



WENTWORTH-DOUGLASS
HOSPITAL
MASSACHUSETTS GENERAL HOSPITAL SUBSIDIARY

2019 Community Health Needs Assessment

Dear patients and community members,

Wentworth-Douglass Hospital is pleased to share the results of our 2019 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.

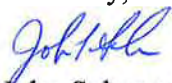
Based on a comprehensive data assessment, and in alignment with input from community members, our 2019 report identified nine significant health needs in our service area. These include:

- Access to Health Services
- Heart Disease and Stroke
- Mental Health
- Nutrition, Physical Activity, and Obesity
- Older Adults
- Oral Health
- Social Determinants (Basic Needs & Transportation)
- Substance Abuse
- Tobacco Use

An implementation strategy has been developed to address these health needs over the next several years. This plan includes the continuation of our 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 improve our mental health and substance abuse 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 care delivery and the development of local services.

As we implement our 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 Taskforce

Wentworth-Douglass Hospital

Community Health Needs Assessment

Prepared for
Wentworth-Douglass Hospital

By
Verité Healthcare Consulting, LLC

April 4, 2019

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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 110-year history of compassionate care and innovation.

Serving its communities since 1906, Wentworth-Douglass is a family of over 400 providers, and 2,300 employees, including nearly 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 Partners HealthCare 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.

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 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.

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.

¹Instructions 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 73 percent of the hospital’s FY 2018 inpatient discharges and nearly 75 percent of emergency department visits.

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 a total of 51 individuals from 30 internal and external organizations was received 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.

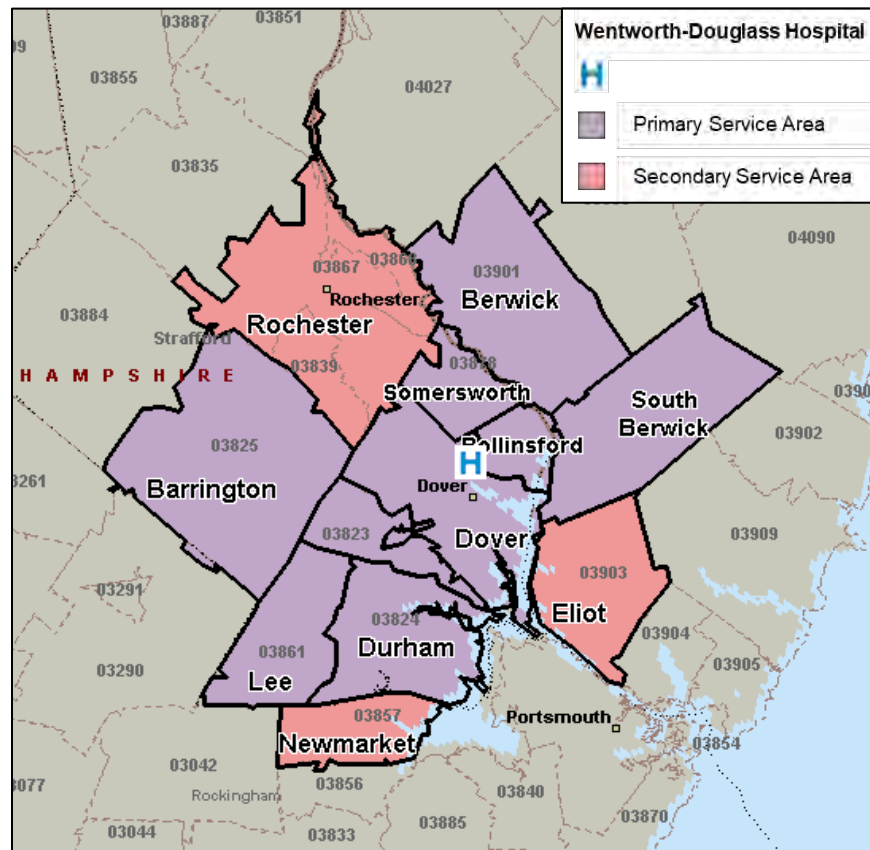
Certain community health needs were determined to be “significant” if they were identified as problematic in two or more of the following three data sources: (1) recently available secondary data regarding the community’s health, (2) recent assessments developed by state and county organizations, and (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.

For purposes of this report, WDH’s community is defined as fourteen ZIP Codes representing twelve towns across Rockingham and Strafford counties in New Hampshire and York County in Maine. The twelve towns are Dover (NH), Somersworth (NH), Barrington (NH), Berwick (ME), South Berwick (ME), Durham (NH), Rollinsford (NH), Lee (NH), Madbury (NH), Rochester³ (NH), Newmarket (NH), and Eliot (ME). The community was defined by considering the geographic origins of the hospital’s discharges in FY 2018. The total population of WDH’s community in 2019 was 139,674. The following map portrays the community served by WDH.



³ Rochester data for ZIP Code 03839 include the incorporated village of Gonic.

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 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 Abuse
9. Tobacco Use

These significant health needs in the community served by WDH were identified based on analyses of secondary data, primary data received through key stakeholder interviews, and assessments produced by public health departments. Categories of community health needs are topic areas used in Health People 2020, 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 Healthy People 2020 descriptions.⁴

Access to Health Services

Access to health is the timely use of health care services. Elements of timely use include entry to the health care system through insurance, geographic accessibility, and culturally competent providers.

- Within the community, there are fewer primary care physicians, dentists, and mental health providers per capita than in New Hampshire or Maine (**Exhibit 17C**);
- Strafford County is designated as a Medically Underserved Area by the Health Resources and Services Administration (HRSA); and
- Lack of providers was cited by many interviewees as a significant issue within the community, especially providers specializing in mental health and substance abuse services, and some interviewees noted that access to health care services was challenging for individuals without adequate income and/or insurance.

⁴ <https://www.healthypeople.gov/2020/topics-objectives>

Heart Disease and Stroke

Heart disease and stroke, along with other cardiovascular diseases, are widespread and costly. Numerous unhealthy behaviors are contributing factors.

- The leading causes of death in the community are related to heart and cardiovascular disease (**Exhibit 19**);
- Heart disease and stroke were identified as needs in the 2013-2020 New Hampshire State Health Improvement Plan, the 2015-2017 the Seacoast Public Health Network Community Health Improvement Plan, and the 2018-2021 Strafford County Public Health Network Community Health Improvement Plan; and
- Contributing factors to heart disease, including poor diet, lack of physical activity, and tobacco use were cited by many interviewees as significant issues within the community.

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.

- The percentages of youth reporting feeling sad/hopeless for two or more weeks, seriously considering suicide, and attempting suicide are higher in the community than in New Hampshire and/or Maine (**Exhibits 25A** and **Exhibit 25B**);
- Mental health was identified as a need in the 2015-2016 Maine Shared Community Health Needs Assessment, the 2013-2020 New Hampshire State Health Improvement Plan, 2015-2017 the Seacoast Public Health Network Community Health Improvement Plan, the 2018-2021 Strafford County Public Health Network Community Health Improvement Plan, and the 2016 York County Maine Shared Community Health Needs Assessment; and
- Prevalence of mental health conditions throughout the community, intertwined issues with substance abuse, and lack of treatment options were cited by most interviewees as primary issues within the community.

Nutrition, Physical Activity, and Obesity

Diet and body weight are related to health status, and healthy diets can help individuals reduce risks for many health conditions. Regular physical activity can improve the health and quality of individuals of all ages, regardless of the presence of a chronic disease or disability.

- Food deserts exist throughout the community (**Exhibit 29**);
- Nutrition and/or weight status were identified as needs in the 2015-2016 Maine Shared Community Health Needs Assessment, the 2013-2020 New Hampshire State Health Improvement Plan, 2015-2017 the Seacoast Public Health Network Community Health Improvement Plan, the 2018-2021 Strafford County Public Health Network Community Health Improvement Plan, and the 2016 York County Maine Shared Community Health Needs Assessment; and
- Poor nutrition was cited by many interviewees as a significant issue within the community.

Older Adults

Aging adults experience higher risk of chronic disease. Chronic conditions can lower quality of life for older adults and contribute to the leading causes of death among this population.

- The number of persons aged 65 years and older in the community is projected to increase by over 18 percent between 2019 and 2024 (**Exhibit 5**);
- The age-adjusted death rate from Alzheimer's disease in Strafford County is more than 50 percent higher than the New Hampshire rate (**Exhibit 19**); and
- The increase in the number of older residents, unmet physical needs, and hidden mental health issues were cited by many interviewees as significant issues within the community.

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.

- The percentage of Strafford County youth who visited a dentist in the last year was less than the New Hampshire rate (**Exhibit 25A**);
- The incident rate for oral cavity and pharynx cancer is higher in Rockingham County than the New Hampshire rate (**Exhibit 21B**); and
- Access to general and specialist oral health services by lower-income residents was cited by interviewees as a continued issue within the community.

Social Determinants (*Basic Needs & Transportation*)

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.

- Crime rates are higher within the community, notably in Rochester and Somersworth, than New Hampshire or Maine overall rates (**Exhibit 15**);
- There are 18 schools within the Wentworth-Douglass Hospital community where at least 40 percent of students are eligible for free or reduced price lunches (**Exhibit 12**); and
- Social determinant of health factors, especially affordable housing, food security, and transportation, were cited by many interviewees as significant issues within the community, especially for seniors and working adults with lower-incomes.

Substance Abuse

Substance abuse has a major impact on individuals, families, and communities. Substance abuse is cumulative and significant to numerous costly social, physical, mental, and public health problems.

- The percentage of adults reporting binge or heavy drinking and the percentage of driving deaths with alcohol involvement were higher within the community than in New Hampshire or Maine overall (**Exhibit 17B**);
- Substance abuse was identified as a need in the 2015-2016 Maine Shared Community Health Needs Assessment, the 2013-2020 New Hampshire State Health Improvement Plan, the 2015-2017 Seacoast Public Health Network Community Health Improvement Plan, the 2018-2021 Strafford County Public Health Network Community Health Improvement Plan, and the 2016 York County Maine Shared Community Health Needs Assessment; and
- Prevalence of substance abuse throughout the community, intertwined issues with mental health needs, and lack of treatment options were cited by most interviewees as primary issues within the community.

Tobacco Use

Scientific knowledge indicates that tobacco use causes numerous health conditions, including cancer, heart disease and stroke, and lung diseases.

- Strafford County is ranked among the bottom of New Hampshire counties for adult smoking (**Exhibit 16**);
- Rockingham and Strafford counties compare unfavorably to peer counties nationally for adult smoking rates (**Exhibit 18**); and
- Tobacco use was identified as a need in the 2015-2016 Maine Shared Community Health Needs Assessment, the 2013-2020 New Hampshire State Health Improvement Plan, and the 2016 York County Maine Shared Community Health Needs Assessment.

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.

Input from 51 individuals from 30 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 February 2019. 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 years 2015-2017. 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 2018 inpatient discharges and emergency department visits. Wentworth Douglass Hospital's community is comprised of 14 ZIP Codes representing twelve towns across Rockingham and Strafford counties in New Hampshire and York County in Maine. The twelve towns are Dover (NH), Somersworth (NH), Barrington (NH), Berwick (ME), South Berwick (ME), Durham (NH), Rollinsford (NH), Lee (NH), Madbury (NH), Rochester (NH), Newmarket (NH), and Eliot (ME).

Exhibit 1A: Wentworth-Douglass Inpatient Discharges by City/Town, FY 2018

City / Town	ZIP Code(s)	County (State)	Inpatient Cases FY 2018	Percent of Inpatient Cases
Primary Service Area Subtotal			4,731	56.4%
Dover	03820	Strafford (NH)	2,080	24.8%
Somersworth	03878	Strafford (NH)	947	11.3%
Barrington	03825	Strafford (NH)	430	5.1%
Berwick	03901	York (ME)	342	4.1%
South Berwick	03908	York (ME)	264	3.1%
Durham	03824	Strafford (NH)	276	3.3%
Rollinsford	03869	Strafford (NH)	156	1.9%
Lee	03861	Strafford (NH)	161	1.9%
Madbury	03823	Strafford (NH)	75	0.9%
Secondary Service Area Subtotal			1,413	16.8%
Rochester	03839,03867,03868	Strafford (NH)	1,196	14.2%
Newmarket	03857	Rockingham (NH)	131	1.6%
Eliot	03903	York (ME)	86	1.0%
Community Total			6,144	73.2%
Other Areas			2,253	26.8%
Total Discharges			8,397	100.0%

Source: Claritas and Wentworth-Douglass Hospital, 2019

Description

Exhibit 1A summarizes WDH discharges by city/town for FY 2018 (October 1, 2017 to September 30, 2018).

Observations

Discharge analyses help to identify and inform understanding of community needs. Data in **Exhibit 1A** indicate the following:

- Nearly 75 percent of WDH's 8,397 inpatient discharges in 2017 were residents of the 14 ZIP Codes which define the community.

Exhibit 1B: Wentworth-Douglass Emergency Department Visits by City/Town, FY 2018

City / Town	Zip Codes	County (State)	ED Visits FY 2018	Percent of ED Visits
Primary Service Area Subtotal			17,714	59.2%
Dover	03820	Strafford (NH)	7,726	25.8%
Somersworth	03878	Strafford (NH)	4,174	14.0%
Barrington	03825	Strafford (NH)	1,246	4.2%
Berwick	03901	York (ME)	1,546	5.2%
South Berwick	03908	York (ME)	962	3.2%
Durham	03824	Strafford (NH)	801	2.7%
Rollinsford	03869	Strafford (NH)	553	1.8%
Lee	03861	Strafford (NH)	425	1.4%
Madbury	03823	Strafford (NH)	281	0.9%
Secondary Service Area Subtotal			4,668	15.6%
Rochester	03839,03867,03868	Strafford (NH)	4,070	13.6%
Newmarket	03857	Rockingham (NH)	317	1.1%
Eliot	03903	York (ME)	281	0.9%
Community Total			22,382	74.8%
Other Areas			7,530	25.2%
Total Visits			29,912	100.0%

Source: Claritas and Wentworth-Douglass Hospital, 2019

Description

Exhibit 1B summarizes the WDH emergency department visits by city/town for FY 2018 (October 1, 2017 to September 30, 2018).

Observations

Analyses of emergency department visits help to identify and inform understanding of community needs. Data in **Exhibit 1B** indicate the following:

- Nearly 75 percent of the 29,912 WDH emergency departments visits in FY 2018 were from residents of the 14 ZIP Codes which define the community.

Exhibit 2: Community Population, 2019

City / Town	Zip Codes	County (State)	Estimated Population 2019	Percent of Total Population 2019
Primary Service Area Subtotal			92,645	66.3%
Barrington	03825	Strafford (NH)	9,370	6.7%
Berwick	03901	York (ME)	7,825	5.6%
Dover	03820	Strafford (NH)	31,914	22.8%
Durham	03824	Strafford (NH)	15,645	11.2%
Lee	03861	Strafford (NH)	4,218	3.0%
Madbury	03823	Strafford (NH)	1,786	1.3%
Rollinsford	03869	Strafford (NH)	2,297	1.6%
Somersworth	03878	Strafford (NH)	12,066	8.6%
South Berwick	03908	York (ME)	7,524	5.4%
Secondary Service Area Subtotal			47,029	33.7%
Eliot	03903	York (ME)	6,445	4.6%
Newmarket	03857	Rockingham (NH)	9,407	6.7%
Rochester	03839,03867,03868	Strafford (NH)	31,177	22.3%
Community Total			139,674	100.0%

Source: Claritas and Wentworth-Douglass Hospital, 2019

Description

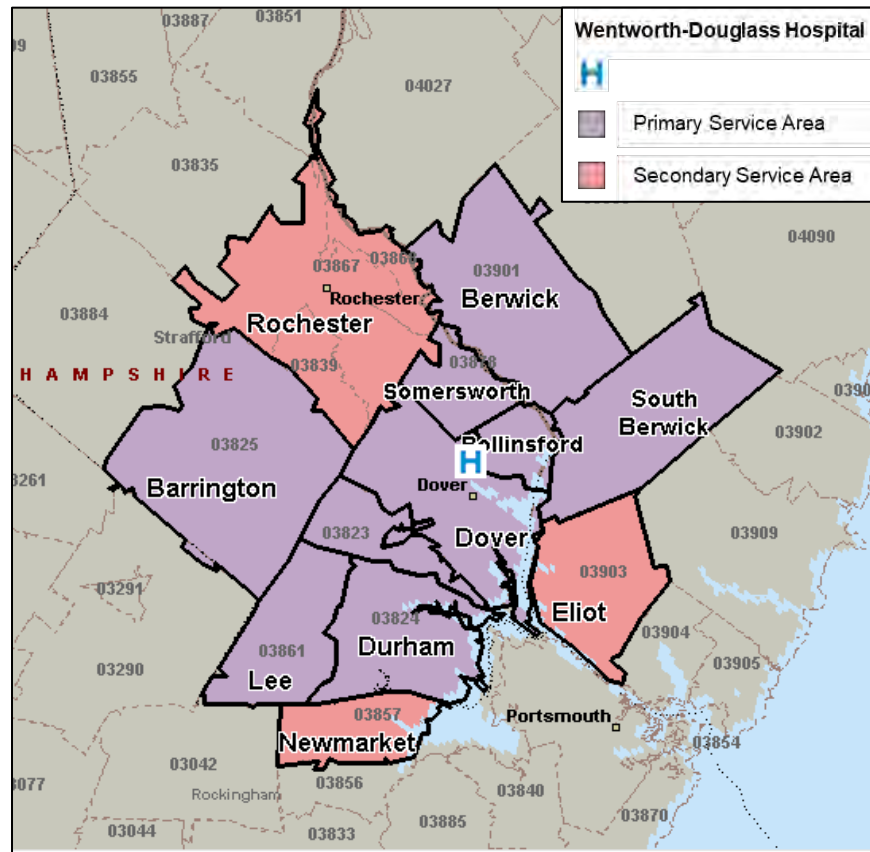
Exhibit 2 summarizes the 2019 estimated population by city/town.

