NORTH COUNTRY COMMUNITY HEALTH **ASSESSMENT**

2022 - 2025

Prepared By:

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Coös County Family Health Services

Cottage Hospital

Grafton County Senior Citizen Council

Indian Stream Health Center

Littleton Regional Healthcare

New Hampshire Oral Health Coalition

North Country Healthcare

North Country Home Health & Hospice

Northern Human Services

Tri-County Community Action Program

Upper Connecticut Valley Hospital

Weeks Medical Center

NH AHEC/Geisel School of Medicine

North Country Public Health Advisory Council

North Country Community Health Committee

North Country Regional Coordinating Committee

North Country Substance Misuse Coalitions

North Country Community Residents

University of New England

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Message from the Public Health Network

The North Country Health Consortium, North Country Regional Public Health Advisory Council (PHAC), North Country Public Health Network, and regional partners share the goal of making the North Country a healthier region, where everyone has access to health care and preventive services, where healthy lifestyles can be embraced, and where our communities and neighborhoods are strong, connected, and vibrant. As participants in the local health system, we recognize we can only achieve this goal through partnerships and positive changes at the individual, school, workplace, and community level.

To keep the communities within our region informed and aware of their population health status and risks, the North Country Regional Public Health Network has completed this Community Health Assessment. The purpose of the Community Health Assessment is to aid in our, and our partners' efforts to provide programming and services that will assist in building and maintaining healthy communities.

The information contained within this assessment consists of the most current primary and secondary qualitative and quantitative data, and includes sources collected and provided by both our agency and our partners. The collaborative foundation utilized in the creation of this assessment considers the region's broad sector and geographic representation.

Introduction

The Community Health Assessment (CHA) is a collaborative process of collecting, reviewing, and analyzing health related data to understand the health status of the North Country. Development of a CHA requires the collection of data, both primary and secondary, and analysis of the data and other pertinent community information. Data included in the CHA consists of both local and statewide demographics, health indicators, health behaviors, and local resources.

North Country Public Health Network will utilize data obtained through the CHA process to educate and mobilize the community, identify areas of focus at the community level, identify available local resources for target issues, and create a plan that addresses the health priorities needing to be addressed. The data contained within the CHA identify current, emerging, or future issues that may have a negative impact on the region.

The CHA can also be used as an evaluation tool to measure change from previous interventions and/or actions. Data gathered in the CHA will form the foundation for development of an updated Community Health Improvement Plan and will provide direction for the North Country Public Health Network's strategic plan.

Organization Description

North Country Health Consortium and North Country Public Health Network

North Country Health Consortium
Our Mission *To lead innovative collaboration to improve the health status of Northern New Hampshire*
Our Vision A strong public health system through which all residents of Northern New Hampshire have the opportunity to access and enjoy health and wellness

The North Country Health Consortium (NCHC) is a rural health network created in 1997 as a vehicle for addressing common issues through collaboration among health and human service providers serving Northern New Hampshire. NCHC is engaged in activities for:

- solving common problems and facilitating regional solutions,
- creating and facilitating services and programs to improve population health status,
- health professional training, continuing education, and management services to encourage sustainability of the health care infrastructure,
- increasing capacity for local public health essential services, and
- increasing access to health care for underserved and uninsured residents of Northern New Hampshire.

The North Country Public Health Network is one of 13 regional public health networks in New Hampshire. The North Country Health Consortium (NCHC) is the host agency that contracts with the NH Department of Health and Human Services to convene, coordinate, and facilitate public health partners in the region. These partners collectively are the Public Health Network.

North Country Health Consortium provides leadership to the regional Public Health Advisory Council (PHAC). Additionally, NCHC is responsible for leadership and coordination of Public Health Emergency Preparedness and Substance Misuse Prevention services and activities. The North Country PHAC has provided guidance in the development of this Community Health Assessment.

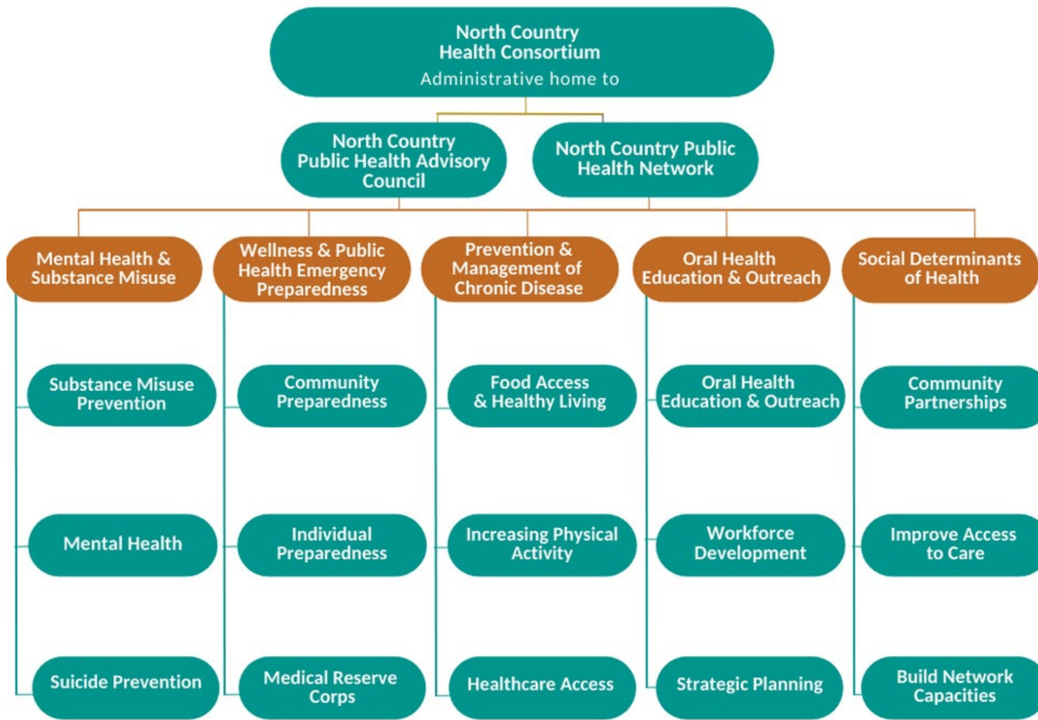

FIGURE 1: NORTH COUNTRY PUBLIC HEALTH NETWORK

Community Profile and Demographics

The North Country Public Health region includes thirty-eight municipalities and five unincorporated areas and serves approximately 54,000 people who reside in the community. The geographic area includes Coös and Northern Grafton Counties, which is referred to as The North Country.

City, Towns, and Unincorporated Places Served by the North Country PHN:			
Bath	Benton	Berlin	Bethlehem
Cambridge	Carroll	Clarksville	Colebrook
Columbia	Dalton	Dixville	Dummer
Easton	Errol	Franconia	Gorham
Haverhill	Jefferson	Kilkenny	Lancaster
Landaff	Lisbon	Littleton	Lyman
Mansfield	Milan	Millsfield	Monroe
Northumberland	Odell	Pittsburg	Randolph
Shelburne	Stark	Stewartstown	Stratford
Sugar Hill	Whitefield		

The North Country service area includes Coös County and fourteen towns in Northern Grafton County. This area is bordered on the west by northern Vermont, on the east by western Maine, and on the north by Quebec, Canada. The North Country is noted for its spectacular vistas and mountainous terrain lending immense beauty to the region, but simultaneously creating economic and geographic barriers. More than 37 percent of the North Country lies within the boundaries of the White Mountain National Forest. Over 50 percent of the total area is forested and, for all practical purposes, is unpopulated.

In most of the North Country, the population density is between 15 and 49 persons per square mile. However, in some portions, especially within the White Mountains, population density is 0 to 15 persons per square mile. The entire area is classified as rural and is predominantly non-agricultural.

Little public transportation exists for those traveling into and out of the area or between communities. The same winter weather that attracts skiers, snowboarders and other winter recreationists makes the roads treacherous to navigate for extended periods each year. Moreover, because of the region's topography, average travel distances from most towns to available sources of health care available for low-income families are twenty-five miles or more. From many towns, one-way trips of 45 minutes or more (in clear weather) are likely.

