Mass General Brigham
Wentworth-Douglass Hospital

Community Health Needs Assessment | 2022

Mass General Brigham
Wentworth-Douglass Hospital

Dear patients and community members,

Wentworth-Douglass Hospital is pleased to share the results of our 2022 Community Health Needs Assessment. Every three years, we conduct this assessment and meet with community representatives to help us better understand the current and future health needs of communities within our service area. This assessment helps us identify how Wentworth-Douglass can focus our efforts to improve the overall health of the individuals and families we serve.

Based on a comprehensive data assessment, and in alignment with input from community members, our 2022 report identified nine significant health needs in our service area. These include *(in alphabetical order)*:

- Access to Primary Care Services
- Access to Long Term Services & Supports
- Chronic Disease
- Financial Barriers to Care
- Mental Health
- Obesity and Physical Inactivity
- Oral Health
- Social Determinants of Health
- Substance Use Disorders

An Implementation Strategy has been developed to help address these health needs over the next several years. This includes continuation of Wentworth-Douglass's current programs, such as free transportation via the Care Van service (as allowed by federal regulations), free and discounted care to those who cannot afford healthcare, and dental care for adults and children at the Community Dental Center. Additionally, we recognize the importance of addressing mental health needs within our community, so we are committed to continuing to expand mental health and substance use disorder treatment and prevention services. This includes providing access to appropriate providers and supporting our community in accessing resources, such as The Doorway. We also look forward to expanding our partnerships with agencies throughout our region to more effectively collaborate on health promotion, care delivery, and the development of local services.

As a non-profit hospital, Wentworth-Douglass will continue to implement efforts to improve the health of those we serve. We appreciate this opportunity to give back to our community. Thank you for allowing us to be part of your lives and for choosing us for your health care needs.

Sincerely,

John Salmon
Board of Trustees
Chair, Community Benefit Task Force
Wentworth-Douglass Hospital

Community Health Needs Assessment

Prepared for
Wentworth-Douglass Hospital

By
Verité Healthcare Consulting, LLC

August 18, 2022

Name of hospital organization operating hospital facility:	Wentworth-Douglass Hospital
EIN of hospital organization operating hospital facility:	46-1635259
Address of hospital organization:	789 Central Avenue, Dover, NH 03820
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Date of CHNA approval:	September 6, 2022
Web Address for CHNA Reports:	www.wdhospital.org/wdh/about-wdh/giving-back

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ABOUT WENTWORTH-DOUGLASS HOSPITAL

Wentworth-Douglass Hospital is a nationally recognized, not-for-profit charitable health care organization located in the Seacoast community of Dover, New Hampshire, with a 116-year history of compassionate care and innovation.

Serving its communities since 1906, Wentworth-Douglass is a family of 400 providers, and 3,500 employees, including more than 500 nurses, and 200 volunteers dedicated to the health, safety, and well-being of residents and visitors to the Seacoast area of New Hampshire and Southern Maine. Wentworth-Douglass Hospital includes a 178-bed Magnet® Recognized hospital, several urgent care and walk-in care facilities, multiple testing centers, 36 Wentworth Health Partners primary care and specialty care provider practices, The Works Health and Fitness Center and the Wentworth-Douglass Foundation. In 2017, Wentworth-Douglass Hospital joined the Massachusetts General Hospital family and Mass General Brigham system.

Wentworth-Douglass Hospital offers advanced technologies including the latest in minimally invasive surgery, including the daVinci® surgical robot, the conforMIS knee replacement, and more. The Seacoast Cancer Center offers the most comprehensive cancer care in the Seacoast, providing medical oncology, immunotherapy, and radiation oncology treatment. The Hospital is certified as a Level III Adult and Pediatric Trauma center and is the first Seacoast hospital to offer a Level IIB Neonatal Intensive Care Unit.

Additional information on the hospital and its services is available at https://www.wdhospital.org/wdh.

ABOUT VERITÉ HEALTHCARE CONSULTING

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 60 needs assessments for hospitals, health systems, and community partnerships nationally since 2010.

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.

EXECUTIVE SUMMARY

Introduction

This Community Health Needs Assessment (CHNA) was conducted by Wentworth-Douglass Hospital (Wentworth-Douglass, WDH, or "the hospital") to identify significant community health needs and to inform development of an Implementation Strategy to address those needs. The hospital's assessment of community health needs also responds to regulatory requirements.

Federal regulations require that tax-exempt hospital facilities conduct a CHNA every three years and adopt an Implementation Strategy that addresses significant community health needs. Tax-exempt hospitals also are required to report information about the CHNA process and about community benefits they provide on IRS Form 990, Schedule H. The State of New Hampshire also requires tax-exempt hospital facilities to conduct a needs assessment every five years.

As described in the instructions to Schedule H, community benefits are programs or activities that provide treatment and/or promote health and healing as a response to identified community needs. Community benefit activities and programs also seek to achieve objectives, including:

- Improving access to health services,
- Enhancing public health,
- Advancing increased general knowledge, and
- Relief of a government burden to improve health.[1]

To be reported, community need for the activity or program must be established. Need can be established by conducting a CHNA.

CHNAs seek to identify significant health needs for particular 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 question of ***how*** the hospital can best address significant needs is the subject of the separate Implementation Strategy.

This CHNA is conducted using widely accepted methodologies to identify the significant health needs of a specific community.

[1]Instructions for IRS form 990 Schedule H, 2015.

Methodology Summary

Federal regulations that govern the CHNA process allow hospital facilities to define the "community a hospital serves" 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 targeted disease)."[2] The community assessed by Wentworth-Douglass accounts for over 79 percent of the hospital's FY 2021 inpatient discharges.

Secondary data from multiple sources were gathered and assessed. Statistics for numerous health status, health care access, and related indicators were analyzed, including comparisons to benchmarks where possible. Findings from recent assessments of the community's health needs conducted by other organizations were reviewed as well.

Input from 42 individuals, from 25 internal and external organizations, representing the broad interests of the community was taken into account through key informant interviews. These informants represented the broad interests of the community and included individuals with special knowledge of or expertise in public health.

In addition, the CHNA development process also included data obtained in partnership with the University of New Hampshire Survey Center. The Survey Center conducted a web and text-based community health assessment survey with 519 participants from WDH's service area. This data was used to supplement Verité's data analysis.

Certain community health needs were determined to be "significant" if they were identified as problematic in two or more of the following three data sources: (1) recently available secondary data regarding the community's health, (2) recent assessments developed by state and county organizations, and (3) key informants who participated in the interview process.

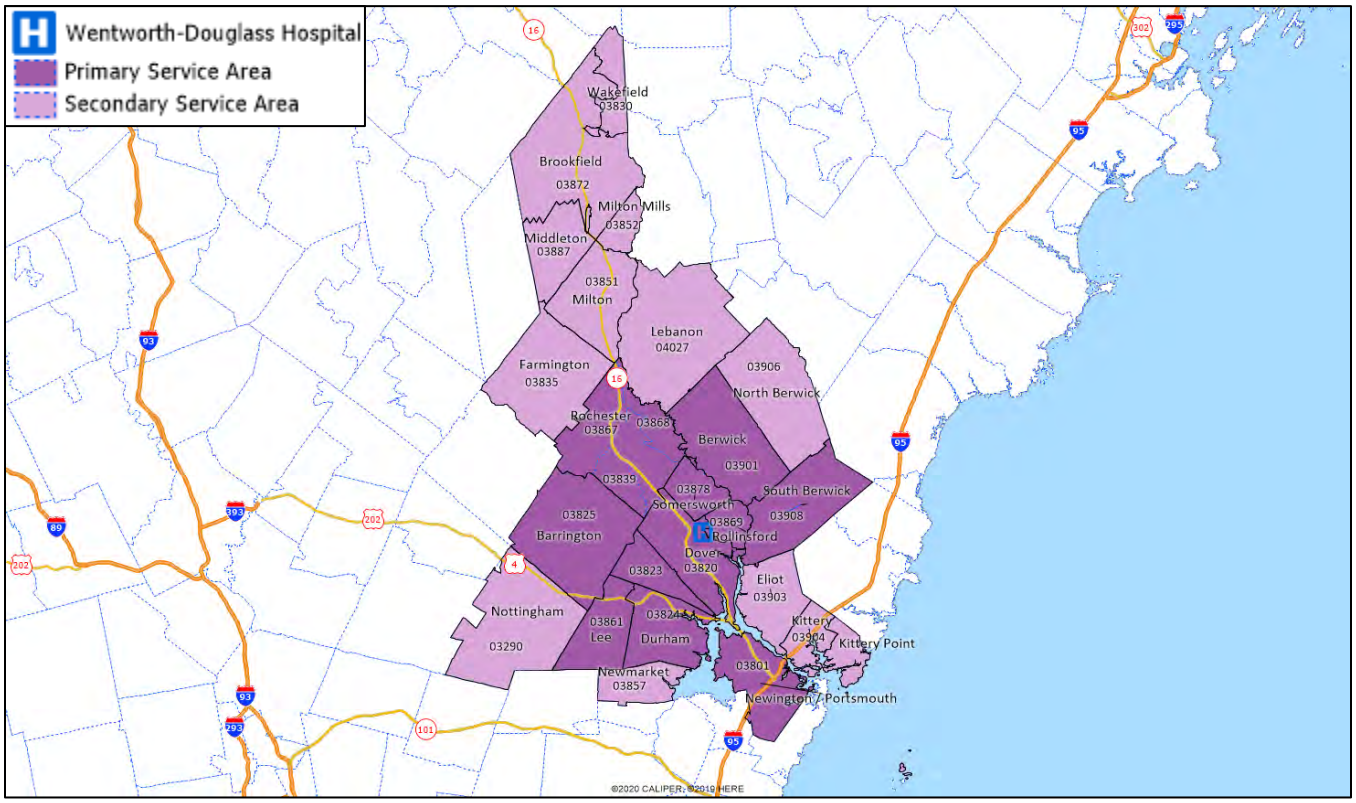
Input on Previous CHNA

No written comments were received regarding the previous CHNA.

[2] 501(r) Final Rule, 2014.

Community Definition

For purposes of this report, WDH's community is defined as 26 ZIP Codes representing 24 towns across Rockingham, Strafford and Carroll counties in New Hampshire and York County in Maine. The 24 towns are Barrington (ME), Berwick (ME), Dover (NH), Durham (NH), Eliot (ME), Farmington (NH), Kittery (ME), Kittery Point (ME), Lebanon (ME), Lee (NH), Madbury (NH), Middleton (NH), Milton (NH), Milton Mills (NH), Newington / Portsmouth (NH), Newmarket (NH), North Berwick (ME), Nottingham (NH), Rochester (NH), Rollinsford (NH), Somersworth (NH), South Berwick (ME), and Wakefield (NH). The community was defined by considering the geographic origins of the hospital's discharges in FY 2021. The total population of WDH's community in 2022 was 213,284. The map below portrays the community served by WDH.



Sources: Wentworth-Douglass Hospital and Caliper Maptitude

Significant Community Health Needs

Nine significant community health needs were identified through this assessment. These significant health needs are as follows, in alphabetical order:

1. Access to primary care services;
2. Access to long term services and supports;[3]
3. Chronic disease;
4. Financial barriers to care;
5. Mental health;
6. Obesity and physical inactivity;
7. Oral health;
8. Social determinants of health; and
9. Substance use disorders.

These significant health needs in the community served by WDH were identified based on analyses of secondary data, primary data received through interviews with interested parties, and assessments produced by public health departments. Categories of community health needs are topic areas consistent with the New Hampshire Community Benefits Reporting Guide, December 2020[4] and Healthy People 2020 and Healthy People 2030, ten-year national health objectives of the U.S. Department of Health and Human Services. Details are summarized below, with descriptions of topics based on information from Healthy People 2020, Healthy People 2030, the Centers for Disease Control and Prevention.[5, 6] In addition, Mass General Brigham also identified cardiometabolic disease and substance use disorder as significant health needs.

Significant needs can impact all residents, irrespective of demographic characteristics. While every community can experience need, the following population groups may be especially vulnerable to the significant needs identified for this CHNA:

1. Children and youth;
2. Older adults;
3. LGBTQIA+[7] individuals;
4. Racial/ethnic minorities; and
5. Low-income residents.

Note: The COVID-19 pandemic had an immediate impact on the world since its emergency in late 2019. Testing, vaccinating, and treatment options have evolved, yet the pandemic continue to exacerbate numerous health-related needs within the community. As COVID-19 prevention and management options have improved, this CHNA recognizes the impact of COVID-19 on significant needs within the community. Should the pandemic worsen, it would be appropriate to evaluate the potential consideration of COVID-19 as a separate significant community need.

[3] https://www.medicaid.gov/medicaid/long-term-services-supports/index.html
[4] https://www.doj.nh.gov/charitable-trusts/documents/community-benefits-guide.pdf
[5] https://www.healthypeople.gov/2020/topics-objectives
[6] https://health.gov/healthypeople
[7] Lesbian, Gay, Bisexual, Transgender, Intersex, Queer and/or Questioning, and Asexual and/or Ally and others.

1. Access to Primary Care Services. Access to health is the timely use of health-related services. For the purposes of this CHNA, *Access to Primary Care Services* includes entry to the health care system through insurance, geographic accessibility, and culturally competent providers.

- The ratio of population to primary care physicians is higher for Rockingham and Strafford counties as compared to New Hampshire, as well as higher for York County as compared to Maine (***Exhibit 17D***);
- The 2022 York County Maine Shared Community Health Needs Assessment identified "Access to Care" as one of four top concerns by forum participants (***Findings of Other Assessments***); and
- In a Spring 2022 survey of community members conducted for Wentworth-Douglass Hospital by The University of New Hampshire Survey Center (UNH 2022 Survey), 25 percent of respondents indicated that there was at least one instance in which a routine physical exam or check-up could not be scheduled in the past 12 months (***Primary Data Assessment***).

2. Access to Long Term Services and Supports. Some older adults and community members with conditions that impact participation may require assistance to meet activities of daily living. For the purposes of this CHNA, *Access to Long Term Services and Supports* includes a range of services, from home-based assistance to community-based support to institutional care.

- The number of persons aged 65 years and older in the community is projected to increase by nearly 18 percent between 2022 and 2027 (***Exhibit 5***);
- More than ten percent of community members have a disability (***Exhibit 9***) or cognitive issues, such as "difficulty concentrating, remembering, or making decisions," and physical issues, such as "serious difficulty walking or climbing stairs" (***Exhibit 24D***); and
- In the UNH 2022 Survey, 14 percent of respondents selected "Long-term care" and 13 percent selected "Home health or hospice care" as services unavailable or inadequate to meet the needs of the community (***Primary Data Assessment***).

3. Chronic Disease. Chronic diseases are "conditions that last 1 year or more and require ongoing medical attention or limit activities of daily living or both."[8] For the purposes of this CHNA, *Chronic Disease* focuses on physical conditions such as heart disease and cancer.[9]

- Age-adjusted death rates within the WDH service area for several causes of death, including heart failure, hypertensive heart disease, and certain types of cancer were higher than the overall New Hampshire rate (***Exhibit 19)***;
- The Maine State Health Improvement Plan, 2018-2020, identified "cancer" and "chronic diseases" as two of the five state-wide health improvement efforts (***Findings of Other Assessments***); and
- Chronic disease was identified by interview participants as an issue within the community, and one that worsened because of the COVID-19 pandemic due to deferred disease management (***Primary Data Assessment***).

4. Financial Barriers to Care. Barriers to care are obstacles that prevent or limit access to needed health-related services, which may increase the risk of poor health outcomes and health disparities. For the purposes of this CHNA, *Financial Barriers to Care* focuses on obstacles that impede utilization of existing health and human service providers due to lack of financial resources or lack of health insurance.

- Low-income census tracts are present throughout the community (***Exhibit 11***);
- Interview participants indicated that access to care is especially an issue for individuals without insurance (***Primary Data Assessment***); and
- In the UNH 2022 Survey among those respondents who indicated an inability to get needed or wanted medical over the last year, 31 percent selected "Deductible, co-pay or co-insurance is too expensive" as the reason (***Primary Data Assessment***).

[8] https://www.cdc.gov/chronicdisease/about/index.htm
[9] https://www.cdc.gov/chronicdisease/about/index.htm

5. Mental Health. Mental health contributes to good physical health because mental illnesses affect people's ability to participate in health-promoting behaviors. Physical health also contributes to mental health because chronic diseases affect impact on mental health. For the purposes of this CHNA, *Mental Health* includes disorders, such as depression and anxiety, and severe and persistent mental illness.

- The ratio of population to mental health providers is higher for Rockingham and Strafford counties as compared to New Hampshire, as well as higher for York County as compared to Maine (***Exhibit 17D***);
- The Maine State Health Improvement Plan, 2018-2020, identified "mental health" as one of the five state-wide health improvement efforts and the Seacoast Public Health Network Community Health Improvement Plan, 2019-2022, identified "behavioral health" as one of the five priority areas (***Findings of Other Assessments***); and
- All interview participants indicated that mental health is one of the most significant health needs within the community and nearly thirty percent of respondents in the UNH 2022 Survey selected "Mental health counseling for adults" and "Mental health counseling for youth" as services unavailable or inadequate to meet the needs of the community (***Primary Data Assessment***).

6. Obesity and Physical Inactivity

Diet and body weight are related to health status, and healthy diets can help individuals reduce risks for many health conditions.[10] Regular physical activity can improve the health and quality of life for individuals of all ages, regardless of the presence of a chronic disease or disability.[11] Healthy body weight and regular physical activity can lower the risks of coronary heart disease, stroke, high blood pressure, and type 2 diabetes.[12] For the purposes of this CHNA, *Obesity and Physical Inactivity* is treated as a distinct need although the topics could be included in other needs.

- Approximately 35 percent of community members are overweight and approximately 30 percent are obese (***Exhibit 24F***);
- More than 20 percent of adults report no leisure-time physical activity (***Exhibit 17C***) less than 25 of youth report daily physical activity of at least an hour (***Exhibit 25A*** and ***Exhibit 25B***);
- The Maine State Health Improvement Plan, 2018-2020, identified "healthy weight" as one of the five state-wide health improvement efforts and the Strafford County Public Health Network Community Health Improvement Plan, 2018-2021, identified "obesity and nutrition" as one of the five priority areas (***Findings of Other Assessments***).

[10] https://www.healthypeople.gov/2020/topics-objectives/topic/nutrition-and-weight-status
[11] https://www.healthypeople.gov/2020/topics-objectives/topic/physical-activity
[12] https://www.healthypeople.gov/2020/topics-objectives/topic/physical-activity and https://www.healthypeople.gov/2020/topics-objectives/topic/nutrition-and-weight-status

7. Oral Health. Oral health, including care of the teeth and mouth, is central to overall health and well-being. Oral health issues include dental caries (tooth decay), periodontal (gum) diseases, and oral and pharyngeal (mouth and throat) cancers.[13] For the purposes of this CHNA, *Oral Health* is treated as a distinct need although the topics could be included in other needs.

- The ratio of population to dentists is higher for Rockingham and Strafford counties as compared to New Hampshire, as well as higher for York County as compared to Maine (***Exhibit 17D***);
- Approximately 25 percent of community members did not visit a dentist or dental clinic during the last year (***Exhibit 24F***);
- Interview participants indicated the demand for oral services has increased while the supply of oral health professionals has decreased, and over ten percent of respondents in the UNH 2022 Survey selected "Dental care for adults" and "Dental care for youth" as services unavailable or inadequate to meet the needs of the community (***Primary Data Assessment***).

8. Social Determinants of Health. Social determinants of health are social, economic, physical, and other conditions that affect a wide range of health outcomes. Quality of life is affected by access to resources, including housing, education, public safety, and healthy food.[14] For the purposes of this CHNA, *Social Determinants of Health* includes access to safe and affordable housing, food security, transportation, and poverty.

- Low-income census tracts and food deserts exist within the community (***Exhibit 11*** and ***Exhibit 28***) and more than 10 percent of households experience severe housing problems (***Exhibit 17F***);
- The 2022 York County Maine Shared Community Health Needs Assessment identified "Social determinants of health" as one of four top concerns by forum participants (***Findings of Other Assessments***); and
- Interview participants indicated that the COVID-19 pandemic increased basic needs insecurity, including access to food, transportation, and affordable housing (***Primary Data Assessment***).

[13] https://www.healthypeople.gov/2020/topics-objectives/topic/oral-health
[14] https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health

9. Substance Use Disorders. Substance use disorders have major impacts on individuals, families, and communities. Substance abuse is cumulative and significant to numerous costly social, physical, mental, and public health problems.[15] For the purposes of this CHNA, *Substance Use Disorders* includes misuse of prescription medications, illegal drugs, and alcohol, as well as use of tobacco.

- Approximately 20 percent of adults in the community report heavy drinking and/or binge drinking (***Exhibit 17C***), and approximately 10 percent of youth report using prescription drugs without a prescription or used differently (***Exhibit 25A*** and ***Exhibit 25B***);
- The Maine State Health Improvement Plan, 2018-2020, identified "mental health" as one of the five state-wide health improvement efforts and the Seacoast Public Health Network Community Health Improvement Plan, 2019-2022, identified "behavioral health" as one of the five priority areas (***Findings of Other Assessments***); and
- Interview participants indicated the prevalence of substance use disorder has increased during but has been overshadowed by the COVID-19 pandemic, and sixty percent of respondents in the UNH 2022 Survey selected "Substance misuse and the opioid crisis" as an area on which hospitals should focus to improve community health (***Primary Data Assessment***).

[15] https://www.healthypeople.gov/2020/topics-objectives/topic/substance-abuse

CHNA DATA AND ANALYSIS

METHODOLOGY

This section provides information on how the CHNA was conducted.

Data Sources

Community health needs were identified by collecting and analyzing data from multiple sources. Considering a vast 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.

Statistics for numerous community health indicators were analyzed, including data provided by local, state, and federal government agencies, local community service organizations, and Wentworth-Douglass. Comparisons to benchmarks were made wherever possible. This CHNA also incorporated findings from other recently conducted, relevant state and county health assessments. In addition, the CHNA development process also included data obtained in partnership with the University of New Hampshire Survey Center. The Survey Center conducted a web and text-based community health assessment survey with 519 participants from WDH's service area. This data was used to supplement Verité's data analysis.

Input from 42 individuals, from 25 internal and external organizations, representing the broad interests of the community was taken into account through key informant interviews. Interviewees included: individuals with special knowledge of or expertise in public health; local public health departments; agencies with current data or information about the health and social needs of the community; representatives of social service organizations; and leaders, representatives, and members of medically underserved, low-income, and minority populations.

Collaborating Organizations

The Wentworth-Douglass Hospital committee, who guided development of this CHNA, included representatives from Wentworth Health Partners.

Prioritization Process

Certain community health needs were determined to be "significant" if they were identified as problematic in two or more of the following three data sources: (1) recently available secondary data regarding the community's health, (2) recent assessments developed by state and county organizations, and (3) key informants who participated in the interview process.

Information Gaps

This CHNA relies on multiple data sources and community input gathered in Spring 2022. A number of data limitations should be recognized when interpreting results. For example, some data, such as County Health Rankings, exist only at a county-wide level of detail. Those data sources do not allow assessment of health needs at a more granular level of detail, such as by ZIP Code or census tract.

Secondary data upon which this assessment relies measure community health in prior years. For example, the most recent mortality rates available for the region were data collected for 2019. The impacts of the most recent public policy developments, changes in the economy, and other community developments are not yet reflected in those data sets.

The findings of this CHNA may differ from those of others conducted in the community. Differences in data sources, communities assessed (such as hospital service areas versus counties or cities), and prioritization processes can contribute to differences in findings.

Definition of Community Assessed

Definition of Community Assessed

This section identifies the community that was assessed by Wentworth-Douglass Hospital. The community was defined by considering the geographic origins of the hospital's FY 2021 inpatient discharges. Wentworth-Douglass Hospital's community is comprised of 26 ZIP Codes representing 24 towns across Rockingham, Strafford, and Carroll counties in New Hampshire and York County in Maine, as listed in ***Exhibit 1***.

Exhibit 1: Wentworth-Douglass Inpatient Discharges by City/Town, FY 2021

City / Town	Zip Code(s)	County (State)	Inpatient Cases FY 2021	Percent of Inpatient Cases
Primary Service Area Subtotal			**5,663**	**63.9%**
Barrington	03825	Strafford (NH)	381	4.3%
Berwick	03901	York (ME)	391	4.4%
Dover	03820	Strafford (NH)	1,704	19.2%
Durham	03824	Strafford (NH)	238	2.7%
Lee	03861	Strafford (NH)	168	1.9%
Madbury	03823	Strafford (NH)	91	1.0%
Newington / Portsmouth	03801	Rockingham (NH)	243	2.7%
Rochester	03839,03867,03868	Strafford (NH)	1,316	14.9%
Rollinsford	03869	Strafford (NH)	127	1.4%
Somersworth	03878	Strafford (NH)	760	8.6%
South Berwick	03908	York (ME)	244	2.8%
Secondary Service Area Subtotal			**1,387**	**15.7%**
Brookfield	03872	Carroll (NH)	101	1.1%
Eliot	03903	York (ME)	118	1.3%
Farmington	03835	Strafford (NH)	229	2.6%
Kittery	03904	York (ME)	70	0.8%
Kittery Point	03905	York (ME)	12	0.1%
Lebanon	04027	York (ME)	187	2.1%
Middleton	03887	Strafford (NH)	55	0.6%
Milton	03851	Strafford (NH)	150	1.7%
Milton Mills	03852	Strafford (NH)	23	0.3%
Newmarket	03857	Rockingham (NH)	103	1.2%
North Berwick	03906	York (ME)	172	1.9%
Nottingham	03290	Rockingham (NH)	127	1.4%
Wakefield	03830	Carroll (NH)	40	0.5%
Community Total			**7,050**	**79.6%**
Other Areas			1,809	20.4%
Total Discharges			**8,859**	**100.0%**

Source: Wentworth-Douglass Hospital, 2022

Exhibit 1 summarizes WDH discharges by city/town for 2021. Nearly 80 percent of WDH's 8,859 inpatient discharges in 2021 were residents of the 26 ZIP Codes which define the community.

Exhibit 2: Community Population, 2022

City/Town	ZIP Code	County (State)	Estimated Population 2022	Percent of Total Population 2022
Primary Service Area Subtotal			**149,304**	**70.0%**
Barrington	03825	Strafford (NH)	9,903	4.6%
Berwick	03901	York (ME)	8,179	3.8%
Dover	03820	Strafford (NH)	33,126	15.5%
Durham	03824	Strafford (NH)	15,376	7.2%
Lee	03861	Strafford (NH)	4,360	2.0%
Madbury	03823	Strafford (NH)	1,878	0.9%
Newington / Portsmouth	03801	Rockingham (NH)	21,980	10.3%
Rochester	03839, 03867, 03868	Strafford (NH)	32,162	15.1%
Rollinsford	03869	Strafford (NH)	2,352	1.1%
Somersworth	03878	Strafford (NH)	12,275	5.8%
South Berwick	03908	Strafford (NH)	7,713	3.6%
Secondary Service Area Subtotal			**63,980**	**30.0%**
Brookfield	03872	Carroll (NH)	4,146	1.9%
Eliot	03903	York (ME)	6,588	3.1%
Farmington	03835	Strafford (NH)	7,398	3.5%
Kittery	03904	York (ME)	7,942	3.7%
Kittery Point	03905	York (ME)	1,895	0.9%
Lebanon	04027	York (ME)	6,737	3.2%
Middleton	03887	Strafford (NH)	2,381	1.1%
Milton	03851	Strafford (NH)	4,514	2.1%
Milton Mills	03852	Strafford (NH)	560	0.3%
Newmarket	03857	Rockingham (NH)	9,645	4.5%
North Berwick	03906	York (ME)	4,964	2.3%
Nottingham	03290	Rockingham (NH)	5,456	2.6%
Wakefield	03830	Carroll (NH)	1,754	0.8%
Community Total			**213,284**	**100.0%**

Source: Nielsen Solution Center and Wentworth-Douglass Hospital, 2022

Description

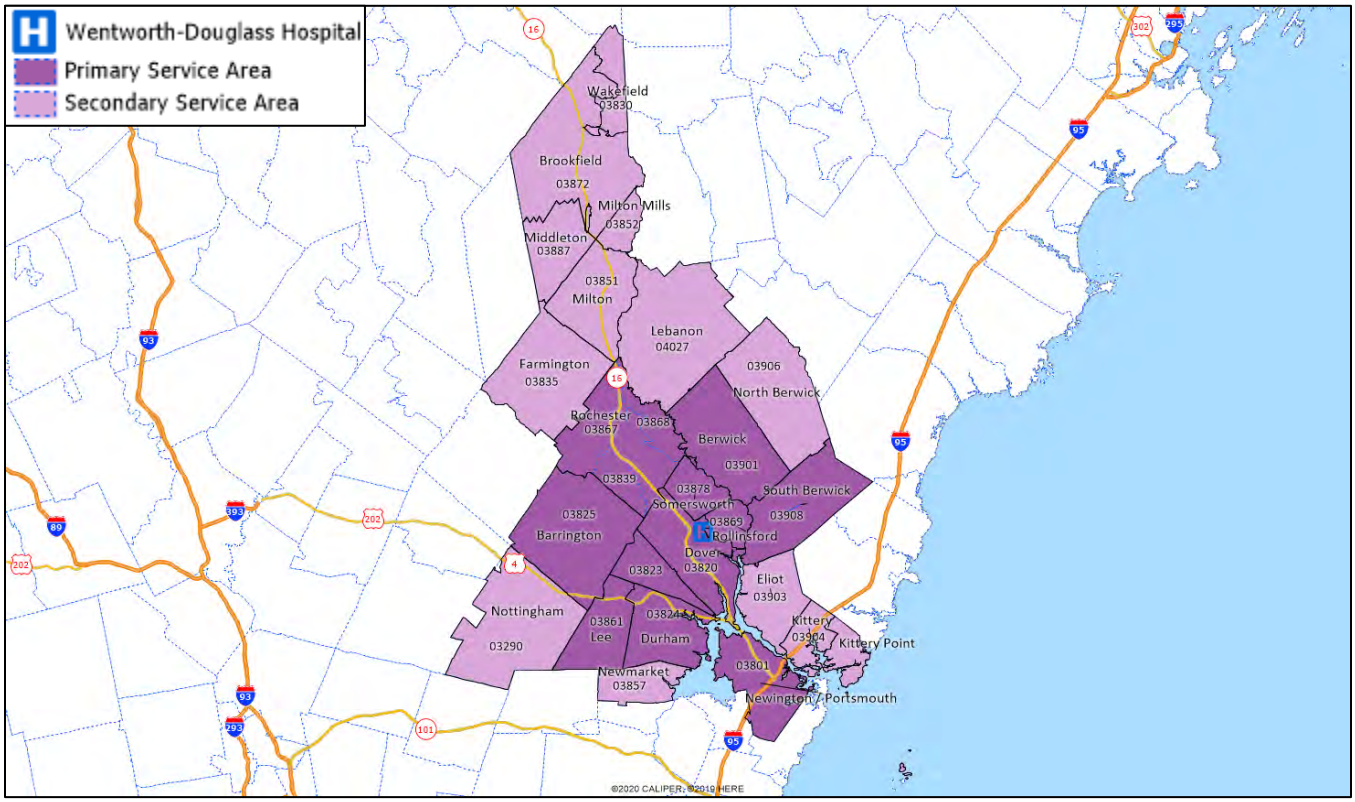
Exhibit 2 summarizes the 2022 estimated population by city/town.