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 2019 population of the community is nearly 140,000 persons;
- Residents of the primary service area represent approximately two-thirds (66.3 percent) of the community population; and
- Residents of the secondary service area represent approximately one-third (33.7 percent) of the community population.

Exhibit 3: Wentworth-Douglass Hospital Community



Sources: Claritas and Wentworth-Douglass Hospital, 2019.

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 fourteen ZIP Codes, representing twelve towns across Rockingham, Strafford, and York counties, are contiguous; and
- WDH is approximately in the geographic center 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, 2019-2024

City/Town	ZIP Code	County (State)	Estimated Population 2019	Estimated Population 2024	Percent Change 2019-2024
Primary Service Area Subtotal			92,645	95,137	2.7%
Barrington	03825	Strafford (NH)	9,370	9,743	4.0%
Berwick	03901	York (ME)	7,825	8,109	3.6%
Dover	03820	Strafford (NH)	31,914	32,879	3.0%
Durham	03824	Strafford (NH)	15,645	16,138	3.2%
Lee	03861	Strafford (NH)	4,218	4,256	0.9%
Madbury	03823	Strafford (NH)	1,786	1,839	3.0%
Rollinsford	03869	Strafford (NH)	2,297	2,281	-0.7%
Somersworth	03878	Strafford (NH)	12,066	12,232	1.4%
South Berwick	03908	York (ME)	7,524	7,660	1.8%
Secondary Service Area Subtotal			47,029	48,197	2.5%
Rochester	03839, 03867, 03868	Strafford (NH)	31,177	31,948	2.5%
Newmarket	03857	Rockingham (NH)	9,407	9,680	2.9%
Eliot	03903	York (ME)	6,445	6,569	1.9%
Community Total			139,674	143,334	2.6%

Sources: Claritas and Wentworth-Douglass Hospital, 2019.

Description

Exhibit 4 summarizes the estimated 2019 populations and projected 2024 populations for the WDH Community.

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 2019 and 2024, the community population is projected to increase by 2.6 percent;
- The population is projected to increase most rapidly in Barrington (4.0 percent) and Berwick (3.6 percent); and
- The population is projected to decrease slightly in Rollinsford.

Exhibit 5: Percent Change in Population by Age/Sex Cohort, 2019-2024

Age/Sex Cohort	Estimated Population 2019	Estimated Population 2024	Percent Change, 2019- 2024
Primary Service Area	92,645	95,137	2.7%
0-17	17,147	16,877	-1.6%
Female 18-44	19,793	20,252	2.3%
Male 18-44	18,955	19,403	2.4%
45-64	23,519	22,898	-2.6%
65+	13,231	15,707	18.7%
Secondary Service Area	47,029	48,197	2.5%
0-17	9,450	9,348	-1.1%
Female 18-44	7,953	7,965	0.2%
Male 18-44	7,926	7,963	0.5%
45-64	13,213	12,981	-1.8%
65+	8,487	9,940	17.1%
Community Total	139,674	143,334	2.6%
0-17	26,597	26,225	-1.4%
Female 18-44	27,746	28,217	1.7%
Male 18-44	26,881	27,366	1.8%
45-64	36,732	35,879	-2.3%
65+	21,718	25,647	18.1%
Maine	1,339,785	1,350,641	0.8%
0-17	250,600	244,075	-2.6%
Female 18-44	208,701	207,030	-0.8%
Male 18-44	211,666	212,936	0.6%
45-64	392,941	375,056	-4.6%
65+	275,877	311,544	12.9%
New Hampshire	1,350,496	1,374,296	1.8%
0-17	255,483	247,369	-3.2%
Female 18-44	219,235	221,277	0.9%
Male 18-44	226,946	230,817	1.7%
45-64	401,894	387,680	-3.5%
65+	246,938	287,153	16.3%
United States	329,236,175	340,950,101	3.6%
0-17	74,070,593	74,964,689	1.2%
Female 18-44	57,971,617	58,690,471	1.2%
Male 18-44	59,387,577	60,705,485	2.2%
45-64	84,315,951	84,134,723	-0.2%
65+	53,490,437	62,454,733	16.8%

Source: Claritas and Wentworth-Douglass Hospital, 2019.

Description

Exhibit 5 summarizes the estimated 2019 populations and projected 2024 populations for the WDH Community by age and sex cohorts.

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 over 18 percent between 2019 and 2024.

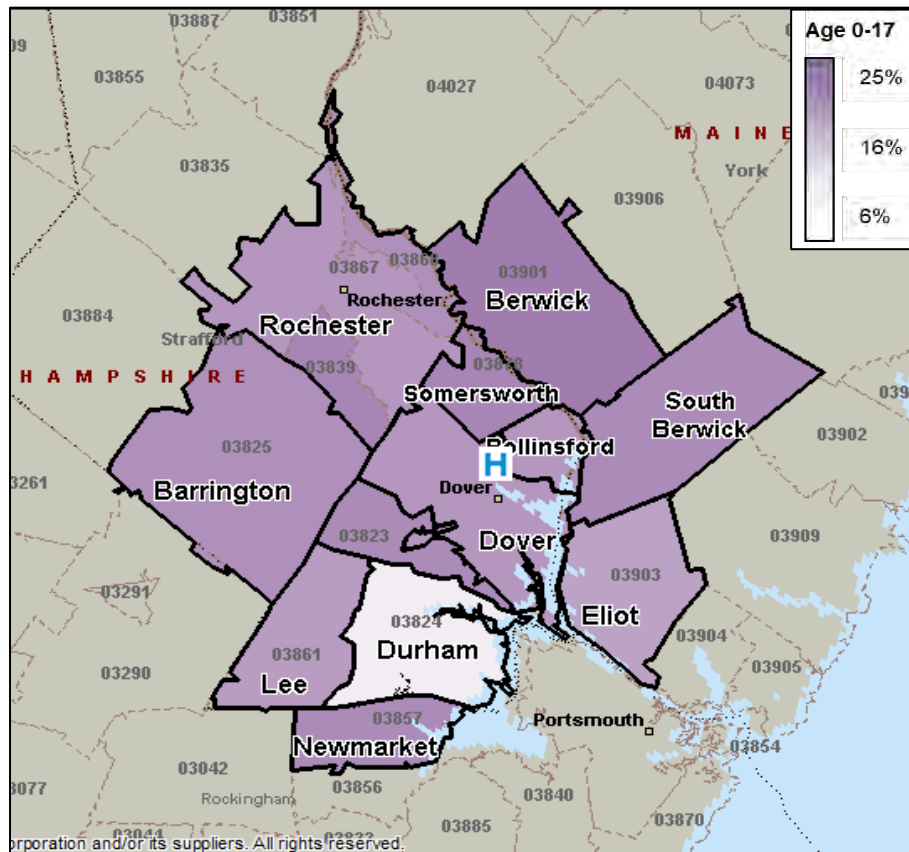
Map of the City of Dover showing ward boundaries and the percentage of the population aged 65 and older. The map includes wards such as Rochester, Berwick, Somersworth, Barrington, South Berwick, Eliot, Lee, Durham, and Newmarket. A legend indicates that the percentage of the population aged 65 and older ranges from 8% to 22%.

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.

Observations

- Rochester ZIP Code 03868 and Eliot ZIP Code 03903 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: Microsoft MapPoint and Claritas, 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.

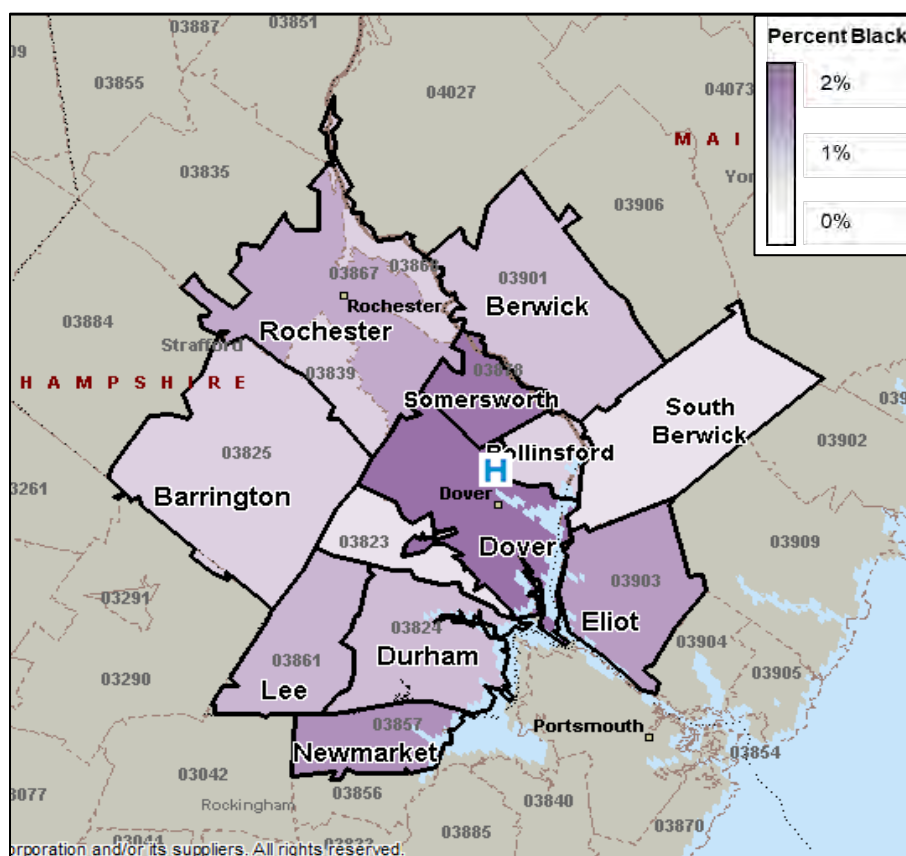
Exhibit 6B presents estimated 2019 residents aged 0-17 by ZIP Code.

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:

- Dover ZIP Code 03820, Somersworth ZIP Code 03878, Barrington ZIP Code 03825, Berwick ZIP Code 03901, South Berwick ZIP Code 03908, Madbury ZIP Code 03823, Rochester ZIP Code 03839, Rochester ZIP Code 03868, and Newmarket ZIP Code 03857 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: Microsoft MapPoint and Claritas, 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.

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

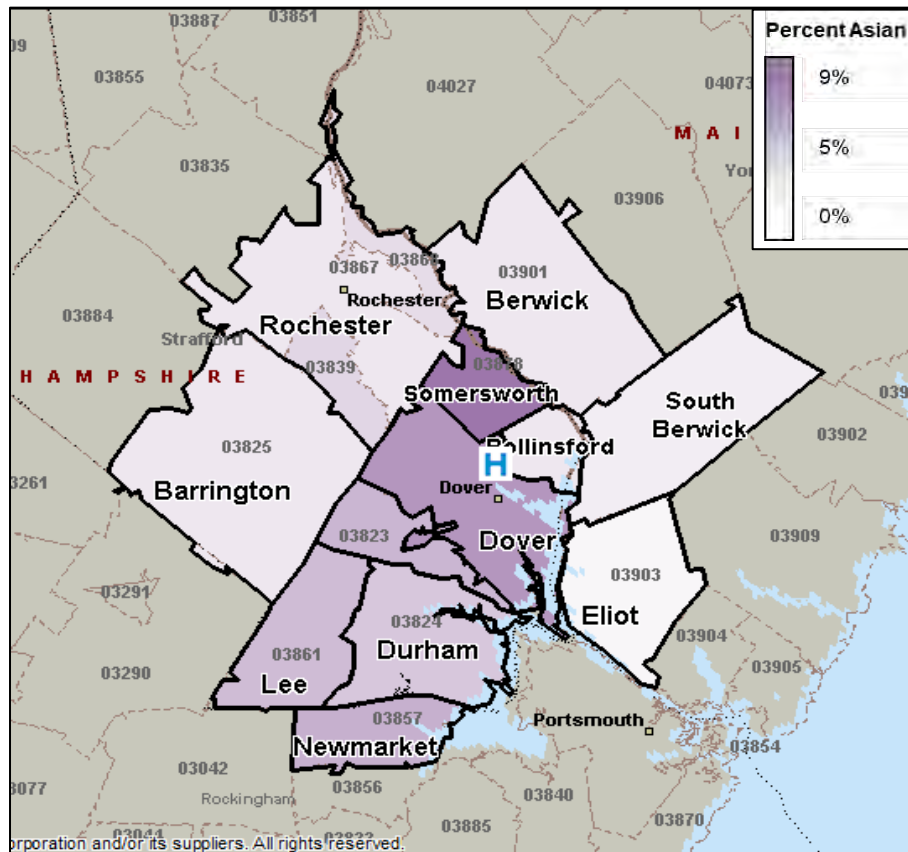
Observations

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.”⁵ Data in **Exhibit 7A** indicate the following:

- The highest percentages of Black residents were located in Dover ZIP Code 03820 (2.0 percent) and Somersworth ZIP Code 03878 (1.9 percent).

⁵ “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: Microsoft MapPoint and Claritas, 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.

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

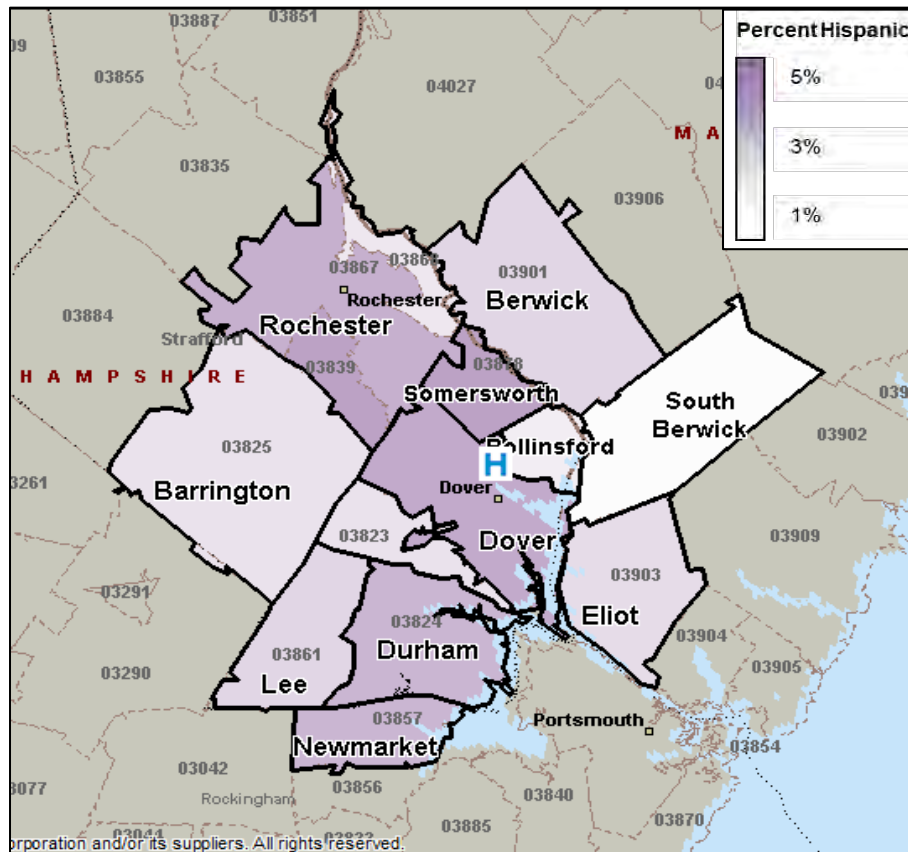
Observations

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.”⁶ Data in **Exhibit 7B** indicate the following:

- The highest percentages of Asian residents were located in Somersworth ZIP Code 03878 (8.6 percent) and Dover ZIP Code 03820 (6.4 percent).

⁶ “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: Microsoft MapPoint and Claritas, 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.

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.”⁷ 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.

⁷ “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, 2017

Measure	Rockingham County (NH)	Strafford County (NH)	New Hampshire	York County (ME)	Maine	United States
Population 25+ without High School Diploma	4.9%	7.5%	7.1%	7.2%	7.9%	12.6%
Population with a Disability	10.6%	12.6%	12.6%	14.3%	15.9%	12.6%
Population Linguistically Isolated	1.5%	1.9%	2.4%	1.6%	1.6%	8.5%

Source: U.S. Census, ACS 5-Year Estimates, 2013-2017

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 well 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 is higher than the New Hampshire percentage; and
- In York County, the percentage of the population with a disability is higher than the U.S. average.