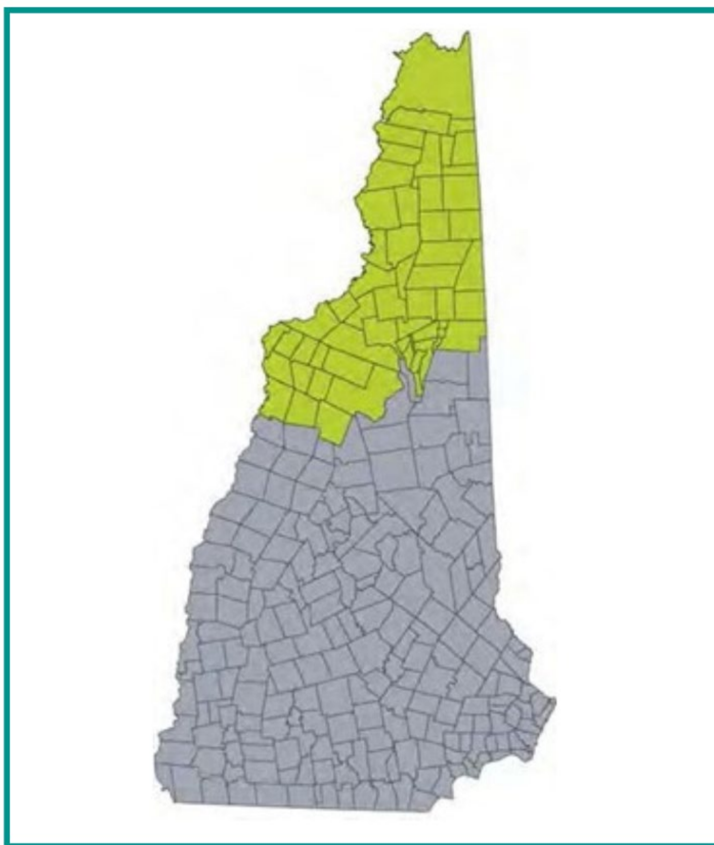

FIGURE 2: THE NORTH COUNTRY ENCOMPASSES THE NORTHERN MOST PART OF NH

The North Country population suffers higher morbidity and mortality than the rest of New Hampshire, and, in some instances, the rest of the country. The table below reflects this disparity for selected health status indicators. The North Country population is at greater risk for premature death and suffers from chronic diseases at rates substantially higher than the state, and, in many cases, the United States.

New Hampshire is regarded as one of the healthiest states in the nation. However, regional disparities exist between the North Country and the regions south of it. The North Country's rural population suffers geographic and economic barriers to accessing health care as well as higher rates of mortality and morbidity than the state and national averages.

In the rural North Country of New Hampshire, residents have disproportionately higher rates of chronic disease and disability than the state as a whole. North Country health behavior data for youth and adults reveals a population that is more likely to use tobacco and engage in other risky health behaviors that contribute to poor health outcomes.

North Country residents are less likely to have health or dental insurance or to have seen a doctor in the last 30 days. Family and individual incomes in the North Country are, on average, lower than regions south of them and compared to the rest of the United States. The travel distance from most North Country communities to a health care provider is twenty-five miles or more.

People are less able to afford the health care they need. Shortages of health care providers, dentists, mental health clinicians and other health professionals in the North Country compound these problems. Overall, people in the North Country are more likely to be sick and less likely to have the care they need to treat or manage their illness.

The North Country of New Hampshire has a total population that is comparably lower than the rest of the State - approximately nineteen persons per square mile- but disparately experiences a lack of services, economic instability, geographic isolation, generational poverty, and access to needed medical, dental, and mental health care.

Data in the table below shows that the North Country population is older, less educated, and earns substantially less than other residents in the state and the nation. Alternately Northern NH residents earn lower incomes, have lower employment rates, and education rates than the rest of NH and the country, all of which are known risk factors for having a population at greater risk for premature death and with a higher prevalence of chronic diseases.

Table 1: 18+ Population Demographics and Socioeconomic Indicators – Geographic Comparison[1]

Variable	Coös County	New Hampshire	United States
18+ population	83.5%	80.7%	77.4%
65+ population	23.1%	17.5%	15.6%
75+ population	9.8%	7%	6.5%
Median age	48.2 years	42.9 years	38.1 years
Did not finish high school (population 25 and over)	12.2%	6.9%	12%
Some college, no degree	20%	18.5%	20.4%
Associate degree	10.6%	10.2%	8.5%
High School graduate	39%	27.4%	27.9%
Currently employed	52.7%	65.1%	59.6%
Veteran Status	10.9%	8.8%	8.5%
Current unemployment rate	5.5%	3.6%	5.3%

Variable	Coös County	New Hampshire	United States
Income < $15,000 per year	11.8%	6.8%	10.3%
Income $15,000-$24,999	12.3%	7%	8.9%
Income $25,000-$34,99	11.4%	7.5%	8.9%
Income $50,000+	59.5%	68.1%	47.1%
Median household income	$47,117	$76,768	$62,843
Percentage at or below 100% of FPL in last 12 months	12.5%	7.6%	13.4%
Population 18-64 at or below 100% FPL	12.4%	7.6%	12.6%
Population 65+ at or below FPL	10%	5.7%	9.3%

Collaborative initiatives that address health disparities in the North Country have the most impact and make the best use of community and organizational resources. Public health, healthcare, and social service agencies rely on population health data for planning effective strategies and interventions to address identified health priorities. Conducting the CHA update during the global pandemic hindered access to new data from sources previously used to inform the CHA. Data collection cycles were significantly delayed and decentralized during the period the CHA update was conducted.

Table 2: Regional, State and National Comparison of Health Status Indicators[2]

Indicator	North Country Percent/rate per 100,000	NH State Percent/rate per 100,000	National Benchmark Percent/rate per 100,000
Premature Mortality (Under 75) Years)3	7,600	6,400	5,400
Life Expectancy	77.3	81.1	79.7
Diabetes Prevalence	15%	10%	8%
Drug Overdose Deaths per 100,000 population	24	33	11
Adult Obesity Prevalence	37%	28%	26%
Children Poverty	18%	8%	10%
Suicide Deaths per 100,000 population	23	18	11
Physical Inactivity (no leisure-time physical activity, population 20+)	26%	21%	19%
Flu Vaccinations	41%	52%	55%
Adult smoking	20%	17%	16%
Excessive Drinking	20%	20%	15%
Broadband Access	78%	88%	76%
General Health Status Fair/Poor	19%	13%	14%

Community Health Assessment and Planning

In the Fall of 2013, the North Country Health Consortium (NCHC) formed the North Country Public Health Advisory Council (PHAC). The PHAC includes all members of the NCHC Board of Directors as well as representation from local business, education, faith based, and government sectors. The PHAC functions in an advisory capacity to the NCHC.

The purpose of the North Country PHAC is to perform the following functions for the North Country Region:

- Identify local community and public health needs and priorities.
- Encourage the development and coordination of appropriate community and public health services.
- Coordinate and sponsor various forums on public health issues.
- Advise the North Country Public Health Region in policy matters concerning the nature, scope, and extent of community and public health concerns and responses.

In support of these functions, the North Country PHAC:

- Provides input to periodic community health needs assessments completed for the purpose of identifying health-related trends, emerging threats, and community concerns.
- Reviews and comments on regional health profiles based on needs assessments and provides input on regional health priorities and plans for improvement.
- Reviews the work and recommendations of committees addressing public health matters, including public health emergency planning and substance misuse prevention activities.
- Makes recommendations for developing and improving the delivery of public health programs and policies.
- Facilitates, when appropriate, the review of funding opportunities for federal and state funding.

During the fall of 2020, the Health Improvement Working Group, a subcommittee of the North Country PHAC, reviewed data from the most recent regional Community Health Needs Assessments. The Health Improvement Working Group and regional partners also engaged in a Community Health Improvement Plan (CHIP) Regional Update Survey. Information from the regional Community Health Needs Assessments and CHIP Regional Update Survey were reviewed and assessed to:

- determine progress and relevance of each health priority identified in previous iterations of the CHIP,
- assess how each health priority has been impacted by the global pandemic on a regional level, and
- determine if any new health priority areas may have risen to importance since the development of the 2018-2020 CHIP.