Observations

Understanding the size of the population helps to enhance the understanding of the magnitude of health needs in the community. Data in ***Exhibit 2*** indicate the following:

- The total 2022 population of the community is nearly 215,000 persons;
- Residents of the primary service area represent 70.0 percent of the community population; and
- Residents of the secondary service area represent 30.0 percent of the community population.

Exhibit 3: Wentworth-Douglass Hospital Community



Sources: Wentworth-Douglass Hospital, 2022, and Caliper Maptitude.

Description

Exhibit 3 presents ZIP Codes and cities/towns that are included in the WDH community definition for this CHNA.

Observations

Mapping the geography of a community can inform understanding the scale of community health needs. Data in ***Exhibit 3*** indicate the following:

- The 26 ZIP Codes, representing twelve towns across Rockingham, Strafford, York, and Carroll counties, are contiguous; and
- WDH is approximately in the geographic center of the primary service area of the community.

SECONDARY DATA ASSESSMENT

This section presents an assessment of secondary data regarding health needs in the Wentworth-Douglass community.

Exhibit 4: Percent Change in Community Population by ZIP Code, 2022-2027

City/Town	ZIP Code	County (State)	Estimated Population 2022	Estimated Population 2027	Percent Change 2022-27
Primary Service Area Subtotal			**149,304**	**154,190**	**3.3%**
Barrington	03825	Strafford (NH)	9,903	10,433	5.4%
Berwick	03901	York (ME)	8,179	8,568	4.8%
Dover	03820	Strafford (NH)	33,126	34,489	4.1%
Durham	03824	Strafford (NH)	15,376	15,675	1.9%
Lee	03861	Strafford (NH)	4,360	4,481	2.8%
Madbury	03823	Strafford (NH)	1,878	1,964	4.6%
Newington / Portsmouth	03801	Rockingham (NH)	21,980	22,388	1.9%
Rochester	03839, 03867, 03868	Strafford (NH)	32,162	33,307	3.6%
Rollinsford	03869	Strafford (NH)	2,352	2,374	0.9%
Somersworth	03878	Strafford (NH)	12,275	12,570	2.4%
South Berwick	03908	Strafford (NH)	7,713	7,941	3.0%
Secondary Service Area Subtotal			**63,980**	**66,456**	**3.9%**
Brookfield	03872	Carroll (NH)	4,146	4,346	4.8%
Eliot	03903	York (ME)	6,588	6,784	3.0%
Farmington	03835	Strafford (NH)	7,398	7,698	4.1%
Kittery	03904	York (ME)	7,942	8,126	2.3%
Kittery Point	03905	York (ME)	1,895	1,926	1.6%
Lebanon	04027	York (ME)	6,737	7,043	4.5%
Middleton	03887	Strafford (NH)	2,381	2,482	4.2%
Milton	03851	Strafford (NH)	4,514	4,712	4.4%
Milton Mills	03852	Strafford (NH)	560	577	3.0%
Newmarket	03857	Rockingham (NH)	9,645	10,002	3.7%
North Berwick	03906	York (ME)	4,964	5,139	3.5%
Nottingham	03290	Rockingham (NH)	5,456	5,771	5.8%
Wakefield	03830	Carroll (NH)	1,754	1,850	5.5%
Community Total			**213,284**	**220,646**	**3.5%**

Sources: Nielsen Solution Center and Wentworth-Douglass Hospital, 2022.

Description

Exhibit 4 summarizes the estimated 2022 and projected 2027 populations by town.

Observations

Population indicators are relevant because population estimates are necessary to quantify the current and projected community. Data in ***Exhibit 4*** indicate the following:

- Between 2022 and 2027, the community population is projected to increase by 3.5 percent; and
- The population is projected to increase most rapidly in Nottingham (5.8 percent) and Wakefield (5.5 percent).

Exhibit 5: Percent Change in Population by Age/Sex Cohort, 2022-2027

Age/Sex Cohort	Estimated Population 2022	Estimated Population 2027	Percent Change 2022-2027
Primary Service Area	**149,304**	**154,190**	**3.3%**
0-17	26,698	26,423	-1.0%
Female 18-44	31,950	32,113	0.5%
Male 18-44	26,788	27,062	1.0%
45-64	38,216	38,453	0.6%
65+	25,652	30,139	17.5%
Secondary Service Area	**63,980**	**66,456**	**3.9%**
0-17	12,617	12,564	-0.4%
Female 18-44	11,106	11,310	1.8%
Male 18-44	9,192	9,320	1.4%
45-64	18,387	18,286	-0.5%
65+	12,678	14,976	18.1%
Community Total	**213,284**	**220,646**	**3.5%**
0-17	39,315	38,987	-0.8%
Female 18-44	43,056	43,423	0.9%
Male 18-44	35,980	36,382	1.1%
45-64	56,603	56,739	0.2%
65+	38,330	45,115	17.7%
Maine	**1,367,533**	**1,397,447**	**2.2%**
0-17	248,122	244,900	-1.3%
Female 18-44	213,263	213,181	0.0%
Male 18-44	216,972	219,721	1.3%
45-64	381,935	370,643	-3.0%
65+	307,241	349,002	13.6%
New Hampshire	**1,386,515**	**1,426,804**	**2.9%**
0-17	253,260	249,379	-1.5%
Female 18-44	226,173	228,964	1.2%
Male 18-44	236,028	240,629	1.9%
45-64	394,278	385,978	-2.1%
65+	276,776	321,854	16.3%
United States	**334,279,739**	**344,999,336**	**3.2%**
0-17	73,544,423	73,928,211	0.5%
Female 18-44	58,678,351	59,113,655	0.7%
Male 18-44	60,280,791	61,288,210	1.7%
45-64	83,266,282	83,232,270	0.0%
65+	58,509,892	67,436,990	15.3%

Source: Nielsen Solution Center and Wentworth-Douglass Hospital, 2022.

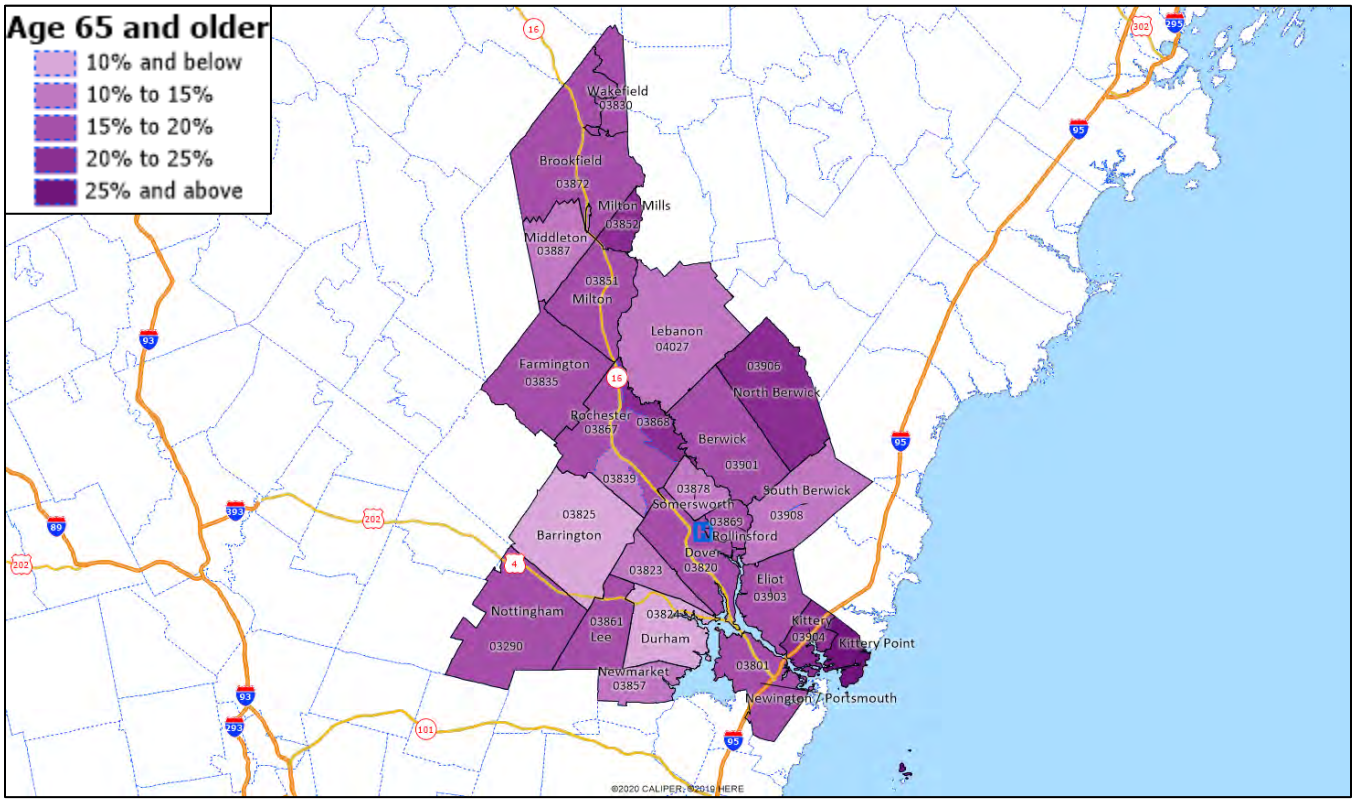
Description

Exhibit 5 summarizes the estimated 2022 and projected 2027 populations by town.

Observations

Population characteristics and changes directly influence community health needs. Different segments of the population can have different characteristics. Data in ***Exhibit 5*** indicate the number of persons aged 65 years and older in the community is projected to increase by approximately 18 percent between 2022 and 2027.

Exhibit 6A: Percent of Population Aged 65+ by ZIP Code, 2019



Source: Caliper Maptitude and Census ACS (2015-2019)
Note that density of shading on this map is not comparable to the density of shading of other maps. The legend is specific to this map.

Description

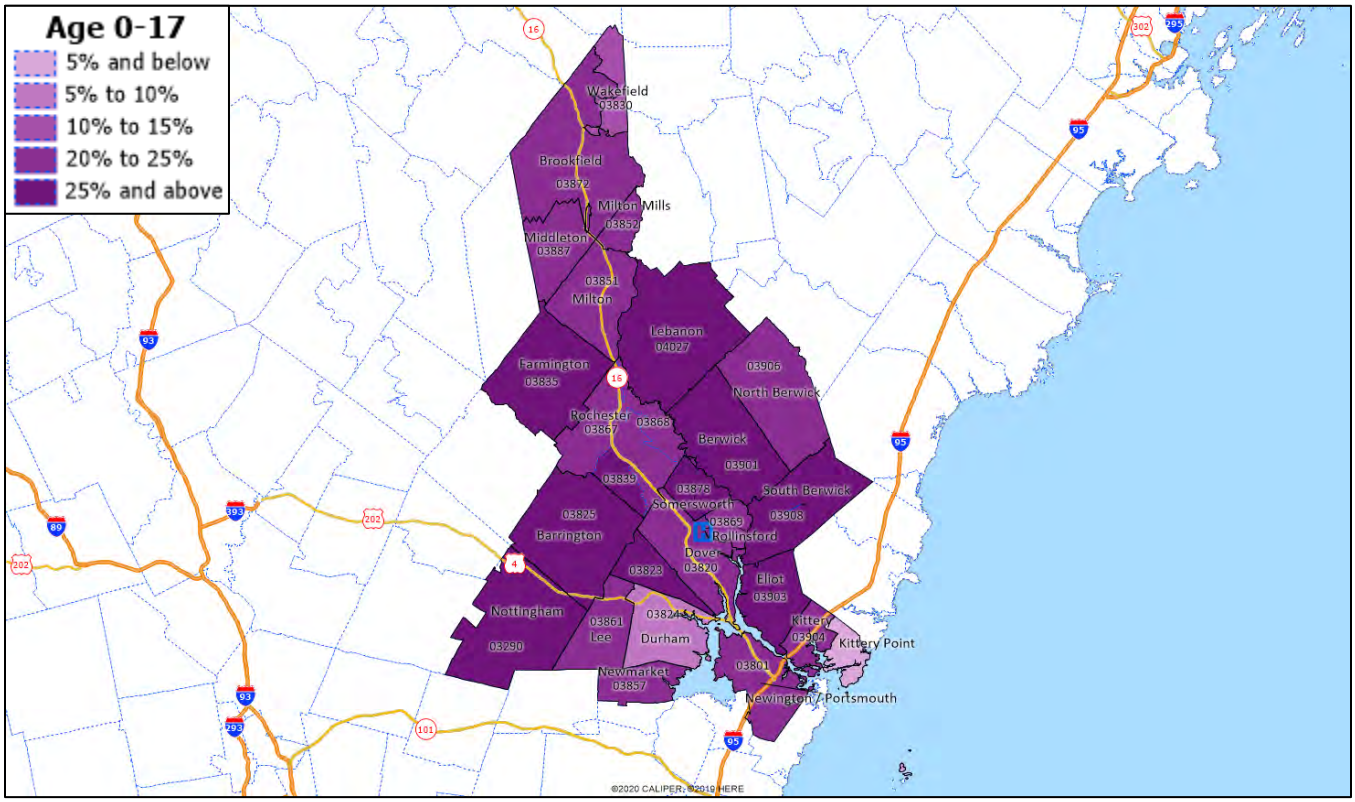
Exhibit 6A presents estimated 2019 residents aged 65 and older by ZIP Code.

Observations

Population characteristics directly influence community health needs as different segments of the population can have different characteristics. Estimating residents aged 65 and older is relevant because members of this population can have unique health needs which should be considered separately from other age groups. Additionally, older individuals typically need and use more services than younger persons. Data in ***Exhibit 6A*** indicate the following:

- Rochester ZIP Code 03868, Kittery ZIP Code 03904, Kittery Point ZIP Code 03905, Milton Mills ZIP Code 03852, and Newmarket ZIP Code 03857 have proportions of population aged 65 and older of 20 percent or more.

Exhibit 6B: Percent of Population Aged 0-17 by ZIP Code, 2019



Source: Caliper Maptitude and Census ACS (2015-2019)
Note that density of shading on this map is not comparable to the density of shading of other maps. The legend is specific to this map.

Description

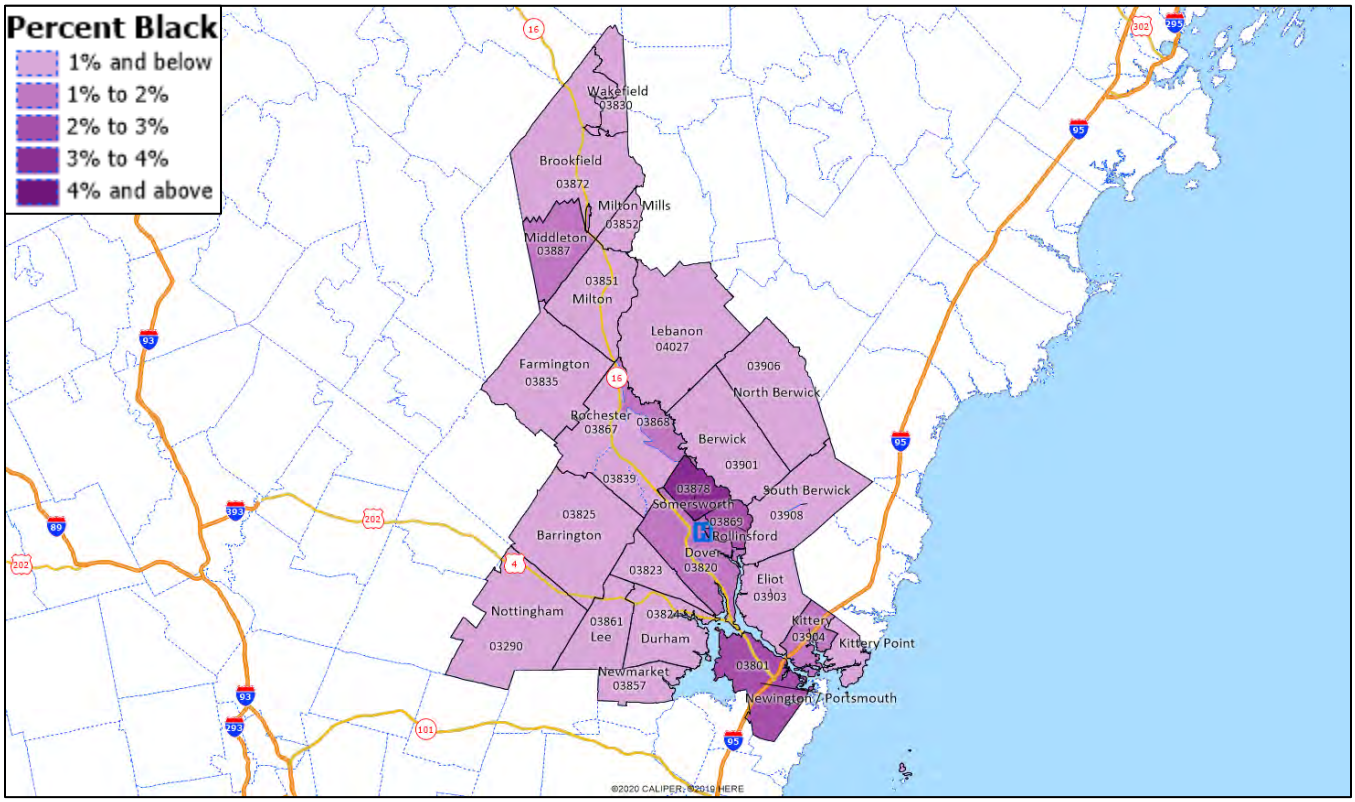
Exhibit 6B presents estimated 2019 residents aged 0-17 by ZIP Code.

Observations

Population characteristics directly influence community health needs as different segments of the population can have different characteristics. Estimating pediatric residents (infants, children, and youth) is relevant because members of this population cohort can have unique health needs which should be considered separately from other age groups. Data in ***Exhibit 6B*** indicate the following:

- Barrington ZIP Code 03825, Berwick ZIP Code 03901, Madbury ZIP Code 03823, Rochester ZIP Code 03839, Somersworth ZIP Code 03878, South Berwick ZIP Code 03908, Eliot ZIP Code 03903, Farmington ZIP Code 03835, Lebanon ZIP Code 04027, and Nottingham ZIP Code 03290 have proportions of population aged 0-17 of 20 percent or more.

Exhibit 7A: Percent of Population by Black or African-American Race, 2019



Source: Caliper Maptitude and Census ACS (2015-2019)
Note that density of shading on this map is not comparable to the density of shading of other maps. The legend is specific to this map.

Description

Exhibit 7A presents estimated 2019 Black or African American residents by ZIP Code.

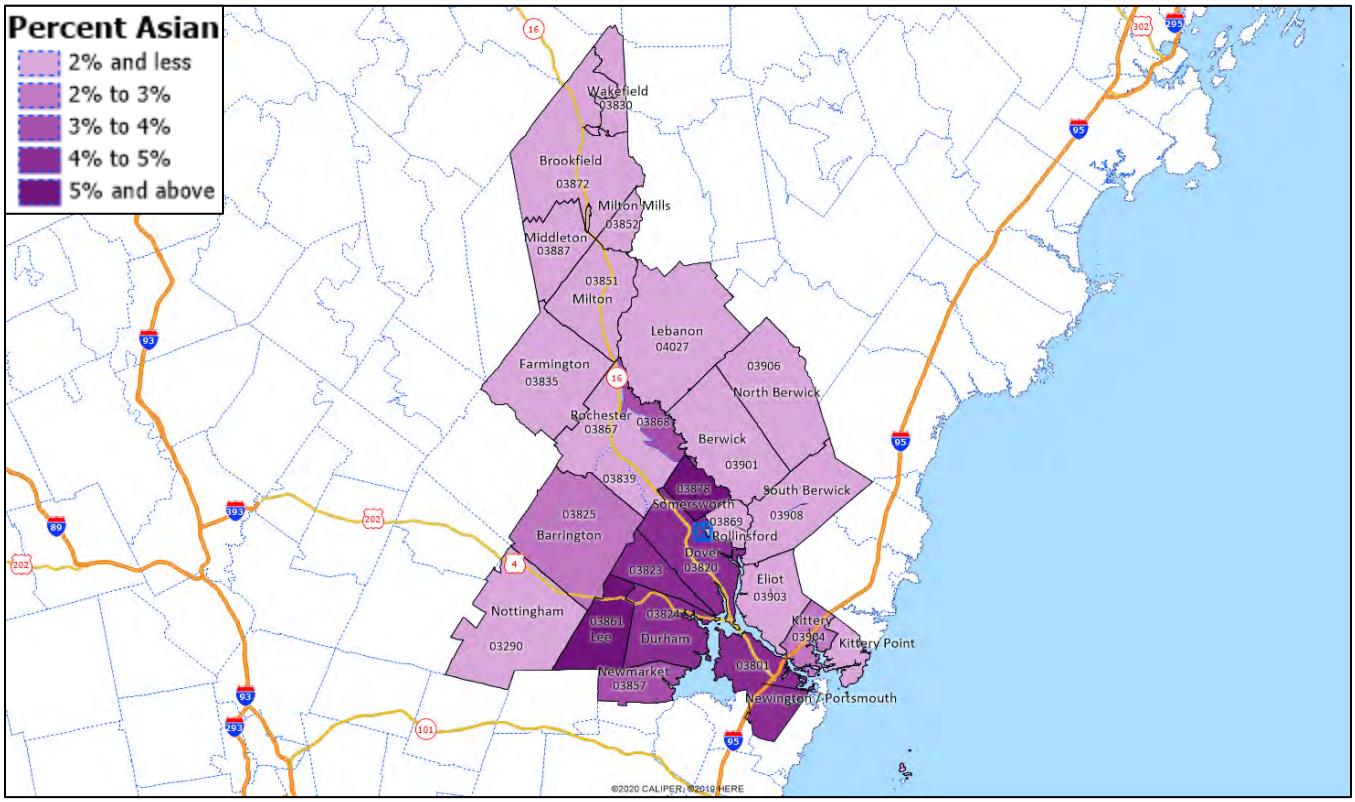
Observations

Population characteristics and changes directly influence community health needs. Different segments of the population can have different characteristics. Estimating residents by race is relevant as "[h]istorically, people in racial/ethnic minority groups are more likely than non-Hispanic whites to be poor, to lack a high school education, and to experience disparities in health and health care services." [16] Data in ***Exhibit 7A*** indicate the following:

- The highest percentages of Black residents were located in Newington / Portsmouth ZIP Code 03801 (2.1 percent), Rollinsford ZIP Code 03869 (2.5 percent), and Somersworth ZIP Code 03878 (3.2 percent).

[16] "Program Brief: AHRQ Activities to Reduce Racial and Ethnic Disparities in Health Care," Agency for Healthcare Research and Quality, December 2009. See http://www.ahrq.gov/sites/default/files/publications/files/disparities.pdf. AHRQ is an agency of the U.S. Department of Health and Human Services.

Exhibit 7B: Percent of Population by Asian Race, 2019



Source: Caliper Maptitude and Census ACS (2015-2019)
Note that density of shading on this map is not comparable to the density of shading of other maps. The legend is specific to this map.

Description

Exhibit 7B presents estimated 2019 Asian residents by ZIP Code.

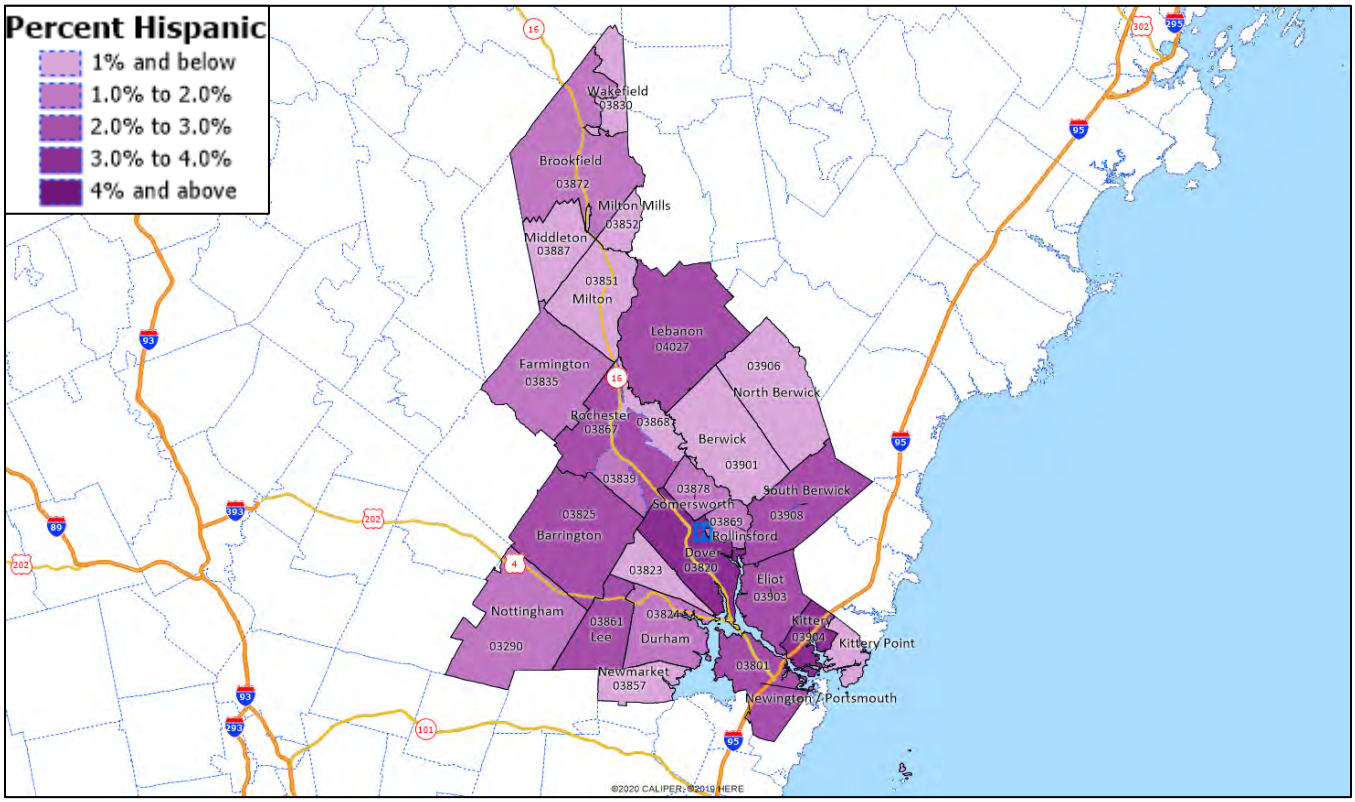
Observations

Population characteristics and changes directly influence community health needs. Different segments of the population can have different characteristics. Estimating residents by race is relevant as "[h]istorically, people in racial/ethnic minority groups are more likely than non-Hispanic whites to be poor, to lack a high school education, and to experience disparities in health and health care services." [17] Data in ***Exhibit 7B*** indicate the following:

- The highest percentages of Asian residents were located in Lee ZIP Code 03861 (8.7 percent) and Somersworth ZIP Code 03878 (6.6 percent).

[17] "Program Brief: AHRQ Activities to Reduce Racial and Ethnic Disparities in Health Care," Agency for Healthcare Research and Quality, December 2009. See http://www.ahrq.gov/sites/default/files/publications/files/disparities.pdf. AHRQ is an agency of the U.S. Department of Health and Human Services.

Exhibit 8: Percent of Population by Hispanic or Latino Ethnicity, 2019



Source: Caliper Maptitude and Census ACS (2015-2019)
Note that density of shading on this map is not comparable to the density of shading of other maps. The legend is specific to this map.