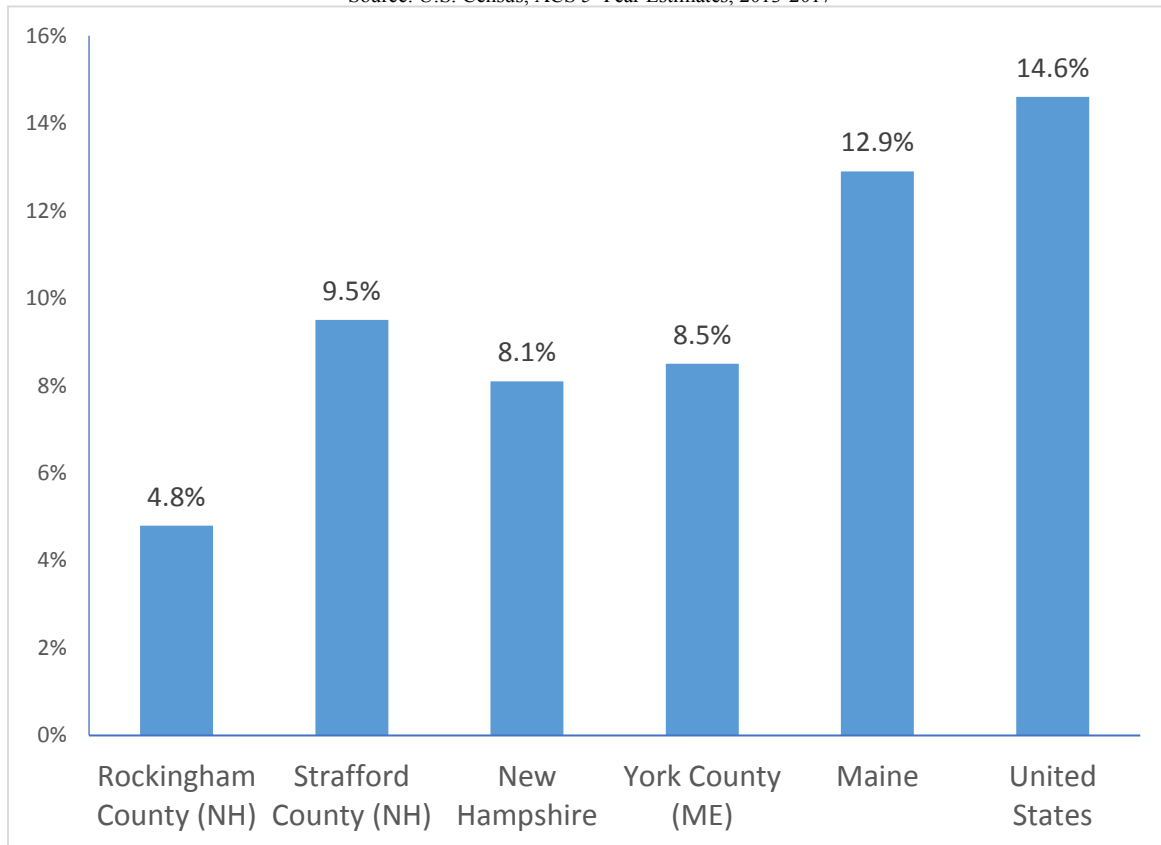
Economic indicators

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, 2017

Source: U.S. Census, ACS 5-Year Estimates, 2013-2017



Description

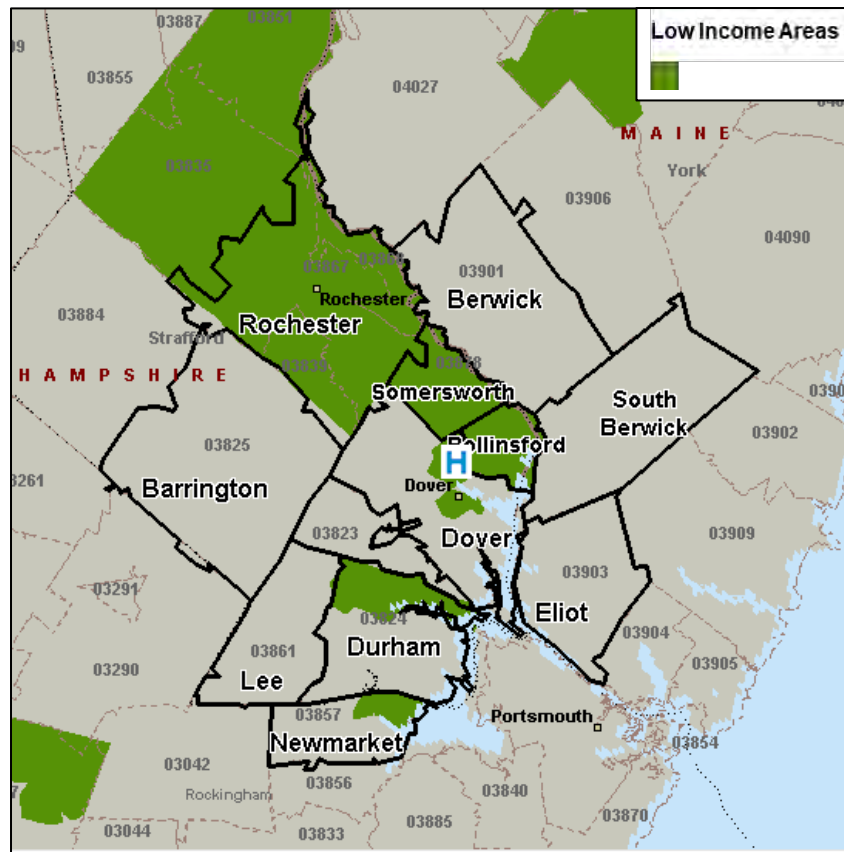
Exhibit 10 presents the percent of people in poverty in Rockingham County (NH), Strafford County (NH), New Hampshire, York County (ME), Maine, and the United States.

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

Exhibit 11: Low-Income Census Tracts



Source: Microsoft MapPoint and Economic Research Services, U.S. Department of Agriculture, 2019

Description

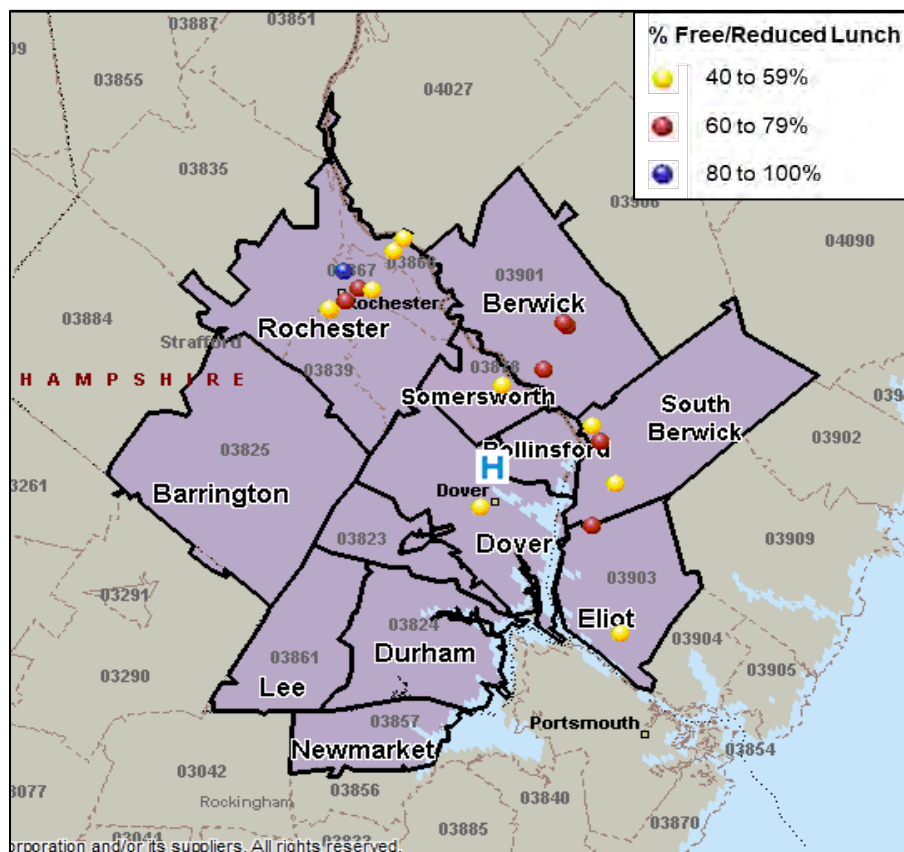
Exhibit 11 presents the location of low-income census tracts in a map of the WDH community.

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 in Somersworth and parts of Dover, Durham, Newmarket, Rollinsford, and Rochester.

Exhibit 12: Public Schools with over 40 Percent of Students Eligible for Free or Reduced-Price Lunches, School Year 2017-18



Source: Maine and New Hampshire Departments of Education, 2019.

*New Hampshire data are as of October 31, 2017. 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.

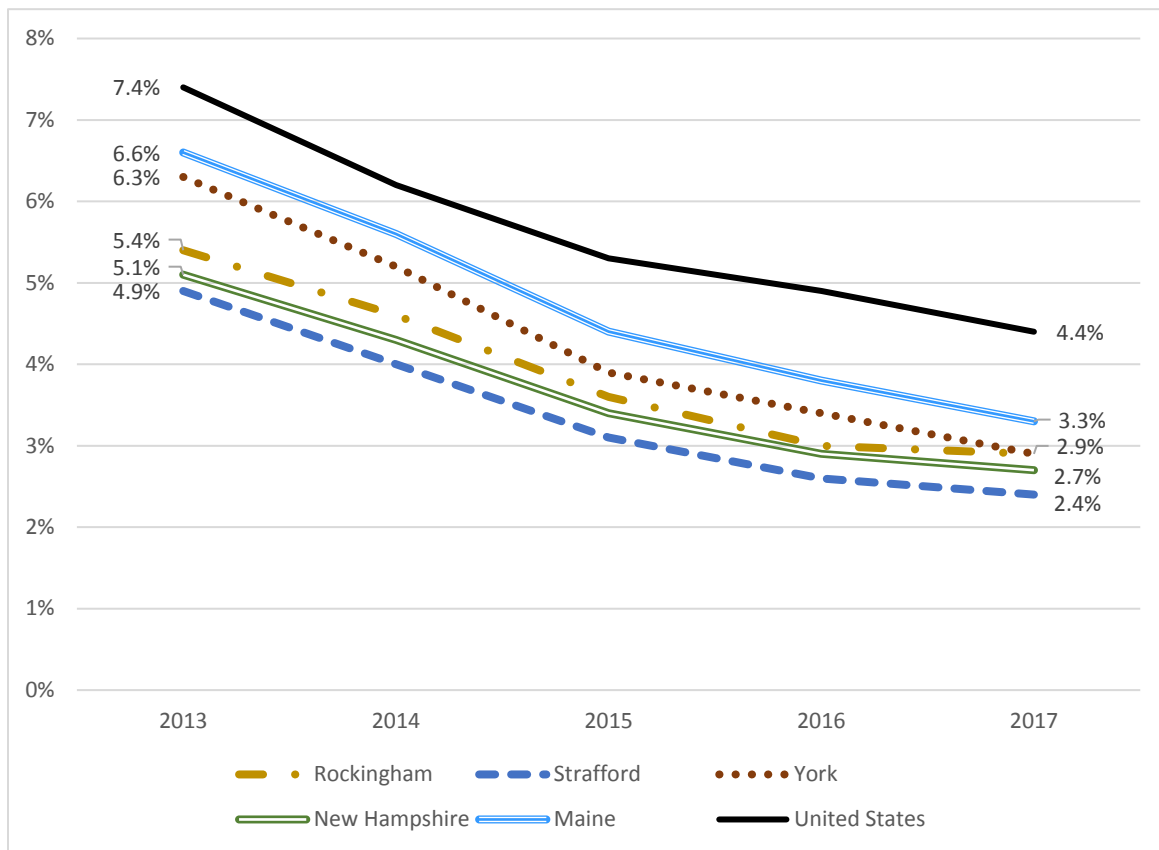
Observations

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 18 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, 2018.

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. Data in **Exhibit 13** indicate the following:

- Unemployment rates decreased from 2013 to 2017 for all geographies;
- Unemployment rates for 2013-2017 in York County were higher than the unemployment rates of Rockingham County (NH), Strafford County, and New Hampshire, although lower than Maine and U.S. rates; and
- The unemployment rate for Rockingham County was higher than the unemployment rates of Strafford County and New Hampshire, although lower than Maine and U.S. rates.

Insurance Status

Exhibit 14: Percent of the Population without Health Insurance, 2017

City/Town	ZIP Code	County (State)	Percent Uninsured
Primary Service Area Subtotal			6.2%
Barrington	03825	Strafford (NH)	6.8%
Berwick	03901	York (ME)	5.2%
Dover	03820	Strafford (NH)	8.2%
Durham	03824	Strafford (NH)	3.3%
Lee	03861	Strafford (NH)	4.0%
Madbury	03823	Strafford (NH)	4.5%
Rollinsford	03869	Strafford (NH)	5.5%
Somersworth	03878	Strafford (NH)	8.7%
South Berwick	03908	York (ME)	2.8%
Secondary Service Area Subtotal			9.4%
Rochester	03839, 03867, 03868	Strafford (NH)	9.9%
Eliot	03903	York (ME)	8.9%
Newmarket	03857	Rockingham (NH)	7.9%
Community Total			7.3%
Rockingham County			5.7%
Strafford County			7.9%
York County			8.4%
Maine			9.0%
New Hampshire			7.5%
United States			10.5%

Source: U.S. Census, ACS 5-Year Estimates, 2012-2017.

Description

Exhibit 14 presents the percentage of population without health insurance for Rockingham County (NH), Strafford County (NH), New Hampshire, York County (ME), Maine, and the United States.

Observations

Lack of health insurance contributes to poor health outcomes, particular through a lack of access to health professionals. Data in **Exhibit 14** indicate the following:

- The uninsured rate in Strafford County is higher than the overall uninsured rate of New Hampshire.

Crime

Exhibit 15: Crime Rates by Type and City/Town, Per 100,000, 2017

City/Town State	Violent Crime	Murder	Rape	Robbery	Aggravated Assault	Property Crime	Burglary	Larceny- Theft	Motor Vehicle Theft
Barrington (NH)	66.8	-	-	-	66.8	501.1	167.0	322.9	11.1
Dover (NH)	111.7	-	47.9	16.0	47.9	1,017.7	92.5	893.3	31.9
Durham (NH)	53.7	6.0	23.9	-	23.9	495.5	131.3	340.3	23.9
Lee (NH)	158.5	-	22.6	45.3	90.6	566.0	67.9	498.1	-
Madbury (NH)	54.7	-	-	-	54.7	382.9	54.7	328.2	-
Newmarket (NH)	133.3	-	66.6	-	66.6	544.3	44.4	488.7	11.1
Rochester (NH)	476.3	-	121.5	82.1	272.7	3,294.9	351.5	2,867.8	75.6
Rollinsford (NH)	-	-	-	-	-	1,058.0	195.9	862.1	-
Somersworth (NH)	339.1	-	84.8	93.3	161.1	2,933.4	313.7	2,475.6	144.1
Berwick (ME)	78.7	-	13.1	-	65.6	708.0	104.9	550.7	52.4
Eliot (ME)	108.0	-	30.9	-	77.1	262.3	15.4	216.0	30.9
South Berwick (ME)	40.2	-	13.4	-	26.8	401.7	107.1	281.2	13.4
New Hampshire	198.7	1.0	49.4	31.2	117.1	1,381.8	191.7	1,122.0	68.1
Maine	121.0	1.7	35.4	18.6	65.3	1,507.1	249.6	1,198.1	59.4

Source: FBI, 2018.

Description

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

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 2017 Durham (NH) murder rate was six times higher than the New Hampshire rate (for one murder);
- The 2017 Lee (NH) robbery rate was higher than the New Hampshire rate;
- The 2017 Newmarket (NH) rape rate was higher than the New Hampshire rate;
- The 2017 Rochester (NH) rates for violent crime, rape, robbery, aggravated assault, property crime, burglary, and larceny-theft were more than 50 percent higher than the New Hampshire rate, and the rate for motor vehicle theft was higher overall;
- The 2017 Rollinsford (NH) burglary rate was higher than the New Hampshire rate;
- The 2017 Somersworth (NH) rates for violent crime, rape, robbery, property crime, burglary, larceny-theft, and motor vehicle theft were more than 50 percent higher than the New Hampshire rate, and the rate for aggravated assault was higher overall;
- The 2017 Berwick (ME) aggregated assault rate was higher than the Maine rate; and
- The 2017 Eliot (ME) aggregated assault rate was higher than the Maine rate.

County Health Rankings

Exhibit 16: County Health Rankings, 2015 and 2018

Measure	Rockingham		Strafford		York	
	2015	2018	2015	2018	2015	2018
Health Outcomes	1	1	8	8	4	4
Health Factors	2	2	8	8	3	3
Length of Life	2	2	7	7	3	3
Quality of Life	2	1	8	8	4	5
Poor or fair health	1	1	9	10	4	6
Poor physical health days	2	1	9	9	4	7
Poor mental health days	1	3	8	9	1	3
Low birthweight	7	3	6	5	7	5
Health Behaviors	2	3	9	7	6	5
Adult smoking	2	2	8	8	8	4
Adult obesity	3	3	9	6	6	7
Food environment index	2	2	9	9	3	2
Physical inactivity	2	3	9	7	3	7
Access to exercise opportunities	4	9	3	6	4	5
Excessive drinking	10	10	4	9	16	15
Alcohol-impaired driving deaths	4	9	9	8	10	10
Sexually transmitted infections	3	5	10	10	12	9
Teen births	1	1	3	3	2	2
Clinical Care	4	2	8	7	5	7
Uninsured	1	1	4	5	3	5
Primary care physicians	6	6	7	10	10	11
Dentists	5	4	4	6	11	12
Mental health providers	7	8	8	7	8	8
Preventable hospital stays	9	4	10	7	7	8
Diabetes monitoring	5	1	2	4	10	12
Mammography screening	2	3	10	8	11	2
Social & Economic Factors	1	1	7	4	2	3
High school graduation	1	3	10	8	5	6
Some college	1	1	2	2	3	2
Unemployment	9	8	4	3	4	3
Children in poverty	1	1	4	4	1	1
Income inequality	2	1	7	7	4	3
Children in single-parent households	1	1	5	5	2	1
Social associations	7	7	9	10	15	15
Violent crime	1	1	8	9	10	14
Injury deaths	2	1	3	7	5	8
Physical Environment	3	9	2	10	13	16
Air pollution - particulate matter	2	9	1	8	11	15
Severe housing problems	3	2	9	10	9	11
Driving alone to work	9	9	2	5	11	10
Long commute - driving alone	10	10	5	5	16	15

Source: County Health Rankings, 2018.