The purpose of this process was to engage partners to:

- review regional community health needs assessments and surveys
- review relevant regional data

- provide information to community members
- build new and strengthen existing partnerships and coalitions
- identify emerging issues
- identify impact of the pandemic on health priority areas
- prioritize regional public health priorities
- develop a new Community Health Improvement Plan

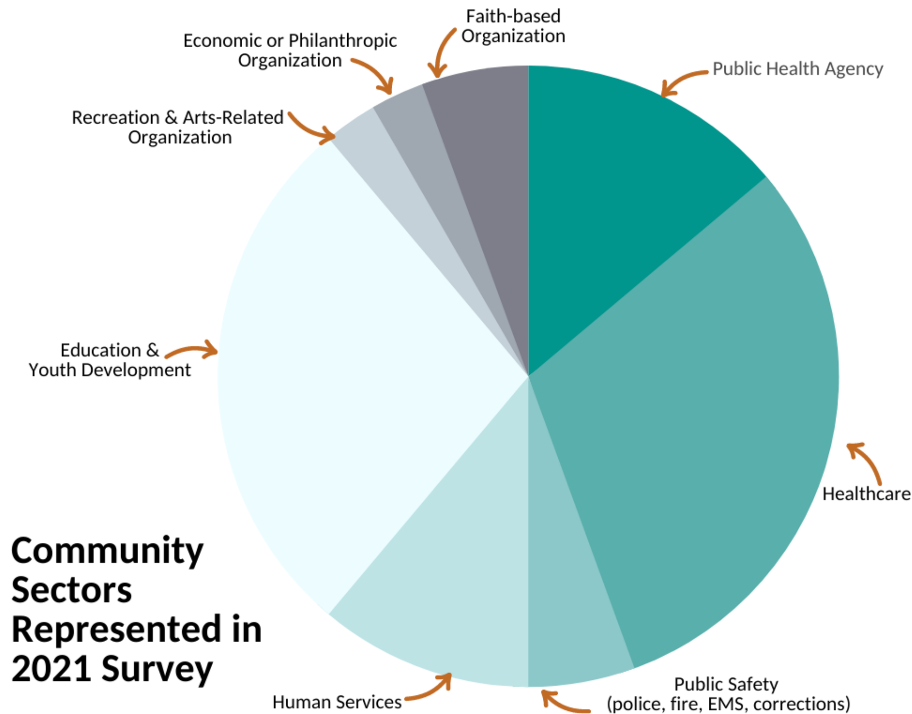

FIGURE 3: COMMUNITY SECTORS REPRESENTED IN THE REGIONAL COMMUNITY HEALTH NEEDS ASSESSMENTS AND CHIP REGIONAL UPDATE SURVEY, 2021

Community Health Assessment (CHA)

To benchmark progress made in the 2018-2020 CHIP and adequately assess current health priority areas, the Community Health Assessment process included a thorough examination of health equity in the region. Analyses of the data revealed that, while health priority areas identified in the 2018-2020 CHIP remain completely relevant, achieving health equity in any or all these areas is impacted by more broad factors. For North Country residents to achieve their full health potential we must look at the impact of socially defining circumstances such as the consequences of rurality, poverty, access to care and services, as well as social, health, and economic disparities that create barriers to improving health outcomes for individuals and communities in the North Country.

In the Fall of 2019, North Country PHAC partners and community members participated in a Community Health Needs Assessment with Littleton Regional Healthcare, Ammonoosuc Community Health Services and

Coös County Family Health Services to determine the health needs of the Greater Northern New Hampshire Region. In 2019, Cottage Hospital also conducted a Community Health Needs Assessment to evaluate its community's input and identify key health needs. In March 2021, North Country Hospital conducted a Community Health Needs Assessment to build an accurate picture of the current community and its health needs. Collection of this data was far reaching to include all subregions within the North Country Regional Public Health Network. The resulting geographically comprehensive assessments and their key findings both identified and confirmed gaps and assets in the region, and in some instances revealed the regional impact of the global pandemic.

Planning Steps

Between March 2021 and September 2021, the North Country Health Consortium Board of Directors/North Country PHAC met monthly. During the same period, the Health Improvement Working Group, the North Country Regional Coordinating Committee, and various substance misuse prevention coalitions and groups met regularly. These groups reviewed and discussed existing and potential priority areas, frequently providing information and recommendations for relevant strategies and activities. In addition, regional data was reviewed and utilized to identify gaps in data and services. Overall goals, objectives, and strategic approaches were presented to the PHAC for review and comment.

Community Health Needs Assessments conducted by the region's Critical Access Hospitals were reviewed for commonalities and overall themes. The five community priority areas are highlighted below with the corresponding hospital ranking of importance.

Table 3: Regional CAH Community Health Needs Assessment Priority Areas

Hospital	Chronic Disease	Oral Care	Wellness and Emergency Preparedness	Mental Health and Substance Misuse	Social Determinants of Health
Cottage Hospital (9/1/2019)	7	4	5	3	1
Littleton Regional Healthcare (9/23/2019)	3	5	N/A	2	4
North Country Healthcare (6/30/2021)	5	2	7	3	1

SOURCE: COMPILED FROM HOSPITAL COMMUNITY HEALTH NEEDS ASSESSMENTS CONDUCTED BY COTTAGE HOSPITAL, NORTH COUNTRY HEALTHCARE (ON BEHALF OF ANDROSCOGGIN VALLEY HOSPITAL, UPPER CONNECTICUT VALLEY HOSPITAL AND WEEKS MEDICAL CENTER) AND LITTLETON REGIONAL HEALTHCARE

When updating and reviewing data since the 2018-2020 CHIP, there has been an overall decrease in current, available data. Most data come from national organizations, such as the CDC or Census bureau. However, some data is collected locally. National, state, and regional data scheduled to be collected in the years between 2020 and 2021 encountered delayed collection cycles, creating a significant gap in data sources that had previously been readily available to inform the CHA.

Regional Health Priority Areas

Based on data analysis, community surveys, and input from community partners, the North Country Health Consortium Board of Directors and the North Country Public Health Advisory Council have identified five health priority areas to be addressed in the 2022-2025 North Country Community Health Improvement Plan:

Prevention and Management of Chronic Disease

- Food access and healthy living
- Healthcare access
- Increasing physical activity

Oral Health

Wellness and Emergency Preparedness

- Medical Reserve Corps
- Individual preparedness
- Community preparedness

Mental Health and Substance Abuse

- Substance misuse prevention
- Substance use disorder and the Continuum of Care
- Mental health
- Suicide prevention

Social Determinants of Health

Summary of Community Health Assessment Findings

These identified health priority areas will serve as the foundation on which the North Country Public Health Network updates the Community Health Improvement Plan. The health priority areas will be used to identify and determine the North Country Public Health Network and its partners' focus areas for which strategies will be developed and implemented in a public health approach to improve population health outcomes. The remainder of this assessment provides more in-depth information about each of these five identified health priority areas.

Health Priority Area 1: Prevention and Management of Chronic Disease

- Food access and healthy living
- Healthcare access
- Increasing physical activity

Background

The leading causes of disability and death in the United States and in the North Country are chronic diseases, which include heart disease, cancer, diabetes, stroke, and arthritis. What makes preventing, treating, and managing chronic disease particularly challenging is that chronic conditions often do not exist in isolation. Today, one in four U.S. adults have two or more chronic conditions, while more than half of older adults have three or more chronic conditions. The likelihood of these types of comorbidities occurring increases as people age.[3]

The pervasiveness of chronic disease negatively impacts the health and quality of life for North Country residents, and is a major driver of escalating healthcare costs, workforce patterns such as employee productivity and absenteeism, and the overall regional economy. Chronic diseases are tied very closely to Social Determinants of Health, such as the environments, cultures, and behaviors that surround individuals; chronic diseases disproportionately affect people living in poverty, who have less education, are food insecure, and who have less access to healthcare.

Individuals experiencing food insecurity also face disproportionately higher rates of chronic diseases. Conditions, such as diabetes mellitus, can be especially difficult to manage when experiencing food insecurity.[4] The stress that individuals facing food insecurity experience when they cannot consistently obtain healthy food, along with the effects of unpredictable or intermittent meal consumption, can be detrimental to the successful prevention and management of chronic conditions, such as diabetes mellitus. Northern New Hampshire residents experience the highest rates of diabetes than any region of the state and have a higher incidence of food insecurity.[3] In rural Northern New Hampshire, access to affordable, nutritious food can be limited by the need to travel long distances to a grocery store. The cost of traveling, the lack of public transportation options, and a scarcity of food pantries compound barriers to achieving food security for some North Country families.