Description

Exhibit 8 presents estimated 2019 Hispanic or Latino residents by ZIP Code.

Observations

Population characteristics and changes directly influence community health needs. Different segments of the population can have different characteristics. Estimating residents by race is relevant as "[h]istorically, people in racial/ethnic minority groups are more likely than non-Hispanic whites to be poor, to lack a high school education, and to experience disparities in health and health care services." [18] Data in ***Exhibit 8*** indicate the following:

- Somersworth ZIP Code 03878, Rochester ZIP Code 03839, Dover ZIP Code 03820, Rochester ZIP Code 03867, Durham ZIP Code 03824, and Newmarket ZIP Code 03857 have proportions of Hispanic or Latino populations of 3 percent or more.

[18] "Program Brief: AHRQ Activities to Reduce Racial and Ethnic Disparities in Health Care," Agency for Healthcare Research and Quality, December 2009. See http://www.ahrq.gov/sites/default/files/publications/files/disparities.pdf. AHRQ is an agency of the U.S. Department of Health and Human Services.

Exhibit 9: Other Socioeconomic Indicators, 2020

Measure	Rockingham County (NH)	Strafford County (NH)	New Hampshire	York County (ME)	Maine	United States
Population 25+ without High School Diploma	4.6%	6.7%	6.7%	6.3%	6.8%	11.5%
Population with a Disability	10.8%	12.8%	12.8%	14.9%	15.9%	15.7%
Population Linguistically Isolated	1.3%	2.0%	2.5%	1.7%	1.4%	8.2%

Source: U.S. Census, ACS 5-Year Estimates, 2016-2019

Description

Exhibit 9 portrays the percent of the population (aged 25 years and above) without a high school diploma, the percent of the population with a disability, and the percent of the population that is linguistically isolated.

Observations

Low levels of education are often linked to poverty and poor health. Disabled individuals comprise a vulnerable population that can require targeted services and outreach by providers. An inability to speak English proficiently creates barriers to healthcare access, provider communications, and health literacy/education. Data in ***Exhibit 9*** indicate the following:

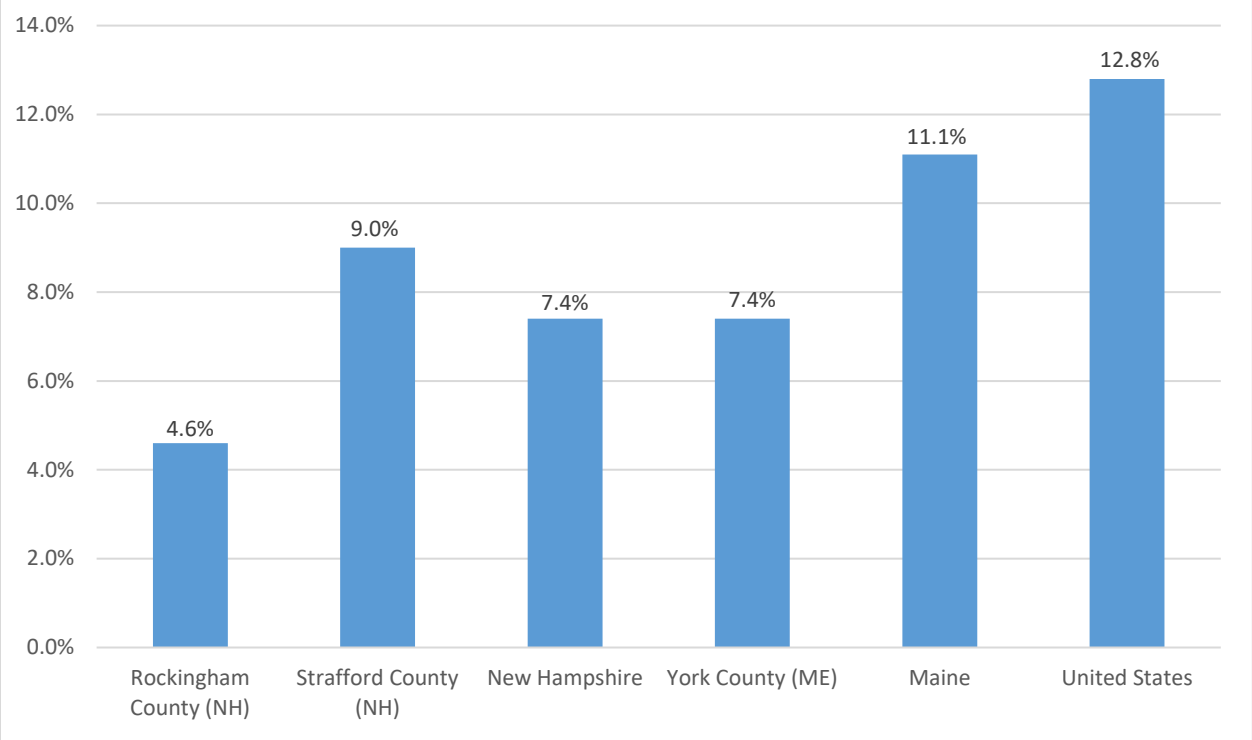
- In Strafford County, the percentage of the population aged 25 and older without a high school diploma and with a disability is equal to the New Hampshire percentage;
- In York County, the percentage of the population that is linguistically isolated is higher than the Maine percentage.

Economic Indicators

The following categories of economic indicators with implications for health were assessed: (1) people in poverty; (2) unemployment rate; (3) insurance status; and (4) crime.

People in Poverty

Exhibit 10: Percent of People in Poverty, 2020



Source: U.S. Census, ACS 5-Year Estimates, 2016-2019

Description

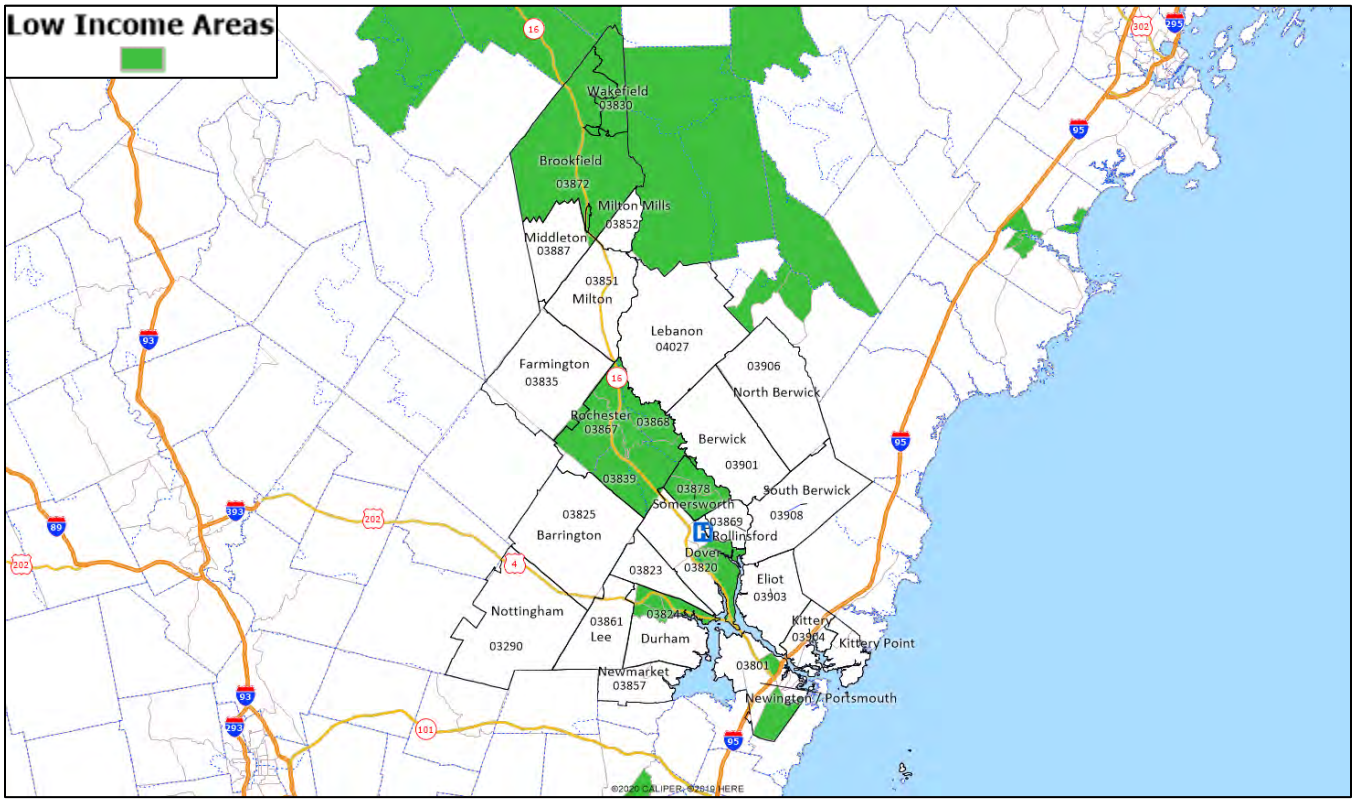
Exhibit 10 presents the percent of people in poverty in Rockingham County (NH), Strafford County (NH), New Hampshire, York County (ME), Maine, and the United States.

Observations

As many health needs are associated with poverty, poverty rates and other measures of economic well-being can inform assessment of community health needs. Data in ***Exhibit 10*** indicate the following:

- In Strafford County, residents are more likely to be in poverty than residents of New Hampshire overall.

Exhibit 11: Low-Income Census Tracts



Source: Caliper Maptitude and Economic Research Services, U.S. Department of Agriculture, 2019

Description

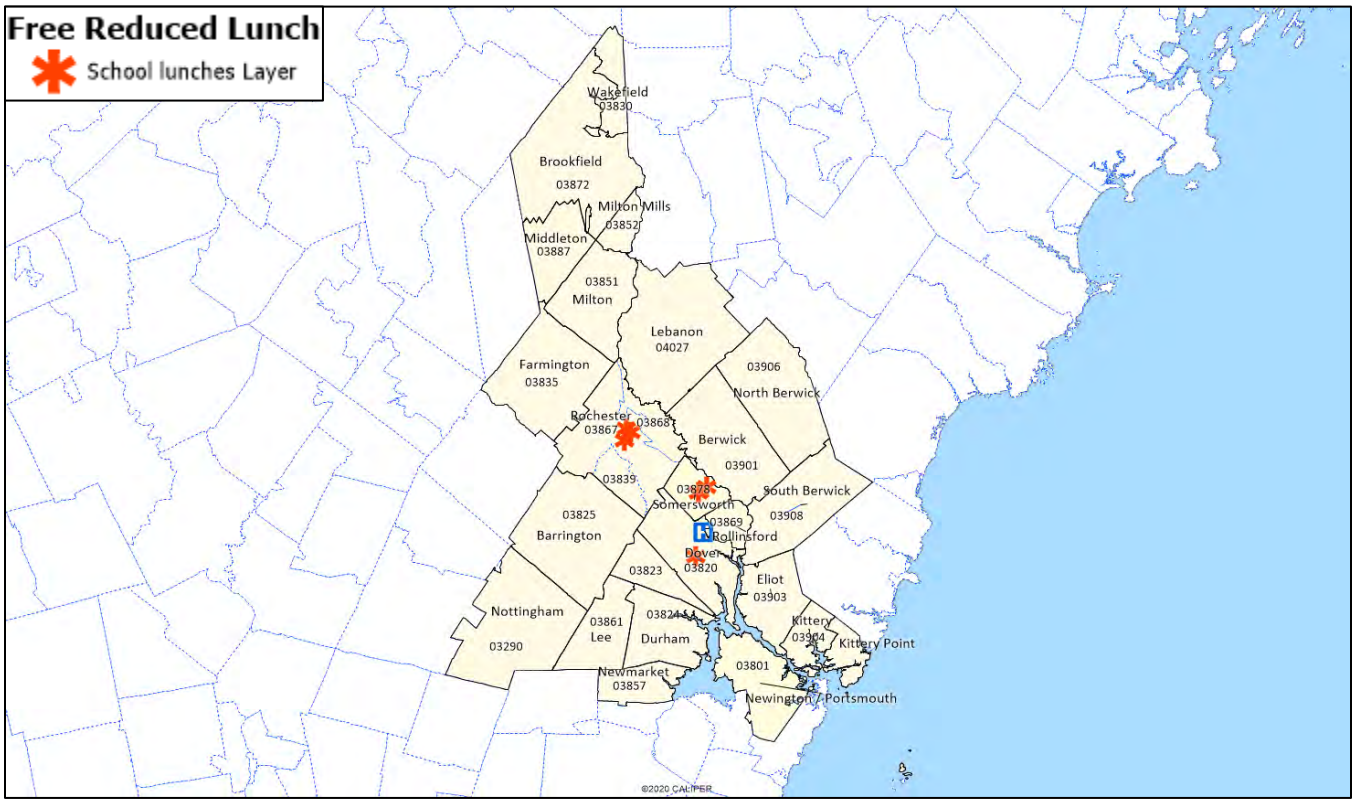
Exhibit 11 presents the location of low-income census tracts in a map of the WDH community.

Observations

The U.S. Department of Agriculture defines "low-income census tracts" as tracts with a poverty rate of 20 percent or more, tracts with a median family income 80 percent or less of the median family income for the state or, if applicable, the metropolitan area. Low-income census tracts are geographic areas where residents may be in need of assistance. Data in ***Exhibit 11*** indicate the following:

- Low-income census tracts are present throughout the community.

Exhibit 12: Public Schools with over 40 Percent of Students Eligible for Free or Reduced-Price Lunches, School Year 2021-22



Source: Maine and New Hampshire Departments of Education, 2019.
*New Hampshire data are as of October 31, 1017. Maine data are as of December 31, 2018.

Description

Exhibit 12 presents the location in the WDH community of schools with 40 percent or more of their student body on free or reduced-price meals provided to low-income students.

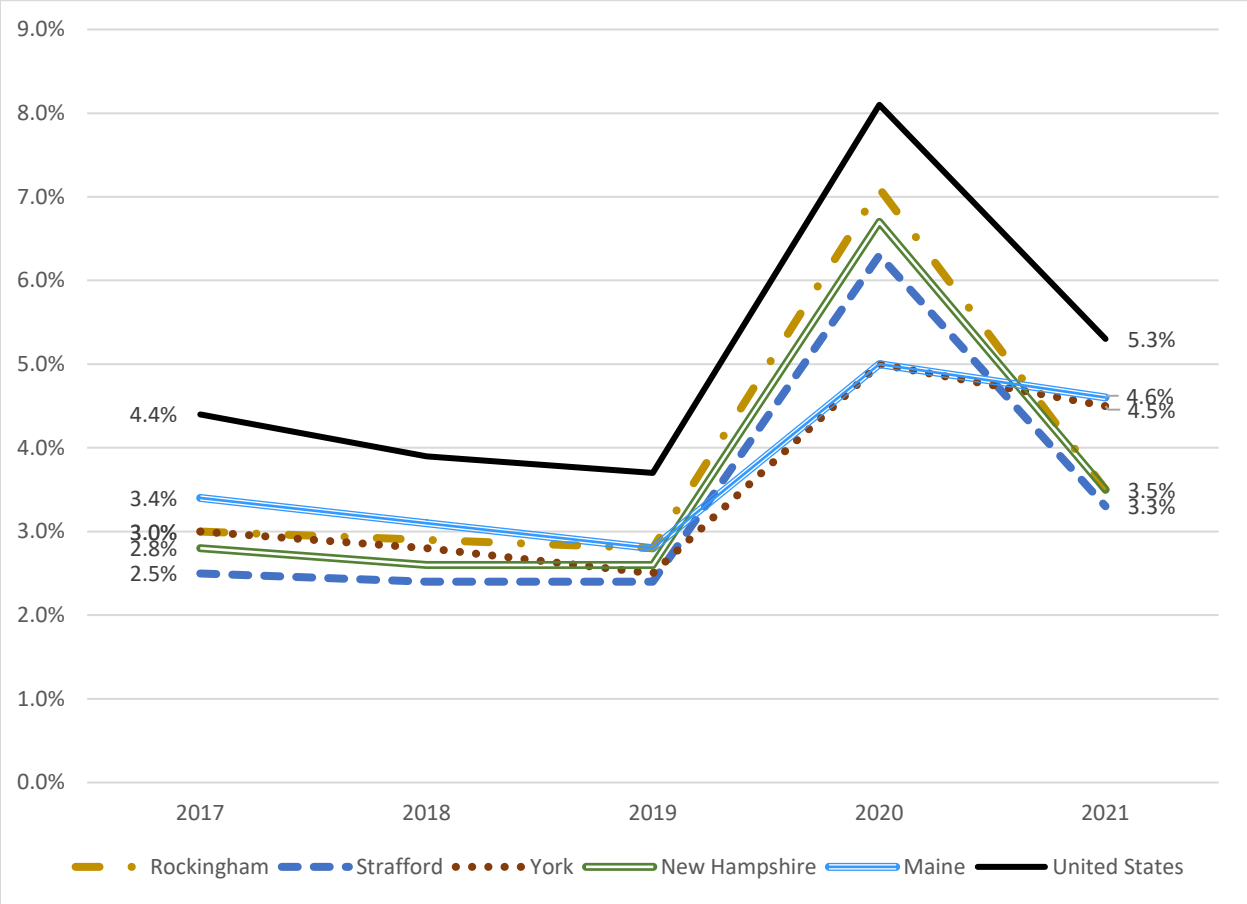
Observations

Schools participating in the National School Lunch Program are eligible to receive financial assistance from the United States Department of Agriculture (USDA) to provide free or reduced-price meals to low-income students. Schools with 40 percent or more of their student body receiving this assistance are eligible for school-wide Title I funding, designed to ensure that students meet grade-level proficiency standards. Schools with Title I funding may help areas with vulnerable populations that have multiple health access, health status, and social support needs. Data in ***Exhibit 12*** indicate the following:

- There are six schools within the Wentworth-Douglass Hospital community where at least 40 percent of students are eligible for free or reduced-price lunches.

Unemployment

Exhibit 13: Unemployment Rates, 2013-2017



Source: Bureau of Labor Statistics, 2022.

Description

Exhibit 13 presents indicators for unemployment rates for Rockingham County (NH), Strafford County (NH), New Hampshire, York County (ME), Maine, and the United States.

Observations

Unemployment creates financial instability and barriers to access including insurance coverage, health services, healthy food, and other necessities that contribute to poor health status. Because many obtain health insurance through employer-based coverage, higher unemployment rates contribute to higher numbers of uninsured people. Data in ***Exhibit 13*** indicate the following:

- Unemployment rates decreased from 2013 to 2019 for all geographies;
- Unemployment rates rose in 2020 due to the COVID-19 pandemic; and
- Unemployment rates fell in 2021 as the economy recovered.

Insurance Status

Exhibit 14: Percent of the Population without Health Insurance, 2020

City/Town	ZIP Code	County (State)	Percent Uninsured
Primary Service Area Subtotal			**5.2%**
Barrington	03825	Strafford (NH)	6.4%
Berwick	03901	York (ME)	6.7%
Dover	03820	Strafford (NH)	7.3%
Durham	03824	Strafford (NH)	2.1%
Lee	03861	Strafford (NH)	4.4%
Madbury	03823	Strafford (NH)	3.5%
Newington / Portsmouth	03801	Rockingham (NH)	3.9%
Rochester	03839	Strafford (NH)	5.0%
Rochester	03867	Strafford (NH)	6.6%
Rochester	03868	Strafford (NH)	3.3%
Rollinsford	03869	Strafford (NH)	6.0%
Somersworth	03878	Strafford (NH)	5.0%
South Berwick	03908	York (ME)	2.2%
Secondary Service Area Subtotal			**6.3%**
Brookfield	03872	Carroll (NH)	10.0%
Eliot	03903	York (ME)	3.3%
Farmington	03835	Strafford (NH)	4.4%
Kittery	03904	York (ME)	6.3%
Kittery Point	03905	York (ME)	5.1%
Lebanon	04027	York (ME)	10.8%
Middleton	03887	Strafford (NH)	16.1%
Milton	03851	Strafford (NH)	7.5%
Milton Mills	03852	Strafford (NH)	1.9%
Newmarket	03857	Rockingham (NH)	5.1%
North Berwick	03906	York (ME)	6.3%
Nottingham	03290	Rockingham (NH)	3.0%
Wakefield	03830	Carroll (NH)	4.3%
Community Total			**5.5%**
Rockingham (NH)			4.7%
Strafford (NH)			5.8%
York (ME)			5.8%
Maine			7.6%
New Hampshire			6.0%
United States			8.7%

Source: U.S. Census, ACS 5-Year Estimates, 2016-2020

Description. ***Exhibit 14*** presents the percentage of population without health insurance for community ZIP Codes; Rockingham, Strafford, and York counties, New Hampshire, Maine, and the United States.

Observations. Lack of health insurance contributes to poor health outcomes, particularly through a lack of access to health professionals. Data in ***Exhibit 14*** indicates comparatively high percentages of uninsurance in Brookfield ZIP Code 03872 (10.0 percent), Lebanon ZIP Code 04027 (10.8 percent), and Middleton ZIP Code 03887 (16.1 percent).

Crime

Exhibit 15: Crime Rates by Type and City/Town, Per 100,000, 2019

City/Town *State/US*	Violent Crime	Murder	Rape	Robbery	Aggravated Assault	Property Crime	Burglary	Larceny- Theft	Motor Vehicle Theft
Barrington (NH)	64.8	-	54.0	-	10.8	388.6	118.8	215.9	54.0
Dover (NH)	78.2	-	25.0	18.8	34.4	1,086.1	118.9	923.3	43.8
Durham (NH)	35.7	-	11.9	11.9	11.9	249.9	59.5	184.4	5.9
Farmington (NH)	115.4	-	72.1	-	43.3	1,485.9	375.1	937.7	173.1
Lee (NH)	22.3	-	22.3	-	-	378.3	22.3	311.5	44.5
Madbury (NH)	-	-	-	-	-	107.1	-	107.1	-
Middleton (NH)	-	-	-	-	-	930.5	164.2	656.8	109.5
Milton (NH)	150.5	-	43.0	-	107.5	902.8	150.5	580.4	172.0
Newmarket (NH)	87.3	-	21.8	-	65.5	469.4	54.6	403.9	10.9
Nottingham (NH)	58.3	-	-	-	58.3	135.9	-	135.9	-
Portsmouth (NH)	127.6	-	45.6	9.1	72.9	1,635.5	127.6	1,407.7	100.2
Rochester (NH)	298.2	-	66.6	34.9	196.7	3,095.8	352.1	2,626.3	117.4
Rollinsford (NH)	115.8	-	38.6	38.6	38.6	656.1	193.0	424.5	38.6
Somersworth (NH)	125.2	-	66.8	41.7	16.7	2,946.8	208.7	2,646.3	91.8
Wakefield (NH)	224.6	-	120.9	-	103.6	587.3	120.9	414.6	51.8
Berwick (ME)	63.6	-	12.7	12.7	38.2	763.4	279.9	445.3	38.2
Eliot (ME)	102.7	-	58.7	14.7	29.3	337.4	73.3	249.4	14.7
Kittery (ME)	80.9	-	70.8	-	10.1	930.2	121.3	788.7	20.2
North Berwick (ME)	42.3	-	-	-	42.3	401.6	63.4	338.2	-
South Berwick (ME)	52.9	-	26.4	-	26.4	489.2	145.4	304.1	39.7
New Hampshire	**152.5**	**2.4**	**43.4**	**23.0**	**83.7**	**1,209.2**	**126.3**	**1,017.3**	**65.7**
Maine	**115.2**	**1.5**	**38.4**	**14.0**	**61.3**	**1,245.6**	**174.8**	**1,016.7**	**54.0**
United States	**366.7**	**5.0**	**42.6**	**81.6**	**250.2**	**2,109.9**	**340.5**	**1,549.5**	**219.9**

Source: FBI, 2022.

Description

Exhibit 15 presents indicators for crime rates for cities/towns in the community, Maine, New Hampshire, and the United States.

Observations
A safe environment supports community health by helping to prevent injury and promote recreation and good mental health. Data in ***Exhibit 15*** indicate the following:

- The 2019 Barrington (NH) rate for rape was higher than the New Hampshire rate;
- The 2019 Farmington (NH) rates for rape, burglary, and motor vehicle theft were more than 50 percent higher than the New Hampshire rates, and the rate for property crime was higher;
- The 2019 Middleton (NH) rate for motor vehicle theft was more than 50 percent higher than the New Hampshire rate, and the rate for burglary was higher;
- The 2019 Milton (NH) rate for motor vehicle theft was more than 50 percent higher than the New Hampshire rate, and the rape, property crime, burglary, and larceny-theft rates were higher;
- The 2019 Rochester (NH) rates for violent crime, rape, robbery, aggravated assault, property crime, burglary, larceny- theft, and motor vehicle theft were more than 50 percent higher than the New Hampshire rates;
- The 2019 Rollinsford (NH) rates for robbery and burglary were more than 50 percent higher than the New Hampshire rates;
- The 2019 Portsmouth (NH) rate for motor vehicle theft was more than 50 percent higher than the New Hampshire rate, and the rates for aggravated assault and burglary were higher;
- The 2019 Somersworth (NH) rates for rape, robbery, property crime, burglary, and larceny-theft were more than 50 percent higher than the New Hampshire rate, and the rate for and motor vehicle theft was higher;
- The 2019 Wakefield (NH) rate for rape was more than 50 percent higher than the New Hampshire rate, and the rates for violent crime and aggravated assault were higher,
- The 2019 Berwick (ME) rate for burglary was more than 50 percent higher than the Maine rate;
- The 2019 Eliot (ME) rate for rape was more than 50 percent higher than the Maine rate, and the rate for robbery was higher; and
- The 2019 Kittery (ME) rate for rape was more than 50 percent higher than the Maine rate.

County Health Rankings

Exhibit 16: County Health Rankings, 2018 and 2022

Measure	Rockingham		Strafford		York	
	2018	2022	2018	2022	2018	2022
Health Outcomes	1	1	8	7	4	4
Health Factors	2	1	8	7	3	4
Length of Life	2	1	7	7	3	6
Quality of Life	1	1	8	7	5	3
Poor or fair health	1	1	10	4	6	2
Poor physical health days	1	1	9	5	7	2
Poor mental health days	3	1	9	5	3	2
Low birthweight	3	3	5	5	5	5
Health Behaviors	3	1	7	7	5	4
Adult smoking	2	1	8	5	4	3
Adult obesity	3	2	6	8	7	6
Food environment index	2	1	9	8	2	2
Physical inactivity	3	1	7	8	7	2
Access to exercise opportunities	9	4	6	5	5	3
Excessive drinking	10	8	9	5	15	13
Alcohol-impaired driving deaths	9	10	8	3	10	6
Sexually transmitted infections	5	3	10	10	9	11
Teen births	1	1	3	3	2	2
Clinical Care	2	2	7	10	7	3
Uninsured	1	1	5	5	5	2
Primary care physicians	6	6	10	10	11	10
Dentists	4	5	6	6	12	9
Mental health providers	8	7	7	6	8	8
Preventable hospital stays	4	7	7	9	8	6
Diabetes monitoring	1	4	4	10	12	2
Mammography screening	3	4	8	10	2	2
Social & Economic Factors	1	1	4	4	3	3
High school graduation	3	1	8	4	6	5
Some college	1	1	2	3	2	2
Unemployment	8	8	3	5	3	7
Children in poverty	1	1	4	2	1	2
Income inequality	1	1	7	6	3	4
Children in single-parent households	1	1	5	7	1	9
Social associations	7	6	10	9	15	14
Violent crime	1	1	9	8	14	14
Injury deaths	1	1	7	7	8	12
Physical Environment	9	5	10	10	16	15
Air pollution - particulate matter	9	3	8	7	15	14
Drinking water violations	-	-	-	-	-	-
Severe housing problems	2	2	10	10	11	10
Driving alone to work	9	9	5	4	10	13
Long commute - driving alone	10	10	5	5	15	15

Source: County Health Rankings, 2018 and 2022.
Light grey shading indicates rankings in the bottom half of counties within the respective state; dark grey shading indicates rankings in bottom quartile within the respective state.

Description

Exhibit 16 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." These health factors and outcomes are composite measures based on several variables grouped into the following categories: health behaviors, clinical care,[19] social and economic factors, and physical environment.[20] *County Health Rankings* is updated annually. *County Health Rankings 2022* relies on data from 2010 to 2020. *County Health Rankings 2018* relies on data from 2010 to 2017.

The exhibit presents 2018 and 2022 rankings for each available indicator category. Rankings indicate how the county compared to other counties within the state. A 1 is the most favorable rank. A 10 is the least favorable in New Hampshire and a 16 the least favorable in Maine.

Observations

Data in ***Exhibit 16*** indicate the following:

- Rockingham County ranked in the bottom 50th percentile among New Hampshire counties for 9 of the 42 indicators assessed in 2022;
    - 6 of the 6 indicators that ranked in the bottom 50th percentile were in the bottom quartile (excessive drinking, alcohol-impaired driving deaths, unemployment, driving alone to work, and long commute - driving alone); and
    - Rankings for five indictors fell between 2018 and 2022,
- Strafford County ranked in the bottom 50th percentile among New Hampshire counties for 24 of the 42 indicators assessed in 2022;
    - 19 of the 24 indicators that ranked in the bottom 50th percentile were in the bottom quartile (adult obesity, food environment index, physical inactivity, sexually transmitted infections, clinical care, primary care physicians, preventable hospital stays, diabetes monitoring, mammography screening, social associations, violent crime, physical environment, and severe housing problems); and
    - Rankings for 9 indictors fell between 2018 and 2022,
- York County ranked in the bottom 50th percentile among Maine counties for 13 of the 42 indicators assessed in 2022;
    - 8 of the 13 indicators that ranked in the bottom 50th percentile were in the bottom quartile (excessive drinking; social associations; violent crime; physical environment; air pollution; and long commute - driving alone;); and
    - Rankings for 9 indictors fell between 2018 and 2022.