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,⁸ social and economic factors, and physical environment.⁹ *County Health Rankings* is updated annually. *County Health Rankings 2018* relies on data from 2010 to 2017.

The exhibit presents 2015 and 2018 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 11 of the 42 indicators assessed in 2018;
 - 9 of the 11 indicators that ranked in the bottom 50th percentile were in the bottom quartile (access to exercise opportunities, excessive drinking, alcohol-impaired driving deaths, mental health providers, unemployment, physical environment, air pollution, driving alone to work, and long commute - driving alone); and
 - Rankings for 22 indicators fell between 2015 and 2018,
- Strafford County ranked in the bottom 50th percentile among New Hampshire counties for 30 of the 42 indicators assessed in 2018;
 - 19 of the 30 indicators that ranked in the bottom 50th percentile were in the bottom quartile (health outcomes; health factors; quality of life; poor or fair health; poor physical health days; poor mental health days; adult smoking; food environment index; excessive drinking; alcohol-impaired driving deaths; sexually transmitted infections; primary care physicians; mammography screening; high school graduation; social associations; violent crime; physical environment; air pollution; and severe housing problems); and
 - Rankings for 15 indicators fell between 2015 and 2018,
- York County ranked in the bottom 50th percentile among Maine counties for 13 of the 42 indicators assessed in 2018;
 - 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 15 indicators fell between 2015 and 2018.

⁸ 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.

⁹ 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, 2018
Health Outcomes

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)	5,179.0	6,308.1	5,867.3	6,010.5	6,529.2	6,700.0
Quality of Life - Poor or fair health	Percentage of adults reporting fair or poor health (age-adjusted)	10.4	14.9	13.6	12.9	15.4	16.0
Quality of Life - Poor physical health days	Average number of physically unhealthy days reported in past 30 days (age-adjusted)	3.1	3.8	3.7	3.6	4.2	3.7
Quality of Life - Poor mental health days	Average number of mentally unhealthy days reported in past 30 days (age-adjusted)	3.8	4.2	4.2	3.7	4.4	3.8
Quality of Life - Low birthweight	Percentage of live births with low birthweight (< 2500 grams)	6.5	6.7	6.9	6.6	6.9	8.0

Source: County Health Rankings, 2018.

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 indicators for health outcomes from *County Health Rankings 2018* for Rockingham County, Strafford County, New Hampshire, York County, Maine, and the U.S.

Observations

County Health Ranking's Health Outcomes measure is based on length of life and quality of life indicators. Data in **Exhibit 17A** indicate the following:

- In Strafford County, the number of years of potential life lost (YPPL) rate, the percentage of adults reporting fair or poor health, and the average number of physically unhealthy days are greater than New Hampshire averages.

Exhibit 17B: County Health Rankings Data Compared to State and U.S. Averages, 2018
Health Factors – Health Behaviors

Indicator Category	Measure	Rockingham	Strafford	New Hampshire	York	Maine	United States
Adult smoking	Percentage of adults who are current smokers	13.7	16.3	18.0	14.9	19.8	17.0
Adult obesity	Percentage of adults that report a BMI of 30 or more	27.1	28.6	27.9	29.0	29.0	28.0
Food environment index	Index of factors that contribute to a healthy food environment, 0 (worst) to 10 (best)	8.8	8.3	9.1	8.2	7.9	7.7
Physical inactivity	Percentage of adults age 20 and over reporting no leisure-time physical activity	20.0	21.3	20.6	21.4	21.4	23.0
Access to exercise opportunities	Percentage of population with adequate access to locations for physical activity	72.3	84.9	82.4	76.4	72.8	83.0
Excessive drinking	Percentage of adults reporting binge or heavy drinking	22.1	20.3	20.1	22.1	20.5	18.0
Alcohol-impaired driving deaths	Percentage of driving deaths with alcohol involvement	35.8	35.0	31.8	43.0	39.2	29.0
Sexually transmitted infections	Number of newly diagnosed chlamydia cases per 100,000 population	196.9	289.8	233.3	244.6	298.1	478.8
Teen births	Number of births per 1,000 female population ages 15-19	7.8	10.4	12.5	15.5	18.0	27.0

Source: County Health Rankings, 2018.

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 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 17B** indicate the following:

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

Exhibit 17C: County Health Rankings Data Compared to State and U.S. Averages, 2018
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	6.1	8.2	7.8	9.7	10.3	11.0
Primary care physicians	Ratio of population to primary care physicians	1,257:1	1,458:1	1098:1	1,257:1	899:1	1,320:1
Dentists	Ratio of population to dentists	1,397:1	1,465:1	1389:1	2,628:1	1671:1	1,480:1
Mental health providers	Ratio of population to mental health providers	493:1	457:1	369:1	271:1	227:1	470:1
Preventable hospital stays	Number of hospital stays for ambulatory-care sensitive conditions per 1,000 Medicare enrollees	46.4	51.1	47.1	49.4	49.4	49.0
Diabetes monitoring	Percentage of diabetic Medicare enrollees ages 65-75 that receive HbA1c monitoring	91.2	90.6	90.3	88.1	88.6	85.0
Mammography screening	Percentage of female Medicare enrollees ages 67-69 that receive mammography screening	71.9	67.7	70.7	70.6	69.1	63.0

Source: County Health Rankings, 2018.

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 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 17C** 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;
- 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 67-69 that receive mammography screenings is lower; and
- In York County, the percentage of diabetic Medicare enrollees receiving diabetes monitoring is lower than the Maine percentage.

Exhibit 17D: County Health Rankings Data Compared to State and U.S. Averages, 2018
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	90.8	86.6	88.5	87.1	87.2	83.0
Some college	Percentage of adults ages 25-44 with some post-secondary education	75.1	72.1	69.4	68.2	65.7	65.0
Unemployment	Percentage of population ages 16 and older unemployed but seeking work	3.0	2.5	2.8	3.4	3.9	4.9
Children in poverty	Percentage of children under age 18 in poverty	4.8	9.0	8.5	11.3	16.7	20.0
Income inequality	Ratio of household income at the 80th percentile to income at the 20th percentile	3.8	4.3	4.2	4.0	4.6	5.0
Children in single-parent households	Percentage of children that live in a household headed by single parent	22.8	29.3	28.2	26.9	32.4	34.0
Social associations	Number of membership associations per 10,000 population	9.2	8.6	10.4	8.1	11.1	9.3
Violent crime	Number of reported violent crime offenses per 100,000 population	125.9	233.2	199.7	156.0	126.6	380.0
Injury deaths	Number of deaths due to injury per 100,000 population	66.7	79.5	74.4	77.5	75.1	65.0

Source: County Health Rankings, 2018.

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 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 17D** indicate the following:

- In Rockingham County, the unemployment is higher than the New Hampshire rate, and the rate for social associations is lower;
- In Strafford County, the rates for high school graduation and social associations are lower than New Hampshire rates, and children in poverty, income inequality, children in single-parent households, violent crime, and injury deaths are comparatively higher; and
- In York County, the rates for high school graduation and social associations are lower than the Maine rates, and rates for violent crime and injury deaths are higher.

Exhibit 17E: County Health Rankings Data Compared to State and U.S. Averages, 2018
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)	8.7	8.5	7.8	8.6	7.4	8.7
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	14.9	18.7	16.0	16.1	15.8	19.0
Driving alone to work	Percentage of the workforce that drives alone to work	83.7	78.9	81.0	79.5	78.2	76.0
Long commute - driving alone	Among workers who commute in their car alone, the percentage that commute more than 30 minutes	44.9	36.8	38.3	41.8	31.4	35.0

Source: County Health Rankings, 2018.

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 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 17E** indicate the following:

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

Exhibit 18: Community Health Status Indicators, 2018

Category	Indicator	Rockingham	Strafford	York
Length of Life	Years of Potential Life Lost Rate	Moderate	Moderate	Moderate
Quality of Life	% Fair/Poor Health	Moderate	Moderate	Moderate
	Physically Unhealthy Days	Moderate	Worse	Moderate
	Mentally Unhealthy Days	Much worse	Much worse	Moderate
	% Births - Low Birth Weight	Moderate	Moderate	Moderate
Health Behaviors	% Smokers	Worse	Worse	Moderate
	% Obese	Worse	Moderate	Moderate
	Food Environment Index	Moderate	Moderate	Moderate
	% Physically Inactive	Moderate	Moderate	Moderate
	% With Access to Exercise Opportunities	Much worse	Worse	Worse
	% Excessive Drinking	Much worse	Much worse	Much worse
	% Driving Deaths Alcohol-Impaired	Worse	Worse	Much worse
	Chlamydia Rate	Moderate	Moderate	Moderate
	Teen Birth Rate	Moderate	Moderate	Moderate
Clinical Care	% Uninsured	Worse	Moderate	Moderate
	Primary Care Physicians Rate	Worse	Moderate	Moderate
	Dentist Rate	Moderate	Moderate	Much worse
	Mental Health Professionals Rate	Worse	Moderate	Moderate
	Preventable Hosp. Rate	Worse	Moderate	Worse
	% Receiving HbA1c Screening	Moderate	Moderate	Moderate
	% Mammography Screening	Moderate	Moderate	Moderate
Social & Economic Factors	High School Graduation Rate	Worse	Worse	Moderate
	% Some College	Moderate	Moderate	Moderate
	% Unemployed	Moderate	Moderate	Moderate
	% Children in Poverty	Moderate	Moderate	Moderate
	Income Ratio	Moderate	Worse	Moderate
	% Children in Single-Parent Households	Worse	Moderate	Moderate
	Social Association Rate	Worse	Worse	Moderate
	Violent Crime Rate	Worse	Worse	Moderate
	Injury Death Rate	Worse	Much worse	Moderate
Physical Environment	Average Daily PM2.5	Moderate	Moderate	Worse
	% Severe Housing Problems	Moderate	Much worse	Moderate
	% Drive Alone to Work	Much worse	Moderate	Moderate
	% Long Commute - Drives Alone	Worse	Worse	Much worse

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 18 compares Rockingham, Strafford, and York counties to other U.S. counties identified as comparable, peer counties. 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

Social and economic indicators measure education, poverty, and other environment factors, which are correlated with health and health outcomes. Data in **Exhibit 18** indicate the following:

- Rockingham County compares unfavorably to its peer counties for many indicators and ranks in the bottom quartile for mentally unhealthy days, access to exercise opportunities, excessive drinking, and drive alone to work;
- Strafford County compares unfavorably to its peer counties for several indicators and ranks in the bottom quartile for mentally unhealthy days, excessive drinking, injury death rate, and severe housing problems; and
- York County compares unfavorably to its peer counties for several indicators and ranks in the bottom quartile for excessive drinking, driving deaths alcohol-impaired, dentist rate, and long commute - drives alone.

Exhibit 19: Selected Causes of Death, Age-Adjusted Rates per 100,000 Population, 2017

Cause of Death	Rockingham County (NH)	Strafford County (NH)	New Hampshire	York County (ME)	Maine	United States
Major cardiovascular diseases	181.0	202.4	192.0	167.6	193.6	218.1
Malignant neoplasms	145.3	179.2	153.5	162.6	170.8	152.5
Diseases of heart	142.2	154.6	149.7	125.8	143.5	165.0
All other diseases	93.9	130.3	104.0	102.4	113.9	86.3
Ischemic heart diseases	67.7	84.8	80.4	72.8	74.9	92.9
Accidents	55.1	78.2	62.9	75.1	68.0	49.4
Other forms of chronic ischemic heart disease	53.2	67.3	59.6	52.8	51.4	63.7
Other heart diseases	67.1	60.9	59.5	46.7	60.2	57.3
Nontransport accidents	49.9	69.2	55.0	62.7	53.0	36.6
Chronic lower respiratory diseases	35.5	53.0	43.0	47.6	48.7	40.9
All other forms of chronic ischemic heart disease	34.8	55.2	42.4	43.9	43.8	47.7
Other chronic lower respiratory diseases	29.9	51.4	38.7	44.3	45.6	38.0
Malignant neoplasms of trachea, bronchus and lung	37.4	53.7	38.6	46.3	44.8	36.6
All other forms of heart disease	33.7	41.2	35.9	23.8	38.1	36.2
Accidental poisoning and exposure to noxious substances	31.8	41.5	34.9	44.4	32.6	20.1
Cerebrovascular diseases	24.7	31.0	28.9	30.6	37.5	37.6
Alzheimer disease	22.4	44.5	24.8	33.7	30.4	31.0
Heart failure	32.5	18.9	22.7	22.0	21.0	20.4
Acute myocardial infarction	13.1	17.5	20.0	19.7	22.7	28.1
All other and unspecified malignant neoplasms	18.8	16.6	19.3	20.2	24.2	18.6
Diabetes mellitus	16.2	27.8	19.2	20.6	19.7	21.5
Intentional self-harm (suicide)	20.1	Unreliable	18.9	18.2	18.9	14.0
Atherosclerotic cardiovascular disease, so described	18.4	12.1	17.2	8.9	7.5	15.9
Falls	14.6	21.3	15.1	11.0	12.3	9.4
Malignant neoplasms of lymphoid, hematopoietic and related tissue	12.4	17.9	14.0	11.9	17.1	15.0
Influenza and pneumonia	14.2	15.9	13.1	12.8	15.2	14.3
Malignant neoplasms of colon, rectum and anus	11.1	Unreliable	13.0	9.8	13.0	13.7
Pneumonia	12.6	14.0	10.7	9.2	11.7	12.6
Other diseases of respiratory system	10.2	Unreliable	10.2	10.4	11.5	10.8
Malignant neoplasm of pancreas	9.4	Unreliable	10.2	10.8	11.8	11.1
Parkinson disease	9.7	16.1	10.0	7.4	10.4	8.4
Intentional self-harm (suicide) by other and unspecified means	9.9	**	9.7	9.6	8.8	7.1
Nephritis, nephrotic syndrome and nephrosis	9.6	Unreliable	9.4	11.8	13.0	13.0
Intentional self-harm (suicide) by discharge of firearm	10.3	**	9.2	8.6	10.1	6.9
Renal failure	9.6	Unreliable	9.1	11.2	12.6	12.8
Chronic liver disease and cirrhosis	7.7	Unreliable	9.1	11.5	10.4	10.9
Malignant neoplasm of breast	8.0	Unreliable	8.9	6.1	10.2	11.0
Malignant neoplasm of prostate	10.1	Unreliable	8.4	10.0	8.3	7.8
Septicemia	5.7	Unreliable	8.1	6.4	6.2	10.6
Transport accidents	Unreliable	Unreliable	7.9	12.4	15.1	12.8
Hypertensive heart disease	5.9	Unreliable	7.7	Unreliable	6.4	12.2
Motor vehicle accidents	Unreliable	Unreliable	7.3	10.7	13.7	12.0
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	5.5	Unreliable	6.9	Unreliable	4.2	8.8
Malignant neoplasm of esophagus	Unreliable	Unreliable	6.0	7.5	5.7	3.8

** Data are not available. Unreliable indicates 20 or fewer deaths
 Light grey shading indicates rankings in the bottom half of peer counties;
 Dark grey shading indicates rankings in the bottom quartile of peer counties.
 - Table Continued -

**Exhibit 19: Selected Causes of Death, Age-Adjusted Rates per 100,000 Population, 2017
(Continued)**

Cause of Death	Rockingham County (NH)	Strafford County (NH)	New Hampshire	York County (ME)	Maine	United States
Essential hypertension and hypertensive renal disease	Unreliable	**	5.6	Unreliable	6.0	9.0
Leukemia	5.4	Unreliable	5.5	**	6.8	6.1
Non-Hodgkin lymphoma	5.4	**	5.4	Unreliable	6.1	5.3
Malignant neoplasm of bladder	4.8	**	5.4	7.6	6.2	4.3
Malignant neoplasms of liver and intrahepatic bile ducts	Unreliable	**	5.2	7.9	5.6	6.7
Alcoholic liver disease	Unreliable	**	4.8	7.5	6.1	5.9
Other diseases of circulatory system	**	**	4.7	Unreliable	6.1	5.1
Pneumonitis due to solids and liquids	Unreliable	Unreliable	4.6	Unreliable	5.8	5.1
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior	Unreliable	**	4.6	Unreliable	4.5	4.1
Malignant neoplasms of meninges, brain and other parts of central nervous system	5.2	**	4.5	**	5.1	4.4
Other chronic liver disease and cirrhosis	Unreliable	**	4.3	Unreliable	4.2	5.0
Certain conditions originating in the perinatal period	**	**	4.0	**	4.2	3.9
Other and unspecified nontransport accidents and their sequelae	**	**	3.9	6.5	7.0	5.1
Malignant neoplasm of ovary	Unreliable	Unreliable	3.9	Unreliable	4.1	3.6
Malignant neoplasms of corpus uteri and uterus, part unspecified	Unreliable	**	3.3	**	2.9	2.8
Malignant melanoma of skin	Unreliable	**	3.3	Unreliable	2.4	2.1
Atherosclerosis	7.2	**	3.2	**	Unreliable	1.4
Emphysema	Unreliable	**	3.1	**	1.9	1.8
Malignant neoplasms of kidney and renal pelvis	Unreliable	**	3.1	Unreliable	3.5	3.5
Multiple myeloma and immunoproliferative neoplasms	**	**	3.1	Unreliable	3.9	3.3
Malignant neoplasms of lip, oral cavity and pharynx	Unreliable	**	2.9	**	2.2	2.5
Congenital malformations, deformations and chromosomal abnormalities	**	**	2.8	**	3.3	3.1
Aortic aneurysm and dissection	**	**	2.8	**	3.3	2.6
Influenza	**	**	2.4	Unreliable	3.5	1.7
Other and unspecified infectious and parasitic diseases and their sequelae	**	**	2.2	**	2.9	2.0
Certain other intestinal infections	**	**	2.2	**	2.2	2.3
Malignant neoplasm of stomach	Unreliable	**	2.1	**	1.6	2.9
Other diseases of arteries, arterioles and capillaries	**	**	1.8	**	2.8	2.5
Nutritional deficiencies	**	**	1.4	**	Unreliable	2.0
Complications of medical and surgical care	**	**	1.3	**	1.6	1.2
Hypertensive heart and renal disease	**	**	1.3	**	1.0	1.9
Enterocolitis due to Clostridium difficile	**	**	1.2	**	-	1.6
Malnutrition	**	**	1.2	**	Unreliable	1.9
Malignant neoplasm of larynx	**	**	Unreliable	**	1.3	0.9
Anemias	**	**	Unreliable	**	1.4	1.4
Other and unspecified events of undetermined intent and their sequelae	**	**	Unreliable	**	1.6	1.7
Events of undetermined intent	**	**	Unreliable	**	1.7	1.8
Acute rheumatic fever and chronic rheumatic heart diseases	**	**	Unreliable	**	1.0	0.9

Source: Centers for Disease Control and Prevention, 2019.