A significant contributor to preventing and managing chronic disease is getting enough physical activity. Increasing access to physical activity in North Country communities is a key public health strategy for chronic disease prevention and health promotion. A leading cause of heart disease, the lack of physical activity can also increase the likelihood of developing other heart disease risk factors, including obesity, high blood pressure, high blood cholesterol, and type 2 diabetes. Regular physical activity can lower the risk of many cancers, including cancers of the bladder, breast, colon, uterus, esophagus, kidney, lung, and stomach. These benefits of physical activity apply regardless of an individual's weight status.[5] In the North Country, many residents reside in communities that are not designed for year-round physical activity. The rural and vast

mountainous terrain of the region does not lend itself to community designs that accommodate physical activity. Active school and work environments that make physical activity easier or more accessible are also lacking.

In New Hampshire, heart disease is the second leading cause of death as of 2017, at a rate of 149.7 out of 1000 deaths, with 2721 occurring in the state that year.3 Stroke was the 5th leading cause of death in the state for 2017, occurring at a rate of 28.9 out of 1,000 deaths. A majority of risk factors remain the same, including obesity, being physically inactive, excessive alcohol consumption, diabetes, high blood pressure, and smoking; other risk factors include substance misuse, including misuse of methamphetamine, obstructive sleep apnea, heart disease, and now COVID-19 infection.[6] There is a higher risk of stroke with adults who are over 55, while men also tend to have more strokes than women.[7] In 2016, it was estimated that one person died every 3 minutes and 33 seconds from a stroke in the US; in 2018 strokes accounted for 1 out of every 19 deaths.[7]

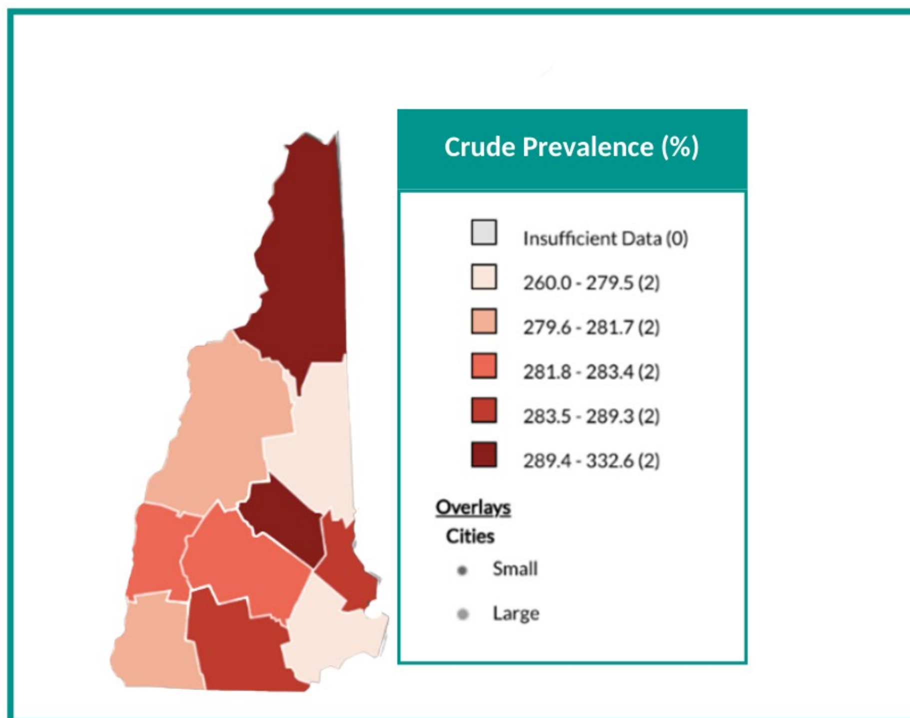

FIGURE 4: CDC HEART DISEASE DEATHS 2017-2019

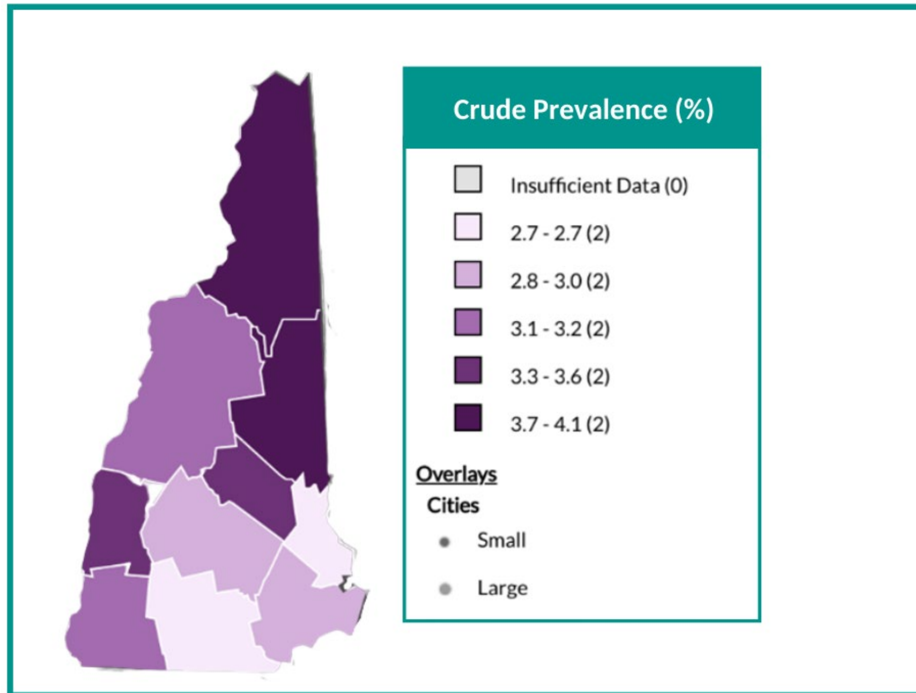

FIGURE 5: PREVALENCE OF STROKE 2017-2019

Chronic childhood diseases are on the rise and are causing concerns similar to those experienced in the adult population with chronic health conditions. Risk factors for chronic disease increase related to Social Determinants of Health, including being a child from a single parent household and living in a neighborhood with limited activities.[8]

Conversely, the protective factors for chronic childhood disease include parental college attainment, h:ealth insurance coverage, and being female.8 Poverty is a factor that contributes to chronic conditions, like higher obesity rates among younger people. Healthier foods that tend to be lower in calories and more nutritious are more expensive and may be less affordable to low-income households. Access to healthy food sources is a Social Determinant that has a direct impact on management and prevention of chronic disease. New Hampshire has the second highest rate of residents with limited access to healthy foods at 5.0%, compared to 5.9% of people across the country.[9]

The healthcare system is often overburdened by the cost of chronic conditions. Although common and costly, many chronic conditions are also preventable. In 2021, the United States is estimated to have spent $245 million on diabetes management, $176 million of which was related to direct health costs.[10] Ways to mitigate risk of chronic health conditions related to diabetes have been explored, up to and including, universal healthcare and weight management, such as medication or surgery.[11] These prevention strategies have shown to reduce overall burden on the healthcare system.

The average American adult is more than twenty-four pounds heavier today than they were in 1960, and the rates of adult obesity have continued to trend upward over time. An update to CDC statistics in M arch 2021 reveals 42.5% of adults 20 and older were diagnosed with obesity; in the same time period 21.2% of adolescents aged 12-19 years were diagnosed with obesity, along with 20.3% of children aged 6-11 years, and 13.4% of children aged 2-5 years.[12] There has been no new information regarding obesity in childhood since the last edition of the CHIP; since 2013, the CDC has continued to report a decline in the rate of obesity for ages 2-5. Additional information is needed to determine the current rates.12

In a 2012 study, the Robert Wood Johnson Foundation found that if obesity rates in New Hampshire continued to rise on their current trajectory, 57.7% of the state's population will have a BMI of 30 or above by 2030.[9] In the North Country, that number will be 79.3%. For perspective, with the current predicted rate of BMI increase, in less than ten years, 4 out of every 5 people in the North Country of New Hampshire will be obese. Social Determinants of Health are also significant contributors to the current obesity issues in New Hampshire.

This health condition has come into focus during the COVID-19 pandemic, where obesity is specifically called out by the Centers for Disease Control and Prevention as a specific health condition that places patients infected with the SARS-CoV-2 virus at higher risk of serious complications, hospitalization, and death.10 Management of chronic disease, such as obesity, has been shown to reduce prevalence of cardiovascular disease, stroke, diabetes, hypertension, chronic obstructive pulmonary disorder, osteoarthritis, and cancer.