[19] A 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.

[20] A 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.

Exhibit 17A: County Health Rankings Data Compared to State and U.S. Averages, 2022
Length of Life

Indicator Category	Measure	Rockingham	Strafford	New Hampshire	York	Maine	United States
Length of Life - Premature death	Years of potential life lost before age 75 per 100,000 population (age-adjusted)	5,223.0	6,973.3	6,360.5	7,082.5	7,189.0	7,300.0

Source: County Health Rankings, 2022.
Light grey shading indicates that rates were higher (worse) than the New Hampshire or Maine average.
Dark grey shading indicates that rates were more than 50 percent higher than the New Hampshire or Maine average.

Description
Exhibit 17A presents an indicator for length of life from *County Health Rankings 2022* for Rockingham County, Strafford County, New Hampshire, York County, Maine, and the U.S.

Observation
Data in ***Exhibit 17A*** indicate the following:

- In Strafford County, the number of years of potential life lost (YPLL) rate is greater than the New Hampshire rate.

Exhibit 17B: County Health Rankings Data Compared to State and U.S. Averages, 2022
Quality of Life

Indicator Category	Measure	Rockingham	Strafford	New Hampshire	York	Maine	United States
Quality of Life - Poor or fair health	Percentage of adults reporting fair or poor health (age-adjusted)	12.5%	14.1%	14.3%	14.9%	17.2%	17.0%
Quality of Life - Poor physical health days	Average number of physically unhealthy days reported in past 30 days (age-adjusted)	3.2	3.6	3.9	3.8	4.2	3.9
Quality of Life - Poor mental health days	Average number of mentally unhealthy days reported in past 30 days (age-adjusted)	4.3	4.7	4.8	4.5	4.7	4.5
Quality of Life - Low birthweight	Percentage of live births with low birthweight (< 2500 grams)	6.3%	6.9%	6.7%	7.0%	7.2%	8.0%

Source: County Health Rankings, 2022.
Light grey shading indicates that rates were higher (worse) than the New Hampshire or Maine average.
Dark grey shading indicates that rates were more than 50 percent higher than the New Hampshire or Maine average.

Description
Exhibit 17B presents indicators for quality of life from *County Health Rankings 2022* for Rockingham County, Strafford County, New Hampshire, York County, Maine, and the U.S.

Observation
Data in ***Exhibit 17B*** indicate the following:

- In Strafford County, the percentage of live births with low birthweight is greater than the New Hampshire average.

Exhibit 17C: County Health Rankings Data Compared to State and U.S. Averages, 2022
Health Factors – Health Behaviors

Indicator Category	Measure	Rockingham	Strafford	New Hampshire	York	Maine	United States
Adult smoking	Percentage of adults who are current smokers	14.3	16.5	16.9	16.9	19.1	16.0
Adult obesity	Percentage of adults that report a BMI of 30 or more	27.4	31.6	32.1	31.4	31.4	780.0
Food environment index	Index of factors that contribute to a healthy food environment, 0 (worst) to 10 (best)	9.0	8.5	9.1	8.5	8.1	7.8
Physical inactivity	Percentage of adults aged 20 and over reporting no leisure-time physical activity	20.2	23.3	21.1	27.1	29.5	26.0
Access to exercise opportunities	Percentage of population with adequate access to locations for physical activity	77.2	72.1	73.9	64.2	56.6	80.0
Excessive drinking	Percentage of adults reporting binge or heavy drinking	20.8	20.2	20.8	23.8	22.5	20.0
Alcohol-impaired driving deaths	Percentage of driving deaths with alcohol involvement	44.0	27.8	33.1	32.4	34.4	27.0
Sexually transmitted infections	Number of newly diagnosed chlamydia cases per 100,000 population	209.5	352.9	263.1	259.1	296.8	551.0
Teen births	Number of births per 1,000 female population ages 15-19	4.8	7.6	8.7	10.6	13.0	19.0

Source: County Health Rankings, 2022.
Light grey shading indicates that rates were higher (worse) than the New Hampshire or Maine average.
Dark grey shading indicates that rates were more than 50 percent higher than the New Hampshire or Maine average.

Description
Exhibit 17C presents indicators for health behaviors from *County Health Rankings* for Rockingham County, Strafford County, New Hampshire, York County, Maine, and the U.S.

Observations
Health behavior indicators assess current activities, which can determine future health and may correlate to other health issues, such as diabetes. Data in ***Exhibit 17C*** indicate the following:

- In Rockingham County, the food environment index is lower than the indicator for New Hampshire, and the rates of excessive drinking and alcohol-impaired driving deaths are higher;
- In Strafford County, the food environment index and access to exercise opportunity indicators are lower than the New Hampshire rates indicators; physical inactivity and sexually transmitted infection indicators are higher than New Hampshire; and
- In York County, excessive drinking is higher than Maine.

Exhibit 17D: County Health Rankings Data Compared to State and U.S. Averages, 2022 Health Factors – Clinical Care

Indicator Category	Measure	Rockingham	Strafford	New Hampshire	York	Maine	United States
Uninsured	Percentage of population under age 65 without health insurance	6.4	7.8	7.7	8.6	10.2	0.1
Primary care physicians	Ratio of population to primary care physicians	1275:1	1574:1	1111:1	1366:1	908:1	1275:1
Dentists	Ratio of population to dentists	1297:1	1385:1	1295:1	2010:1	1476:1	1297:1
Mental health providers	Ratio of population to mental health providers	371:1	360:1	288:1	231:1	194:1	371:1
Preventable hospital stays	Number of hospital stays for ambulatory-care sensitive conditions per 1,000 Medicare enrollees	3,468.0	3,831.0	3,436.0	2,779.0	3,070.0	3,767.0
Diabetes monitoring	Percentage of diabetic Medicare enrollees ages 65-75 that receive HbA1c monitoring	N/A	N/A	N/A	N/A	N/A	N/A
Mammography screening	Percentage of female Medicare enrollees ages 67-69 that receive mammography screening	50.0	41.0	49.0	51.0	47.0	43.0

Source: County Health Rankings, 2022.
Light grey shading indicates that rates were higher (worse) than the New Hampshire or Maine average.
Dark grey shading indicates that rates were more than 50 percent higher than the New Hampshire or Maine average.

Description

Exhibit 17D presents indicators for clinical care from *County Health Rankings* for Rockingham County, Strafford County, New Hampshire, York County, Maine, and the U.S.

Observations

Clinical care indicators assess a lack of access to preventive care, a lack of health knowledge, insufficient provider outreach, and/or social barriers preventing utilization of services. Data in ***Exhibit 17D*** indicate the following:

- In Rockingham, Strafford, and York counties, ratios of the population to primary care physicians, dentists, and mental health providers are higher than respective New Hampshire or Maine ratios; and
- In Strafford County, the percentages of the population under 65 without health insurance and the rate of preventable hospital stays are higher than New Hampshire rates, and the percentage of female Medicare enrollees ages 67-75 that receive mammography screenings is lower.

Exhibit 17E: County Health Rankings Data Compared to State and U.S. Averages, 2022
Health Factors – Social and Economic Environment

Indicator Category	Measure	Rockingham	Strafford	New Hampshire	York	Maine	United States
High school graduation	Percentage of ninth-grade cohort that graduates in four years	95.4	93.3	93.3	93.8	93.2	89.0
Some college	Percentage of adults ages 25-44 with some post-secondary education	75.4	71.7	70.9	71.0	68.9	67.0
Unemployment	Percentage of population ages 16 and older unemployed but seeking work	7.1	6.3	6.7	5.4	5.4	8.1
Children in poverty	Percentage of children under age 18 in poverty	4.8	6.7	8.4	8.9	12.8	16.0
Income inequality	Ratio of household income at the 80th percentile to income at the 20th percentile	4.0	4.2	4.3	4.0	4.5	4.9
Children in single-parent households	Percentage of children that live in a household headed by single parent	16.4	19.6	18.9	19.6	19.4	25.0
Social associations	Number of membership associations per 10,000 population	9.9	7.3	10.4	7.8	11.0	9.2
Violent crime	Number of reported violent crime offenses per 100,000 population	117.2	235.8	196.8	150.8	125.8	386.0
Injury deaths	Number of deaths due to injury per 100,000 population	76.8	93.8	88.8	104.8	98.0	76.0

Source: County Health Rankings, 2022.
Light grey shading indicates that rates were higher (worse) than the New Hampshire or Maine average.
Dark grey shading indicates that rates were more than 50 percent higher than the New Hampshire or Maine average.

Description

Exhibit 17E presents social and economic environment indicators from *County Health Rankings* for Rockingham County, Strafford County, New Hampshire, York County, Maine, and the U.S.

Observations

Social and economic indicators measure education, poverty, and other environment factors, which are correlated with health and health outcomes. Data in ***Exhibit 17E*** indicate the following:

- In Rockingham, Strafford, and York counties, the social association rates are lower than respective New Hampshire or Maine ratios; and
- In Rockingham County, the unemployment is higher than the New Hampshire rate;
- In Strafford and York counties, the rates children in single-parent households, violent crime, and injury deaths are comparatively higher.

Exhibit 17F: County Health Rankings Data Compared to State and U.S. Averages, 2022
Health Factors – Physical Environment

Indicator Category	Measure	Rockingham	Strafford	New Hampshire	York	Maine	United States
Air pollution - particulate matter	Average daily density of fine particulate matter in micrograms per cubic meter (PM2.5)	5.2	5.8	5.7	6.6	5.9	7.5
Severe housing problems	Percentage of households with at least 1 of 4 housing problems: overcrowding, high housing costs, or lack of kitchen or plumbing facilities	12.9	16.3	14.3	13.9	13.9	17.0
Driving alone to work	Percentage of the workforce that drives alone to work	81.0	77.9	79.5	80.4	77.2	75.0
Long commute - driving alone	Among workers who commute in their car alone, the percentage that commute more than 30 minutes	45.5	37.8	39.0	41.1	33.2	37.0

Source: County Health Rankings, 2022.
Light grey shading indicates that rates were higher (worse) than the New Hampshire or Maine average.
Dark grey shading indicates that rates were more than 50 percent higher than the New Hampshire or Maine average.

Description

Exhibit 17F presents physical environment indicators from *County Health Rankings* for Rockingham County, Strafford County, New Hampshire, York County, Maine, and the U.S.

Observations

Factors in the physical environment are correlated with health and health outcomes. Data in ***Exhibit 17F*** indicate the following:

- In Rockingham County, the percentages of the workforce that drive alone to work and long commutes - driving alone are higher than New Hampshire rates;
- In Strafford County, air pollution and the percentage of households with severe housing problems are higher than New Hampshire; and
- In York County, air pollution and the percentages of the workforce that drives alone to work and has long commutes - driving alone are higher than Maine.

Exhibit 18A: Community Health Status Indicators – Length of Life, 2022

Category	Indicator	Rockingham	Strafford	York
Length of Life	Years of potential life lost before 75 per 100,000	5,223.0	6,973.3	7,082.5

Source: Verité analysis of data from County Health Rankings, 2022
Light grey shading indicates rankings in the bottom half of peer counties;
dark grey shading indicates rankings in the bottom quartile of peer counties.

Description

Exhibit 18A compares Rockingham, Strafford, and York counties to other U.S. counties identified as comparable, peer counties for Length of Life indicators. These comparisons follow a methodology developed by the Centers for Disease Control (CDC) for its *Community Health Status Indicators* Project (CHSI). CHSI developed a group of 30 to 35 peer counties for each county in the U.S. based on 19 variables, including population size, population growth, population density, household income, unemployment, percent children, percent elderly, and poverty rates.

CHSI analyses were formerly 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. The Verité CHSI analysis utilized data compiled by *County Health Rankings* for all 3,143 U.S. counties. The Verité analysis was based on lists of "peer counties" that are also maintained by *County Health Rankings*.

Observations

Length of Life data in ***Exhibit 18A*** indicate the following:

- Strafford County compares unfavorably to its peer counties for years of potential life lost, average years a person can expect to live, and death rate for residents under 75.

Exhibit 18B: Community Health Status Indicators – Quality of Life, 2022

Category	Indicator	Rockingham	Strafford	York
Quality of Life	% of adults reporting fair or poor health	12.5%	14.1%	14.9%
	Average physically unhealthy days reported in past 30 days	3.2	3.6	3.8
	Average mentally unhealthy days reported in past 30 days	4.3	4.7	4.5
	% of live births with low birthweight (< 2,500 grams)	6.3%	6.9%	7.0%

Source: Verité analysis of data from County Health Rankings, 2022
Light grey shading indicates rankings in the bottom half of peer counties;
dark grey shading indicates rankings in the bottom quartile of peer counties.

Description

Exhibit 18B compares Rockingham, Strafford, and York counties to other U.S. counties identified as comparable, peer counties for Quality of Life indicators. See ***Exhibit 18A*** for more detail on the *Community Health Status Indicators* methodology.

Observations

Quality of Life data in ***Exhibit 18B*** indicate the following:

- Rockingham County compares unfavorably to its peer counties for mentally unhealthy days; and
- Strafford County compares unfavorably to its peer counties for mentally unhealthy days.

Exhibit 18C: Community Health Status Indicators – Health Behaviors, 2022

Category	Indicator	Rockingham	Strafford	York
Health Behaviors	% of adults who are current smokers	14.3%	16.5%	16.9%
	% of adults (18+) that reports a BMI >= to 30	27.4%	31.6%	31.4%
	Food Environment Index	9.0	8.5	8.5
	% of adults (18+) reporting no leisure-time physical activity	20.2%	23.3%	27.1%
	% of adults (18+) with adequate access to locations for physical activity	77.2%	72.1%	**64.2%**
	% of adults reporting binge or heavy drinking	20.8%	20.2%	**23.8%**
	% of driving deaths with alcohol involvement	**44.0%**	27.8%	**32.4%**
	Newly diagnosed chlamydia cases per 100,000	209.5	352.9	259.1
	Births per 1,000 females aged 15-19	4.8	7.6	10.6

Source: Verité analysis of data from County Health Rankings, 2022
Light grey shading indicates rankings in the bottom half of peer counties;
dark grey shading indicates rankings in the bottom quartile of peer counties.

Description

Exhibit 18C compares Rockingham, Strafford, and York counties to other U.S. counties identified as comparable, peer counties for Health Behaviors indicators. See ***Exhibit 18A*** for more detail on the *Community Health Status Indicators* methodology.

Observations

Health Behaviors data in ***Exhibit 18C*** indicate the following:

- Rockingham County compares especially unfavorably to its peer counties for driving deaths with alcohol involvement and compares unfavorably for access to locations for physical activity;
- Strafford County compares unfavorably for access to locations for physical activity, binge or heavy drinking, and driving deaths with alcohol involvement; and
- York County compares especially unfavorably to its peer counties for access to locations for physical activity, binge or heavy drinking, and driving deaths with alcohol involvement and compares unfavorably for adults with no physical activity.

Exhibit 18D: Community Health Status Indicators – Clinical Care, 2022

Category	Indicator	Rockingham	Strafford	York
Clinical Care	% of population under age 65 without health insurance	6.4%	7.8%	8.6%
	Ratio of population to primary care physicians	1275:1	1574:1	1366:1
	Ratio of population to dentists	1297:1	1385:1	2010:1
	Ratio of population to mental health providers	371:1	360:1	231:1
	Preventable hospitalizations per 100,000 Medicare enrollees	3,468.0	3,831.0	2,779.0
	% of Females 65-74 with annual mammogram	50.0%	**41.0%**	51.0%
	% of FFS Medicare beneficiaries with annual flu vaccination	54.0%	51.0%	51.0%

Source: Verité analysis of data from County Health Rankings, 2022
Light grey shading indicates rankings in the bottom half of peer counties;
dark grey shading indicates rankings in the bottom quartile of peer counties.

Description

Exhibit 18D compares Rockingham, Strafford, and York counties to other U.S. counties identified as comparable, peer counties for Clinical Care indicators. See ***Exhibit 18A*** for more detail on the *Community Health Status Indicators* methodology.

Observations

Clinical Care data in ***Exhibit 18D*** indicate the following:

- Rockingham County compares unfavorably to its peer counties for the population under 65 without health insurance, preventable hospitalizations; and adults under 65 without health insurance;
- Strafford County compares especially unfavorably to its peer counties for females 65-74 with annual mammograms and compares unfavorably for primary care physicians and Medicare beneficiaries with annual flu vaccinations; and
- York County compares unfavorably to its peer counties for dentists and Medicare beneficiaries with annual flu vaccinations.

Exhibit 18E: Community Health Status Indicators – Social & Economic Factors, 2022

Category	Indicator	Rockingham	Strafford	York
Social & Economic Factors	% of adults (25+) with a high school diploma or equivalent	95.4%	93.3%	93.8%
	% of adults (25-44) with some post-secondary education	75.4%	71.7%	71.0%
	% of population (16+) unemployed but seeking work	7.1%	6.3%	5.4%
	% of children under age 18 in poverty	4.8%	6.7%	8.9%
	Ratio of household income at the 80th percentile to the 20th percentile	4.0	4.2	4.0
	% of children in single-parent households	16.4%	19.6%	19.6%
	Membership associations per 10,000	9.9	7.3	7.8
	Reported violent crime offenses per 100,000	117.2	235.8	150.8
	Deaths due to injury per 100,000	76.8	**93.8**	**104.8**

Source: Verité analysis of data from County Health Rankings, 2022
Light grey shading indicates rankings in the bottom half of peer counties;
dark grey shading indicates rankings in the bottom quartile of peer counties.

Description

Exhibit 18E compares Rockingham, Strafford, and York counties to other U.S. counties identified as comparable, peer counties for Social & Economic Factors indicators. See ***Exhibit 18A*** for more detail on the *Community Health Status Indicators* methodology.

Observations

Social & Economic Factors data in ***Exhibit 18E*** indicate the following:

- Rockingham County compares unfavorably for reported violent crime and deaths due to injury;
- Strafford County compares especially unfavorably to its peer counties for deaths due to injury and compares unfavorably for ratio of household income at the 80th percentile to the 20th percentile, membership associations, and violent crime; and
- York County compares especially unfavorably to its peer counties for deaths due to injury and compares unfavorably for membership associations.

Exhibit 18F: Community Health Status Indicators – Physical Environment, 2022

Category	Indicator	Rockingham	Strafford	York
Physical Environment	Average Daily Density of Fine Particulate Matter (PM2.5)	5.2	5.8	6.6
	% of households with severe housing problems	11.3%	**14.2%**	12.0%
	% of workforce that drives alone to work	**81.0%**	77.9%	80.4%

Source: Verité analysis of data from County Health Rankings, 2018
Light grey shading indicates rankings in the bottom half of peer counties;
dark grey shading indicates rankings in the bottom quartile of peer counties.

Description

Exhibit 18F compares Rockingham, Strafford, and York counties to other U.S. counties identified as comparable, peer counties for Physical Environment indicators. See ***Exhibit 18A*** for more detail on the *Community Health Status Indicators* methodology.

Observations

Physical Environment data in ***Exhibit 18F*** indicate the following:

- Rockingham County compares especially unfavorably to its peer counties for the workforce that drives alone to work;
- Strafford County compares especially unfavorably to its peer counties for households with severe housing problems; and
- York County compares unfavorably to its peer counties for the workforce that drives alone to work.

Exhibit 19: Selected Causes of Death, Age-Adjusted Rates per 100,000 Population, 2019

Cause of Death	Rockingham County, NH	Strafford County, NH	New Hampshire	York County, ME	Maine	United States
Malignant neoplasms	181.6	186.7	183.8	169.8	186.8	213.4
Diseases of heart	140.9	186.9	147.4	168.4	164.2	146.2
All other diseases	142.6	140.8	143.4	129.2	142.4	161.5
Ischemic heart diseases	96.4	120.5	106.4	121.0	129.3	88.2
Other heart diseases	66.2	65.3	73.3	68.1	77.5	88.0
Accidents (unintentional injuries)	67.6	67.3	59.1	42.8	47.1	56.4
Other forms of chronic ischemic heart disease	55.0	66.9	58.8	69.7	66.8	49.3
Non transport accidents	51.2	48.5	56.1	48.2	52.6	61.4
Chronic lower respiratory diseases	48.6	63.2	50.9	57.4	54.5	37.0
All other forms of chronic ischemic heart disease	34.1	48.1	39.2	46.0	48.3	38.2
All other forms of heart disease	38.2	35.8	38.2	41.0	47.4	45.4
Other chronic lower respiratory diseases	35.5	37.5	37.0	30.3	34.5	34.7
Malignant neoplasms of trachea, bronchus and lung	30.7	45.4	36.4	43.9	45.5	35.3
Accidental poisoning and exposure to noxious substances	31.2	44.8	34.2	44.5	42.1	33.4
Cerebrovascular diseases	28.7	41.0	30.9	30.6	29.4	20.2
Alzheimer disease	27.5	34.8	28.5	27.5	31.4	37.0
Heart failure	26.5	**46.1**	27.8	23.3	25.9	29.8
All other and unspecified malignant neoplasms	31.2	29.3	21.6	11.9	11.7	21.0
Diabetes mellitus	19.1	21.9	19.4	20.7	23.6	18.3
Atherosclerotic cardiovascular disease, so described	15.2	16.3	19.3	22.6	23.6	21.6
Intentional self-harm (suicide)	13.1	12.7	17.9	7.3	5.3	16.0
Acute myocardial infarction	12.1	Unreliable	17.5	26.5	19.4	13.9
Malignant neoplasms of lymphoid, hematopoietic and related tissue	13.4	15.5	16.3	19.5	23.4	25.5
Falls	13.1	20.2	13.6	13.9	15.5	14.2
Malignant neoplasm of pancreas	12.8	16.3	13.4	18.8	17.8	9.8
Malignant neoplasms of colon, rectum and anus	13.0	16.4	12.9	14.4	11.2	11.0
Other diseases of respiratory system	9.3	Unreliable	11.4	9.8	13.0	13.1
Nephritis, nephrotic syndrome and nephrosis	9.9	Unreliable	11.3	13.6	11.7	10.9
Renal failure	9.5	16.4	11.2	9.2	11.6	12.7
Chronic liver disease and cirrhosis	9.5	16.4	11.2	9.2	11.2	12.4
Malignant neoplasm of breast	10.7	Unreliable	11.0	10.9	10.1	11.3
Parkinson disease	10.2	15.6	10.7	9.4	9.7	10.7
Influenza and pneumonia	9.8	Unreliable	10.4	11.0	10.0	8.8
Malignant neoplasm of prostate	9.6	13.4	10.3	12.0	14.7	12.3
Hypertensive heart disease	10.9	**14.2**	9.3	9.0	7.6	7.7
Intentional self-harm (suicide) by discharge of firearms	7.6	Unreliable	9.1	15.0	13.2	13.7
Intentional self-harm (suicide) by other & unspecified means	Unreliable	N/A	8.9	12.3	9.8	6.8
Pneumonia	6.3	Unreliable	8.6	14.2	9.6	7.1
Transport accidents	8.4	Unreliable	8.4	9.9	12.5	10.8

- Table continued below –

- Table continued from above -

Cause of Death	Rockingham County, NH	Strafford County, NH	New Hampshire	York County, ME	Maine	United States
Motor vehicle accidents	6.4	N/A	7.9	12.4	12.3	12.3
Alcoholic liver disease		N/A	7.3	11.5	11.9	11.5
Septicemia	6.2	Unreliable	6.8	Unreliable	6.0	6.4
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	6.1	Unreliable	6.6	Unreliable	2.7	9.5
Pneumonitis due to solids and liquids	4.8	Unreliable	6.2	N/A	2.6	8.5
Leukemia	6.3	N/A	6.0	N/A	1.0	4.7
Essential hypertension and hypertensive renal disease	5.4	Unreliable	5.7	Unreliable	6.3	5.8
Other diseases of circulatory system		N/A	5.5	5.9	5.8	8.9
Other and unspecified non transport accidents and their sequelae	5.3	N/A	5.3	6.4	6.7	4.9
Malignant neoplasms of meninges, brain and other parts of central nervous system	6.3	N/A	5.0	Unreliable	4.5	5.1
Malignant neoplasms of liver and intrahepatic bile ducts	Unreliable	N/A	4.9	Unreliable	5.3	4.3
Non-Hodgkin lymphoma	5.3	N/A	4.8	**8.5**	5.4	6.6
Malignant neoplasm of esophagus	5.1	Unreliable	4.8	Unreliable	5.5	5.0
Malignant neoplasm of bladder	Unreliable	Unreliable	4.4	7.5	6.8	3.8
Other chronic liver disease and cirrhosis	Unreliable	N/A	4.3	6.4	5.8	4.1
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior	4.5	N/A	4.1	Unreliable	4.1	5.0
Malignant neoplasms of kidney and renal pelvis	Unreliable	N/A	3.8	Unreliable	4.7	3.9
Multiple myeloma and immunoproliferative neoplasms	Unreliable	N/A	3.3	N/A	3.3	3.4
Malignant neoplasms of corpus uteri and uterus, part unspecified	Unreliable	N/A	2.9	Unreliable	3.2	3.1
Other diseases of arteries, arterioles and capillaries	Unreliable	N/A	2.8	Unreliable	3.0	2.8
Assault (homicide)	Unreliable	N/A	2.8	Unreliable	3.8	2.4
Malignant neoplasms of lip, oral cavity and pharynx	N/A	N/A	2.8	N/A	1.8	6.0
Congenital malformations, deformations and chromosomal abnormalities	Unreliable	N/A	2.6	N/A	3.0	2.5
Malignant neoplasm of ovary	N/A	N/A	2.5	N/A	3.6	3.1
Aortic aneurysm and dissection	Unreliable	N/A	2.4	Unreliable	2.9	3.3
Certain conditions originating in the perinatal period	N/A	N/A	2.4	N/A	2.9	2.5
Other and unspecified infectious and parasitic diseases and their sequelae	N/A	N/A	2.4	N/A	3.6	3.8
Malignant melanoma of skin	N/A	N/A	2.3	N/A	3.0	2.3
Malignant neoplasm of stomach	Unreliable	N/A	2.3	N/A	2.4	2.0
Emphysema	N/A	N/A	2.2	N/A	2.3	2.8
Influenza	N/A	N/A	2.0	N/A	1.8	1.8
Nutritional deficiencies	N/A	N/A	1.9	N/A	2.2	1.5
Malnutrition	N/A	N/A	1.8	N/A	Unreliable	2.8
Certain other intestinal infections	N/A	N/A	1.8	N/A	Unreliable	2.7
Assault	N/A	N/A	1.6	N/A	2.5	1.8
Complications of medical and surgical care	N/A	N/A	1.5	N/A	Unreliable	4.6
Cholelithiasis and other disorders of gallbladder	Unreliable	N/A	1.5	N/A	1.7	1.3
Atherosclerosis	N/A	N/A	1.1	N/A	1.5	0.9

Source: Centers for Disease Control and Prevention, 2022. N/A indicates that data are not available. Unreliable indicates 20 or fewer deaths.

Description

Exhibit 19 summarizes age-adjusted mortality rates for selected causes of death in 2019 in Rockingham, Strafford, and York counties, as well as New Hampshire and Maine. Light grey shading indicates that rates were higher (worse) than the New Hampshire or Maine averages. Dark grey shading indicates that rates were more than 50 percent higher than the New Hampshire or Maine averages.

Note: Although New Hampshire and Maine maintain databases on mortality, CDC data were chosen for comparability across the two states. Data for 2019 were selected because of the impact of COVID-19 on mortality rates.

Observations

The health of populations can be measured by mortality indictors, which identify life spans and causes of death. Data in ***Exhibit 19*** indicate the following:

- For Rockingham County, the age-adjusted death rates for several causes of death were higher than the overall New Hampshire rate;
- For Strafford County, the age-adjusted death rates from heart failure and hypertensive heart disease were more than 50 percent higher than New Hampshire rates; and the rates for several causes of death were higher than the overall New Hampshire rates; and
- For York County, the age-adjusted death rate for non-Hodgkin lymphoma was more than 50 percent higher than the overall Maine rate, and the rates for several causes of death were higher than the overall Maine rates.

Exhibit 20A: Maine Age-Adjusted Cancer Mortality Rates per 100,000 Population, 2015-2019

Cancer Type	York County (ME)	Maine
All Cancer Sites	167.5	168.0
Lung & Bronchus	47.0	45.5
Prostate	20.5	19.3
Breast	17.0	18.1
Colon & Rectum	11.8	130
Pancreas	12.0	11.5
Ovary	6.6	6.2
Leukemia	5.3	6.1
Non-Hodgkin Lymphoma	6.2	5.8
Esophagus	6.6	5.6
Bladder	5.8	5.3
Brain & ONS	5.6	5.3
Liver & Bile Duct	6.2	5.3
Kidney & Renal Pelvis	3.2	4.0
Oral Cavity & Pharynx	2.5	2.8
Childhood (Ages <20, All Sites)	N/A	2.4
Melanoma of the Skin	3.0	2.4
Childhood (Ages <15, All Sites)	N/A	2.1
Cervix	N/A	1.4
Stomach	N/A	0.4
Thyroid	N/A	0.4
Uterus (Corpus & Uterus	N/A	0.4

Source: Maine Department of Health, 2022.
N/A indicates that data are not available.
Light grey shading indicates that rates were higher (worse) than the Maine average.
Dark grey shading indicates that rates were more than 50 percent higher than the Maine average.