Light grey shading indicates rankings in the bottom half of peer counties;

Dark grey shading indicates rankings in the bottom quartile of peer counties.

** Data are not available. Unreliable indicates 20 or fewer deaths

Description

Exhibit 19 summarizes age-adjusted mortality rates for selected causes of death in 2017 in Rockingham, Strafford, and York counties, as well as New Hampshire and Maine.

Note: Although New Hampshire and Maine maintain databases on mortality, CDC data were chosen for comparability across the two states.

Observations

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

- For Rockingham County, the age-adjusted death rate from atherosclerosis was more than 50 percent higher than the New Hampshire rate; and several causes of death were higher than the overall New Hampshire rate;
- For Strafford County, the age-adjusted death rates from Alzheimer disease and Parkinson disease were more than 50 percent higher than New Hampshire rates; and several causes of death were higher than the overall New Hampshire rates;
- For York County, numerous causes of death were higher than the overall Maine rates.

Exhibit 20A: Maine Age-Adjusted Cancer Mortality Rates per 100,000 Population, 2010-14

Cancer Type	York County (ME)	Maine
All Cancers	170.2	178.1
Lung and Bronchus Cancer	47.7	52.5
Tobacco-related Cancers (Excluding Lung)	53.7	54.4
Prostate Cancer (Male)	20.2	19.8
Breast Cancer (Female)	17.5	18
Colon and Rectum Cancer	14.5	13.9

Source: Maine Department of Health, 2018.

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 2010-14 cancer mortality rates for York County and Maine.

Observations

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

- In York County, death rates from prostate cancer and colon and rectum cancer are higher than Maine rates.

Exhibit 20B: New Hampshire Age-Adjusted Cancer Mortality Rates per 100,000 Population, 2012-16

Cancer Type	Rockingham County (NH)	Strafford County (NH)	New Hampshire
All Cancers	163.7	175.2	162.3
Lung and Bronchus	46.0	52.3	44.4
Prostate (Male)	19.9	18.6	20.0
Breast (Female)	16.8	19.9	19.3
Colorectal	12.7	13.9	12.8
Pancreas	11.5	9.8	10.7
Ovary (Female)	6.8	7.6	7.0
Leukemia	6.6	6.1	6.2
Non-Hodgkin Lymphoma	6.1	7.6	5.6
Esophagus	5.0	5.3	5.2
Liver and Intrahepatic Bile Duct	5.4	6.3	5.4
Bladder	5.5	7.3	5.3
Brain and Other CNS	4.5	4.0	4.7
Uterus (Female)	3.2	5.0	4.7
Kidney and Renal Pelvis	4.6	4.1	3.8
Multiple Myeloma	3.7	2.8	2.9
Melanoma of Skin	2.9	2.8	2.7
Oral Cavity and Pharynx	2.5	2.5	2.4
Stomach	2.0	1.8	2.1
Cervical (Female)	1.6	1.4	1.5
Mesothelioma	1.2	0.8	0.8
Larynx	0.9	1.1	0.8
Hodgkin Lymphoma	*	*	0.4
Thyroid	0.4	*	0.3
Testis (Male)	*	-	0.2
Kaposi Sarcoma	-	-	*

Source: New Hampshire Department of Health, 2018.

* 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 2012-16 cancer mortality rates for Rockingham County, Strafford County, and New Hampshire.

Observations

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

- Death rates from numerous cancers are higher in Rockingham and Strafford County than New Hampshire rates.

Exhibit 21A: Maine Age-Adjusted Cancer Incidence Rates per 100,000 Population, 2012-14

Cancer Type	York County (ME)	Maine
All Cancers	488.2	473.6
Lung and Bronchus Cancer	72.3	74.2
Tobacco-related Cancers (Excluding Lung)	139.0	134.0
Prostate Cancer (Male)	78.1	87.1
Breast Cancer (Female)	140.0	125.0
Colon and Rectum Cancer	37.3	37.4
Urinary Bladder Cancer	28.4	27.1
Brain and Other Nervous System Tumors*	17.7	16.0

Source: Maine Department of Health, 2018.

*For years 2010-14.

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 2012-14 cancer incidence rates for York County and Maine, and 2010-14 cancer incidence rates for brain and other nervous system tumors.

Observations

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

- In York County, incidence rates for all cancers and most forms of cancers are higher than Maine rates.

Exhibit 21B: New Hampshire Age-Adjusted Cancer Incidence Rates per 100,000 Population, 2012-16

Cancer Type	Rockingham County (NH)	Strafford County (NH)	New Hampshire
All Cancers	525.6	506.7	497.7
Lung and Bronchus	72.1	78.4	67.3
Prostate (Male)	133.1	108.3	120.9
Breast (Female)	149.9	146.7	145.3
Colorectal	40.1	43.1	38.8
Pancreas	13.2	11.6	12.2
Ovary (Female)	12.2	10.5	11.3
Leukemia	13.9	13.5	14.6
Non-Hodgkin Lymphoma	22.7	23.5	21.1
Esophagus	6.9	7.6	7.1
Liver and Intrahepatic Bile Duct	5.3	6.6	5.8
Bladder	31.2	31.4	28.3
Brain and Other CNS	8.8	6.9	7.4
Uterus (Female)	30.3	29.1	32.4
Kidney and Renal Pelvis	16.1	17.5	15.2
Multiple Myeloma	7.3	6.0	6.4
Melanoma of Skin	30.6	21.6	29.7
Oral Cavity and Pharynx	13.5	11.5	12.1
Stomach	5.4	5.3	5.2
Cervical (Female)	4.6	5.8	4.8
Mesothelioma	1.8	1.2	1.2
Larynx	3.5	3.8	3.3
Hodgkin Lymphoma	3.2	3.2	2.9
Thyroid	17.9	16.2	16.4
Testis (Male)	9.4	5.2	7.3
Kaposi Sarcoma	*	*	0.1

Source: New Hampshire Department of Health, 2018.

* 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 21B summarizes 2012-14 cancer incidence rates for Rockingham County, Strafford County, and New Hampshire.

Observations

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

- Incidence rates of numerous cancers are higher in Rockingham and Strafford County than New Hampshire rates, including overall rates.

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

Disease	Year	Rockingham County (NH)	Strafford County (NH)	New Hampshire	York County (ME)	Maine	United States
HIV diagnoses	2016	*	*	3.6	*	4.3	14.7
HIV prevalence	2015	79.9	97.9	107.6	132.2	128.5	362.3
Tuberculosis	2016	*	*	1.1	*	1.7	2.9
Chlamydia	2016	218.0	346.1	260.6	264.0	312.6	497.3
Gonorrhea	2016	21.9	27.6	34.3	27.3	33.9	145.8
Primary and Secondary Syphilis	2016	3.3	5.5	3.0	1.0	3.2	8.7
Early Latent Syphilis	2016	2.3	4.7	2.5	0.5	0.5	9.0

Source: Centers for Disease Control and Prevention, 2019.

*Data 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 indicators, 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;
- In Strafford County, the incidence rate for primary and secondary syphilis is more than 50 percent higher than the New Hampshire rate, and the chlamydia rate is higher than the overall New Hampshire rate; and
- In York County, the HIV prevalence rate is higher than the Maine rate.

Exhibit 23: Maternal and Infant Health Indicators, 2012-2014

Indicator	Year	Rockingham County (NH)	Strafford County (NH)	New Hampshire	York County (ME)	Maine	United States
Teen births (15-19 years) (per 1,000)	2017	4.4	6.7	8.1	11.0	12.7	18.8
Births to unmarried women (18-54 years)	2017	23.4%	34.4%	32.1%	37.5%	38.1%	34.1%
Births to women over 40	2017	3.4%	2.3%	2.8%	2.2%	2.6%	3.2%
Births to women under 18 years	2017	0.2%	0.5%	0.6%	0.7%	0.9%	5.0%
Infant deaths [per 1,000 live births]	2016	*	-	3.7	n/a	5.8	5.9
Low birth weight deliveries	2017	6.4%	8.7%	6.9%	6.9%	7.1%	8.3%
Very low birth weight deliveries	2017	0.9%	1.4%	1.0%	1.2%	1.1%	1.4%
Preterm births	2017	8.5%	9.7%	8.3%	9.0%	8.7%	9.9%
< 32 weeks gestation	2017	1.0%	1.4%	1.2%	1.2%	1.3%	1.6%
32-33 weeks gestation	2017	0.7%	1.2%	1.0%	0.7%	1.0%	1.2%
34-36 weeks gestation	2017	6.8%	7.1%	6.1%	7.2%	6.3%	7.2%

Sources: Centers for Disease Control and Prevention, 2019, and Verité analysis of these data.

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

Exhibit 24A: Behavioral Risk Factor Surveillance System, 2012
Alcohol Consumption

Topic	Indicator [Year]	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) [2017]	18.3%	18.7%	18.7%	17.9%	17.4%
Heavy Drinking	Heavy drinkers (adult men having more than two drinks per day and adult women having more than one drink per day) [2017]	7.4%	7.6%	10.2%	8.9%	6.3%

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

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:

- More than one in six residents are binge drinkers in the Rockingham County - Strafford County area (18.3 percent) and the Portland -South Portland area (18.7 percent); and
- In the Portland - South Portland area, the percentages of residents who engage in binge drinking and heavy drinking are higher than Maine percentages.

**Exhibit 24B: Behavioral Risk Factor Surveillance System, 2012
Chronic Health Indicators**

Topic	Indicator [Year]	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 [2017]	24.9%	26.6%	27.9%	31.2%	24.9%
Asthma	Adults who have been told they currently have asthma [2017]	13.8%	13.2%	9.3%	11.2%	9.4%
Asthma	Adults who have ever been told they have asthma [2017]	20.2%	18.3%	14.0%	16.2%	14.2%
Cardiovascular Disease	Adults who have ever been told they had a heart attack (myocardial infarction) [2017]	3.6%	3.7%	5.0%	5.8%	4.2%
Cardiovascular Disease	Adults who have ever been told they had a stroke [2017]	2.1%	2.6%	2.3%	2.9%	3.0%
Cardiovascular Disease	Adults who have ever been told they had angina or coronary heart disease [2017]	3.5%	3.4%	4.2%	4.7%	3.9%
COPD	Adults who have ever been told they have COPD [2017]	6.3%	6.7%	5.6%	7.8%	6.5%
Depression	Adults who have ever been told they have a form of depression [2017]	22.9%	23.0%	23.3%	26.0%	20.5%
Diabetes	Adults who have ever been told by a doctor that they have diabetes [2017]	7.8%	8.4%	9.2%	10.7%	10.5%
Kidney	Adults who have ever been told they have kidney disease [2017]	2.4%	2.8%	2.7%	3.4%	3.0%
Other Cancer	Adults who have ever been told they had any other types of cancer [2017]	8.9%	8.6%	9.4%	9.2%	7.1%
Skin Cancer	Adults who have ever been told they had skin cancer [2017]	6.0%	7.0%	8.6%	7.8%	6.2%
Vision	Adults who have ever been told they have vision impairment [2012]	11.7%	13.4%	13.0%	14.1%	15.3%

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 24B presents BRFSS indicators for chronic health indicators 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

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

- One in four adults in the Rockingham County - Strafford County area (24.9 percent) and the Portland -South Portland area (27.9 percent) have been told they have arthritis;
- More than one in five adults in the Rockingham County - Strafford County area (22.9 percent) and the Portland -South Portland area (23.3 percent) have ever been told they have a form of depression;
- In the Rockingham County - Strafford County area, the percentages of adults who have been told they currently have asthma, have ever been told they have asthma, have ever been told they had angina or coronary heart disease, and have ever been told they had any other types of cancer, are higher than New Hampshire percentages; and
- In the Portland - South Portland area, the percentages of adults have ever been told they had any other types of cancer and who have ever been told they had skin cancer than Maine percentages.

**Exhibit 24C: Behavioral Risk Factor Surveillance System, 2012
Colorectal Cancer Screening**

Topic	Indicator [Year]	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 [2016]	92.5%	93.4%	95.1%	93.3%	92.0%
Colonoscopy	Adults aged 50-75 who had a colonoscopy within the past 10 years [2016]	73.9%	72.7%	78.1%	73.3%	63.5%

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 24C presents BRFSS indicators for Colorectal Cancer Screening 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

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:

- In York County, adults aged 50-75 are less likely to have had a blood stool test in the last two years than for Maine overall; and
- In Rockingham and Strafford counties, adults aged 50-75 are less likely to have had a colonoscopy in the last ten years than for New Hampshire overall.

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

Topic	Indicator [Year]	Rockingham County - Strafford County, (NH)	New Hampshire	Portland - South Portland, (ME)	Maine	All States and DC
Demographics						
Disability status	Adults who report having serious difficulty concentrating, remembering, or making decisions [2017]	8.7%	9.4%	8.2%	10.5%	10.7%
Disability status	Adults who report having difficulty doing errands alone [2017]	6.2%	6.6%	5.2%	6.8%	6.8%
Health Care Access/Coverage						
Health Care Coverage	Adults without any kind of health care coverage [2017]	6.6%	7.3%	8.1%	9.5%	10.5%
Under 65 Coverage	Adults aged 18-64 without any kind of healthcare coverage [2017]	7.5%	8.9%	10.5%	12.3%	12.7%
Health Status						
Fair or Poor Health	Adults reporting fair or poor health [2017]	12.8%	13.9%	12.1%	16.1%	17.6%

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 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 injury and promote recreation and good mental health. Indicators related to insurance and cost are relevant because lack of insurance, types of insurance, and the cost of medical services are primary barriers to healthcare access. Data in **Exhibit 24D** indicate the following:

- One in twelve adults in the Rockingham County - Strafford County area (8.7 percent) and the Portland -South Portland area (8.2 percent) report having serious difficulty concentrating, remembering, or making decisions; and
- Approximately one in thirteen adults aged 18-64 in the Rockingham County - Strafford County area (7.2 percent) and one in ten in the Portland -South Portland area (10.5 percent) report being without any kind of healthcare coverage; and
- More than one in ten adults in the Rockingham County - Strafford County area (12.8 percent) and the Portland -South Portland area (12.1 percent) report fair or poor health.

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 [2017]	38.9%	38.1%	34.2%	36.8%	39.3%
Pneumonia Vaccination	Adults aged 65+ who have never had a pneumonia vaccination [2017]	17.0%	18.1%	20.1%	20.4%	24.6%
Shingle Vaccination	Adults aged 65+ who have ever had the shingles or zoster vaccination [2017]	28.7%	32.1%	34.1%	33.5%	28.9%
Injury						
Seatbelt Use	Adults who always or nearly always wear a seat belt? [2017]	86.1%	83.0%	96.3%	94.3%	94.3%

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 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:

- Approximately one in five adults aged 65+ in the Rockingham County - Strafford County area (17.0 percent) and the Portland -South Portland area (20.1 percent) have never had a pneumonia vaccination; and
- In the Rockingham County - Strafford County area, the percentage of adults aged 65+ who have not had a flu shot within the past year is higher than the New Hampshire percentage; and
- In the Rockingham County - Strafford County area, the percentage of adults aged 65+ who have ever had the shingles or zoster vaccination is lower than the overall New Hampshire percentage.

