers connected through a shared technology platform, Unite Us, which enables them to send and receive referrals to address individuals' social needs. We expect to use this platform to address our patients social need, but through our financial support of the platform, we are also ensuring it is available and free to other community-based organizations in Cecil County.
- Finally, the Office of Health Equity is also working to pilot a transportation program for Union Hospital CareVio Care Transformation Initiative patients. These patients will be provided free transportation to medical services to ensure they continue to get the care they need and avoid future hospitalization.

Planning for 2023, and Beyond

As we move past the current Covid-19 pandemic, ChristianaCare looks to the future with optimism and a commitment to serving the health needs of the Cecil County community. The opportunities presented in this 2022 CHNA provide a new road map for health care and community services in northeastern Maryland. Together with community partners, we will be intentional in our approach. We will work collaboratively to organize partnerships and allocate resources, and we will use the voices of the community to serve as our north star to provide expert care for all residents of Cecil County.