Description

Exhibit 20A summarizes 2015-19 cancer mortality rates for York County and Maine.

Observation

The health of populations can be measured by mortality indictors, which identify life spans and causes of death. Data in ***Exhibit 20A*** indicate the following:

- York County death rates from most cancers are higher than Maine rates.

Exhibit 20B: New Hampshire Age-Adjusted Cancer Mortality Rates per 100,000 Population, 2015-19

Cancer Type	Rockingham County	Strafford County	New Hampshire
All Cancer Sites	148.5	180.9	154.0
Lung & Bronchus	38.2	46.9	39.2
Prostate	20.8	26.2	19.4
Breast	15.9	26.6	18.1
Colon & Rectum	11.3	13.5	12.3
Pancreas	10.7	13.1	10.8
Ovary	7.4	7.3	6.7
Leukemia	6	7.2	5.8
Liver & Bile Duct	4.8	5.7	5.4
Esophagus	5.1	6.4	5.3
Uterus (Corpus & Uterus	5.2	5.7	5.3
Bladder	4.4	6.4	5.2
Non-Hodgkin Lymphoma	5.5	7.1	5.2
Brain & ONS	4.6	3.8	4.8
Kidney & Renal Pelvis	3	2.4	3.2
Melanoma of the Skin	2.9	3	2.7
Oral Cavity & Pharynx	2	2	2.4
Childhood (Ages <20, All Sites)	N/A	N/A	2.2
Childhood (Ages <15, All Sites)	N/A	N/A	2.1
Stomach	1.7	N/A	2
Cervix	N/A	N/A	1.5
Thyroid	N/A	N/A	0.4

Source: New Hampshire Department of Health, 2021.
N/A indicates rates and counts are not displayed if fewer than 5 events are reported.
Light grey shading indicates that rates were higher (worse) than the New Hampshire average.
Dark grey shading indicates that rates were more than 50 percent higher than the New Hampshire average.

Description

Exhibit 20B summarizes 2015-19 cancer mortality rates for Rockingham County, Strafford County, and New Hampshire.

Observations

The health of populations can be measured by mortality indictors, which identify life spans and causes of death. Data in ***Exhibit 20B*** indicate the following:

- Rockingham County death rates from prostate cancer, ovary cancer, leukemia, non-Hodgkin lymphoma, and melanoma are higher than New Hampshire rates; and
- Strafford County death rates from most cancers are higher than New Hampshire rates.

Exhibit 21A: Maine Age-Adjusted Cancer Incidence Rates per 100,000 Population, 2015-19

Cancer Type	York County (ME)	Maine
All Cancer Sites	487.8	476.0
Breast	139.2	127.2
Prostate	91.3	92.6
Lung & Bronchus	73.7	71.3
Colon & Rectum	33.7	36.2
Breast	31.2	27.8
Melanoma of the Skin	29.3	27.1
Bladder	28.4	27.0
Childhood (Ages <20, All Sites)	28.9	22.1
Non-Hodgkin Lymphoma	20.6	20.7
Childhood (Ages <15, All Sites)	25.5	19.2
Kidney & Renal Pelvis	15.2	17.1
Stomach	14.0	15.0
Thyroid	14.0	15.0
Uterus	14.0	15.0
Leukemia	16.3	14.8
Oral Cavity & Pharynx	15.5	13.6
Pancreas	14.9	12.9
Ovary	10.2	9.0
Brain & ONS	8.6	7.9
Esophagus	7.5	6.8
Liver & Bile Duct	7.2	5.9
Cervix	6.3	5.6

Source: Maine Department of Health, 2022.
Light grey shading indicates that rates were higher (worse) than the Maine average.
Dark grey shading indicates that rates were more than 50 percent higher than the Maine average.

Description

Exhibit 21A summarizes 2015-2019 cancer incidence rates for York County and Maine.

Observations

The health of populations can be measured by morbidity indictors, which identify the prevalence of diseases and/or medical conditions. Data in ***Exhibit 21A*** indicate the following:

- York County incidence rates from most cancers are higher than Maine rates.

Exhibit 21B: New Hampshire Age-Adjusted Cancer Incidence Rates per 100,000 Population, 2014-2018

Cancer Type	Rockingham County (NH)	Strafford County (NH)	New Hampshire
All Cancer Sites	495.3	505.6	479.3
Breast	147.5	150.3	143.1
Prostate	115.5	101.8	109.2
Lung & Bronchus	64.1	78.7	62.5
Colon & Rectum	38.0	39.9	36.2
Breast	44.9	40.9	35.7
Melanoma of the Skin	31.4	27.2	32.1
Uterus	26.7	32.7	30.6
Bladder	29.0	30.1	27.3
Childhood (Ages <20, All Sites)	24.9	15.6	21.2
Non-Hodgkin Lymphoma	22.3	20.9	20.5
Childhood (Ages <15, All Sites)	20.8	17.0	19.0
Kidney & Renal Pelvis	16.7	17.7	16.0
Thyroid	16.5	17.6	14.9
Leukemia	13.0	15.1	13.6
Pancreas	13.7	12.2	12.6
Oral Cavity & Pharynx	12.4	11.6	11.9
Ovary	10.7	8.3	10.1
Brain & ONS	8.5	6.6	7.4
Esophagus	7.0	8.7	6.9
Liver & Bile Duct	6.3	6.9	6.3
Stomach	4.6	4.1	5.4
Cervix	4.7	7.5	5.1

Source: New Hampshire Department of Health, 2022.
Light grey shading indicates that rates were higher (worse) than the New Hampshire average.
Dark grey shading indicates that rates were more than 50 percent higher than the New Hampshire average.

Description

Exhibit 21B summarizes 2014-18 cancer incidence rates for Rockingham County, Strafford County, and New Hampshire.

Observations

The health of populations can be measured by morbidity indictors, which identify the prevalence of diseases and/or medical conditions. Data in ***Exhibit 21B*** indicate the following:

- Rockingham County incidence rates for most cancers are higher than New Hampshire rates; and
- Strafford County incidence rates for most cancers are higher than New Hampshire rates.

Exhibit 22: Communicable Disease Incidence Rates per 100,000 Population, 2019

Disease	Year	Rockingham County (NH)	Strafford County (NH)	New Hampshire	York County (ME)	Maine	United States
HIV diagnoses	2019	1.9	N/A	2.6	N/A	2.6	13.2
HIV prevalence	2019	65.3	94.7	110.4	134.8	140.9	378.0
Tuberculosis	2019	N/A	N/A	0.4	N/A	1.3	2.7
Chlamydia	2019	209.5	352.9	253.1	259.1	296.8	551.0
Gonorrhea	2019	22.0	42.9	30.2	26.5	40.7	187.8
Primary and Secondary Syphilis	2019	3.9	3.1	3.5	2.9	4.1	11.9
Early Latent Syphilis	2019	3.2	2.3	3.6	2.4	3.9	12.7

Source: Centers for Disease Control and Prevention, 2022.
N/A indicates data are suppressed
Light grey shading indicates that rates were higher (worse) than the New Hampshire or Maine average.
Dark grey shading indicates that rates were more than 50 percent higher than the New Hampshire or Maine average.

Description

Exhibit 22 summarizes communicable incidence rates for Rockingham County, Strafford County, New Hampshire, York County, Maine, and the U.S.

Observations

The health of populations can be measured by morbidity indictors, which identify the prevalence of diseases and/or medical conditions. Rates of selected reportable and infectious diseases can identify specific diseases and conditions prevalent in the community. Data in ***Exhibit 22*** indicate the following:

- In Rockingham County, the incidence rate for primary and secondary syphilis is higher than the New Hampshire rate; and
- In Strafford County, the incidence rates for chlamydia and gonorrhea are higher than the overall New Hampshire rates.

Exhibit 23: Maternal and Infant Health Indicators, 2017 - 2020

Indicator	Year(s)	Rockingham County (NH)	Strafford County (NH)	New Hampshire	York County (ME)	Maine	United States
Teen births (15-19 years) (per 1,000)	2020	3.3	6.7	6.6	7.2	10.6	15.4
Births to unmarried women (18-54 years)	2018-2020	23.4%	34.1%	32.2%	34.0%	38.5%	40.4%
Births to women aged 40-49	2018-2020	3.8%	2.8%	3.2%	2.2%	3.0%	3.4%
Births to women aged 15-19	2018-2020	1.1%	3.6%	2.5%	2.3%	3.2%	4.6%
Infant deaths [per 1,000 live births]	2017-2019	3.0	N/A	3.6	N/A	5.6	5.7
Low birth weight deliveries	2018-2020	6.4%	6.2%	6.7%	7.3%	7.3%	8.3%
Very low birth weight deliveries	2018-2020	0.7%	0.6%	1.0%	1.1%	1.1%	1.4%
Preterm births	2018-2020	8.7%	7.7%	8.3%	9.3%	8.9%	10.1%
< 32 weeks gestation	2018-2020	1.0%	0.9%	1.1%	1.3%	1.3%	1.6%
32-33 weeks gestation	2018-2020	1.0%	0.7%	1.0%	1.0%	0.9%	1.2%
34-36 weeks gestation	2018-2020	6.7%	6.1%	6.2%	6.9%	6.6%	7.4%

Sources: Centers for Disease Control and Prevention, 2022, and Verité analysis of these data.
N/A indicates data are suppressed
Light grey shading indicates that rates were higher (worse) than the New Hampshire or Maine average.
Dark grey shading indicates that rates were more than 50 percent higher than the New Hampshire or Maine average.

Description

Exhibit 23 presents indicators for maternal and infant health for Rockingham County, Strafford County, New Hampshire, York County, Maine, and the U.S.

Observations

The health of populations can be measured by conditions prevalent in the community. Maternal, infant, and young child health indicators can identify conditions in the community that negatively impact the health of pregnant women and can potentially impact the future needs of children. Data in ***Exhibit 23*** indicate the following:

- In Rockingham County, the percentages of births to women over 40, preterm births overall, preterm births with 32-33 weeks gestation, and preterm births with 34-36 weeks gestation are higher than New Hampshire rates;
- In Strafford County, the teen birth rate, percentages of teen births (15-19 years), and births to unmarried women (18-54 years) are higher than New Hampshire rates; and
- In York County, the percentages of very low birth weight deliveries, preterm births overall, preterm births with less than 32 weeks gestation, preterm births with less than 33 weeks gestation, and 34-36 weeks gestation are higher than Maine rates.

Exhibit 24A: Behavioral Risk Factor Surveillance System, 2020
Alcohol Consumption

Topic	Indicator	Rockingham County – Strafford County, (NH)	New Hampshire	Portland - South Portland, (ME)	Maine	All States and DC
Alcohol Consumption						
Binge Drinking	Binge drinkers (males having five or more drinks on one occasion, females having four or more drinks on one occasion)	18.5%	16.0%	15.3%	14.4%	15.7%
Heavy Drinking	Heavy drinkers (adult men having more than two drinks per day and adult women having more than one drink per day)	9.5%	8.2%	8.4%	8.1%	6.7%

Source: Centers for Disease Control and Prevention, 2022.
Light grey shading indicates that rates were higher (worse) than the New Hampshire or Maine average.
Dark grey shading indicates that rates were more than 50 percent higher than the New Hampshire or Maine average.

Description

The Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) gathers data through a telephone survey regarding health risk behaviors, healthcare 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. ***Exhibit 24A*** presents BRFSS indicators for alcohol consumption for Rockingham County-Strafford County (NH) Metropolitan Division, New Hampshire, the Portland-South Portland (ME) Metropolitan Statistical Area, Maine, and the United States (the median of all States and DC).

Observations

Alcohol consumption can impair driving, leading to injuries and death from motor vehicle crashes. Data in ***Exhibit 24A*** indicate the following:

- Binge drinking (18.5 percent) and heavy drinking (9.5 percent) are reported by a higher percentage of the residents of Rockingham County - Strafford County area than New Hampshire overall (16.0 percent and 8.2 percent, respectively); and
- Binge drinking (15.3 percent) and heavy drinking (8.4 percent) are reported by a higher percentage of the residents of Portland - South Portland, (ME) area than Maine overall (14.4 percent and 8.1 percent, respectively).

Exhibit 24B: Behavioral Risk Factor Surveillance System, 2020
Chronic Health Indicators

Topic	Indicator	Rockingham County - Strafford County, (NH)	New Hampshire	Portland - South Portland, (ME)	Maine	All States and DC
Chronic Health Indicators						
Arthritis	Adults who have been told they have arthritis	23.2%	25.0%	25.4%	29.0%	24.4%
Asthma	Adults who have been told they currently have asthma	9.2%	11.5%	10.0%	10.6%	9.6%
Asthma	Adults who have ever been told they have asthma	13.1%	15.4%	13.8%	14.8%	14.2%
Cardiovascular Disease	Adults who have ever been told they had a heart attack (myocardial infarction)	3.1%	3.9%	3.5%	5.2%	4.3%
Cardiovascular Disease	Adults who have ever been told they had a stroke	2.3%	2.6%	2.3%	3.0%	2.8%
Cardiovascular Disease	Adults who have ever been told they had angina or coronary heart disease	3.4%	4.0%	3.3%	4.9%	4.0%
COPD	Adults who have ever been told they have COPD	6.5%	6.6%	5.7%	8.3%	6.2%
Depression	Adults who have ever been told they have a form of depression	20.3%	21.4%	22.0%	22.1%	19.2%
Diabetes	Adults who have ever been told by a doctor that they have diabetes	9.0%	8.8%	9.0%	10.3%	10.8%
Kidney	Adults who have ever been told they have kidney disease	2.1%	2.0%	2.7%	3.3%	2.9%
Other Cancer	Adults who have ever been told they had any other types of cancer	6.0%	7.6%	7.4%	8.1%	6.8%
Skin Cancer	Adults who have ever been told they had skin cancer	7.5%	7.6%	7.7%	7.1%	6.3%

Source: Centers for Disease Control and Prevention, 2020.
Light grey shading indicates that rates were higher (worse) than the New Hampshire or Maine average.
Dark grey shading indicates that rates were more than 50 percent higher than the New Hampshire or Maine average.

Description. ***Exhibit 24B*** presents BRFSS indicators for chronic health indicators.

Observations. The health of populations can be measured by morbidity indictors, which identify the prevalence of diseases and/or medical conditions. Data in ***Exhibit 24B*** indicate:

- Diabetes diagnoses (9.0 percent) and kidney disease diagnoses (2.1 percent) are reported by a higher percentage of residents of the Rockingham County - Strafford County area than New Hampshire overall (8.8 percent and 2.0 percent, respectively); and
- Skin cancer diagnoses (7.7 percent) are reported by a higher percentage of residents of the Portland - South Portland, (ME) area than Maine overall (7.1 percent).

Exhibit 24C: Behavioral Risk Factor Surveillance System, 2020
Colorectal Cancer Screening

Topic	Indicator	Rockingham County - Strafford County, (NH)	New Hampshire	Portland - South Portland, (ME)	Maine	All States and DC
Colorectal Cancer Screening						
Blood Stool Test	Adults aged 50-75 who have not had a blood stool test within the past two years	94.8%	94.9%	92.5%	90.3%	90.7%
USPSTF Guidance	Respondents aged 50-75 who received one or more colorectal cancer tests	77.4%	77.8%	86.1%	81.2%	74.2%

Source: Centers for Disease Control and Prevention, 2019.
Light grey shading indicates that rates were worse than the New Hampshire or Maine average.
Dark grey shading indicates that rates were more than 50 percent worse than the New Hampshire or Maine average.

Description
Exhibit 24C presents BRFSS indicators for Colorectal Cancer Screening.

Observation
Evaluating the utilization of preventive services can inform both access to care of residents and the likelihood that residents will utilize available preventive services. Data in ***Exhibit 24C*** indicate the following:

- The reported percentage of "Respondents aged 50-75 who have fully met the USPSTF recommendation" [United States Preventive Services Task Force] "Received one or more of the recommended CRC tests within the recommended time interval" by residents of the Rockingham County - Strafford County area (77.4 percent) is lower than New Hampshire overall (77.8 percent).

Exhibit 24D: Behavioral Risk Factor Surveillance System, 2012
Demographics, Health Care Access / Coverage, and Health Status

Topic	Indicator	Rockingham County - Strafford County, (NH)	New Hampshire	Portland - South Portland, (ME)	Maine	All States and DC
Demographics						
Disability status	Adults who are blind or have serious difficulty seeing, even when wearing glasses	3.5%	3.9%	3.6%	4.6%	4.7%
Disability status	Adults who report having difficulty doing errands alone	5.8%	6.0%	4.9%	6.4%	6.3%
Disability status	Adults who report having difficulty dressing or bathing	2.9%	2.8%	2.4%	3.2%	3.0%
Disability status	Adults who report having serious difficulty concentrating, remembering, or making decisions	7.7%	8.9%	10.3%	11.7%	10.8%
Disability status	Adults who report having serious difficulty walking or climbing stairs	9.1%	10.1%	9.8%	13.0%	11.9%
Hearing	Adults who are deaf	4.3%	6.6%	7.2%	8.9%	6.8%
Health Care Access/Coverage						
Health Care Coverage	Adults without any kind of health care coverage	5.4%	7.6%	7.4%	8.8%	10.7%
Under 65 Coverage	Adults aged 18-64 without any kind of healthcare coverage	6.9%	9.7%	9.5%	11.4%	13.2%
Health Care Cost	Adults who reported delaying a doctor visit in the past 12 months due to cost	7.4%	9.0%	8.5%	9.4%	9.8%
Health Status						
Fair or Poor Health	Adults reporting fair or poor health	9.8%	11.4%	9.3%	12.5%	13.5%

Source: Centers for Disease Control and Prevention, 2019.
Light grey shading indicates that rates were higher (worse) than the New Hampshire or Maine average.
Dark grey shading indicates that rates were more than 50 percent higher than the New Hampshire or Maine average.

Description

Exhibit 24D presents BRFSS indicators for Demographics, Health Care Access / Coverage, and Health Status.

Observations

Disability can impact quality of life. Lack of insurance and the cost of medical services are primary barriers to healthcare access. Data in ***Exhibit 24D*** indicate the following:

- Difficulty dressing or bathing (2.9 percent) are reported by a higher percentage of residents of the Rockingham County - Strafford County area than New Hampshire overall (2.8 percent).

Exhibit 24E: Behavioral Risk Factor Surveillance System, 2012
Immunizations and Injury

Topic	Indicator [Year]	Rockingham County - Strafford County, (NH)	New Hampshire	Portland - South Portland, (ME)	Maine	All States and DC
Immunization						
Flu Shot	Adults aged 65+ who have not had a flu shot within the past year	70.9%	70.9%	76.9%	72.3%	67.8%
Pneumonia Vaccination	Adults aged 65+ who have never had a pneumonia vaccination	71.2%	74.8%	76.9%	72.7%	71.8%
Injury						
Drink and Drive	Adults who reported driving after drinking too much	2.8%	2.0%	1.4%	1.7%	2.3%
Seatbelt Use	Adults who always or nearly always wear a seat belt?	14.1%	16.9%	4.6%	5.5%	5.8%

Source: Centers for Disease Control and Prevention, 2019.
Light grey shading indicates that rates were worse than the New Hampshire or Maine average.
Dark grey shading indicates that rates were more than 50 percent worse than the New Hampshire or Maine average.

Description
Exhibit 24E presents BRFSS indicators for Immunization and Injury for Rockingham County-Strafford County (NH) Metropolitan Division, New Hampshire, the Portland-South Portland (ME) Metropolitan Statistical Area, Maine, and the United States (the median of all States and DC).

Observations
A safe environment supports community health by helping to prevent vaccine-preventive disease and to prevent injury. Data in ***Exhibit 24E*** indicate the following:

- Drinking and driving (2.8 percent) is reported by a higher percentage of the residents of Rockingham County - Strafford County area than New Hampshire overall (2.0 percent); reported seatbelt use (14.1 percent) is lower than the state overall (16.8 percent).

Exhibit 24F: Behavioral Risk Factor Surveillance System, 2012
Oral Health, Overweight / Obesity (BMI), and Physical Activity

Topic	Indicator [Year]	Rockingham County - Strafford County, (NH)	New Hampshire	Portland - South Portland, (ME)	Maine	All States and DC
Oral Health						
All Teeth Removed	Adults aged 65+ who have had all their natural teeth extracted	12.2%	11.0%	8.5%	16.8%	12.9%
Dental Visit	Visited the dentist or dental clinic within the past year for any reason	74.8%	69.7%	74.0%	66.7%	66.3%
Teeth Removed	Adults that have had any permanent teeth extracted	36.4%	39.0%	39.0%	44.4%	40.2%
Overweight / Obesity (BMI)						
BMI Categories	Adults who are obese (BMI 30.0 - 99.8)	27.7%	29.9%	28.3%	31.0%	31.9%
BMI Categories	Adults who are overweight (BMI 25.0 - 29.9)	34.8%	35.8%	34.4%	34.6%	35.2%
Physical Activity						
Exercise	Adults who participated in physical activities during the past month	83.8%	80.7%	81.4%	78.5%	77.3%

Source: Centers for Disease Control and Prevention, 2019.
Light grey shading indicates that rates were higher (worse) than the New Hampshire or Maine average.
Dark grey shading indicates that rates were more than 50 percent higher than the New Hampshire or Maine average.

Description

Exhibit 24F presents BRFSS indicators for Oral Health, Overweight / Obesity (BMI), and Physical Activity.

Observations

Oral health, healthy weight, and physical activity are correlated with overall good health. Data in ***Exhibit 24F*** indicate the following:

- Reported oral health, overweight / obesity (BMI), and physical activity indicators for adults in the Rockingham County - Strafford County area are better than New Hampshire indicators overall; and
- Reported oral health, overweight / obesity (BMI), and physical activity indicators for adults in the Portland - South Portland, (ME) area are better than Maine overall.

Exhibit 24G: Behavioral Risk Factor Surveillance System, 2012
Prostate Cancer and Tobacco Use

Topic	Indicator	Rockingham County - Strafford County, (NH)	New Hampshire	Portland - South Portland, (ME)	Maine	All States and DC
Prostate Cancer						
PSA Test	Men aged 40+ who have had a PSA test within the past two years	30.7%	30.5%	29.7%	26.8%	31.8%
Tobacco Use						
Current Smoker Status	Adults who are current smokers	14.0%	13.9%	12.2%	16.5%	15.5%
Smokeless Tobacco	Adults who currently use chewing tobacco, snuff, or snus	1.8%	1.8%	2.7%	2.7%	3.7%

Source: Centers for Disease Control and Prevention, 2019.
Light grey shading indicates that rates were higher (worse) than the New Hampshire or Maine average.
Dark grey shading indicates that rates were more than 50 percent higher than the New Hampshire or Maine average.

Description
Exhibit 24G presents BRFSS indicators for Prostate Cancer and Tobacco Use.

Observations
Health behaviors contribute markedly to leading causes of death, disability, and social problems. Early detection of cancer improves health outcomes. Tobacco use, especially, can have a negative impact on health. Data in ***Exhibit 24G*** indicate the following:

- Reported prostate cancer and tobacco use indicators for adults in the Rockingham County - Strafford County area are the same as or better than New Hampshire indicators overall; and
- Reported prostate cancer and tobacco use indicators for adults in the Portland - South Portland, (ME) area the same as or better than Maine overall.

Exhibit 24H: Behavioral Risk Factor Surveillance System, 2012
Women's Health

Topic	Indicator [Year]	Rockingham County - Strafford County, (NH)	New Hampshire	Portland - South Portland, (ME)	Maine	All States and DC
Women's Health						
Mammogram	Women aged 40+ who have not had a mammogram within the past two years	69.2%	71.6%	78.1%	75.9%	71.5%
Mammogram	Women aged 50-74 who have not had a mammogram within the past two years	78.5%	78.5%	84.7%	82.9%	78.3%
Pap Test	Women aged 21-65 who have had a pap test in the past three years	78.2%	78.4%	81.9%	80.4%	77.7%

Source: Centers for Disease Control and Prevention, 2019.
Light grey shading indicates that rates were higher (worse) than the New Hampshire or Maine average.
Dark grey shading indicates that rates were more than 50 percent higher than the New Hampshire or Maine average.

Description
Exhibit 24H presents BRFSS indicators for Women's Health.

Observations
Health behaviors contribute markedly to leading causes of death, disability, and social problems. Early detection of cancer improves health outcomes. Data in ***Exhibit 24H*** indicate the following:

- Women aged 21-65 who have had a pap test in the past three years (78.2 percent) is reported by a lower percentage of the residents of Rockingham County - Strafford County area than New Hampshire overall (78.4 percent).

Exhibit 25A: Strafford County Youth Risk Behavior Survey, 2019

Measure	Time Period	Strafford County				New Hampshire			
		Percent Total	<= 15	Male	Female	Percent Total	<= 15	Male	Female
Has ridden in a car driven by someone who had been drinking	Month	15.1%	15.6%	13.1%	17.4%	14.9%	15.5%	13.3%	16.3%
Has driven a vehicle when had been drinking alcohol	Month	2.5%	1.1%	3.4%	1.5%	4.7%	4.3%	5.5%	3.6%
Text or email while driving a vehicle	Month	27.6%	3.3%	25.8%	29.7%	44.2%	11.8%	42.0%	46.4%
Did not go to school because felt unsafe at school or on way to school	Month	2.6%	2.4%	2.2%	2.8%	6.9%	6.6%	4.8%	8.8%
Were in a physical fight	Year	9.6%	12.6%	13.7%	4.7%	7.9%	10.9%	11.2%	4.1%
Physically forced to have sexual intercourse when did not want to	Ever	6.9%	3.7%	3.1%	11.0%	6.7%	4.1%	3.0%	10.6%
Have been bullied on school property	Year	23.7%	25.7%	19.7%	28.0%	23.0%	26.6%	18.5%	27.6%
Have been electronically bullied	Year	20.4%	20.3%	13.2%	28.0%	20.1%	21.0%	13.4%	26.8%
Feel sad or hopeless almost every day for two weeks or more in a row	Year	31.8%	29.3%	20.7%	43.7%	33.6%	30.2%	23.8%	43.9%
Seriously consider attempting suicide	Year	17.3%	17.0%	12.5%	21.9%	18.4%	19.1%	14.4%	22.5%
Attempted suicide	Year	6.2%	5.7%	4.8%	7.4%	7.0%	7.3%	5.3%	8.4%
Smoked cigarettes in the past 30 days	Month	4.5%	2.4%	5.4%	3.0%	5.5%	3.6%	6.6%	4.1%
Drank alcohol in the past 30 days	Month	26.2%	15.8%	25.8%	26.3%	26.8%	15.4%	24.7%	29.0%
Used marijuana in the past 30 days	Month	25.6%	18.6%	25.4%	25.1%	26.1%	16.7%	26.3%	25.5%
Ever used heroin	Ever	1.4%	1.1%	2.0%	0.8%	1.5%	1.1%	2.0%	0.7%
Ever used methamphetamines	Ever	1.5%	1.3%	2.1%	0.8%	1.7%	1.3%	2.4%	1.0%
Ever used prescription drugs without a prescription	Ever	9.8%	8.0%	10.0%	9.3%	-	-	-	-
Ever used synthetic marijuana	Ever	-	-	-	-	8.6%	6.6%	8.7%	8.2%
Ever had sexual intercourse	Ever	38.8%	20.3%	36.6%	41.1%	39.8%	20.0%	39.4%	40.0%
Had sex in the past 3 months	3 months	29.3%	13.6%	27.3%	31.4%	29.7%	13.3%	28.2%	31.1%
Were physically active for at least 60 minutes every day	Week	23.3%	24.0%	30.9%	15.2%	22.5%	24.0%	28.8%	15.6%
Went to the dentist	Year	83.6%	87.0%	82.7%	85.4%	-	-	-	-
Went to the dentist	Never	-	-	-	-	98.8%	98.8%	98.5%	99.2%
Had asthma	Ever	22.2%	19.7%	22.6%	21.4%	22.6%	20.1%	21.4%	23.8%
Do something to purposely hurt yourself without wanting to die	Year	18.8%	20.2%	10.1%	27.8%	-	-	-	-

Source: New Hampshire Department of Health and Human Services.
* Light grey shading indicates that rates were higher (worse) than the New Hampshire average.
Dark grey shading indicates that rates were more than 50 percent higher than the New Hampshire average.

Description

Exhibit 25A presents indicators from the New Hampshire Youth Risk Behavior Survey ("YRBS"). The YRBS was developed in 1990 to monitor priority health risk behaviors that contribute markedly to the leading causes of death, disability, and social problems among youth and adults in the United States. These behaviors, often established during childhood and early adolescence, include the following:

- Behaviors that contribute to unintentional injuries and violence;
- Sexual behaviors related to unintended pregnancy and sexually transmitted infections, including HIV infection;
- Alcohol and other drug use;
- Tobacco use;
- Unhealthy dietary behaviors; and
- Inadequate physical activity.

YRBS data were assessed for Strafford County and New Hampshire overall.