**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 [2016]	10.7%	12.4%	9.0%	15.2%	14.2%
Dental Visit	Visited the dentist or dental clinic within the past year for any reason [2016]	73.9%	71.9%	67.7%	63.6%	66.4%
Teeth Removed	Adults that have had any permanent teeth extracted [2016]	39.2%	42.8%	44.0%	50.6%	43.1%
Overweight / Obesity (BMI)						
BMI Categories	Adults who are overweight or obese (BMI 25.0 - 99.8) [2017]	64.1%	64.9%	62.1%	65.0%	66.6%
Physical Activity						
Physical Activity Index	Adults who participated in enough Aerobic and Muscle Strengthening exercises to meet guidelines [2017]	23.0%	21.4%	23.7%	20.1%	20.3%

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 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

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

- Less than 75 percent of adults in the Rockingham County - Strafford County area (73.9 percent) and the Portland -South Portland area (67.7 percent) visited the dentist or dental clinic within the past year for any reason; and
- More than six in ten adults in the Rockingham County - Strafford County area (64.1 percent) and the Portland -South Portland area (62.7 percent) are overweight or obese; and
- Less than 25 percent of adults in the Rockingham County - Strafford County area (23.0 percent) and the Portland -South Portland area (23.7 percent) participated in enough Aerobic and Muscle Strengthening exercises to meet guidelines.

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

Topic	Indicator [Year]	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 [2016]	40.3%	37.4%	27.3%	28.9%	39.5%
Tobacco Use						
Current Smoker Status	Adults who are current smokers [2017]	14.0%	15.7%	13.7%	17.3%	17.1%
Smokeless Tobacco	Adults who currently use chewing tobacco, snuff, or snus [2017]	2.2%	1.9%	3.1%	3.3%	4.0%

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 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

Healthy 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:

- In the Rockingham County - Strafford County area, nearly one in seven adults (14.0 percent) are current smokers and the percentage of adults who currently use chewing tobacco, snuff, or snus is higher than the New Hampshire percentage; and
- In the Portland - South Portland area, nearly one in seven adults (14.0 percent) are current smokers; and
- In the Portland - South Portland area, the percentage of men aged 40+ who had a PSA test within the last two years is less than the overall percentage for Maine.

**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 [2016]	20.9%	23.1%	24.9%	24.2%	27.5%
Mammogram	Women aged 50-74 who have not had a mammogram within the past two years [2016]	13.8%	17.7%	18.5%	19.2%	22.4%
Pap Test	Women aged 21-65 who have had a pap test in the past three years [2016]	-	-	18.0%	18.4%	20.2%

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 for the 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

Healthy 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:

- In the Portland - South Portland area, the percentage of women aged 40+ who have not had a mammogram test within the last two years is higher than the overall percentage for Maine.

Exhibit 25A: Strafford County Youth Risk Behavior Survey, 2017

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	11.1	11.3	9.9	12.2	14.4	15.0	13.6	15.1
Has driven a vehicle when had been drinking alcohol	Month	2.7	1.1	3.3	2.0	3.7	1.3	4.4	2.9
Text or email while driving a vehicle	Month	25.8	2.4	23.9	27.1	26.8	2.6	26.0	27.5
Did not go to school because felt unsafe at school or on way to school	Month	5.6	5.4	3.2	7.9	5.2	5.5	3.8	6.4
Were in a physical fight	Year	15.4	16.3	21.5	9.0	19.2	20.9	25.7	11.9
Physically forced to have sexual intercourse when did not want to	Ever	6.6	5.0	2.9	10.3	5.8	4.3	2.8	8.8
Have been bullied on school property	Year	23.5	27.2	17.1	29.6	21.4	24.3	16.9	25.7
Have been electronically bullied	Year	21.1	22.3	13.4	28.9	19.0	20.8	12.1	26.2
Feel sad or hopeless almost every day for two weeks or more in a row	Year	30.5	26.6	21.3	39.5	28.0	26.1	18.6	37.6
Seriously consider attempting suicide	Year	20.1	17.7	13.9	26.4	16.1	14.9	11.5	20.6
Attempted suicide	Year	7.1	6.8	4.5	9.3	5.9	6.1	4.0	7.7
Smoked cigarettes in the past 30 days	Month	7.8	4.0	7.0	8.6	7.8	4.4	8.7	6.6
Drank alcohol in the past 30 days	Month	28.3	16.2	27.3	29.4	29.6	17.7	28.5	30.7
Used marijuana in the past 30 days	Month	26.7	16.9	27.3	26.1	23.1	13.5	24.0	21.9
Ever used cocaine	Ever	-	-	-	-	-	-	-	-
Ever used heroin	Ever	2.5	1.8	2.8	1.9	1.8	1.4	2.3	1.0
Ever used methamphetamines	Ever	2.1	1.3	2.7	1.3	1.8	1.3	2.5	0.8
Ever used prescription drugs without a prescription	Ever	12.4	8.0	13.8	10.9	11.5	8.2	12.1	10.5
Ever used synthetic marijuana	Ever	6.7	4.5	7.7	5.6	5.6	3.7	6.0	4.9
Ever had sexual intercourse	Ever	44.0	23.5	43.5	43.8	38.9	19.6	40.0	37.5
Had sex in the past 3 months	3 months	35.1	18.9	33.2	36.5	38.7	19.2	39.8	37.3
Were physically active for at least 60 minutes every day	Week	25.8	26.0	32.6	19.1	23.0	24.1	30.0	15.3
Went to the dentist	Year	80.9	82.8	80.6	81.3	82.8	84.4	82.5	83.1
Had asthma	Ever	-	-	-	-	-	-	-	-
Do something to purposely hurt yourself without wanting to die	Year	18.6	16.6	10.9	26.3	17.1	17.6	9.4	24.9

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 and Female Youth were more likely to report not going to school because they felt unsafe at school or on way to school than comparable cohorts in New Hampshire;
- All cohorts of Strafford County youth were more likely to report being physically forced to have sexual intercourse, being bullied on school property, and being electronically bullied than comparable cohorts in New Hampshire;
- Cohorts in Strafford County were more likely to report using marijuana in the past 30 days, ever using heroin, ever using methamphetamines, ever using prescription drugs without a prescription, and ever using synthetic marijuana than comparable cohorts in New Hampshire;
- All cohorts of Strafford County youth were more likely to report having ever had sexual intercourse than comparable cohorts in New Hampshire;
- All cohorts of Strafford County youth were less likely to report visiting a dentist in the past year than comparable cohorts in New Hampshire; and
- Cohorts in Strafford County were more likely to report doing something to purposely hurt themselves without wanting to die than comparable cohorts in New Hampshire.

Exhibit 25B: York County Maine Integrated Youth Health Survey, 2017

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	15.1	17	15.1	14.7	14.3	14.9	14.3	14.1
Has driven a vehicle when had been drinking alcohol	Month	4.7	11.8	5.2	4	4.2	8.4	5.4	2.8
Text or email while driving a vehicle	Month	-	-	-	-	37.6	12.4	36.7	38.4
Did not go to school because felt unsafe at school or on way to school	Month	-	-	-	-	5.8	5.7	4.9	6.4
Were in a physical fight on school property	Year	-	-	-	-	5.2	6.3	7.8	2.3
Forced to have sexual intercourse when did not want to	Ever	9.5	8.9	5.8	13.3	10.6	9	5.4	15.8
Have been bullied on school property	Year	21.3	25.1	18.6	24.1	21.9	26.6	18.5	25.3
Have been electronically bullied	Year	18.8	21.1	14.2	23.6	18.2	21	12.4	24.1
Feel sad or hopeless almost every day for two weeks or more in a row	Year	26.5	24.6	19.1	34.3	26.9	24.2	18.5	34.3
Seriously consider attempting suicide	Year	14	14.6	10.8	17.3	14.7	15.5	5.9	7.3
Attempted suicide	Year	6.8	7.5	5.9	7.3	7.4	7.6	6.7	7.9
Smoked cigarettes in the past 30 days	Month	14.4	9.6	19.1	9.1	13.9	8.3	16.8	10.4
Drank alcohol in the past 30 days	Month	23.4	12.2	21.8	24.9	22.5	11.8	21	24
Smoked marijuana in the past 30 days	Month	18.4	6.9	18.3	18.4	19.3	9.7	19.5	18.9
Ever used cocaine	Ever	5.2	5.3	7.1	2.9	4.7	4.5	6.1	3
Ever used heroin	Ever	3.5	4.2	4.6	1.9	3.4	3.8	4.3	2.1
Ever used methamphetamines	Ever	3.5	3.1	4.8	1.6	3.1	3.1	4.2	1.7
Ever used prescription drugs without a prescription or used differently	Ever	9.6	8.3	10.6	8.3	9.8	8.7	10.2	9
Ever used synthetic marijuana	Ever	7.1	6.3	8.4	5.5	7.4	5.5	7.9	6.4
Ever had sexual intercourse	Ever	37.1	13.9	37.6	36.6	38	14.9	38.2	37.7
Had sex in the past 3 months	3 months	-	-	-	-	28.3	9.3	25.8	30.6
Were physically active for at least 60 minutes every day	Week	18.9	22.8	24.5	13.1	20.3	22.9	25.8	14.8
Went to the dentist	Year	-	-	-	-	-	-	-	-
Had asthma	Ever	-	-	-	-	27	24.4	25.7	28.3
Do something to purposely hurt yourself without wanting to die	Year	14.3	18.9	9.7	18.8	16.3	17.4	10.8	21.8

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:

- Cohorts in York County were more likely to report having ridden in a car driven by someone who had been drinking and having driven a vehicle when drinking alcohol than comparable cohorts in Maine;
- Male youths were more likely to report being physically forced to have sexual intercourse and being bullied on school property than Male youths in Maine overall;
- Cohorts of York County youth were more likely to report being electronically bullied than comparable cohorts in Maine;
- Male and Female youths in York County were more than 50 percent more likely to report seriously considering attempting suicide over the last year than Male and Female youths in Maine overall;
- Cohorts in York County were more likely to report smoking cigarettes in the past 30 days, drinking alcohol in the past 30 days, and smoking marijuana in the past 30 days than comparable cohorts in Maine overall;
- Cohorts in York County were more likely to report ever using cocaine, ever using heroin, ever using methamphetamines, ever using prescription drugs without a prescription or using differently than prescribed, and ever using synthetic marijuana than comparable cohorts in Maine overall;
- All cohorts of York County youth were more likely to report not being physically active for at least 60 minutes every day than comparable cohorts in Maine; and
- Youths aged less than 15 were more likely to report doing “something to purposely hurt yourself without wanting to die” than the same cohort in Maine overall.

Ambulatory Care Sensitive Conditions

Exhibit 26A: PQI (ACSC) Counts, by ZIP Code, 2018

City/Town	ZIP Code	PQI 01 Diabetes Short-Term Complications Admission Rate	PQI 02 Perforated Appendix Admission Rate	PQI 03 Diabetes Long-Term Complications Admission Rate	PQI 05 Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults Admission Rate	PQI 07 Hypertension Admission Rate	PQI 08 Heart Failure Admission Rate	PQI 09 Low Birth Weight Rate	PQI 10 Dehydration Admission Rate	PQI 11 Bacterial Pneumonia Admission Rate	PQI 12 Urinary Tract Infection Admission Rate	PQI 14 Uncontrolled Diabetes Admission Rate	PQI 15 Asthma in Younger Adults Admission Rate	PQI 16 Lower-Extremity Amputation among Patients with Diabetes Rate
Primary Service Area		27	10	18	129	21	226	28	38	113	57	24	3	0
Barrington	03825	3	1	0	8	0	9	1	3	9	4	2	0	0
Berwick	03901	5	0	0	10	1	7	3	3	9	2	5	0	0
Dover	03820	9	8	10	65	14	120	14	16	51	30	8	1	0
Durham	03824	1	0	3	8	1	18	1	1	11	1	3	0	0
Lee	03861	1	0	1	2	1	9	0	3	6	2	0	0	0
Madbury	03823	0	0	0	0	0	6	0	2	2	0	0	0	0
Rollinsford	03869	1	1	0	4	0	7	2	2	3	3	2	0	0
Somersworth	03878	3	0	1	27	3	34	6	8	20	9	2	2	0
South Berwick	03908	4	0	3	5	1	16	1	0	2	6	2	0	0
Secondary Service Area		8	1	10	36	6	56	11	13	26	16	6	0	0
Eliot	03903	0	0	0	1	0	1	1	0	0	0	0	0	0
Newmarket	03857	0	0	1	2	0	3	2	0	1	1	0	0	0
Rochester	03839	0	0	0	3	2	5	0	1	4	4	0	0	0
Rochester	03867	8	0	8	23	1	38	6	10	18	9	5	0	0
Rochester	03868	0	1	1	7	3	9	2	2	3	2	1	0	0
Community Total		35	11	28	165	27	282	39	51	139	73	30	3	0

Source: Verité analysis of data provided by Wentworth-Douglass and AHRQ QI Software, 2019.

Description

Exhibit 26A presents the frequency of FY 2018 discharges from WDH for Ambulatory Care Sensitive Conditions (“ACSCs”). ACSCs are also referred to as Prevention Quality Indicators or (“PQIs”). ACSCs are health “conditions for which good outpatient care can potentially prevent the need for hospitalization or for which early intervention can prevent complications or more severe disease.”¹⁰

Rates of hospitalization for these conditions can “provide insight into the quality of the health care system outside of the hospital,” including the accessibility and utilization of primary care, preventive care and health education. Among these conditions are: diabetes, perforated appendixes, chronic obstructive pulmonary disease (COPD), hypertension, congestive heart failure, dehydration, bacterial pneumonia, urinary tract infection, and asthma.

Observations

Disproportionately high rates of discharges for ACSC indicate potential problems with the availability or accessibility of ambulatory care and preventive services and can suggest areas for improvement in the health care system and ways to improve outcomes. Data in **Exhibit 26A** indicate the following:

- The largest number of ACSC discharges from WDH were for heart failure (PQI 08), COPD or asthma in older adults (PQI 05), and bacterial pneumonia (PQI 11).

¹⁰Agency for Healthcare Research and Quality (AHRQ) Prevention Quality Indicators.

Exhibit 26B: ACSC Discharges, 2018

City/Town	ZIP Code	Total ACSC Discharges	Total Discharges	Percent ACSC Discharges
Primary Service Area		694	4,415	15.7%
Barrington	03825	40	393	10.2%
Berwick	03901	45	374	12.0%
Dover	03820	346	1,995	17.3%
Durham	03824	48	272	17.6%
Lee	03861	25	131	19.1%
Madbury	03823	10	70	14.3%
Rollinsford	03869	25	150	16.7%
Somersworth	03878	115	789	14.6%
South Berwick	03908	40	241	16.6%
Secondary Service Area		189	1,343	14.1%
Eliot	03903	3	88	3.4%
Newmarket	03857	10	116	8.6%
Rochester	03839	19	135	14.1%
Rochester	03867	126	832	15.1%
Rochester	03868	31	172	18.0%
Community Total		883	5,758	15.3%

Source: Verité analysis of data provided by Wentworth-Douglass and AHRQ QI Software, 2019.

Description

Exhibit 26B presents the frequency of FY 2018 discharges and FY 2018 ACSC discharges. ACSCs are health “conditions for which good outpatient care can potentially prevent the need for hospitalization or for which early intervention can prevent complications or more severe disease.”¹¹

Observations

Disproportionately high rates of discharges for ACSC indicate potential problems with the availability or accessibility of ambulatory care and preventive services and can suggest areas for improvement in the health care system and ways to improve outcomes. Data in **Exhibit 26A** indicate the following:

- Approximately one in six discharges from WDH are potentially preventable; and
- The largest number of percentages of ACSC discharges are from Lee (ZIP Code 03861), Rochester (ZIP Code 03868), and Durham (ZIP Code 03824).

¹¹Agency for Healthcare Research and Quality (AHRQ) Prevention Quality Indicators.

Community Need Index™ and Food Deserts

Dignity Health Community Need Index™

Exhibit 27: Community Need Index™ Score by ZIP Code, 2019

City / Town	Zip Codes	County (State)	CNI Score
Primary Service Area Subtotal			2.4
Barrington	03825	Strafford (NH)	1.6
Berwick	03901	York (ME)	2.0
Dover	03820	Strafford (NH)	2.8
Durham	03824	Strafford (NH)	2.4
Lee	03861	Strafford (NH)	1.8
Madbury	03823	Strafford (NH)	1.6
Rollinsford	03869	Strafford (NH)	2.2
Somersworth	03878	Strafford (NH)	3.4
South Berwick	03908	York (ME)	1.6
Secondary Service Area Subtotal			2.8
Eliot	03903	York (ME)	1.4
Newmarket	03857	Rockingham (NH)	2.4
Rochester	03839	Strafford (NH)	3.2
Rochester	03867	Strafford (NH)	3.4
Rochester	03868	Strafford (NH)	2.4
Community Total			2.6
Rockingham (NH)			1.7
Strafford (NH)			2.6
York (ME)			2.2

Source: Dignity Health, 2019

Description

Exhibit 27 presents the *Community Need Index™* (CNI) score for each ZIP code in the WDH community. Dignity Health, a California-based hospital system, developed and published the CNI as a way to assess barriers to health care access. The index, available for every ZIP code in the United States, is derived from five social and economic indicators:

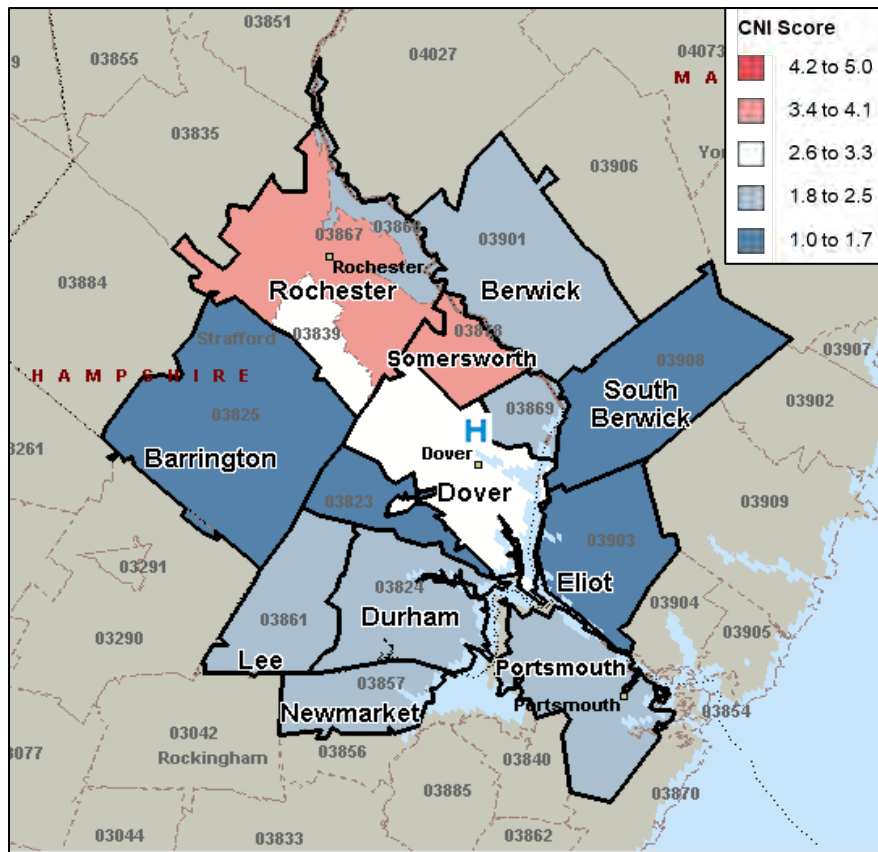
- The percentage of elders, children, and single parents living in poverty;
- The percentage of adults over the age of 25 with limited English proficiency, and the percentage of the population that is non-White;
- The percentage of the population without a high school diploma;
- The percentage of uninsured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

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

Observations

Data in **Exhibit 27** indicate that Somersworth ZIP Code 03878 and Rochester ZIP Code 03867 have moderately high levels of need.