Prevention and Management of Chronic Disease includes:

- food access and healthy living
- healthcare access
- creating opportunities for increased physical activity
- increasing access to healthcare
- increasing use of community health workers, patient navigators, and other allied health professionals to deliver high-quality care
- increasing the use of effective community-delivered interventions—such as chronic disease self-management programs, the National Diabetes Prevention Program, smoking cessation services through clinician referrals, use of health insurance benefits, and community health workers
- linking public health services, such as tobacco cessation, to health care systems
- using health care workers, like pharmacists, patient navigators, and community health workers, to guide people in managing their own health
- educating people to become more involved in their own health care

Many people in the North Country face barriers that prevent or limit access to needed health care services, which may increase health disparities and poor health outcomes. The challenges to healthcare access that impact North Country residents include lack of or insufficient health insurance, limited or no access to transportation, being designated a medical and dental professional shortage area, and limited health care

resources. Uninsured adults are less likely to receive preventive services for chronic conditions such as diabetes, cancer, and cardiovascular disease.[13] Also increasing access to healthcare issues for North Country's vulnerable population are healthcare workforce shortages, which have been significantly exacerbated by the pandemic. Healthcare provider shortages may mean that patients experience longer wait times and delayed care, and access to specialty providers can be even more difficult in the North Country.

Why Management and Prevention of Chronic Disease is a Health Priority in the North Country

Nationally, rural residents generally fare worse than their urban counterparts in heart disease deaths, as well as the associated risk factors of obesity and physical inactivity. The populations of the North Country, particularly those over the age of 65, have more risk factors for heart disease and stroke, and higher rates of chronic diseases. Individuals who are 18 or older in the North Country account for 81% of the total population. The North Country population over age 18 is a larger percent of the total population than the population in the state as a whole or nationally, while the age 65+ population is substantially larger. The area population is not only older overall, but also has less income and less education than the state and national populations. In addition, this older North Country population suffers from chronic diseases at rates higher than the rest of the state. Moreover, North Country residents both below and above age 65 have substantially higher rates of heart disease and stroke risk factors, including high blood pressure, diabetes, and smoking than their New Hampshire or US counterparts.9

The North Country population, comprised of Coös and Northern Grafton Counties, is approximately 54,000 people. Of this population, 7,173 are school age children. Children whose families have annual incomes of up to 185 percent of the Federal Poverty Level (FPL), which in 2014 was $44,123 for a family of four, are eligible for free and reduced lunch programs. In 2019, the median family income for all families residing in the North Country was $47,117.9

The Third Grade Healthy Smiles-Healthy Growth Survey was not repeated since its 2013-2014 iteration. However, at that time economic indicators revealed that children attending schools with a higher proportion (>50.0%) of students participating in the Free and Reduced Lunch program experienced an increased burden of obesity compared with students in schools with <25% of students participating. In Coös County specifically, 21.6% of students ages 7-10 were obese, while 15.6% were overweight compared to statewide rates of 12.6% and 15.4%, respectively. More third graders in Coös County (nearly 22%) were obese than in any other New Hampshire region in 2013-2014.[14]

Factors contributing to higher obesity rates in the region include North Country residents engaging in leisure-time physical activity only 26% of the time, and 74% having poor access to exercise opportunities.[15] Data from the Behavioral Risk Factor Surveillance Survey for the North Country indicate that close to 73% of Coös County adult residents are overweight or obese, compared to 62.8% of New Hampshire residents. Moreover, 37% of North Country residents have a Body Mass Index (BMI) greater than 30 and are therefore obese. This percentage is significantly higher than the state percentage of 28, which is comparable to the general obesity level in the United States. Social Determinants have been increasingly acknowledged as fundamental causes

of health afflictions in the United States. In the North Country, communities experience higher rates of inadequate housing, lower household incomes, and lack of access to healthy food, putting North Country residents at higher risk for poor health outcomes.

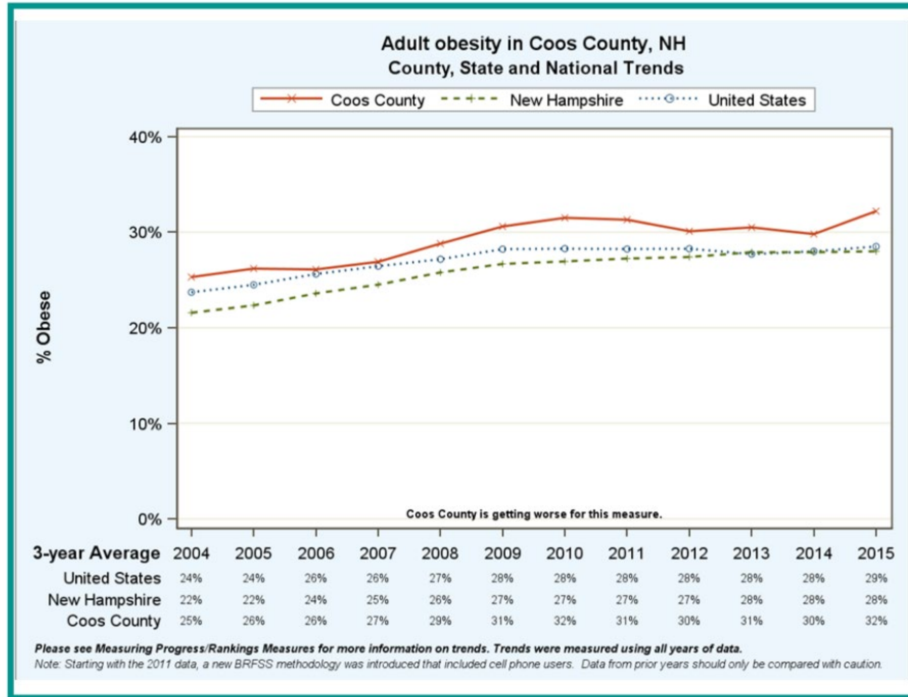

FIGURE 6: ADULT OBESITY IN COÖS COUNTY, NH COUNTY, STATE AND NATIONAL TRENDS

The North Country Health Consortium supports communities in implementing healthy eating and physical activity strategies where they live, work, and go to school. The Health Improvement Working Group is a sub-committee of the North Country PHAC. NCHC collaborates with regional health care providers to implement quality improvement strategies to address chronic disease among the North Country population.

North Country PHN supports the development and implementation of programs and services that help its residents prevent and manage chronic disease. The North Country PHN, along with its partners and contractors, works to reduce the burden and impact of chronic disease by:

- increasing access to educational programming throughout the region
- increasing awareness about reducing chronic disease-related risks
- preventing, detecting, and managing chronic disease
- supporting behavior change and lifestyle improvements through referral to available community-based programming
- supporting development and implementation of policy and systems changes that improve health care delivery

State and Regional Assets

- North Country Health Consortium
- Ways 2 Wellness Community Health Worker Program
- Health Improvement Working Group
- Critical Access Hospitals
- Federally Qualified Health Centers
- NH Department of Public Health Services

Partners Working on this Priority

- Northern New Hampshire Area Health Education Center
- Northern Human Services
- Ammonoosuc Community Health Services
- Coös County Family Health Services
- UNH Cooperative Extension
- Grafton County Senior Citizens Council
- Adaptive Sports Partners of the North Country
- Littleton Food Co-Op
- Androscoggin Valley Hospital
- Cottage Hospital
- Littleton Regional Healthcare
- Upper Connecticut Valley Hospital
- Weeks Medical Center

Health Priority Area 2: Oral Health

Background

Oral health is a fundamental part of total wellness and integral to general health. Oral health is multifaceted and includes the ability to speak, smile, smell, taste, chew, swallow, and convey a range of emotions through facial expressions with confidence and without pain, discomfort, or disease of the craniofacial complex. Oral health is essential to and a key indicator of overall health and well-being.

Oral Health in America: A Report of the Surgeon General released in 2000 served as an edification to the nation by raising awareness about the prevalence of oral disease among Americans, as well as the racial, ethnic, and socioeconomic disparities that impact individual oral health status. This report was a beacon that brought national attention to the status of oral health disparities in the United States and called for the development of a National Oral Health Plan to improve oral health and reduce identified disparities. Two decades of work on the national, state, and local levels have shown improvement in overall oral health outcomes and efforts to reduce oral health disparities. However, many challenges identified 21 years ago have not been adequately addressed. Dental caries remains the single most common chronic childhood disease, while striking disparities in oral diseases among various disadvantaged and underserved population subgroups continue to exist.