Observations

Results from the YRBS can help identify issues in children, youth, and young adults. Data in ***Exhibit 25A*** indicate the following:

- Strafford County Youth overall, Youth Aged 15 and younger, and Female Youth were more likely to report having ridden in a car driven by someone who had been drinking in the last month than comparable New Hampshire cohorts;
- All cohorts of Strafford County youth were more likely to report being having been in a physical fight over the last year than comparable cohorts in New Hampshire;
- Strafford County Youth overall, Male Youth, and Female Youth were more likely to report ever being physically forced to have sexual intercourse when they did not want to and over the last year having been bullied on school property than comparable New Hampshire cohorts;
- Strafford County Youth overall and Female Youth were more likely to report having been electronically bullied over the past year than the comparable New Hampshire cohort;
- Youth Aged 15 and Younger and Male Youth were more likely to report having drank alcohol in the last month than comparable New Hampshire cohorts;
- Youth Aged 15 and Younger were more likely to have used marijuana in the last 30 days than the comparable New Hampshire cohort;
- Female Youth were more likely ever to have used heroin than the comparable New Hampshire cohort, as well as less likely to have been physically active for at least 60 minutes every day in a week;
- Youth Aged 15 and Younger and Female Youth were more likely to report having ever had sexual intercourse and had sex in the past 3 months than comparable New Hampshire cohorts; and
- Male Youth were more likely to report having ever had asthma than the comparable New Hampshire cohort.

Exhibit 25B: York County Maine Integrated Youth Health Survey, 2019

Measure	Time Period	York County				Maine			
		Percent Total	<= 15	Male	Female	Percent Total	<= 15	Male	Female
Has ridden in a car driven by someone who had been drinking	Month	13.3%	15.6%	11.7%	14.8%	13.7%	14.6%	12.5%	14.5%
Has driven a vehicle when had been drinking alcohol	Month	7.5%	-	-	-	4.2%	5.1%	5.2%	2.6%
Text or email while driving a vehicle	Month	-	-	-	-	37.6%	12.1%	36.2%	38.9%
Did not go to school because felt unsafe at school or on way to school	Month	-	-	-	-	6.3%	5.1%	5.4%	6.8%
Were in a physical fight on school property	Year	-	-	-	-	5.5%	6.9%	7.9%	2.7%
Forced to have sexual intercourse when did not want to	Ever	11.7%	14.4%	6.0%	17.7%	11.9%	9.7%	5.6%	18.4%
Have been bullied on school property	Year	22.7%	30.1%	18.1%	27.4%	23.3%	26.8%	19.5%	27.1%
Have been electronically bullied	Year	19.5%	28.8%	14.2%	24.9%	19.6%	21.6%	14.1%	25.3%
Feel sad or hopeless almost every day for two weeks or more in a row	Year	32.2%	40.9%	24.1%	40.8%	32.1%	29.9%	23.3%	41.2%
Seriously consider attempting suicide	Year	16.8%	23.2%	13.1%	20.6%	16.4%	16.6%	12.6%	20.2%
Attempted suicide	Year	9.1%	11.1%	8.9%	8.7%	8.9%	9.5%	8.2%	9.2%
Smoked cigarettes in the past 30 days	Month	9.3%	6.9%	11.1%	7.2%	10.6%	7.5%	12.6%	8.1%
Drank alcohol in the past 30 days	Month	24.0%	17.5%	22.9%	25.1%	22.9%	14.8%	21.6%	24.0%
Smoked marijuana in the past 30 days	Month	21.7%	15.2%	21.7%	21.6%	22.0%	14.7%	22.0%	21.9%
Ever used cocaine	Ever	4.4%	2.6%	4.6%	4.2%	3.8%	3.0%	4.4%	2.7%
Ever used heroin	Ever	3.3%	2.1%	4.1%	2.3%	3.0%	2.8%	3.9%	1.8%
Ever used methamphetamines	Ever	3.2%	2.2%	3.9%	2.4%	3.0%	2.9%	3.8%	1.8%
Ever used prescription drugs without a prescription or used differently	Ever	11.3%	11.9%	10.7%	11.9%	11.7%	11.6%	11.5%	11.6%
Ever used synthetic marijuana	Ever	6.9%	6.0%	7.1%	6.7%	6.2%	5.7%	6.5%	5.3%
Ever had sexual intercourse	Ever	38.0%	19.6%	38.6%	37.3%	38.4%	20.8%	38.6%	38.2%
Had sex in the past 3 months	3 months	-	-	-	-	29.2%	13.6%	27.0%	31.3%
Were physically active for at least 60 minutes every day	Week	20.8%	18.3%	25.7%	15.6%	20.9%	22.6%	25.7%	16.0%
Went to the dentist	Year	-	-	-	-	79.6%	81.2%	78.0%	81.3%
Had asthma	Ever	-	-	-	-	21.1%	20.4%	20.9%	21.2%
Do something to purposely hurt yourself without wanting to die	Year	17.7%	24.0%	11.9%	23.4%	18.7%	19.8%	12.5%	24.9%

Source: Maine Department of Health and Human Services.
*Data suppressed Light grey shading indicates that rates were higher (worse) than the Maine average.
Dark grey shading indicates that rates were more than 50 percent higher than the Maine average.

Description
Exhibit 25B presents indicators from the Maine Integrated Youth Health Survey ("MIYHS"). The MIYHS was first administered in 2009. The MIYHS is used to assess the health, attitudes, and behaviors of children, youth, and young adults. MIYHS results can be compared to YRBS results.

Observations
Results from the MIYHS can help identify issues in children, youth, and young adults. Data in ***Exhibit 25B*** indicate the following:

- York County Youth overall were more than 50 percent more likely to report having driven a vehicle when they had been drinking alcohol than the comparable cohort in Maine;
- All cohorts in York County were more likely to report having seriously considered attempting suicide, having previously drank alcohol, and ever using synthetic marijuana than comparable cohorts in Maine;
- York County Youth overall and Female Youth are more likely to report having ridden in a car driven by someone who had been drinking and having been bullied on school property than comparable cohorts in Maine;
- Youth Aged 15 and Younger and Male Youth were more likely to report having been forced to have sexual intercourse and having been electronically bullied than comparable Maine cohorts;
- York County Youth overall, Youth Aged 15 and Younger and Male Youth were more likely to report having attempted suicide than comparable Maine cohorts;
- Youth Aged 15 and were more likely to report having smoked marijuana and having done something to purposely to hurt oneself than the comparable Maine cohort;
- York County Youth overall, Male Youth, and Female Youth are more likely to report having ever used cocaine, having ever used heroin, and having ever used methamphetamines, as well as less likely to have been physically active than comparable cohorts in Maine; and
- York County Youth overall and Female Youth were more likely to report having ever used prescription drugs without a prescription or used differently than comparable cohorts in Maine.

Community Need Index™ and Food Deserts

Dignity Health Community Need Index™

Exhibit 26: Community Need Index™ Score by ZIP Code, 2022

City/Town	ZIP Code	County (State)	CNI Score
Primary Service Area Subtotal			**2.7**
Barrington	03825	Strafford (NH)	1.8
Berwick	03901	York (ME)	1.8
Dover	03820	Strafford (NH)	3.0
Durham	03824	Strafford (NH)	2.8
Lee	03861	Strafford (NH)	2.0
Madbury	03823	Strafford (NH)	1.6
Newington / Portsmouth	03801	Rockingham (NH)	2.6
Rochester	03839	Strafford (NH)	3.0
Rochester	03867	Strafford (NH)	3.6
Rochester	03868	Strafford (NH)	2.8
Rollinsford	03869	Strafford (NH)	1.8
Somersworth	03878	Strafford (NH)	3.2
South Berwick	03908	York (ME)	1.4
Secondary Service Area Subtotal			**2.1**
Brookfield	03872	Carroll (NH)	1.6
Eliot	03903	York (ME)	1.4
Farmington	03835	Strafford (NH)	2.4
Kittery	03904	York (ME)	2.2
Kittery Point	03905	York (ME)	2.0
Lebanon	04027	York (ME)	2.2
Middleton	03887	Strafford (NH)	2.0
Milton	03851	Strafford (NH)	2.0
Milton Mills	03852	Strafford (NH)	2.0
Newmarket	03857	Rockingham (NH)	2.6
North Berwick	03906	York (ME)	1.6
Nottingham	03290	Rockingham (NH)	2.0
Wakefield	03830	Carroll (NH)	1.8
Community Total			**2.5**
Rockingham (NH)			**1.9**
Strafford (NH)			**2.7**
York (ME)			**2.1**

Source: Dignity Health, 2022

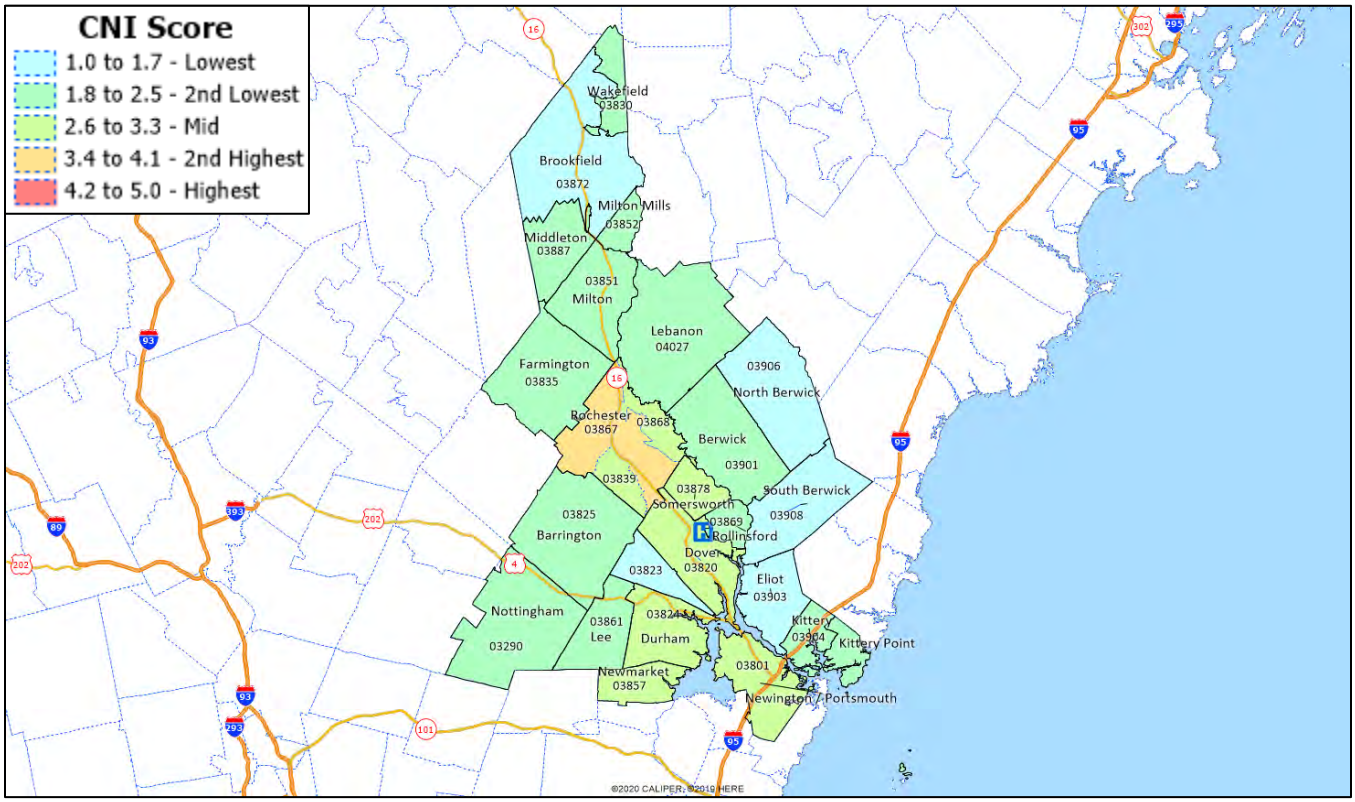
Description

Exhibit 26 presents the *Community Need Index*™ (CNI) score for each ZIP Code in the WDH community. The index, developed by Dignity Health, is available for every ZIP Code in the United States, is derived from five social and economic indicators (poverty, English proficiency, high school diploma, uninsured and unemployed residents, and population renting houses). CNI scores are grouped into "Lowest Need" (1.0-1.7) to "Highest Need" (4.2-5.0) categories; 3.0 represents the national median.

Observations

Data in ***Exhibit 26*** indicate that Somersworth (ZIP Code 03878), and Rochester (ZIP Code 03867) have levels of need higher than they have moderately high levels of need.

Exhibit 27: Community Need Index™, 2022



Source: Dignity Health, 2019

Description

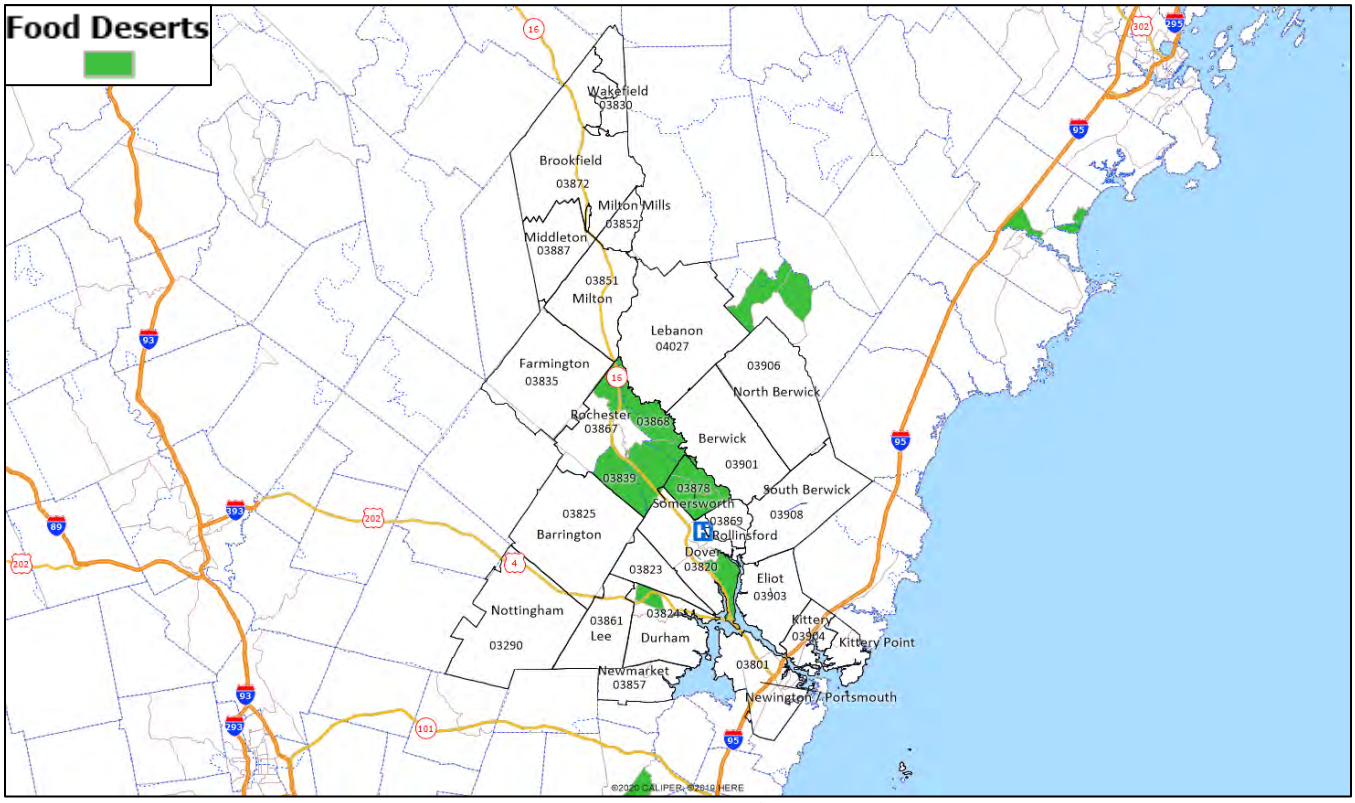
Exhibit 27 maps Dignity Health's CNI scores by ZIP Code.

Observations

Data in ***Exhibit 27*** indicate two ZIP Codes within the WDH community have moderately high CNI scores (3.4-4.1). These ZIP Codes are 03878 (Somersworth) and 03867 (Rochester). No ZIP Code in the community has the highest score.

Food Deserts

Exhibit 28: Food Deserts



Source: Caliper Maptitude and U.S. Department of Agriculture, 2022.

Description

Exhibit 28 maps census tracts identified as "food deserts" by the Economic Research Service of the U.S. Department of Agriculture (USDA). The USDA estimates the number of people in each census tract that live in a "food desert," an area with "limited access to supermarkets, supercenters, grocery stores, or other sources of healthy and affordable food." Food deserts in ***Exhibit 28*** are defined as a "low income and low access tract measured at 1 mile for urban areas and 10 miles for rural areas."

Observations

Data in ***Exhibit 28*** indicate that Somersworth and parts of Dover, Durham, and Rochester have been designated as food deserts.

Medically Underserved Areas and Populations

Medically Underserved Areas and Populations (MUA/Ps) are designated by the Health Resources and Services Administration (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.[21] Areas with a score of 62 or less are considered "medically underserved."

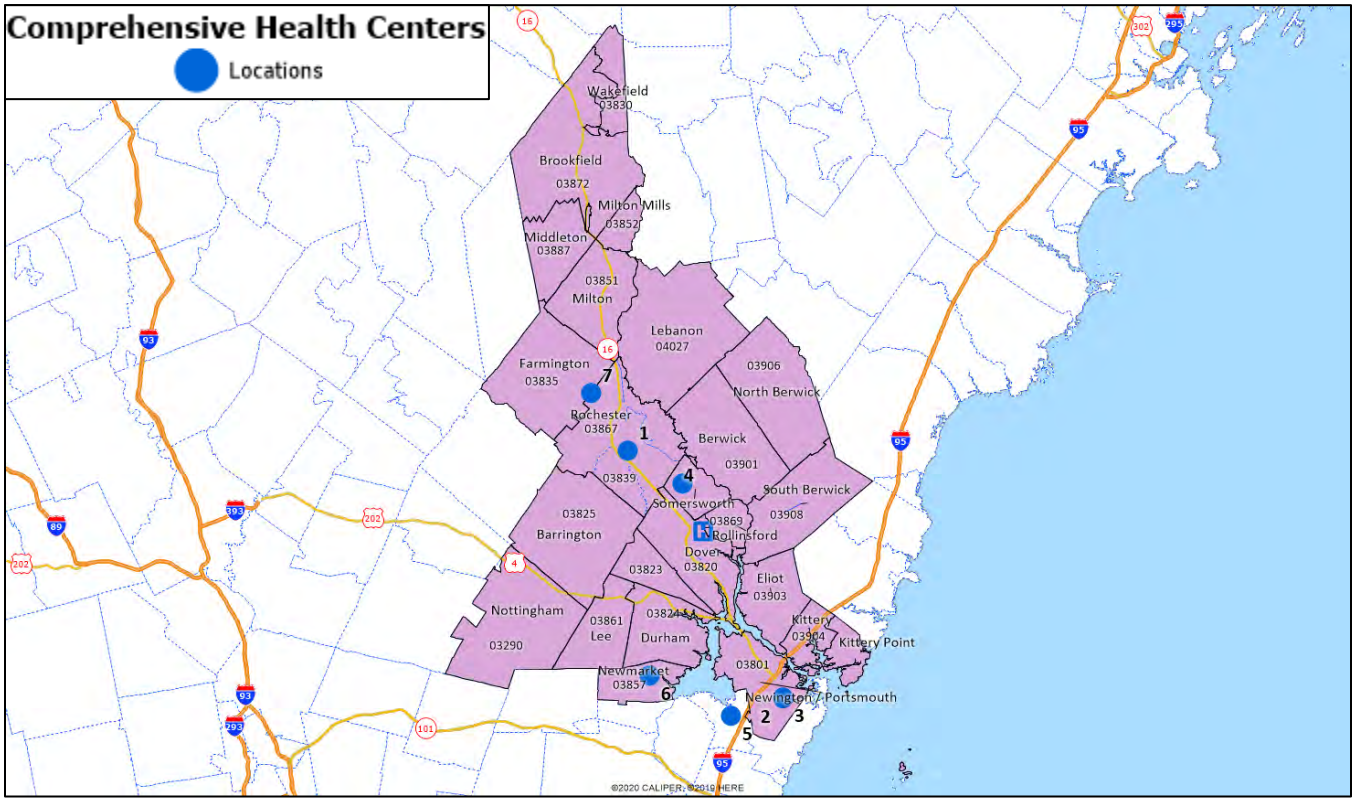
Populations receiving MUP designation include groups within a geographic area with economic barriers or cultural and/or linguistic access barriers to receiving primary care. If a population group does not qualify for MUP status based on the IMU score, Public Law 99-280 allows MUP designation if "unusual 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."[22]

Strafford County is designated as a Medically Underserved Area.

[21] Heath Resources and Services Administration. See http://www.hrsa.gov/shortage/mua/index.html
[22] *Ibid.*

Health Professional Shortage Areas

Exhibit 29: HPSA Designated Comprehensive Health Centers



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

Description

Exhibit 29 illustrates sites in the WDH community that are designated as Health Professional Shortage Areas ("HPSAs"). A geographic area or population can receive a federal HPSA designation if a shortage of primary care, dental care, or mental health care professionals is found to be present. 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.

Observations

Data in ***Exhibit 29*** illustrate seven sites of community Federally Qualified Health Centers ("FQHCs") designed as HPSAs. These FQHCs and their addresses are listed below.

Map #	Site Name	Address	City	State	ZIP Code
1	Community Partners	25 Old Dover Rd	Rochester	NH	03867
2	Cross Roads House	600 Lafayette Rd Rm 120	Portsmouth	NH	03801
3	Families First Health & Support Center	8 Greenleaf Woods Dr	Portsmouth	NH	03801
4	Goodwin Community Health	311 Route 108	Somersworth	NH	03878
5	Goodwin Community Health Mobile Van	575 Portsmouth Ave	Greenland	NH	03840
6	Lamprey Health Care	207 S Main St	Newmarket	NH	03857
7	Lilac Pediatrics	180 Farmington Rd	Rochester	NH	03867

Description of Other Facilities and Resources within the Community

Federally Qualified Health Centers

Exhibit 30: Federally Qualified Health Centers

Facility	Address	City/Town	ZIP Code	County
Lamprey Health Care	207 S Main St	Newmarket	03857	Rockingham
Goodwin Community Health/St. Vincent de Paul	53 Lincoln St	Exeter	03833	Rockingham
Lamprey Health Care - Administration II	205 S Main St	Newmarket	03857	Rockingham
Rockingham County Nursing Home	117 North Rd	Brentwood	03833	Rockingham
Healthy Together	10 Tsienneto Rd STE 1	Derry	03038	Rockingham
Nasson Health Care – Biddeford	357 Elm St	Biddeford	04005	York
Goodwin Community Health	311 Route 108	Somersworth	03878	Strafford
Lamprey Health Care Mobile Health Unit	128 Route 27	Raymond	03077	Rockingham
Nasson Health Care – Springvale	15 Oak St	Springvale	04083	York
Cross Roads House	600 Lafayette Rd Rm 120	Portsmouth	03801	Rockingham
Goodwin Community Health Mobile Van 2	575 Portsmouth Ave	Greenland	03840	Rockingham
Lamprey Health Care - Administration III	14 Elm St	Newmarket	03857	Rockingham
York County Community Action Corporation	6 Spruce St	Sanford	04073	York
Goodwin Community Health Mobile Van 1	575 Portsmouth Ave	Greenland	03840	Rockingham
Lamprey Health Care - Raymond Center	128 Route 27	Raymond	03077	Rockingham
Lilac Pediatrics	180 Farmington Rd	Rochester	03867	Strafford
White Mountain Community Health Center	298 White Mountain Hwy	Conway	03818	Carroll
Families First Health & Support Center	8 Greenleaf Woods Dr	Portsmouth	03801	Rockingham
Community Partners	25 Old Dover Rd	Rochester	03867	Strafford

Source: The Health Resources and Services Administration, 2022, and Wentworth-Douglass Hospital.

Description

Exhibit 30 presents FQHCs operating in Carroll, Rockingham, Strafford, and York counties. Included are FQHCs operating in areas beyond the immediate WDH community.

Observations

Data in ***Exhibit 30*** indicate that there are nineteen FQHC sites in Carroll, Rockingham, Strafford, and York counties. Included are two mobile vans.

Hospitals

Exhibit 31: Hospitals

Facility Name	Address	City	State	Zip Code	County Name
Exeter Hospital	5 Alumni Drive	Exeter	NH	03833	Rockingham
Frisbie Memorial Hospital	11 Whitehall Road	Rochester	NH	03867	Strafford
Hampstead Hospital	218 East Road	Hampstead	NH	03841	Rockingham
Huggins Hospital	240 South Main Street	Wolfeboro	NH	03894	Carroll
Memorial Hospital	3073 White Mountain Hwy	North Conway	NH	03860	Carroll
Parkland Medical Center	1 Parkland Drive	Derry	NH	03038	Rockingham
Portsmouth Regional Hospital	333 Borthwick Ave	Portsmouth	NH	03801	Rockingham
Southern Maine Health Care	1 Medical Center Drive	Biddeford	ME	04005	York
Wentworth-Douglass Hospital	789 Central Ave	Dover	NH	03820	Strafford
York Hospital	15 Hospital Drive	York	ME	03909	York

Source: Centers for Medicare & Medicaid Services, 2022

Description

Exhibit 31 presents hospitals operating in Carroll, Rockingham, Strafford, and York counties. Included are community and specialty hospitals operating in areas beyond the immediate WDH community.

Observations

Data in ***Exhibit 31*** indicate that there are ten hospitals in Carroll, Rockingham, Strafford, and York counties, including WDH.

Other Resources

2-1-1 New Hampshire maintains a database to refer individuals to health and human services in the state. 2-1-1 New Hampshire is an initiative of Granite United Way and relies on the generosity of donors and partners like Eversource, the State of New Hampshire, Volunteer NH and local United Ways. Additional information about resources available to New Hampshire residents is available at: http://www.211nh.org.

Categories of resources maintained in the database are as follows:

- Basic Needs (including food, homeless services, housing and utilities, material goods, temporary financial aid, and transportation);
- Consumer Services (including consumer assistance and protection, and consumer regulation);
- Criminal Justice and Legal Services (including courts, criminal correctional system, judicial services, law enforcement agencies, law enforcement services, legal assistance modalities, legal education/information, legal services, and tax organizations and services);
- Education (including educational institutions/schools, educational programs, and educational support services);
- Environmental Quality (including domestic animal services, environmental protection and improvement, municipal services/public works, public health, and public safety);
- Health Care, Mental Health, & Substance Abuse Services (including health care and mental health care facilities, health care services, mental health care services, substance abuse services, and support groups, wellness programs, and health education);
- Income Security (including employment, public assistance programs, and social insurance programs);
- Individual and Family Life (including death certification/burial arrangements, family surrogate/alternative living services, individual and family support services, leisure activities, social development and enrichment, spiritual enrichment, and volunteer opportunities);
- Organizational/Community/International Services (including administrative entities, arts and culture, community economic development, community groups and services, community services, disaster and emergency services, information services, occupational/professional associations, organizational development and management services, and military); and
- Target Populations (including veterans and military personnel, homeless people, and volunteers).

In Maine, 2-1-1 Maine, Inc. maintains a database of health, social economic, and human services available to residents of the state. Categories of resources maintained in the database are as follows:

- Aging & Disability;
- Basic Needs;
- Child Development;
- Crisis;
- Education;
- Family;
- Food;
- Health;
- Housing;
- Jobs & Employment;
- Mental Health;
- Substance Use & Addiction; and
- Transitions.

2-1-1 Maine, Inc. is a collaborative effort of the United Ways of Maine, the State of Maine Department of Health and Human Services, and The Opportunity Alliance as the Contact Center Partner. Additional information about resources available to residents is available at: http://211maine.org/.

Findings of Other Assessments

In recent years, several state and county health departments developed State Health Improvement Plans and other community health assessments. This section identifies and discusses community health priorities found in that work.

New Hampshire State Health Improvement Plan, 2013-2020

The NH Department of Health and Human Services (DHHS) prepared a State Health Improvement Plan ("SHIP"), *Charting a Course to Improve the Health of New Hampshire*, for 2013-2020. Ten priority areas were identified in the New Hampshire SHIP, as follows:

1. Tobacco;
2. Obesity/diabetes;
3. Heart disease and stroke;
4. Healthy mothers and babies;
5. Cancer prevention;
6. Asthma;
7. Injury prevention;
8. Infectious disease;
9. Emergency preparedness; and
10. Misuse of alcohol and drugs.

Maine State Health Improvement Plan, 2018-2020

The Maine Center for Disease Control and Prevention ("Maine CDC") created the State Health Improvement Plan ("SHIP") to identify public health priorities. The Maine SHIP reflects a collaboration between the Maine Department of Health and Human Services, alongside District Public Health Improvement Plans ("DPHIPs") from each of the nine counties in Maine. Five state-wide health improvement efforts were identified:

1. Cancer;
2. Chronic diseases;
3. Healthy weight;
4. Mental health; and
5. Substance use, including tobacco use.

Seacoast Public Health Network Community Health Improvement Plan, 2019-2022

A Community Health Improvement Plan ("CHIP") was produced by the Seacoast Public Health Network Community. The CHIP was developed with input from community organizations. Of the top health priority health areas identified, the five categories below were identified as priority areas.

1. **Behavioral Health.** High school students (grades 9-12) were identified as a vulnerable population for behavioral health challenges. The plan outlines goals, objectives, and strategies to reduce substance use and access among children and adolescents. NH Department of Health and Human Services will focus on a continuum of care that supports mental health needs from screening to recovery support. Suicide prevention is the last major subcategory of behavioral health, with interventions focused primarily on youth (ages 12-17) and young adult (ages 18-25) populations.