Exhibit 28: Community Need Index™, 2019



Source: Dignity Health, 2019

Description

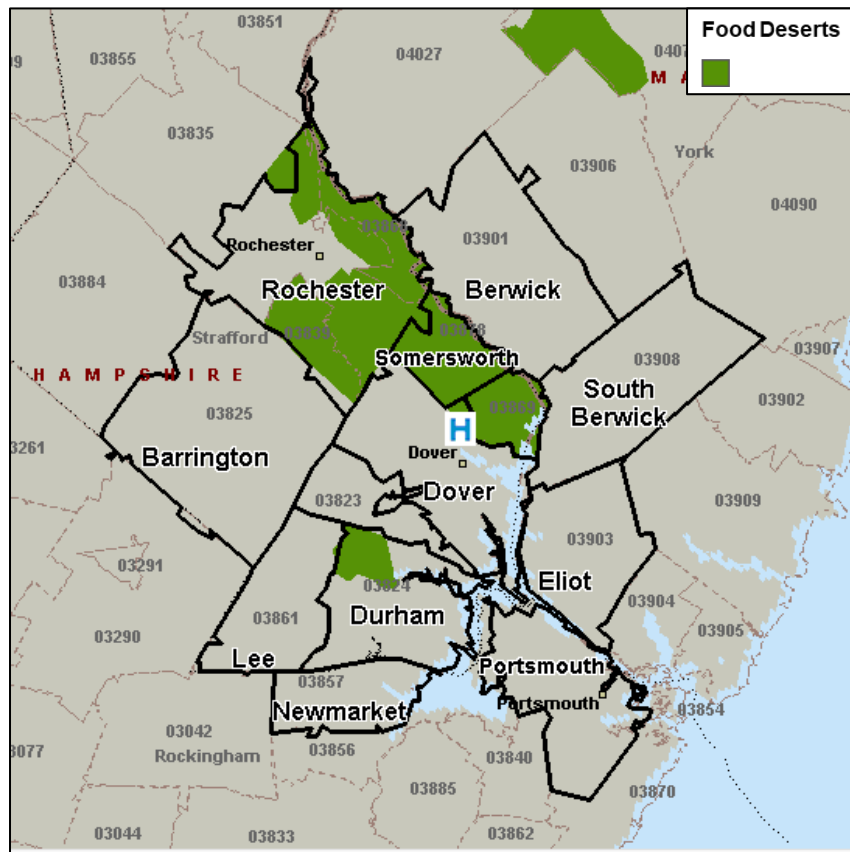
Exhibit 28 maps Dignity Health's CNI scores by ZIP Code.

Observations

Data in **Exhibit 28** 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).

Food Deserts

Exhibit 29: Food Deserts



Source: Microsoft MapPoint and U.S. Department of Agriculture, 2019.

Description

Exhibit 29 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 29** are defined as “low income and low access tract measured at 1 mile for urban areas and 10 miles for rural areas.”

Observations

Data in **Exhibit 29** indicate that Somersworth and parts of Durham, Rollinsford, 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.¹² 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.”¹³

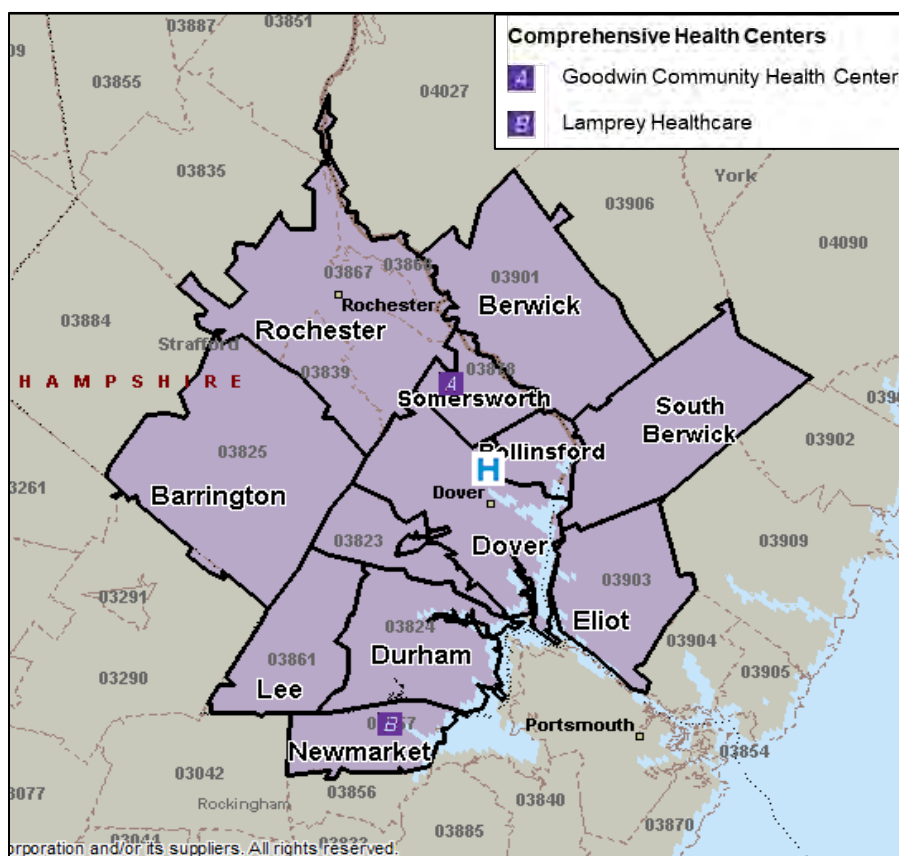
Stafford County is designated as a Medically Underserved Area.

¹² Health Resources and Services Administration. See <http://www.hrsa.gov/shortage/mua/index.html>

¹³ *Ibid.*

Health Professional Shortage Areas

Exhibit 30: HPSA Designated Comprehensive Health Centers



Source: Microsoft MapPoint and Health Resources and Services Administration, 2016.

Description

Exhibit 30 illustrates locations in the WDH community that are federally-designated as Health Professional Shortage Area (“HPSA”). A geographic area or population can receive a federal Health Professional Shortage Area (HPSA) designation if a shortage of primary medical care, dental care, or mental health care professionals is found to be present. In addition, 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 30** indicate that two Federally Qualified Health Centers (“FQHCs”) in the community have been designed as HPSAs. These FQHCs are as follows:

- Goodwin Community Health Center in Somersworth; and
- Lamprey Healthcare in Newmarket.

Description of Other Facilities and Resources within the Community

Federally Qualified Health Centers

Exhibit 31: Federally Qualified Health Centers

Facility	Address	City/Town	ZIP Code	County
Cross Roads House	600 Lafayette Rd Rm 120	Portsmouth	03801	Rockingham
Families First	100 Campus Dr Ste 12	Portsmouth	03801	Rockingham
Families First	53 Lincoln St	Exeter	03833	Rockingham
Families First Mobile Van 2	101 Main St	Exeter	03833	Rockingham
Families First Mobile Van 1	100 Campus Dr Ste 12	Portsmouth	03801	Rockingham
Lamprey Health Care	128 Route 27	Raymond	03077	Rockingham
Lamprey Health Care	207 S Main St	Newmarket	03857	Rockingham
Rockingham County Nursing Home	117 North Rd	Brentwood	03833	Rockingham
Community Partners	25 Old Dover Rd	Rochester	03867	Strafford
Goodwin Community Health	311 Route 108	Somersworth	03878	Strafford
Lilac Pediatrics	180 Farmington Rd	Rochester	03867	Strafford
Southeastern NH Services	272 County Farm Rd	Dover	03820	Strafford
Nasson Health Care - MBH - Biddeford	2 Springbrook Dr	Biddeford	04005	York
Nasson Health Care - MBH - Springvale	474 Main St	Springvale	04083	York
Nasson Health Care - North Berwick	388 Somersworth Rd	North Berwick	03906	York
York County Community Health Care Nap	15 Oak St	Springvale	04083	York
York County Shelter	147 Shaker Hill Rd	Alfred	04002	York

Source: The Health Resources and Services Administration, 2019, and Wentworth-Douglass Hospital.

Description

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

Observations

Data in **Exhibit 31** indicate that there are seventeen FQHC sites in Rockingham, Strafford, and York counties. Included are two mobile vans.

Hospitals

Exhibit 32: Hospitals

Hospital Name	Address	City	State	ZIP Code	County Name
Exeter Hospital	5 Alumni Drive	Exeter	NH	03833	Rockingham
Portsmouth Regional Hospital	333 Borthwick Ave	Portsmouth	NH	03801	Rockingham
Frisbie Memorial Hospital	11 Whitehall Road	Rochester	NH	03867	Strafford
Wentworth-Douglass Hospital	789 Central Ave	Dover	NH	03820	Strafford
Southern Maine Health Care	1 Medical Center Drive	Biddeford	ME	04005	York
York Hospital	15 Hospital Drive	York	ME	03909	York

Source: Centers for Medicare & Medicaid Services, 2019

Description

Exhibit 32 presents hospitals operating in the Rockingham, Strafford, and York counties. Included are hospitals operating in areas beyond the immediate WDH community.

Observations

Data in **Exhibit 32** indicate that there are six hospitals in 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 the United Ways of New Hampshire in partnership with Public Service Company of New Hampshire. 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, protection, consumer regulation);
- Education (including educational institutions, programs, and support services);
- Environmental Quality (including 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, and volunteer opportunities);
- Legal Services (including courts, criminal correctional system, judicial services, law enforcement agencies and services, legal assistance, legal education and information, legal services, and tax organizations and services); and
- Target Populations (including veterans and military personnel, and homeless people).

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 and Disability;
- Clothing/Personal/Household Goods;
- Community and Information Services;
- Consumer and Public Safety;
- Education;
- Emergency Response & Preparedness;
- Food/Meals;
- Health Care and Dental;
- Housing/Shelter/Utilities;
- Income Support/Employment;
- Individual and Family Life;
- Legal Services;
- Mental Health;
- Multicultural;
- Substance Abuse;
- Transportation;
- Tribal; and
- Veterans & Military.

2-1-1 Maine, Inc. is a strategic partnership with the State of Maine, United Ways of Maine, and the Opportunity Alliance. Additional information about resources available to Maine 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 Shared Community Health Needs Assessment, 2015-2016

The 2015-2016 Maine Shared Community Health Needs Assessment (“Shared CHNA”) was developed in collaboration between the Maine Department of Health and Human Services (“DHHS”) and four health-care systems in the state. Ten priority areas were identified by stakeholders during the development of the Maine Shared CHNA, as follows:

1. Drug and alcohol abuse;
2. Obesity;
3. Mental health;
4. Physical activity and nutrition;
5. Depression;
6. Tobacco use;
7. Diabetes;
8. Cardiovascular diseases;
9. Respiratory diseases; and
10. Childhood obesity.

Seacoast Public Health Network Community Health Improvement Plan, 2015-2017

A Community Health Improvement Plan (“CHIP”) was produced by the Seacoast Public Health Network Community. The CHIP was developed with input from community organizations. Six priority areas were identified in the CHIP, as follows:

1. Obesity;
2. Heart disease/stroke;
3. Injury prevention (reducing falls in older adults);
4. Mental health;
5. Alcohol and substance misuse; and
6. Public health emergency preparedness.

Strafford County Public Health Network Community Health Improvement Plan, 2018-2021

A Community Health Improvement Plan (“CHIP”) was produced by the Strafford County Public Health Network Community. The 2018-2021 CHIP updated the prior CHIP, which was developed with input from numerous community stakeholder organizations. Five priority areas were identified in the 2018-2021 CHIP, as follows:

1. Substance misuse, prevention, treatment, and recovery;
2. Mental health;
3. Obesity and nutrition;
4. Emergency preparedness; and
5. Heart disease and stroke.

York County Maine Shared Community Health Needs Assessment, 2016

The 2016 York County Maine Shared Community Health Needs Assessment (“Shared CHNA”) was developed in collaboration between the Maine Department of Health and Human Services (“DHHS”) and four health-care systems in the state. Five health issues were identified as top concerns by stakeholders who work in York County as follows:

1. Mental health;
2. Drug and alcohol abuse;
3. Obesity;
4. Physical activity and nutrition; and
5. Tobacco use.

PRIMARY DATA ASSESSMENT

Primary data were gathered by conducting interviews with key stakeholders. Key informant interviews were conducted in face-to-face sessions by Verité Healthcare Consulting in February 2019. 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

Eighteen interview sessions were held with 51 individuals representing thirty internal and external organizations. Interviewees included individuals with special knowledge of or expertise in public health, local public health department representatives 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.

- City of Dover, Office of Economic Development
- City of Rochester
- COAST
- Community Action Partnership of Strafford County
- Community Dental Center
- Community Partners
- Dover Fire Department
- Dover Housing Authority
- Dover Listens
- Dover Police Department
- Dover School District
- Dover Teen Center
- Foundation for Seacoast Health
- Greater Seacoast Community Health
- HAVEN
- Health and Safety Council of Strafford County
- Hope on Haven Hill
- Integrated Delivery Network
- Maine CDC
- My Friend's Place
- Rochester Child Care
- SOS Recovery Community
- Strafford County Public Health Network / PHAC
- Strafford County Sheriff
- Strafford Nutrition (Meals on Wheels)
- Strafford Regional Planning Commission
- Transformative Healthcare New Hampshire
- Wentworth Health Partners
- Wentworth Home Care
- Wentworth-Douglass Hospital

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

1. Substance misuse continues to impact the community significantly and negatively. Substance abuse is intertwined with unmet mental health needs. Effective treatment for both issues is compromised by a lack of providers, lags in treatment, and gaps in insurance coverage.
2. The community has responded to the recent and ongoing opioid crisis by increasing resources devoted to this specific substance abuse issue. While community collaboration has improved as a result of the collaborative response to the crisis, the work has shifted resources and impacted the provider community.
3. Unemployment is low and the population is increasing in number from new residents moving to the area. The growth in population has increased demand for housing, but the supply of housing has lagged behind this new demand. For lower-income residents, increased housing costs and stagnant wages has impacted access to basic needs, including food security. Homelessness also appears to have increased, especially among individuals with unmet substance abuse and mental health needs.
4. Births are also increasing the number of residents in the community. Some children and youth struggle with basic needs, including housing and food insecurity, due to their parents' mental health, substance abuse, and financial limitations. Adding to these struggles is stress from academic and athletic expectations, as well as bullying, which results in often unmet mental health needs.
5. The community is also aging. Unmet needs in the senior population include barriers to basic needs, including financial constraints and transportation issues. Unmet needs also include hidden issues, including cognitive declines, loneliness and isolation, and mental health needs.
6. Many resources are available within the community, but some residents have difficulty accessing services. Barriers to services include lack of awareness of these services, transportation challenges, and financial limitations. Funding for services, insurance limitations, and incomplete care coordination add to the access difficulty.
7. For many residents, poor nutrition and lack of physical activity contribute to chronic health issues. Contributors to poor nutrition include lack of access to healthy food and work demands. Contributors to lack of physical activity include lack of affordable fitness facilities and transportation.

1. Substance misuse continues to impact the community significantly and negatively. Substance abuse is intertwined with unmet mental health needs. Effective treatment for both issues is compromised by a lack of providers, lags in treatment, and gaps in insurance coverage.

Many individuals from all segments of the community are overwhelmed with work and family obligations, leading to stress and anxiety. Some residents of the community, including seniors, are struggling with isolation and disconnectedness. Others are struggling with serious mental illness, such as schizophrenia, or unresolved traumas, such as adverse childhood experiences (“ACEs”). Suicides in the community are indicative of poor mental health.

Despite these mental health challenges, many in the community do not access professional services because of stigma or may delay care until a crisis is reached. Other access issues include gaps in insurance coverage, lack of provider participation in insurance programs, and/or time delays in provider availability. Some services are not available locally, requiring travel outside of the community to access.