Consequences of poor oral health have significant social and economic effects, as well as an adverse impact on overall health. Poor oral health at any age may result not only in tooth decay, premature tooth loss, and impaired general health, but also in compromised nutrition, increased days lost from school and work, and can inhibit an individual's ability to obtain or advance in education and employment. To maintain optimal oral health, the American Dental Association recommends routine dental visits at intervals determined by a dentist. Good oral health is important across the lifespan, but for residents of the North Country, accessibility remains an issue for obtaining routine and emergent dental care. Disparities in dental care access for North Country residents that always existed have been exacerbated by the global pandemic. The pandemic has intensified the preexisting dental health professional workforce shortage, and dental practices have seen increased backlogs of patients due to temporary COVID-19 associated closures, and reduced workflows that have resulted from COVID-19 compliance measures.

According to the New Hampshire Department of Health and Human Services' 2015 Oral Health Data Report, New Hampshire has seen improvement in overall oral health outcomes over the last 20 years. However, data shows that those residing in the rural northernmost region of the state receive preventive services such as dental sealants at lower rates compared to the rest of the state. North Country residents experience higher rates of childhood caries and higher rates of edentulism among older adults. In addition, the northern part of the state has a shortage of dental health professionals, significantly reducing access to dental care for many residents.

Nationally, data indicates that those with lower income and/or lower educational attainment are less likely to access dental care and more likely to experience adverse outcomes such as tooth loss. The New Hampshire

2015 Oral Health Data Report also shows individual oral health status is affected by socioeconomic factors, such as educational attainment and income. Adults with lower levels of education and lower income experience disproportionately higher rates of tooth loss and are less likely to have had a dental visit within the past year.[15]

According to the CDC dental health data, 68.9% of adults in New Hampshire had visited a dentist or dental clinic during the year 2018.[1] The percentage of adults who had a dental visit was lowest among those making less than $15,000 per year, at 41.5%.[1] By contrast, among those who made $50,000 or more per year, 80.5% had visited a dentist or dental clinic. Similarly, among those who had not earned a high school diploma, 31.1% had visited a dentist or dental clinic, compared to 84.4% among those who had earned a college degree.[1] Moreover, those whose income was less than $15,000 experienced tooth loss at a rate of 35.2% compared to 3.4% of those whose income was greater than $50,000. [16]

The New Hampshire Department of Health and Human Services 2014 Oral Health Survey of older adults has shown oral disease disproportionately affecting older adults more than any other age group, which has a direct impact on nutritional status, social functioning, and overall well-being of this vulnerable population. The North Country senior population face barriers to regular dental care most often due to lack of dental insurance and inability to afford dental care. Prevalence of oral health issues was substantially higher for those participants living in rural communities compared to those living in all other areas[17]

In addition to oral health disparities impacting all generations of the North Country population, a study by the Centers for Disease Control has found that populations disproportionately affected by coronavirus disease 2019 (COVID-19) are also at higher risk for oral diseases and experience oral disease and oral health care disparities at higher rates. Dental care includes aerosol-generating procedures that can increase viral transmission, which has negatively impacted the cadence of establishing patients' preventive dental care. The COVID-19 pandemic led to closure and reduced hours of dental practices with the exception being emergency and emergent dental care, thereby limiting routine care and preventive dental care.[18]

Why Oral Health is a Priority in the North Country

The mouth is indispensable to eating, speaking, smiling, and quality of life. The most prevalent oral conditions are dental caries and periodontal diseases, conditions that are largely preventable. Dental caries is the most common chronic infectious childhood disease, and often continues into adulthood. Oral health disparities existing specifically in the North Country are notable in terms of access to oral healthcare services, and are related primarily to socioeconomic factors. These disparities are compounded by the region's rurality and population distribution, as well as by the distribution of dental professionals. Geographically the North Country region encompasses the top one-third of the state and covers 3,200 square miles. It is the most sparsely populated region of New Hampshire with population centers separated by an average of 40 miles of mountainous terrain.

The North Country region has a lower rate of education than the state; there is also a lower median household income, a lack of public transportation, and a higher percentage of elderly residents. As a Social Determinant of Health, a lack of access to reliable transportation has been determined by NH DHHS to be as

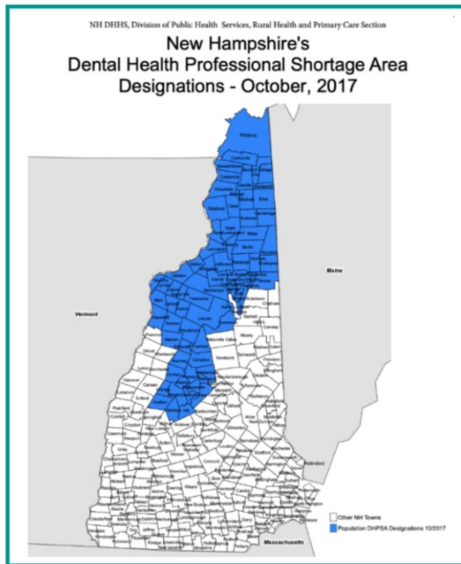

FIGURE 7: NH'S DENTAL HEALTH PROFESSIONAL SHORTAGE AREA DESIGNATIONS, OCTOBER 2017

common as 10% of North Country households.[19] Lack of personal transportation or public transit can prove a difficult barrier for patients attaining dental care.

The North Country is a designated dental health provider shortage area. The regional dental health workforce shortage causes a reduction in availability and access to needed dental care. The population of North Country residents living in the northernmost forty miles of Coös County have limited access to dental services. The geographical barriers, combined with poverty, a lack of dental insurance, and lack of reliable transportation are a consolidation of hurdles to dental care access for residents of all ages in the Great Northwoods of New Hampshire.

In New Hampshire, over thirty-five percent of third grade students experienced tooth decay, while 8.2% of students had untreated decay. As seen in the table below, among Counties, Coös (14.0%) and Strafford (14.2%) had the highest prevalence of untreated decay. Coös County had the highest prevalence (56.0%) of decay experience. Third grade students in Coös (53.5%) and Merrimack (52.3%) Counties had the fewest dental sealants.14

Table 4: Prevalence of Oral Health Needs

Variable	Coös County	Grafton County	New Hampshire
Decay Experience	56%	43.1%	35.4%
Untreated Decay	14%	11.7%	8.2%
Treated Decay	50.6%	37.9%	31.8%
Dental Sealants	53.5%	61.6%	60.9%
Need Treatment	12.5%	10.9%	8.1%
Need Urgent Treatment	0.5%	0.8%	1.0%

An assessment of national and state-level data aligns with recent North Country Regional Public Health Network data obtained in early 2021. Surveying multisector groups, the issue cited as the most prevalent barrier to obtaining dental care is access to oral healthcare. To gather and understand the localized viewpoints around access to dental care, survey participants were asked to provide feedback and ideas for the most impactful strategies to address oral health issues in Northern New Hampshire. Improving access, more opportunities for culturally sensitive oral health education for people in the region and increasing public health programming were provided as solutions to improve oral health outcomes in the North Country region.

State and Regional Assets

- New Hampshire Medicaid
- New Hampshire Oral Health Coalition
- Local WIC programs
- New Hampshire Dental Society
- New Hampshire Children's Health Foundation
- DentaQuest Foundation
- Local dental providers
- Federally Qualified Health Center Dental/Oral Health Centers
- North Country Health Consortium Oral Health Program
- NH Department of Health and Human Services Oral Health Program

Partners Working on This Health Priority

- North Country Health Consortium Oral Health Program
- Northern New Hampshire Area Health Education Center
- Coös Country Family Health Services
- Ammonoosuc Community Health Services
- Grafton County Senior Citizens Council
- Tri-County Community Action Program Head Start
- NH Dental Association
- NH Oral Health Coalition
- Regional Critical Access Hospitals
- Cottage Hospital
- Littleton Regional Healthcare
- Androscoggin Valley Hospital
- Weeks Medical Center
- Upper Connecticut Valley Hospital

Health Priority Area 3: Wellness and Public Health Emergency Preparedness

Background

Since September 11, 2001, national, state, and local jurisdictions have partnered to prepare and plan for emergencies by developing Public Health Emergency Preparedness (PHEP) programs that can respond to many diverse types of crises that threaten the health and safety of communities, states, and the nation. In the North Country, preparedness and response proficiency are essential to supporting mobilization of staff and volunteers during an emergency. Having an Incident Command System in place, pre-identified point-of-dispensing (POD) sites, and sufficient storage and distribution capacity for essential medicine, supplies and mass vaccination efforts are critical responsibilities in producing successful emergency response outcomes. True emergency preparedness cannot be achieved without individuals and communities embracing their personal responsibility to be prepared. Individual and community wellness deliver safer, more resilient, and better prepared communities.[20]

Until the early days of the pandemic began, emergency preparedness had not been supported in a way that could provide adequate response to long-lasting and complex events. The COVID-19 pandemic tested the limits of preparedness teams and revealed the need for ongoing work to develop and support regional capabilities that can sufficiently withstand the scale, intensity, and duration of an intense, complex, long-term health crisis, large-scale attack, or contagious disease outbreak.