2. **Public Health Emergency Preparedness.** Strategies to improve emergency preparedness in the Seacoast region include: community education classes at the local and regional level, assessment of hazards and social conditions that increase vulnerability for impacts of natural disasters, providing regional and statewide emergency preparedness drills, and organizing volunteers (Seacoast Medical Reserve Corps) to provide assistance during public health emergencies and other natural disasters.

3. **Falls Prevention/Older Adults.** Older adults were identified as a vulnerable population due to their risk of moderate to severe injuries resulting from falls each year. Interventions focus on increasing the quantity of Fall Prevention Trainers/Coaches and increasing awareness of fall risks for older adults, their caregivers and health providers.

4. **Family and Social Support (Resiliency) Kinship Care.** Family and Social Support encompasses the needs of children and adolescents, young adults, adults, and families. Interventions target building resiliency, health mindfulness, and increasing awareness of substance use disorder risks through training and education.

5. **Tickborne Disease.** Tickborne Disease is an identified health priority among children and their caregivers, as well as education for healthcare clinicians in high-risk regions of the Seacoast Public Health Network. Education and training will focus on youth and their adult counselors/caregivers, as well as environmental control measures to reduce tick exposure habitats in youth camp or after-school program areas.

Strafford County Public Health Network Community Health Improvement Plan, 2021

A Community Health Improvement Plan ("CHIP") was produced by the Strafford County Public Health Network Community. Six priority areas were identified in the CHIP, as follows:

1. Substance misuse: prevention, treatment, recovery & harm reduction;
2. Mental health: prevention, treatment, recovery & harm reduction;
3. Emergency preparedness;
4. Healthy living (food security, decreasing diet-related health conditions, and preventative health screenings);
5. Health care access/awareness; and
6. Injury prevention.

York County Maine Shared Community Health Needs Assessment, 2022

The 2022 York County Maine Shared Community Health Needs Assessment ("Shared CHNA") was developed in collaboration between the Maine Center for Disease Control and Prevention ("Maine CDC"), and four health-care systems in the state. Four health issues were identified as top concerns by York County forum participants as follows:

1. Mental health;
2. Social determinants of health;
3. Substance and alcohol use; and
4. Access to care.

PRIMARY DATA ASSESSMENT

Primary data were gathered by conducting (1) interviews with interested parties in the community, and (2) a community health assessment survey. Details are below.

Key Informant Interviews

Key informant interviews were conducted in virtual sessions by Verité Healthcare Consulting in May and June, 2022. The interviews were designed to obtain input on health needs from persons who represent the broad interests of the communities served by Wentworth-Douglass Hospital

Thirty-one interview sessions were held with 42 individuals representing twenty-five internal and external organizations. Interviewees included individuals with special knowledge of or expertise in public health, a local public health representative with information and expertise relevant to the health needs of the community; and individuals and organizations serving or representing medically underserved, low-income, and minority populations. Organizations with representatives participating in interview sessions are listed below.

- Alliance for Community Transportation (ACT) and COAST
- Community Action Partnership of Strafford County (CAPSC)
- City of Dover
- Community Partners
- Cornerstone VNA
- Dover Mental Health Alliance
- Dover Police Department
- Dover Public Library
- Dover School District
- Dover Teen Center
- Dover Youth 2 Youth
- Gather NH
- Greater Seacoast Community Health
- HAVEN
- Maine Public Health
- McGregor Memorial EMS
- My Friend's Place
- New Hampshire Harm Reduction Coalition (NHHRC)
- SOS Recovery Community
- Strafford County Public Health Network / PHAC
- School Nurse
- Southern Maine Agency on Aging
- The Doorway
- University of New Hampshire (UNH) Health & Wellness Center
- Wentworth Health Partners
- Wentworth-Douglass Hospital

Issues below were identified by interested parties as those of greatest concern to community health in the Wentworth-Douglass Hospital community.

1. COVID-19 exacerbated existing health needs within the community.
2. Many community residents are experiencing unmet mental health needs, notably anxiety and depression.
3. Substance Use Disorder negatively impacts various populations and is met with a shortage of services.
4. Access to health and other services is a challenge for many community members, including residents in the northern part of the service area. Staffing shortages and an increased demand for services contributes to care access challenges.
5. Basic needs insecurity is increasing, especially for accessible housing and transportation.
6. Health care providers are struggling to meet healthcare demands due to staffing shortages, turnover, and hiring challenges.
7. More children and youth are experiencing physical and mental health needs that are exacerbated by the COVID-19 pandemic.
8. Older adult community residents may be experiencing compounded physical and mental health needs.
9. Prevalence and severity of chronic disease worsened due to delayed care.
10. The environment impacts health and access to health services. Environments include housing, natural environments, social and political climates, healthcare landscape, and digital spaces.
11. Navigating and accessing the ever-changing healthcare landscape is a challenge.

Details are discussed below.

1. **COVID-19 exacerbated existing health needs within the community.**

All interview participants indicated that the COVID-19 pandemic placed significant burdens on healthcare access. Local hospital systems continue to experience the impact of the pandemic, even after the acuity of treating COVID-19 infections has lessened. COVID-19 interrupted discharge patterns and diverted resources away from other community needs.

Mental health challenges magnified during the pandemic. The pandemic caused fear and confusion, and increased rates of anxiety and depression – and almost all interviewees reported mental health as the primary health need due to the pandemic. Mental health concerns are reported across all socio-economic areas, and particularly amongst vulnerable populations, such as youth and adolescents, older adults, unhoused individuals, and low-income families. These populations may experience diminished resiliency to mental health challenges because it is often difficult for these individual to access resources and because of greater rates of isolation. While youth and adolescents often have more access to technology, exposure to social media and detrimental information can have negative impacts. Community members who work with youth and adolescents report children having difficulty decreasing screen usage and socializing.

Oral healthcare was not as accessible during acute stages of the COVID-19 pandemic. Interview participants also indicated that demand for services in the community has increased although the

supply of dental professionals has decreased due to retirement, COVID-related issues, regulatory burden, and/or geographic relocation.

Basic needs, such as safe housing and food security, have increased since the beginning of the pandemic. Interviewees indicated that the pandemic reduced housing income from unemployment while an undersupply of residential units increased housing costs. Further, access to transportation was affected because of cost inflation and/or reduced public utilization due to increased transmission risk of COVID-19.

Local community resources and housing shelters closed or decreased capacity,[23] placing an increased burden on emergency rooms. Hospitals and community resources faced and continue to face staffing shortages as staff members retire or seek jobs in non-healthcare sectors. Healthcare professionals continue to experience stress from risks of exposure, belligerent patients, and increased responsibilities associated with a decreased number of staff members.

Many families are overwhelmed by the lack of childcare available in the region. Childcare facilities have closed since the pandemic, placing extra stress on parents to work and care for their children.

The full impact of the COVID-19 pandemic is still being determined, and local healthcare systems and community resources continue to respond to the ever-changing needs of the community. Increased utilization of telehealth is one potential positive impact of the pandemic, but the technology requirements may be a barrier to care for some community members.

2. **Many community residents are experiencing unmet mental health needs, notably anxiety and depression.**

All interview participants indicated that mental health is one of the most significant health needs within the community. Interview participants indicated that mental health issues within the community include a wide range of challenges, such as anxiety, depression, and post-traumatic stress disorder (PTSD), although some community members may only connote the issue with severe and persistent mental illness (SPMI). As the recognition of the importance of mental health has increased and stigma has decreased over the past few years, demand for services has increased without an adequate supply of mental health providers. The current healthcare system, both community-based and hospital-system wide, are overwhelmed with the demand for mental health services across all ages and populations. There are long wait times for mental health services, treatment for substance use disorder, and behavioral health services. Access to mental health services is especially challenging for children, youth, and older adults.

Grief support is inadequately available within the community. COVID-19 was a traumatic event and, accordingly, the pandemic increased the need for mental health services because community members lost family members, jobs, social opportunities, and transportation services. Many

[23] Unsheltered community members have higher risks for exposures to communicable diseases. Other health issues include mental illness, as well as alcohol and substance use disorder. Health conditions are compounded by barriers to health care, food insecurity, and limited access to resources, including social services.

interview participants mentioned the loss of community events and gathering spaces, such as churches and community centers, that previously offered social support.

Vulnerable members of the community are frequently "treated" with law enforcement and court systems as there are not adequate social service supports to meet the community's needs. Substance abuse frequently is co-occurring with mental health needs yet access to treatment is difficult when these behavioral health issues are co-occurring; accordingly, some individuals assume that no services are available. Unhoused, uninsured individuals, or those with substance use disorder may seek emergency room services as mental health care services are otherwise inaccessible.

Older adults often experienced significant isolation, especially those living in assisted living or retirement communities. As these organizations sought to limit exposure to COVID-19 by restricting access to facilities, residents experienced social isolation from family and friends. Older adults were not receiving their regular healthcare services due to the shifts in priority of services, negatively impacting their mental and physical health status.

Youth mental needs have been illuminated by recent suicides, and programs targeting youth and adolescents have been implemented that focus on peer support for suicide prevention and destigmatizing mental health challenges. The community experiences a lack of professional mental health support or availability of services for this age demographic. Current wait-times for outpatient services exceeds the acute crisis period that many experience with mental health challenges, and suicide rates amongst adolescents and young adults are historically high. The lack of access to mental health services for children and youth impacts their entire family system.

3. **Substance Use Disorder negatively impacts various populations and is met with a shortage of services.**

The prevalence of substance use disorder (SUD) increased since the COVID-19 pandemic. Interview participants noted increased use of alcohol, nicotine, tobacco, opioids, marijuana, methamphetamine, heroin, and fentanyl since 2020, and that the opioid epidemic continues to place a strain on community resources. Interview participants indicated that the increase in New Hampshire overdoses has been overshadowed by the pandemic.

Interview participants stated that vulnerable populations are at an increased risk for experiencing trauma due to housing, social, and environmental factors. Co-occurring mental health needs and substance use disorders are intertwined with lack of stable housing for some community members. Individuals who are unable to access or do not seek mental health services for traumatic events may have an increased risk of substance use to self-medicate associated anxiety, depression, mania, psychosis, or other PTSD-related symptoms. SUD and associated lifestyle factors may also exacerbate or cause trauma. Individuals with both substance use disorder and mental health needs may be assessed as non-compliant and resistant to treatment, further complicating recovery.

Gaps in palliative care exist for people with SUD. There is additionally a lack of funding for providers and services to support these individuals. Often, this population requires more

intensive treatment than outpatient services can offer. While the pandemic highlighted the need for more services and support for individuals with substance use disorder, gaps in resources persist.

4. **Access to health and other services is a challenge for many community members, including residents in the northern part of the service area. Staffing shortages and an increased demand for services contributes to care access challenges.**

Access to healthcare services has become increasingly challenging since the COVID-19 pandemic. Population increases contribute to an increased demand for services yet staffing shortages have decreased the number of available appointments. Interviewees noted that all segments of the community have access issues to primary care and specialty care, especially cardiology and endocrinology. Similar access issues are evident in the range of health-related services, including grocery stores, pharmacies, and social service providers.

The typical hours during which services are provided conflict with the working hours of some community members, which may lead to increased utilization of urgent care and emergency services. Access to certain school services for children is challenging because often parents cannot leave work during school hours.

Access is especially an issue for individuals without insurance, Medicaid enrollees, residents who struggle with cost sharing requirements, people without transportation options, and residents of northern areas. These individuals often have less access to health information and education. While telehealth availability improves access for some residents, other community members have issues with technology, devices, connectivity, and digital literacy.

5. **Basic needs insecurity is increasing, especially for accessible housing and transportation.**

While basic need insecurity was present prior to COVID-19, the pandemic illustrated unmet basic needs in the community. Interview participants indicated basic needs insecurity is frequently intertwined with physical and behavioral health as unmet basic needs, such as housing and food, increase the challenges of managing and improving physical and mental health. Interview participants stated that when community members do not have stable housing or nutritious food, physical ailments and mental health tend to decline. Vulnerable populations face additional barriers to meeting basic needs. Accessing support may be especially challenging for LGBTQIA+ residents.

Increasing costs of living have worsened basic needs insecurity. Buying power has diminished because wages have not kept pace with inflation. Many families cannot afford to rent, and affordable housing is a major need of the community. Additionally, some community residents were unemployed during COVID-19 and are still struggling with the loss of income.

More residents are facing food insecurity. Food insecurity increases nutrition deficiencies, as calories do not equal nutrition.

Unhoused individuals often do not have secure and safe housing, and lack access to food and clean water. Members of the community with low socioeconomic status are especially vulnerable

to environmental shocks such as COVID-19 and support options may be limited due to financial eligibility requirements.

Basic needs insecurity impacts children and adolescents in numerous ways, including lack of sports participation because families cannot afford sports gear and required physicals. Children can experience trauma with food and housing instability.

Older adults have less access to transportation, and therefore less access to grocery stores and pharmacies where they can acquire necessary goods.

Individuals with unmet basic needs may also have limited access to telehealth as service access requires devices, connectivity, and technology literacy. Digital insecurity among unhoused or low socioeconomic populations presents challenges, as some providers and community sources continue to use online platforms.

6. **Health care providers are struggling to meet healthcare demands due to staffing shortages, turnover, and hiring challenges.**

COVID-19 stressed health care professionals and professionals providing a range of social and educational services. Many professionals are exhausted and burned-out from increased responsibilities and decreased resources. The workforce declined as some professionals retired, stopped working, or changed careers; some providers and workers departed due to vaccine mandates.

High staff turnover creates a loss of institutional knowledge. Healthcare workers report that their new colleagues, sometimes recent graduates, are struggling to succeed in the current work climate of having less support and a higher caseload.

Such strain is also present amongst childcare workers and teachers. As mental health issues are exacerbated for children and adolescents, a greater burden is placed on teachers and childcare support. Workers within the childcare industry report unprecedented challenges working with youth, such as helping manage their mental health without proper resources or professional support. The potential work pool is low, turnover is high, scheduling is challenging, and large providers recruit from small providers. There are many unfilled staffing positions throughout the community, region, and nation, resulting in providers competing with one another for employees; competition for healthcare professionals includes non-healthcare employers.

Recruiting healthcare professionals from regions outside of the community can be challenging because jobs may not be available for family members. Additionally, NH state licensing requirements for some professionals is so stringent it can be a deterrent from license renewal or from recruiting out-of-state workers. More professionals are needed, but student enrollment does not appear to be keeping pace with current and projected future need; learning curves further compound supply gaps.

Interview participants indicated that community members expressed pandemic-related anxiety as anger when interacting with providers of health and social services. Contributing to the

interactions is the expectation that all health and social services professionals will provide social work services although such social work expertise may not be a core competency.

Interview participants suggest that more Community Health Workers are needed to meet patient social work and navigation needs.

7. **More children and youth are experiencing physical and mental health needs that are exacerbated by the COVID-19 pandemic.**

Pediatric and adolescent mental health is a significant concern to emerge from COVID-19. Children and youth were significantly impacted during pandemic isolation due to physical inactivity and diminished socialization skills gained through interaction with peers, teachers, and other community members. Teenage suicides within the community are alarming.

Pediatric mental health care demands exceed the community supply of services. Children and adolescents seeking mental health appointments face months-long waiting lists. Schools provide education to children and youth and are expected to provide mental health counseling and social work services. However, services within school districts are limited and unable to meet the emerging needs of the community.

Vulnerable populations exist within youth and adolescents. For example, mental health needs may be especially evident among LGBTQIA+ youth. Children of uninsured or unhoused caregivers face additional challenges. Children whose parents have mental health or substance use disorders may experience early childhood trauma.

Children and adolescents spend an unprecedented amount of time on screens and technology. This population is isolating themselves and substituting in-person socialization with use of technology, social media, and other communication services. Interview participants stated that diminished interaction skills of some children, lagging development motor skills, and more physical and verbal altercations between peers. Behavioral challenges and socialization issues were compounded by COVID-19 restrictions.

Parents were also impacted by COVID-19 restrictions, including the lack of childcare. Parents were expected to function as educators during the pandemic without adequate resources and training while maintaining their employment. COVID-19 made it challenging for families to utilize family or community support.

Pediatric physical health is closely tied to mental health. Children and youth are experiencing more illnesses because isolation reduced exposure to environmental factors during the pandemic, contributing to increasing health issues among children and youth. Interview participants stated that childhood diabetes is increasing within the community. Physical and behavioral health issues among children and youth can impact the entire family system.

8. Older adult community residents may be experiencing compounded physical and mental health needs

Older adults are a large and increasing segment of the community and include new older adult residents migrating to the area from across the region. Some members of this population group may be vulnerable to healthcare issues, particularly from the impacts of COVID-19. Physical and mental health issues worsened during the pandemic due to foregone disease management and isolation.

Physical health issues include management of chronic diseases, such as COPD and CHF, as well as undiagnosed dementia. Health issues are compounded when community members needs are hidden until there is a sentinel event, frequently a fall. After a fall, older adults need more care for an injury or to manage a disease that may have been preventable.

Older adults are at high risk for depression due to isolation, high risk for poor health outcomes due to unmanaged diseases, and high risk for falls due to household conditions. Mental health issues are prevalent amongst the older adult population, including anxiety and depression; the pandemic exacerbated these issues. Demands for mental health services and treatment for substance use disorders continue to increase for the older adult population, yet geropsychiatric specialists are limited. Older adults with physical health ailments often experience more significant mental health issues.

Interview participants indicated that older adults and their caregivers may lack knowledge of available resources. Disparities in access to digital information affect older adults more significantly than other population groups. Some older adults rely on caregiver support and are significantly impacted by disconnected family members, due to work, distance, or other constraints. During the pandemic, family members caring for older adults were also required to care for their children, increasing the burden on caregivers.

Interview participants stated that some caregivers experience burn-out due to high demands for their care and low supply of external support for older adults. Some older adult residents who are dependent on others may experience elder abuse; older adult health can also be negatively impacted by drug diversion by caregivers.

Low-income older adults are particularly vulnerable to food and housing insecurities. Older adults are disproportionately impacted by New Hampshire property taxes. Access to transportation services was negatively impacted by the pandemic, further increasing disparities in access to basic needs and health services. Diminished volunteerism and fears of COVID-19 transmission on community transportation also impacted transportation access.

Older adults are facing a shortage of healthcare providers and services. This population is significantly impacted by the low supply of primary care physicians. The supply of support professionals is impacted by the relatively low pay of the jobs, and the supply of long-term care services is diminishing. The supply of palliative care services is also insufficient for the community need.

9. **Prevalence and severity of chronic disease worsened due to delayed care.**

Chronic disease issues in the community include COPD, CHF, cardiometabolic diseases, and diabetes. Chronic diseases are worsened due to deferred disease management, and much disease management was deferred during the first years of the pandemic. Patient volumes have increased, and patient conditions are more severe. The diagnoses and severity of diagnoses of issues, such as cancer, will likely increase as residents re-engage with providers.

Access and barriers to care are a constant issue with chronic disease management. Transportation to appointments is limited and was significantly impacted by the pandemic.

Chronic diseases are worsened due to poor nutrition, obesity, smoking, and substance use disorders. Chronic disease is also linked to worse mental health status.

10. **The environment impacts health and access to health services. Environments include housing, natural environments, social and political climates, healthcare landscape, and digital spaces.**

External environments impact residents' access to health services in the community. Inflation in housing, food, and fuel costs are significantly impacting some community members' health and well-being. Affordable housing is scarce, and the inaccessibility of goods and healthy food makes it challenging for residents to improve their mental and physical health. Delivery options have increased access to some health-related good services, such as groceries, for some but not all community residents.

The population in the WDH community has increased but some resources have decreased, resulting in fewer services available per person. Development of resources, such as community based behavioral health and substance use disorder treatment services, can be challenging due to neighborhood opposition.

The increase in media options has increased the difficulty of sharing messages. Residents are often unsure of which platform is best for receiving health information. Residents of varying ages use different media platforms, causing inequities in information dissemination.

The connectedness of residents to the community has decreased, resulting in diminished informal mental health supports. Efforts to spread health information and support is more challenging due to the lack of community cohesion. Additionally, politicization of certain health issues has polarized the community, including divisiveness related to public health issues.

In the natural environment, tick-borne disease is a significant community issue. Prevention and environmental awareness efforts are needed.

11. Navigating and accessing the ever-changing healthcare landscape is a challenge.

Healthcare services in the community are constantly changing. Understanding what services are available and who is eligible is daunting. Most community members do not know how to navigate the health and social environment. A lack of health literacy compounds these challenges, while low socioeconomic status further impacts navigation.

Staff turnover and lost institutional knowledge have compounded navigation difficulties. The digital divide impacts some residents' ability to research community resources. Community resources are available but finding information on how to utilize resources and transportation to appointments presents additional issues. Vulnerable populations with poor access to insurance, technology, financial security, housing, and transportation, face additional disadvantages to navigating the healthcare landscape.

Community Health Assessment Survey by the University of New Hampshire

The University of New Hampshire Survey Center conducted a community health assessment for Wentworth Douglass Hospital in Spring 2022. The assessment was conducted with a web-based survey; 519 respondents participated in the survey. The survey goal was to determine residents' perceptions of which areas of health are most important and most needed in the service area.

Residents responded to questions about health-related services in their community. Selected survey topics, questions and response totals are highlighted below.

Question: How many times have you or another adult in your household needed or wanted medical care for a routine physical exam or check-up in the past 12 months but did not or could not get care for any reason?

- No times (75 percent)
- 1 time (12 percent)
- 2 times (6 percent)
- 3 times (3 percent)
- 4 times (0 percent)
- 5 or more times (3 percent)

Question: What is the primary reason, or reasons, why you were unable to obtain this type of care? [Follow-up question for the 25 percent of respondents who indicated that they or another household adult were unable to get needed or wanted medical care for a routine physical exam or check-up in the past 12 months at least once.]

- Could not schedule an appointment at a convenient time (31 percent)
- Deductible, co-pay, or co-insurance is too expensive (31 percent)
- No doctors accepting new patients (17 percent)
- Do not have a regular doctor (13 percent)
- Concern about COVID exposure (11 percent)
- Could not get time off work (7 percent)
- Do not have insurance (cannot afford) (6 percent)
- Doctor or clinic too far away (6 percent)
- Doctor does not accept your insurance (4 percent)
- Could not get there (transportation) (3 percent)
- Not enough doctors in your area (3 percent)
- Some other reason (17 percent)
- You do not like or trust doctors (1 percent)
- No particular reason (10 percent)
- Don't know (5 percent)

Question: As far as you know, are any of the following services unavailable or inadequate to meet the needs of your community?

- Mental health counseling for adults (29 percent of respondents)
- Mental health counseling for youth (27 percent)
- Drug treatment – such as counseling or rehab (27 percent)
- Alcohol treatment (20 percent)
- Dental care for adults (16 percent)
- Long-term care (14 percent)
- Home health or hospice care (13 percent)
- Dental care for youth (11 percent)
- Urgent or emergency care (7 percent)
- Cannot identify any needed service (28 percent)
- Don't know (25 percent)

Question: What would you say are the top three areas that hospitals should focus on in order to make your community healthier?

- Mental health services (74 percent)
- Substance misuse and the opioid crisis (60 percent)
- Improved care for medical conditions, such as heart disease, cancer, diabetes, etc. (30 percent)
- Housing stability and homeownership (24 percent)
- Affordable childcare (19 percent)
- COVID-19 pandemic (testing, vaccinations, information, supplies, etc.) (18 percent)
- Food insecurity (14 percent)
- Transportation (12 percent)
- Career training for quality job (8 percent)
- Neighborhood safety and violence (6 percent)
- Education supports and activities for youth (6 percent)
- Affordable and reliable internet (5 percent)
- Small business support (2 percent)
- Other (6 percent)

Impact of Actions Taken Since the Previous CHNA

Wentworth-Douglass Hospital uses evidence-based approaches in the delivery of healthcare services with the aim of achieving healthy outcomes for the community it serves. The hospital undertakes periodic monitoring of its programs to measure and determine their effectiveness and ensure that best practices continue to be applied.

Given that the process for evaluating the impact of various services and programs on population health is longitudinal by nature, significant changes in health outcomes may not manifest for several community health needs assessment cycles. The hospital continues to evaluate the cumulative impact.

Previously, WDH identified a number of significant community health needs in its 2019 CHNA. These health needs are as follows:

1. Access to Health Services
2. Heart Disease and Stroke
3. Mental Health
4. Nutrition, Physical Activity, and Obesity
5. Older Adults
6. Oral Health
7. Social Determinants (*Basic Needs & Transportation*)
8. Substance Use Disorder [identified as "Substance Abuse" in the 2019 CHNA]
9. Tobacco Use

Discussion of interventions and the impact of these activities is below. *Impact assessments are indicated in italics.*

Note that metrics used to assess the impact of activities include frequency measures, such as the number of services provided. While it is hoped that the intended impact will improve community health, identifying valid outcomes-based impact measures is difficult for multiple reasons, including lags in data collection, analysis, and reporting of community health indicators by independent measures of changes. The size of the community population, changes in the population through in-migration and out-migration, and changes in the overall environment add to the difficulty in measuring outcomes-based impact includes. Furthermore, assessing the causal impact of any correlation between an activity and outcome measure may not be possible.

1. Access to Health Services. Interventions and the impact of these activities on this health need included the following:

- **Financial assistance to individuals and families:** Wentworth-Douglass Hospital (WDH) and its employed provider group (Wentworth Health Partners / WHP) provided financial assistance and financial counseling services to numerous patients throughout the period – *in FY 2021, WDH provided financial assistance to 6,326 patients, and WHP provided assistance to 6,628 patients.*
- **Medicaid participation:** Although payments for services to Medicaid patients are traditionally less than the cost to provide these services WDH and WHP continued to participate in Medicaid (including Medicaid, Wellsense, New Hampshire Health Families, and MaineCare).
- **Marketplace and Medicaid (NH & ME) enrollment assistance and educational resources:** WDH and WHP provided enrollment assistance through the Financial Clearance Department and Certified Application Counselors. Educational information was also provided to staff and to the public via the hospital website and publications –*at least one enrollment session has been offered each year with the exception of 2021, which was canceled due to the COVID-19 pandemic.*
- **Educational offerings related to general insurance literacy, Medicare enrollment, and financial resource availability:** WDH continued to provide educational offerings to community members although fewer patients have met with a Certified Application Counselor, due to the COVID pandemic, increased patient understanding of the Marketplace, and elimination of the financial penalty associated with waiving coverage.
- **Timely access to primary care services, including walk-in services.** WDH and WHP continue to provide primary care services –*a new WHP practice is scheduled to open in Rochester in 2022*. During the initial stages of the pandemic, WDH established a temporary Respiratory Illness Clinic, which screened thousands of patients for COVID-19.
- **Access to primary and specialty care providers, including pediatric subspecialty programs:** WDH and WHP continue efforts to maintain and/or expand primary care and specialty care providers, including pediatric subspecialists by recruitment activities. Additionally, WDH opened a new Advanced Heart Failure clinic and continues to explore additional specialty programs –*in October 2021, pediatric subspecialty care expanded as part of the transition from services provided by the Children's Hospital at Dartmouth to Mass General for Children, which increased pediatric pulmonary access and added pediatric surgical coverage; in addition, a pediatric orthopedic surgeon was recruited.*
- **Level II nursery services:** A Level II Nursery was opened at WDH in October 2021 to enhance the level of care provided for newborns. Neonatology services were also enhanced in partnership with Massachusetts General Hospital's neonatology program.
- **Community educational programs and/or screening events:** A variety of community educational events were held, including a women's heart health event, and lunch & learn sessions for nutrition and stroke –*total attendance was 1,653 in 2020 and 617 in 2021.* Many of these programs were offered remotely in compliance with COVID-19 protocols.
- **Simulation Center:** Since opening in mid-2016, the Simulation Center has continued to expand and has serviced the needs of thousands of learners. A variety of providers and

staff, including all new graduate nurses, and most obstetrical and surgical staff, are trained in the Center, and the space is also used to train teams to improve efficiency and critical thinking skills or low volume skills to improve safety. Simulation Center training has been offered to outside agencies and individuals since 2017, allowing for Emergency Medical Services staff to utilize this resource. During the COVID-19 pandemic, the space was used to train hundreds of staff on how to care for COVID-19 patients by simulating ventilator training, prone positioning, and emergent intubation.

2. Heart Disease and Stroke. Interventions and the impact of these activities on this health need included the following:

- **Participation in the Strafford County Public Health Advisory Council:** WDH staff members have continued to participate on the Strafford County Public Health Advisory Council. The WDH Director of Strategic Planning and Community Benefit is the current chair, and other staff participate in multiple awareness and prevention activities. WDH staff from across the organization participated closely with the Public Health Network during the pandemic.
- **Educational offerings related to cardiovascular health and stroke prevention:** WDH offered events focused on cardiovascular health and stroke prevention in FY 2020 and earlier years, but in-person events were not held after March 2020 due to the COVID-19 pandemic. Events included risk screenings, stroke educational events, and special events for Women's Heart Health Month.