Lags in treatment also exist, as the time between a resident seeking mental health or substance abuse treatment and being seen by a provider can be substantial. This substantial lag can lead to worsening mental and physical health.

Failure to receive timely treatment can also increase layers of pathology by allowing more time for compounding traumatic events without intervention, which may lead to substance abuse issues due to individuals attempting to self-medicate these unmet mental health needs. While substance abuse may begin for some community members with recreational alcohol use or pharmaceuticals prescribed to alleviate pain from injuries or chronic illness, addiction often impacts mental health negatively. Furthermore, addiction to legal substances may lead individuals to begin using illegal ones.

These intertwined issues of mental illness and substance abuse increase treatment challenges. Treatment is difficult to ensure as financial incentives for providers are not aligned with needs, as evidenced by poor reimbursement rates and regulatory restrictions. Treatment is also difficult to ensure due to professional staffing issues, including relatively low salaries, stress, burn-out, and high turnover.

Young community residents may be especially at-risk for mental health and substance abuse issues. Youth are facing academic and athletic pressures, are subject to bullying by peers, and may have additional stress due to family financial difficulties and other challenges. Compounding these issues is the relatively widespread availability of substances and relative unavailability of treatment options specialized toward children and adolescents.

- 2. The community has responded to the recent and ongoing opioid crisis by increasing resources devoted to this specific substance abuse issue. While community collaboration has improved as a result of the collaborative response to the crisis, the work has shifted resources and impacted the provider community.**

Substance abuse in the community has focused on opioids for the last few years. This focus has emerged from drug overdose deaths due to the relative availability of opioids, as well as financial incentives from state and federal agencies for opioid-focused programs.

The targeted effort may have been effective as the opioid epidemic appears to be slowing. Nevertheless, the focus on opioids has diverted attention and resources from other issues within the community, such as binge drinking. Further, the focus on opioid treatment may leave the community ill-prepared to respond to abuse of other substances, such as the emerging use of methamphetamines. Additionally, the impacts on physical health due to substance abuse may emerge later, including the need for management of HIV and hepatitis.

The urgency of the opioid crises has also strained the resources of the provider community, including individuals who provide clinical and social services. However, the urgency has also improved collaboration in the community, as individuals and organizations have worked together to respond to the needs.

- 3. Unemployment is low and the population is increasing in number from new residents moving to the area. The growth in population has increased demand for housing, but the supply of housing has lagged behind this new demand. For lower-income residents, increased housing costs and stagnant wages has impacted access to basic needs, including food security. Homelessness also appears to have increased, especially among individuals with unmet substance abuse and mental health needs.**

The local and regional economy appears to be fairly robust. Jobs are available and employers are recruiting skilled workers from outside of the area. The population is projected to increase due to the arrival of new residents.

The economic reality is not as robust for lower-income residents. The increase in population has increased both the demand for housing and monthly rents, adding to the difficulty in finding safe and affordable housing. As more earnings are budgeted for housing, food insecurity increases because less is available for food. Geographic distances between residential areas and services add to the challenges, as public transportation options in the community are limited in some areas and non-existent in others.

Access to these basic needs of food and shelter can be particularly challenging to young parents, individuals with lower educational achievement levels, and older residents. Young parents are near the beginning of work careers and are likely to have correspondingly low wages. Individuals with educational achievement levels are likely to have fewer job options, with corresponding lower wages and benefits. Older residents are likely to be retired, with corresponding fixed incomes.

Lack of access to basic needs may be evident in issues surrounding homelessness, which appears to have increased recently, and some homelessness is due to unmet substance abuse and mental health needs. Basic need insecurity may also be hidden because of overcrowding and/or unsafe housing conditions. However, waiting lists for housing assistance, the number of students receiving free-and-reduced price meals in schools, and increased requests for assistance from social services organizations indicate that some community members are struggling with access to food and safe shelter.

4. Births are also increasing the number of residents in the community. Some children and youth struggle with basic needs, including housing and food insecurity, due to their parents' mental health, substance abuse, and financial limitations. Adding to these struggles is stress from academic and athletic expectations, as well as bullying, which results in often unmet mental health needs.

In addition to the arrival of new residents moving to the area, the population is also increasing as community residents have children. WDH delivers over 1,100 babies per year.

Some children in the community struggle with basic physical needs, including unsafe housing and food insecurity. These struggles with securing basic needs can be due to low-wage jobs of parents and/or single-parent household earnings. These struggles with basic needs can also be due to financial limitations of parents with unmet mental illness and/or substance abuse issues.

Beyond basic needs, many children and youth in the community face pressures to perform academically and athletically. Peer pressure may also affect children negatively, with experiences of in-person bullying, as well as bullying on social media platforms. These issues contribute to poor mental health, as evidenced by increasing behavioral issues in schools.

Behavioral issues may be especially severe for children and youth with trauma from Adverse Childhood Experiences (“ACEs”). Without intervention, ACEs contribute to the likelihood of substance abuse and mental health needs into adulthood.

Youth in the community are especially likely to engage in risky behaviors. As some individuals are “in a hurry to grow up,” unhealthy practices of adult residents may be adopted to seem mature, such as tobacco and alcohol use.

5. The community is also aging. Unmet needs in the senior population include barriers to basic needs, including financial constraints and transportation issues. Unmet needs also include relatively hidden issues, including cognitive declines, loneliness and isolation, and mental health needs.

Community residents are living longer, with Strafford County having a large proportion of seniors compared to other New Hampshire counties. Support structures have changed as family members have left the community for other opportunities. As a result, some seniors live alone or with relatively little familial contact.

Seniors without support are especially at-risk for basic needs insecurity. While basic needs insecurity may be due to limited income, access to basic needs may be limited due to lack of transportation options to buy healthy food, or more complex issues, including cognitive declines and side effects from polypharmacy. Safe housing may also be a concern because of hoarding.

Some seniors may be reluctant to accept in-home services. Contributing factors include distrust of caregivers and the preference to leave the residence for errands.

Isolation and loss of family members contribute to potential mental health issues in older adults. These issues are compounded by the difficulty of some seniors to build new relationships.

6. Many resources are available within the community, but some residents have difficulty accessing services. Barriers to services include lack of awareness of these services, transportation challenges, and financial limitations. Funding for services, insurance limitations, and incomplete care coordination add to the access difficulty.

There are numerous services available in the community but accessing these services can remain challenging.

Access issues include lack of awareness of current services as new programs emerge, existing programs change, and others cease operations. “Better advertising” of services would reduce the awareness gap between community residents and providers.

Irrespective of resource awareness, access to care can be constrained because insurance plans influence treatment options. Without insurance plans covering specific services, many residents do not have the financial ability to independently fund the service. Accordingly, community resources are limited for many residents without insurance, Medicare beneficiaries, and Medicaid enrollees due to their individual financial limitations.

Provider financial limitations also impact access for residents. Although community resources exist, financial constraints limit service capacity. Compounding the provider resource constraints are changes in funding levels, which can lead to new programs emerging, existing services contracting, and other services closing.

While care coordination can help individuals access community resources, care coordination activities are limited. Limitations include a reimbursement structure that frequently does not

reward care coordination, provider productivity targets, and regulatory constraints. Limitations also include patient utilization of hospital emergency departments instead of primary care providers because of emergency department's evening/weekend hours, as well as patients' lack of engagement with their own health.

Lack of access to resources includes oral health services. Dental care can be especially challenging for some residents to access due to cost, even with dental insurance because of coverage limitations. Some residents have not accessed dental services in years and the severity of oral health issues adds to barrier to seeking services. Poor dental health may limit employment opportunities, thereby exacerbating issues for low-income residents.

7. For many residents, poor nutrition and lack of physical activity contribute to chronic health issues. Contributors to poor nutrition include lack of access to healthy food and work demands. Contributors to lack of physical activity include lack of affordable fitness facilities and transportation.

Overweight and obesity issues remain in the community. Contributing to weight issues in the community is a lack of access to healthy food due to transportation constraints as well as food deserts within the community. A lack of knowledge also contributes, as some individuals may not understand which food options are healthy or unhealthy.

Financial ability also influences nutrition. Lower-cost, calorie-dense, less perishable food choices may be more affordable than fresh food options.

A lack of infrastructure limits physical activity. In particular, many areas in the community lack sidewalks, which would enhance the ability of residents to safely walk or run in their neighborhoods. Further, a lack of transportation options limits the ability of some residents to travel to physical activity options, such as gyms or parks.

Additionally, some residents may be "resigned" to being obese. The barriers to healthy food and physical activity appear to be too vast, and knowledge around the issue may be lacking.

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 2016 CHNA. These health needs are as follows:

1. Affordability of Care and Insurance Barriers;
2. Community Health Education;
3. Dental Health and Access to Dental Health Care;
4. General Healthcare and Access to Primary Care Services;
5. Mental Health and Access to Mental Health Services;
6. Needs of the Aging Population;
7. Obesity, Nutrition and Physical Activity;
8. Poverty and Lack of Economic Opportunity;
9. Substance Misuse and Access to Substance Misuse Treatment Services; and
10. Transportation

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

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. Adding to the difficulty in measuring outcomes-based impact includes the size of the community population, changes in the population through in-migration and out-migration, and changes in the overall environment. Furthermore, assessing the causal impact of any correlation between an activity and outcome measure may not be possible.

1. Affordability of Care and Insurance Barriers. Interventions and the impact of these activities on this health need included the following:

- **Financial assistance to individuals and families:** WDH and Wentworth Health Partners (WHP) provided financial assistance to numerous patients throughout the period –*in FY 2018, WDH provided financial assistance to 8,320 patients and WHP provided assistance to 4,858 patients;*
- **Health insurance marketplace education and enrollment assistance:** Certified Application Counselors at the WDH Financial Clearance Department provided educational information on health insurance enrollment to local residents and staff members –*six enrollment sessions were offered each year and approximately 180 patients per year were provided assistance;* and
- **Education on insurance literacy and financial resource availability:** Certified Application Counselors at the WDH Financial Clearance Department provided educational programming on health insurance to patients and community residents – *regularly scheduled sessions were offered and over 180 patients per year were provided information.*

2. Community Health Education. Interventions and the impact of these activities on this health need included the following:

- **Training programs at the Simulation Center:** Surgical and critical care training for a wide range of high-risk scenarios were provided in a safe learning environment –*since 2016, over 1,600 providers, staff, and Emergency Responders have trained to improve efficiency and critical thinking;*
- **Evidence-based educational resources:** A manager of Community Education was hired and educational resources were standardized to ensure that individuals are receiving consistent health information –*standardized educational materials were made available in the WDH Library and health coaches were available for consultation;* and
- **Community educational programs:** A variety of community educational events were held in 2017 and 2018, including sessions on parenting, advanced directives, women's heart health, nutrition, and stroke – *attendance at programs totaled 1,010 in 2017 and 1,125 in 2018.*

3. Dental Health and Access to Dental Health Care. Interventions and the impact of these activities on this health need included the following:

- **Support of the WDH Dental Center:** WDH provided financial support to the Dental Center, which provides low-cost dental care to local residents – *in FY 2018, 6,201 services were provided to 2,155 patients, and Dental Center staff members provided outreach via partnerships with Head Start programs, Community Partners, and the Children's Museum of Dover;* and
- **Access to Oral Surgery Services:** After completing an internal feasibility analysis, funding was provided in collaboration with the WDH Foundation to provide access to oral surgery services –*direct patient care grants have been provided for oral surgery services.*

4. General Healthcare and Access to Primary Care Services. Interventions and the impact of these activities on this health need included the following:

- **Primary care services, including Prompt Care:** Primary care services were maintained and expansion options were evaluated –*in addition to existing primary care service locations, a new primary care office and a Prompt Care location were opened in 2016;*
- **Access to primary and specialty care providers:** Periodically evaluated gaps between needs for physicians and available physicians –*recruitment was ongoing for primary and specialty care providers;*
- **Education about alternatives to the Emergency Room:** Provided education to patients and community members regarding various access alternatives to the Emergency Room, such as Prompt Care and Express Care –*targeted educational campaigns were initiated in 2017 to inform patients on location options for on-demand care, and scheduling software was launched to allow patients to reserve their place in queue at Express Care locations;* and
- **Patient Centered Medical Home:** The Patient Centered Medical Home model was continued and expanded –*additional care team support staff members, including care management, health coaches, and pharmacy support, were added.*

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

- **Behavioral health services:** Maintained and expanded behavioral health services – *expanded behavioral health practice, hired a new medical director, a child psychiatrist, APNs, and counselors, as well as opened and staffed a new emergency department pod of five rooms for patients experiencing mental health emergencies;*
- **Evaluated existing behavioral health services:** Evaluated the current scope of and staffing for behavioral health services –*increased counseling resources and hired additional counselors;*
- **Community partnerships:** Explored community partnerships to improve access to mental health services –*participated in the regional Integrated Delivery Network, including projects to improve access to ambulatory detox programs and to expand regional community navigation and clinical case management services;*
- **Educational programming:** Developed and offered educational programming to staff and providers to improve understanding of behavioral health needs and available resources –*implemented educational offerings and monthly trainings to provide education and reduce stigma about behavioral health;* and
- **Caregiver and patient support services:** Provided resources for community support groups –*hosted and provided meeting space for various support groups related to mental health and substance abuse disorder, including Alcoholics Anonymous, Narcotics Anonymous, and the National Alliance on Mental Illness, as well as provided funding to the Triangle Club, a local agency which hosts meetings and support groups related to behavioral health.*

6. Needs of the Aging Population. Interventions and the impact of these activities on this health need included the following:

- **Palliative care services:** Maintained and expanded palliative care services to meet demand – *hired a new provider in 2017 to support program growth, and, in FY 2018, provided over 668 consults and 3,140 follow ups; and*
- **Educational programming:** Developed and implemented an educational plan to improve provider and community awareness of palliative care services and advanced care planning –*provided educational resources for palliative care and advance care planning, including classes, in 2017 and 2018.*

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

- **Community partnerships:** Provided nutrition, physical activity, and weight management service offerings via community partnerships – *integrated The Works Family Health & Fitness Center into hospital operations, launched a medical weight loss program in 2017 that has treated over 100 patients since inception, and began a bariatric surgery program in 2018; and*
- **Childhood obesity:** Evaluated opportunities for partnership with community organizations to reduce obesity in children –*funding was provided for a fitness educator within the Somersworth School District and offered a summer camp for children that targeted weight loss and healthy habit reinforcement.*

8. Poverty and Lack of Economic Opportunity. Wentworth-Douglass Hospital was and remains committed to serving the community by adhering to its mission, using its skills and capabilities, and remaining a strong organization so that it can continue to provide a wide range of community benefits. However, no entity can address all of the health needs present in its community.

Wentworth-Douglass Hospital did not implement additional initiatives to address this need. While the hospital and its affiliated entities operated as one of the largest employers in the region, this problem was and remains beyond the scope of the hospital. Poverty and lack of economic opportunity required and continues to require a broader community effort to effectively resolve this issue. Due to resource constraints and the availability of other resources in the community, the hospital focused on other significant community health needs.

Note, however, that WDH did provide several restricted funding grants to support local homeless shelters and transitional programs in 2017 and 2018. Additionally, the hospital provided over \$19M in charity care and community assistance in FY 2018, and is committed to continuing to provide charity care services, as well as financial assistance, for patients under 250% of the federal poverty level.

9. Substance Misuse and Access to Substance Misuse Treatment Services. Interventions and the impact of these activities on this health need included the following:

- **Behavioral health services:** Maintained and expanded behavioral services –*hired drug / alcohol counselors, hired a neonatal abstinence syndrome nurse, provided prevention education through funding of Dover Youth 2 Youth, developed a drug take back program, and distributed safe disposal kits for unused narcotics;*
- **Community partnerships:** Explored community partnerships to improve access to mental health services –*participated in the regional Integrated Delivery Network, including projects to improve access to ambulatory detox programs and to expand regional community navigation and clinical case management services;*
- **Referral assistance:** Opened The Doorway, a new practice and collaborative effort with the state of NH, designed to help connect people with the right treatment programs and community-based support to combat substance use disorder –*assisted residents locate and access substance use disorder services;*
- **Educational programming:** Developed and offered educational programming to staff and providers to improve understanding of behavioral health needs and available resources –*implemented educational offerings, provided monthly trainings to provide education and reduce stigma about behavioral health, and provided education to emergency department staff members on Narcan use;*
- **Caregiver and patient support services:** Provided resources for community support groups –*hosted and provided meeting space for various support groups related to mental health and substance abuse disorder, including Alcoholics Anonymous, Narcotics Anonymous, and the National Alliance on Mental Illness, provided funding to the Triangle Club, a local agency which hosts meetings and support groups related to behavioral health, and hosted several substance abuse disorder presentations by retired NH Justice Broderick; and*
- **Community collaborations:** Explored opportunities to expand outpatient substance misuse treatment and recovery options within the community –*developed strong relationship with SOS Recovery, as well as provided funds to Hope on Haven and to SOS Recovery to develop the SOS center in Dover and established a peer recovery program in the WDH Emergency Department.*

10. Transportation. Interventions and the impact of these activities on this health need included the following:

- **Care Van transportation service:** Maintain current transportation program for WDH patients –*the Care Van provided by WDH completed 14,999 patient trips and travelled 119,920 miles in FY 2018; and*
- **Evaluate services:** Assess the Care Van transportation program to increase efficiency –*completed an Organizational Effectiveness project to improve scheduling effectiveness, implemented recommendations, and reduced travel by 33,000 miles per year while increasing patients served.*