Recent public health emergencies associated with the COVID-19 pandemic both challenged and strengthened the capabilities in the region, and provided valuable lessons learned. These factors point to the need to enhance capabilities across the spectrum, from personal and family preparedness to planning for global infectious disease outbreaks. Expansion of all capabilities should be further built-out and prioritized over the next three years to provide an opportunity to reevaluate how communities, state, and local public health teams will address capability planning efforts in a post-COVID-19 environment.

New Hampshire's community-based actions are critical in managing emergencies and reducing health risks and can be the first line of protection against emergencies, including disasters and other crises such as floods, earthquakes, conflict, epidemics, and pandemics.[21] The COVID-19 pandemic highlighted the importance of strengthening health systems and workforce development, including volunteer training to prepare for, withstand, and recover from emergencies. The North Country is committed to growing and training a strong public health workforce by providing education, development, technical assistance, and collaborative partnerships to rapidly identify and respond to public health threats. In the 2022-2025 CHIP, planning and development to address workforce development is key to improving future emergency preparedness response.

The COVID-19 pandemic has uncovered the longstanding drivers of health inequities in the North Country that have disproportionately affected marginalized groups. The 2022-2025 CHIP will work to address wellness and emergency preparedness for those who experience disparities and barriers exacerbated by the COVID-19

pandemic. Social protection measures that existed for a brief time during the pandemic have not been accessible long enough to reverse rapidly growing inequities. North Country will continue to invest in human resources for health, including community health workers who are ideal ambassadors to share and teach infectious disease control mitigation strategies and personal/family preparedness.

Why Is Emergency Preparedness Important in the North Country?

Health security relies on actions by individuals and communities as well as governments. An essential component of being prepared is to assure that community partners are aware of their potential risks and have public health emergency response plans that address the needs of their communities. Prepared communities have contingency plans, a communications plan, and provisions in place to shelter, sustain, and provide medical and other care for the entire community, including and especially at-risk individuals; they also have community members who are actively prepared and engaged in local decision-making. Prepared individuals have the information and skills they need to protect the health and safety of themselves, their families, and their communities.

A foundation of effective routine health promotion and access to health services are needed to support healthy and resilient individuals and communities and thereby support national health security. New Hampshire's structure of 13 Public Health Networks (PHN) creates localized community capacity to respond during emergencies. The North Country PHN is comprised of community-based partnerships involving broad public health interests, including local health departments and health officers, health care systems, social service agencies, the education sector, municipalities, the media, business leaders, regional and state government, and faith-based communities working together to address complex public health issues.

North Country PHN relies heavily on its health communication platforms to distribute information throughout the region. The COVID-19 pandemic brought forth the centrality of public communication as a force for information distribution and highlighted its impact on diverse segments of society. The far reach of the North Country PHN's website, social media, radio, and print have provided a comprehensive media landscape to carry the network through the pandemic's cadence of rapidly changing information. An ongoing challenge during the pandemic has been for the PHN to establish authenticity as a trusted source with audiences in a crowded online environment, and countering misinformation and disinformation. Reliable health communication has become highly prioritized as a foundational support to emergency preparedness and wellness and will continue to be developed throughout the 2022-2025 CHIP.

State And Regional Assets

- North Country RPHN's partnerships with twelve other RPHNs
- Five regional hospitals and supporting health centers
- NH Homeland Security and Emergency Management
- Local emergency management directors
- North Country Public Health Regional Coordinating Committee
- Northern NH Medical Reserve Corps
- New Hampshire Disaster Behavioral Health Response Team

Partners Working on this Priority

- Littleton Regional Healthcare
- Cottage Hospital
- Weeks Medical Center
- Androscoggin Valley Hospital
- Upper Connecticut Valley Hospital
- Grafton County Sheriff's Department
- Coös County Family Health Services
- North Country municipalities
- Local health officers
- Public service providers: law enforcement, fire service, emergency medical services, and public works departments

Health Priority Area 4: Mental Health and Substance Misuse

Background

According to a 2019 Substance Abuse and Mental Health Services Administration survey, two in five individuals ages 18 and older struggled with illicit substance misuse; three out of four struggled with alcohol use, and one in nine with both.[22] It is estimated that 14.1 million individuals in the United States meet criteria to be diagnosed with a substance use disorder.22 In the North Country's adolescent, young adult, and adult population, data shows steadily increasing rates of alcohol consumption in the years between 2016 and 2019.[23] Heroin use has seen a decline amongst ages 18 to 25 year-old, but has remained steady with individuals 26 and older.22

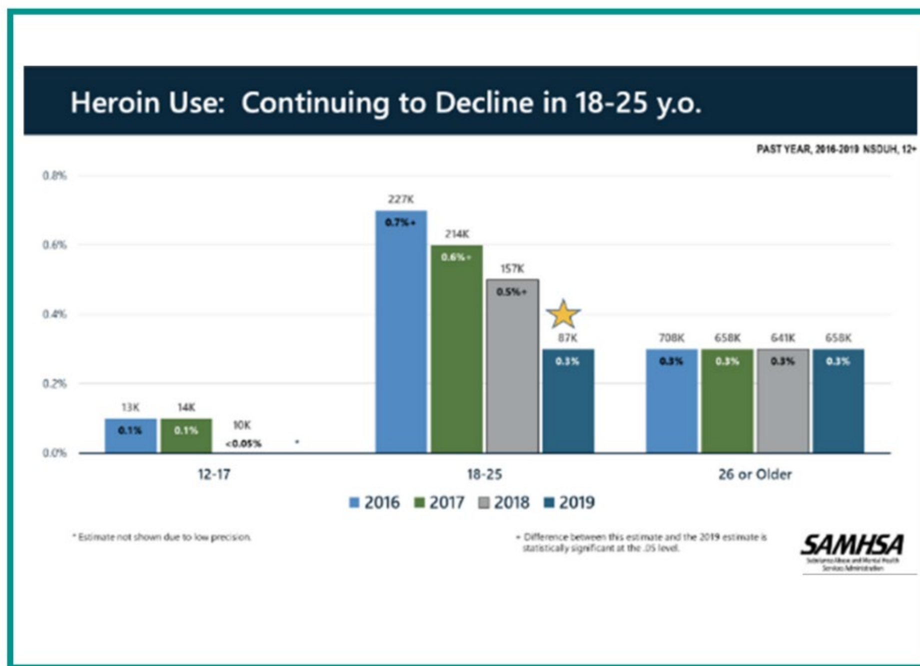

FIGURE 8: HEROIN USE ACROSS AGE GROUPS

New Hampshire DHHS has recognized the impact of overdose deaths, and though the numbers were increasing steadily, as of January 15, 2021, numbers were decreasing across the state.[24] Five New Hampshire cities held the highest number of substance-related deaths in 2020: Manchester, Nashua, Concord, Rochester, and Dover.