3. Mental Health. Interventions and the impact of these activities on this health need included the following:

- **Mental health services through WHP's integrated behavioral health practice and Great Bay Mental Health:** WDH continued to make significant investments to support mental health and substance use disorder treatment *–in 2021, the behavioral health team increased to 49 staff members (from three staff members in 2013).* Since the last CHNA, new counselors were hired for both Great Bay Mental Health and the integrated practice, including the addition of an integrated behavioral health provider at The Women's Health Center at the Portsmouth Outpatient Center *–the WDH Case Worker team, which provides crisis management and educational support in the Emergency Department, expanded from one to five team members since July 2021.*
- **Mental health providers:** WDH continued its efforts to maintaining and/or expand access to mental health providers in the community *–in 2022, an additional child psychiatrist was recruited for Great Bay Mental Health.*
- **Pediatric community mental health services:** In partnership with the Dover Mental Health Alliance, WDH assisted with suicide prevention training for staff in the Dover, Somersworth, and Rochester school districts. WDH also provided community grant funding in FY 2022 to assist in the implementation of a Mental Health First Aid training program for all 10th grade students at Dover High School for the school years of 2022-2023 and 2023-2024.
- **Community mental health and substance abuse treatment services:** WDH has continued to participate in the Dover Mental Health Alliance and The Doorway. WDH

maintained active participation in the Integrated Delivery Network until its sunset during Summer 2021.

- **Grants for community mental health programs:** WDH continued to prioritize mental health and substance use disorders as areas for community grant donations –*since FY 2020, grants have been provided to support Hope on Haven Hill, SOS Recovery Community Organization, and the Dover Mental Health Alliance.*
- **Continuing medical education:** In FY 2020, WDH implemented a new Substance Use Resource Team (SURT) educational program to create an interdisciplinary team of care providers with increased training, understanding and passion for the care of patients with substance use disorders –*over 86 staff members were trained in FY 2021 and 63 staff members were trained during the first half of FY 2022.*
- **Legislative education and advocacy:** WDH continued to provide education and advocacy to highlight the need for additional mental health resources in New Hampshire. WDH's Director of Government Relations and Public Policy collaborates with the WDH Behavioral Health team to stay informed of ongoing concerns/issues to represent those needs to state legislators.

4. Nutrition, Physical Activity, and Obesity. Interventions and the impact of these activities on this health need included the following:

- **Collaborations with nutrition, physical activity, and weight management initiatives:** WDH continues to support eight school districts by providing athletic training and fitness education services. WDH are also the physicians, hospital, and urgent services for the UNH Wildcats.
- **Weight management and bariatric surgery services:** WDH, through its Center for Weight Management and Bariatric Surgery, continued to provide comprehensive weight management, health coaching, nutrition/dietary counseling, and weight loss surgery services –*this accredited program has provided surgery for over 745 patients since the program began in 2018.* Additionally, the integrated behavioral health team partners with an internal social worker to better support the weight loss program at The Works Family Health and Fitness Center.
- **Educational offerings related to nutrition, physical activity, and obesity:** WDH provided educational offerings through patient interactions by staff dieticians, programming at the Center for Weight Management, and collaborations with The Works Family Health and Fitness Center.
- **Wellness programs for children and youth:** WDH continued to collaborate with The Works Family Health and Fitness Center on its summer camp program focused on health and wellness behaviors, as well as outdoor programming, including a treehouse, a challenge course, and nature exploration. Three camps are offered for children entering grades 3-6.
- **The Patient & Family Learning Center:** WDH continued to expand nutrition and health coaching services at the Patient & Family Learning Center (PFLC). PFLC staff members provide health coaching services to community members interested in making healthy lifestyle changes.
- **Participation in the CDC's National Diabetes Prevention Program:** WDH continued participation in the National Diabetes Prevention Program, a lifestyle change program

designed to decrease the risk of developing type 2 diabetes; new participants are enrolled every 6 months –*the program is currently on its fifth cohort and over 50 community members participated in the past year*.

5. Older Adults. Interventions and the impact of these activities on this health need included the following:

- **Supportive & Palliative Care services:** WDH maintained the Supportive & Palliative Care program, which continued to experience increased demand – *in FY 2021, the team provided over 709 patient consultations and 2,825 follow up encounters.* This program has been operating at a reduced capacity due to changes in provider resources and the impact of the pandemic. The Palliative Care team has expanded services to include virtual visits. The Outpatient Clinic is expected to reopen for new patients in 2023.
- **Care management services:** WDH and WHP continue to offer and expand access to care management and social work services in alignment with patient needs.
- **Need assessment for geriatric mental health services and/or geriatric medicine:** This project was placed on hold due to the pandemic and the lack of providers available for recruitment in this specialty.
- **Educational offerings related to advanced care planning:** WDH continued to provide educational programs focused on advanced care planning, however programming diminished during the early stages of the pandemic –*WDH has one of the highest rates of advanced directive completion/adoption in New Hampshire; additionally, Case Managers were trained during the early stages of the pandemic to provide notary services to support the adoption of advanced directives.*
- **Evaluate potential medication management programs:** WHP hired two outpatient pharmacists to assist with medication management –*resulting in improved accuracy of medication lists and the availability of medication education for patients*. Adoption of a new medical record system in October 2019 improved medication reconciliation efforts. A planned de-prescribing initiative was postponed due to the pandemic.

6. Oral Health. Interventions and the impact of these activities on this health need included the following:

- **WDH Dental Center:** WDH continued to support community dental health with its Dental Center, but capacity was severely impacted by the pandemic. The Center continues to operate at a limited capacity due to enhanced infection prevention protocols and staff limitations –*4,189 services were provided to 1,702 patients in FY 2021, but the Dental Center is not currently accepting new patients*.
- **Assess the demand for expanded oral surgery services:** This project was postponed due to staff limitations.
- **Educational offerings related to dental health:** The Dental Center's Certified Public Health Registered Hygienist has continued to provide outreach via partnerships with Head Start programs, Community Partners, etc. when possible. This program has been limited due to the COVID-19 pandemic.

7. Social Determinants (*Basic Needs & Transportation*). Interventions and the impact of these activities on this health need included the following:

- **Care Van transportation services:** WDH maintained operations for WDH patients, in accordance with program guidelines –*the number of miles traveled, and the number of individual patient visits served by the Care Van program remained high, reaching 132,287 miles (15,123 trips) in FY 2021.*
- **Community partnerships:** The Care Van program expanded its operation in November 2021 to serve several offsite locations. This expansion, funded by the Wentworth-Douglass Foundation, included the addition of an additional driver and another vehicle to better meet the need within the community.
- **Educational offerings about unmet basic needs:** WDH staff continue to participate in Public Health Network advocacy efforts about unmet basic needs in community, such as affordable housing. WDH staff members also participate in Peer Group activities in support of population health and community benefit programs with the State of New Hampshire. WDH staff members, including its Director of Government Relations and Public Policy, continue to advocate for vulnerable patient populations.
- **Grants for community programs:** Since 2019, WDH has continued to provide grant funding in support of social determinants, such as transportation, food access, and housing access –*grants include multiple donations to the Alliance for Community Transportation in support of the TripLink and Community Rides programs; a donation to the Community Action Partnership of Strafford County in support of care management and family programming for community members without housing security; and a grant to SOS Recovery Community Organization for the creation of an outreach coordinator position.*
- **Social work services at WDH and WHP:** WDH and WHP continue to offer and expand access to social work services in alignment with patient needs.

8. Substance Use Disorder (SUD) [identified as "Substance Abuse" in the 2019 CHNA]. Interventions and the impact of these activities on this health need included the following:

- **Behavioral health services:** Maintained and expanded behavioral health services -- Great Bay Mental Health continued to offer SUD counseling; the Women & Children's Department continues to provide Neonatal Abstinence Syndrome nursing services; the Doorway operated by Wentworth-Douglass continues to provide walk-in services and *had 1,651 patient visits in FY 2021 and 1,926 visits in FY 2021.*
- **Community mental health and substance use disorder treatment services:** WDH has continued to participate in the Dover Mental Health Alliance and The Doorway. WDH maintained active participation in the Integrated Delivery Network until its sunset during Summer 2021.
- **Grants for community programs:** WDH has continued to provide grant funding in support of social determinants, such as transportation, food access, and housing access – *grants include funds to Dover Youth 2 Youth to support its prevention efforts in local schools; funding to SOS Recovery Community Organization for expansion of their Recovery Center in Dover and the creation of an outreach coordinator position; and funding to the YMCA in Rochester to support a new program expansion for Parenting A Second Time Around (PASTA), an educational program and support group for grandparents who are raising their grandchildren, typically due to the loss of the child's parent(s) due to the opioid crisis (death, loss of custody, incarceration).*
- **Evaluate expansion of community-based substance misuse treatment and recovery options:** WDH funded a substantial portion of the development of the SOS Recovery center in Dover and to establish a peer recovery program in the WDH Emergency Department (ED) and on the hospital's inpatient units. The WDH ED also established a program to offer medication assisted therapy in partnership with The Doorway and Great Bay Mental Health. Further, WDH continued to provide naloxone kits to prevent overdose deaths.
- **Educational offerings about substance use disorders:** WDH continues to provide education and advocacy to highlight the need for additional SUD treatment resources in New Hampshire.
- **Continuing medical education:** In FY 2020, WDH implemented a new Substance Use Resource Team (SURT) educational program to create an interdisciplinary team of care providers with increased training, understanding and passion for the care of patients with substance use disorders –*over 86 staff members were trained in FY 2021 and 63 staff members were trained during the first half of FY 2022.* Additionally, WDH staff members continued to receive regular education about substance use disorder, and WDH ED staff received substance treatment certification and targeted education, including use of naloxone.

9. Tobacco Use. Interventions and the impact of these activities on this health need included the following:

- **Cessation counseling services:** WDH continued to provide tobacco and vaping cessation counseling in the Patient & Family Learning Center –*five facilitators were trained through the American Lung Association's Freedom from Smoking program.*
- **Community collaborations:** WDH began to offer the American Lung Association's Freedom from Smoking program, a collaboration with the Patient & Family Learning Center, Seacoast Cancer Center, Respiratory Therapy, and the Cancer Survivorship Program –*the 8-week, virtual course provides group support to community members interested in quitting nicotine.*
- **Education offerings about tobacco (and vaping) risks:** WDH provided limited educational programming about the risks of tobacco and/or vaping use, the impacts COVID-19 pandemic reduced programming.
- **Tobacco use screening:** WHP continues to offer tobacco screening and cessation education as needed.

APPENDIX – MASS GENERAL BRIGHAM SYSTEM PRIORITIES

The section below was written and provided by Mass General Brigham Community Health.

This section provides information and priorities identified by Mass General Brigham Community Health. Wentworth-Douglass Hospital is part of the Mass General Brigham system of care.

Context and Priorities

Mass General Brigham Community Health leads the Mass General Brigham system-wide commitment to improve the health and well-being of residents in under-resourced communities in our priority neighborhoods most impacted health inequities. Mass General Brigham's commitment to the community is part of a $30 million pledge to programs aimed at dismantling racism and other forms of inequity through a comprehensive range of approaches involving our health care delivery system and community health initiatives.

While not required to conduct a CHNA under current regulations, Mass General Brigham's belief in the critical importance of system-wide, population-level approaches resulted in our decision to have every hospital conduct a 2022 CHNA. Having all our hospitals on the same three-year cycle will prove invaluable in our efforts to eliminate health inequities by identifying system-wide priorities that require system-level efforts.

In addition to the priorities each hospital identifies that are unique to its communities, the Mass General Brigham system identified two system-level priorities: cardiometabolic disease and substance use disorder. These priorities emerged from a review of hospital-level data and prevalent trends in health statistics. Our efforts within these priorities will aim to reduce racial and ethnic disparities in outcomes, with the goal of improving life expectancy.

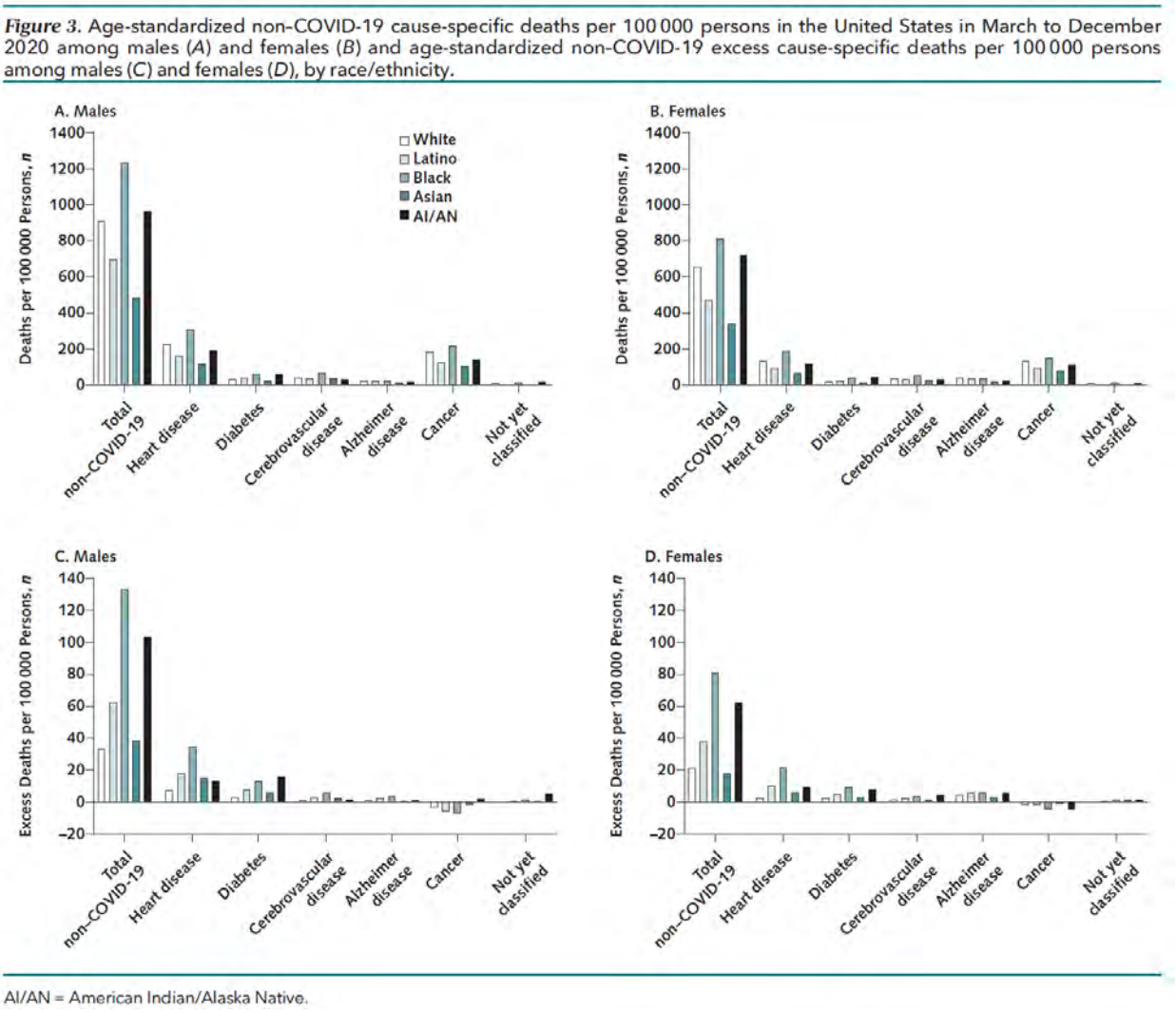
Key Findings

In a national study of deaths during the first wave of the COVID-19 pandemic (March to December 2020), researchers explored non-COVID deaths and excess deaths, defined as the difference between the number of observed and number of expected deaths.

Nationally, non-COVID deaths disproportionately affected Black, American Indian/Alaska Native, and Latino persons (A. and B.) (***Graphic A-1***).

Moreover, when looking at excess deaths, the inequities worsened (C. and D.). The greatest disparities are seen for heart disease and diabetes. Inequities also exist for all cancer deaths but not excess cancer deaths.

Graphic A-1: Figure 3, Racial and Ethnic Disparities in Excess Deaths During the COVID-19 Pandemic, March to December 2020, Annals of Internal Medicine



Massachusetts mortality data for 2019 reveal that heart disease and unintentional injuries, which includes drug overdoses, account for the second and third highest causes of death. As shown in ***Graphic A-2***, the highest number of deaths among individuals from birth to age 44 were the result of unintentional injuries. However, among those 45 years of age and older, heart disease accounts for the highest or second highest cause of death across age group.

Graphic A-2: Table 6: Top Ten Leading Underlying Causes of Death by Age, MA 2019

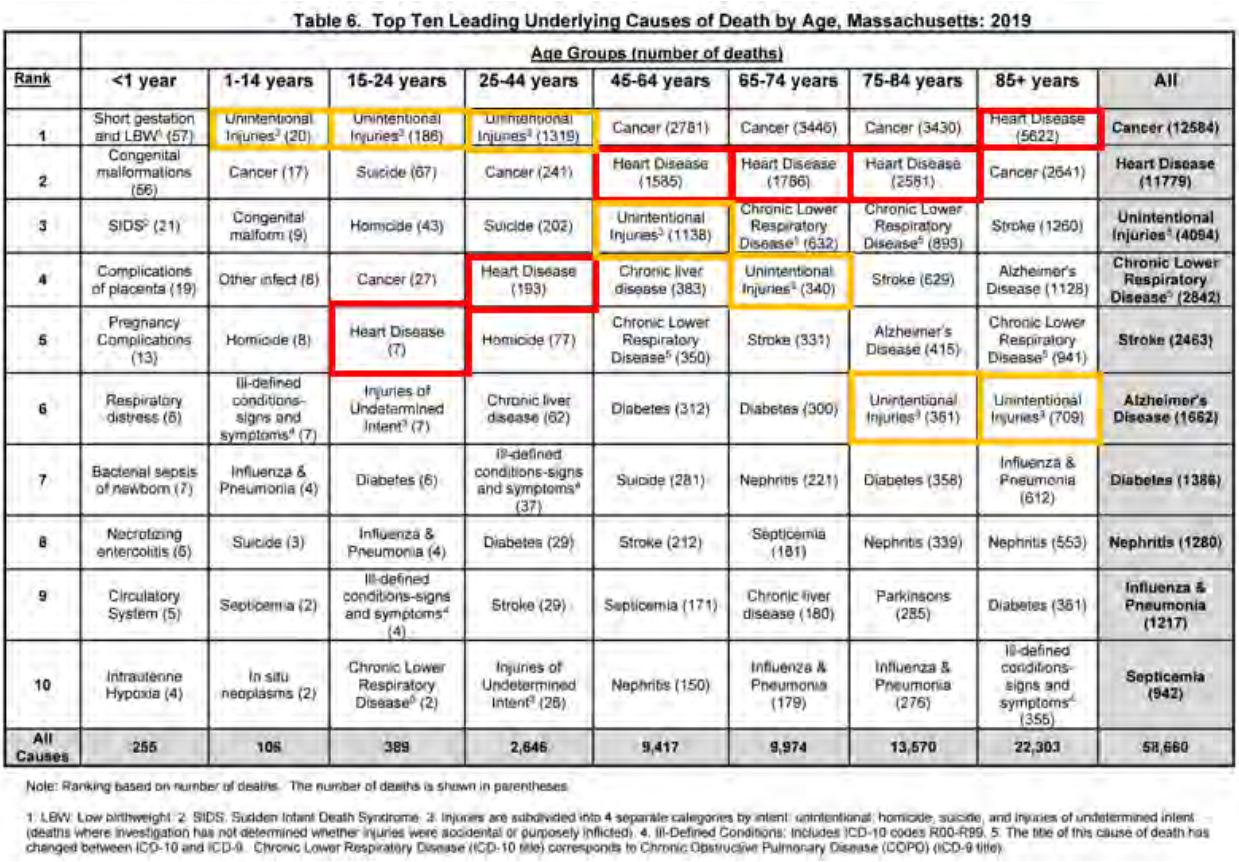


Table 6. Top Ten Leading Underlying Causes of Death by Age, Massachusetts: 2019

	Age Groups (number of deaths)								
Rank	<1 year	1-14 years	15-24 years	25-44 years	45-64 years	65-74 years	75-84 years	85+ years	All
1	Short gestation and LBW[1] (57)	Unintentional Injuries[3] (20)	Unintentional Injuries[3] (186)	Unintentional Injuries[3] (1319)	Cancer (2781)	Cancer (3446)	Cancer (3430)	Heart Disease (5622)	**Cancer (12584)**
2	Congenital malformations (56)	Cancer (17)	Suicide (67)	Cancer (241)	Heart Disease (1585)	Heart Disease (1786)	Heart Disease (2581)	Cancer (2641)	**Heart Disease (11779)**
3	SIDS[2] (21)	Congenital malform (9)	Homicide (43)	Suicide (202)	Unintentional Injuries[3] (1138)	Chronic Lower Respiratory Disease[5] (632)	Chronic Lower Respiratory Disease[5] (893)	Stroke (1260)	**Unintentional Injuries[3] (4094)**
4	Complications of placenta (19)	Other infect (8)	Cancer (27)	Heart Disease (193)	Chronic liver disease (383)	Unintentional Injuries[3] (340)	Stroke (629)	Alzheimer's Disease (1128)	**Chronic Lower Respiratory Disease[5] (2842)**
5	Pregnancy Complications (13)	Homicide (8)	Heart Disease (7)	Homicide (77)	Chronic Lower Respiratory Disease[5] (350)	Stroke (331)	Alzheimer's Disease (415)	Chronic Lower Respiratory Disease[5] (941)	**Stroke (2463)**
6	Respiratory distress (6)	Ill-defined conditions-signs and symptoms[4] (7)	Injuries of Undetermined Intent[3] (7)	Chronic liver disease (62)	Diabetes (312)	Diabetes (300)	Unintentional Injuries[3] (361)	Unintentional Injuries[3] (709)	**Alzheimer's Disease (1662)**
7	Bacterial sepsis of newborn (7)	Influenza & Pneumonia (4)	Diabetes (6)	Ill-defined conditions-signs and symptoms[4] (37)	Suicide (281)	Nephritis (221)	Diabetes (358)	Influenza & Pneumonia (612)	**Diabetes (1386)**
8	Necrotizing enterocolitis (6)	Suicide (3)	Influenza & Pneumonia (4)	Diabetes (29)	Stroke (212)	Septicemia (181)	Nephritis (339)	Nephritis (553)	**Nephritis (1280)**
9	Circulatory System (5)	Septicemia (2)	Ill-defined conditions-signs and symptoms[4] (4)	Stroke (29)	Septicemia (171)	Chronic liver disease (180)	Parkinsons (285)	Diabetes (361)	**Influenza & Pneumonia (1217)**
10	Intrauterine Hypoxia (4)	In situ neoplasms (2)	Chronic Lower Respiratory Disease[5] (2)	Injuries of Undetermined Intent[3] (28)	Nephritis (150)	Influenza & Pneumonia (179)	Influenza & Pneumonia (276)	Ill-defined conditions-signs and symptoms[4] (355)	**Septicemia (942)**
All Causes	255	106	389	2,646	9,417	9,974	13,570	22,303	58,660

Note: Ranking based on number of deaths. The number of deaths is shown in parentheses.

1. LBW: Low birthweight. 2. SIDS: Sudden Infant Death Syndrome. 3. Injuries are subdivided into 4 separate categories by intent: unintentional, homicide, suicide, and injuries of undetermined intent (deaths where investigation has not determined whether injuries were accidental or purposely inflicted). 4. Ill-Defined Conditions: Includes ICD-10 codes R00-R99. 5. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title).

Among Boston residents in 2020, heart disease was the second leading causes of death for all residents after COVID-19, and the leading cause of death among Black and White residents. Excluding COVID, accidents, which include drug overdose, were the third leading cause of death among all residents, and the leading cause of death for Latino residents (***Table A-1***).

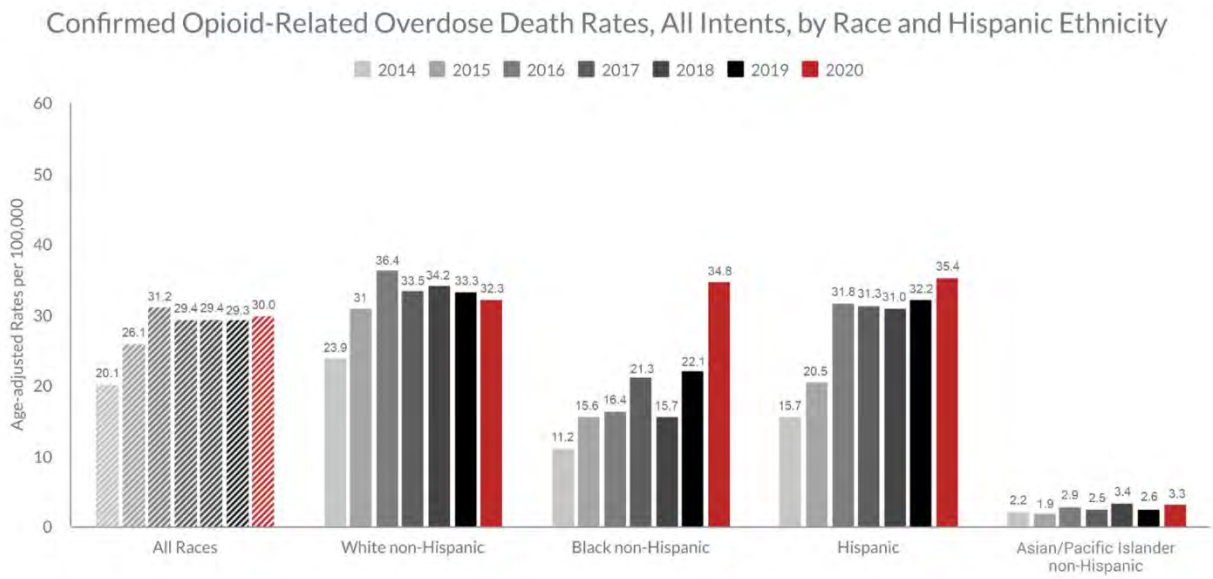
Table A-1. Leading Causes of Mortality, by Boston and Race/Ethnicity, Age-Adjusted Rate per 100,000 Residents, 2020

	Boston	Asian	Black	Latino	White
1	COVID-19 138.4	COVID-19 95.1	COVID-19 238.1	COVID-19 143.5	Cancer 117.6
2	Cancer 117.4	Cancer 92.8	Heart Disease 183.6	Accidents 59.5	Heart Disease 113.1
3	Heart Disease 114.9	Heart Disease 55.4	Cancer 166.7	Heart Disease 86.1	COVID-19 103.5
4	Accidents 53.7	Cerebrovascular Diseases 22.2 +	Accidents 82.7	Cancer 78.8	Accidents 53.2
5	Cerebrovascular Diseases 27.4	Accidents 17.1 +	Cerebrovascular Diseases 52.8	Diabetes 27.4	Chronic Lower Respiratory Diseases 24.7

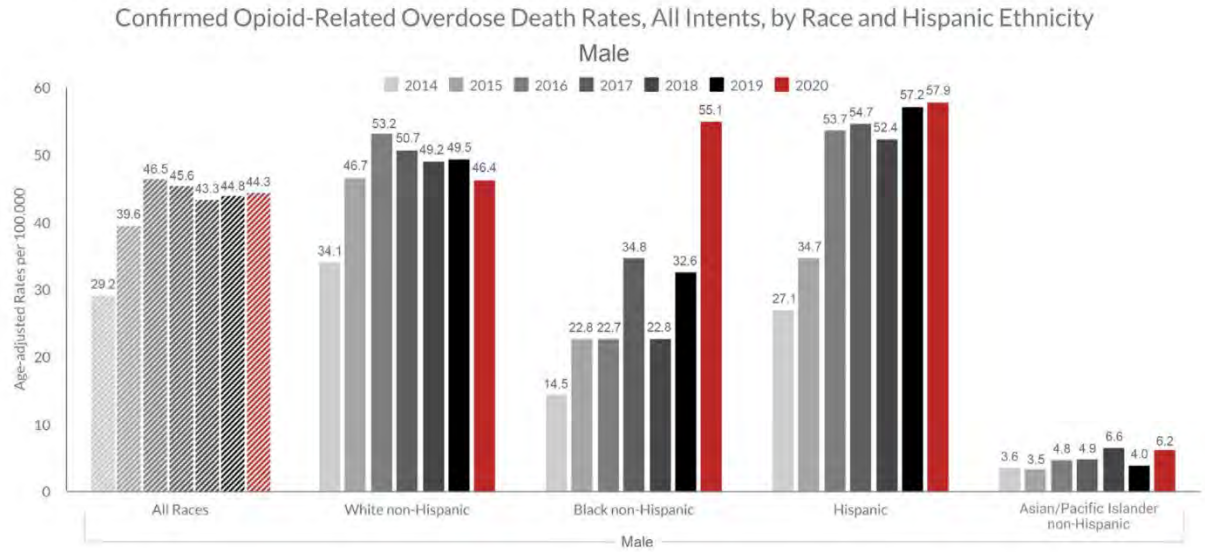
Data Source: Massachusetts Department of Public Health, Boston Resident Deaths, 2020. Data Analysis: Boston Public Health Commission, Research and Evaluation Office

From 2016 to 2020, opioid-related overdose deaths in Massachusetts declined for White residents. In contrast, the mortality rates for Latino and Black residents increased dramatically, this was especially prevalent among males (***Graphic A-3*** and ***Graphic A-4***).

Graphic A-3: Massachusetts Opioid-Related Deaths, All



Graphic A-4: Massachusetts Opioid-Related Deaths, Males



In addition to this quantitative data, results from a Community Survey administered a convenience sample of Boston residents from January to March of 2022 identified "Improved care for medical conditions" and "Substance misuse and the opioid crisis" as among the top 5 areas that hospitals should focus to help make communities healthier.

Focus Areas

As Mass General Brigham develops and implements programming and supports that will reduce disparities in health outcomes for the two system priorities, our efforts will focus on the highest need communities across our hospital priority neighborhoods. We will also continue to support locally identified priorities at the hospital level.