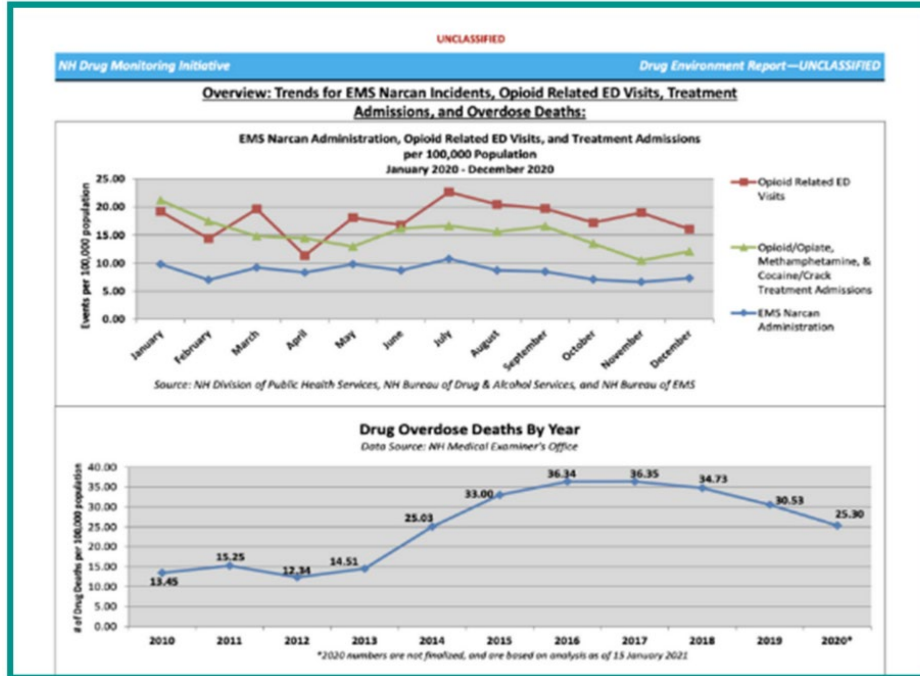

FIGURE 9: NH STATISTICS/DHHS OVERVIEW OF TRENDS FOR EMS NARCAN INCIDENTS, OPIOID RELATED ER VISITS, TREATMENT ADMISSIONS, AND OVERDOSE DEATHS

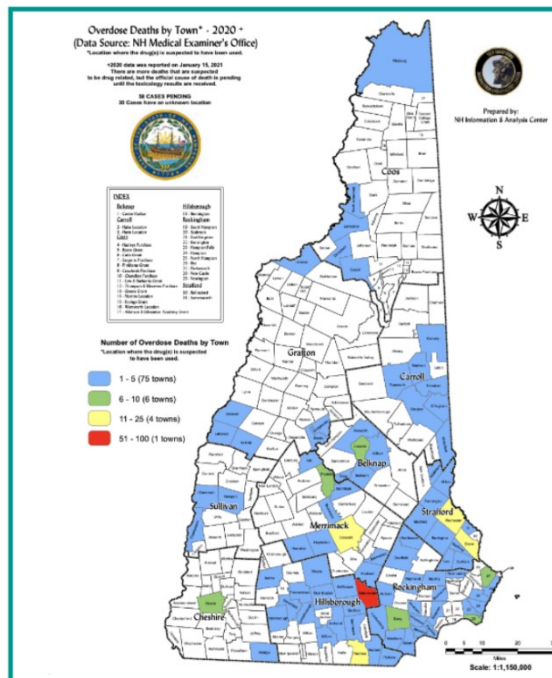

FIGURE 10: OVERDOSE DEATHS IN 2020

New Hampshire did have periods of time in 2020 where there was a spike in emergency room visits related to opioid use, and a slight decrease in the instances of Naloxone having been used to respond to an overdose event. In the United States, SAMHSA reports an increase in available opioid related treatment;22 despite this, there was a decrease in the number of admissions for a variety of substance use in 2020 in the state of New Hampshire.[22]

Mental illness is strongly linked to substance misuse as a co-occurring disorder and continues to be part of the conversation in the North Country. Between 2016-2019, there was an increase in episodes of major depression: In this time, 15.2% of youth were diagnosed with major depression in New Hampshire compared to 14% in the United States. This shows a significant increase in data previously collected in 2007, when diagnosis of major depression in youth was at 10.2% in New Hampshire and 8.5% nationwide.[23] Increases in substance use disorders have simultaneously increased with these rates. The National Survey on Drug Use and Health (NSDUH) reported in 2019 a prevalence of 15.85% of illicit substance use in New Hampshire adults, and 15% of youth and young adults ages 12+ reporting illicit substance use.22

Though there is no specific information regarding the death rate in New Hampshire relating to mental health and substance use disorder. In 2020, there were 417 confirmed deaths that were associated with substance use. Suicide remains the second leading cause of death for ages 10-34 despite being the 10th leading cause of death in the entire population of the United States. New Hampshire continues to be in need of infrastructure to support screening, assessment, treatment and recovery services and supports for adolescents and transition age youth with substance use disorders and/or co-occurring substance use and behavioral health disorders.

Between 2016-2019, 15.2% New Hampshire youth were diagnosed with major depression, while in the US 14% of youth had this diagnosis.[24] In the same period, New Hampshire youth ages 12-16 received treatment for major depression at a rate of 46.8%, while the rate was 48.3% amongst youth in the United States.[26]

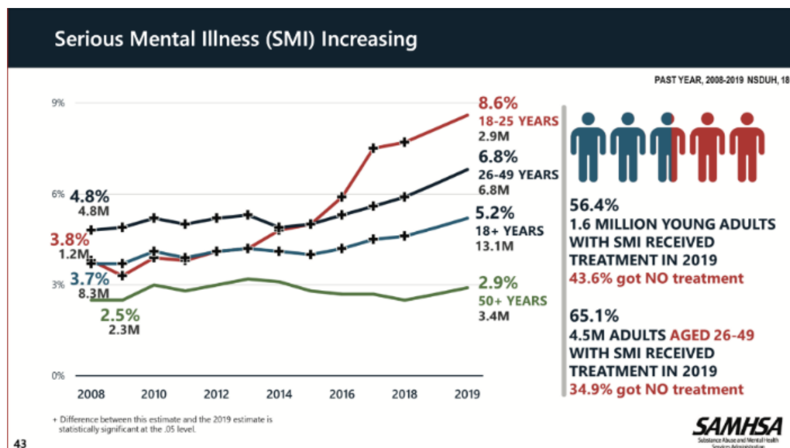

FIGURE 11: RATE OF SERIOUS MENTAL ILLNESS INCREASING

A serious mental illness (SMI) is defined as "a mental, behavioral, or emotional disorder resulting in serious functional impairment, which substantially interferes with or limits one or more major life activities."[23] Often an SMI is thought to be related to a major depression disorder, bipolar affective disorder, or thought disorder such as schizophrenia.[24] By gender, females have much higher rates of impairment due to mental illness than males across all ages, which has also increased in the years between 2016 and 2019.[26]

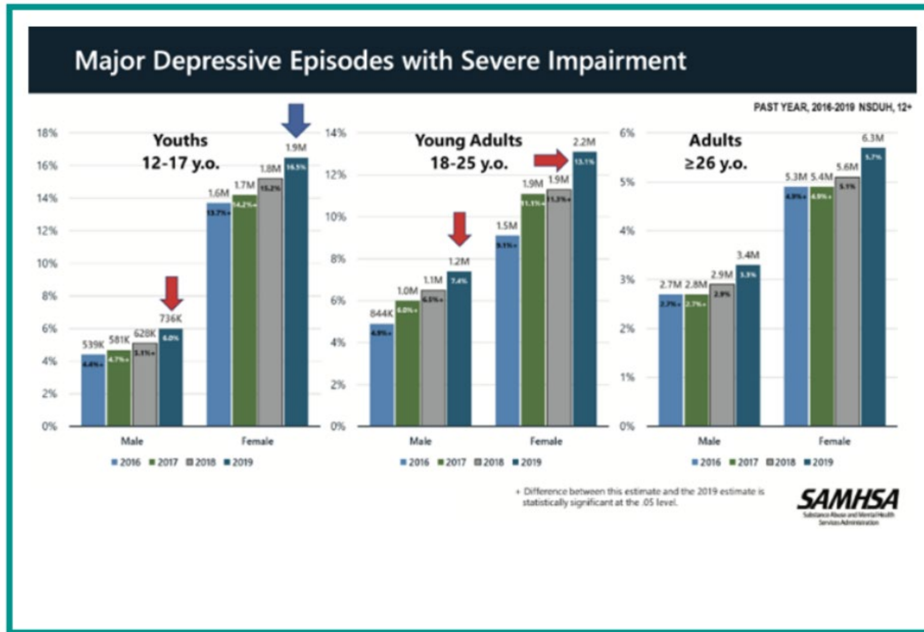

FIGURE 12: SEVERE IMPAIRMENT COMPARISON OF MAJOR DEPRESSIVE EPISODES

Social Determinants of Health impact both mental health and substance misuse. This has become more evident in the context of the current global pandemic with the effects on social, psychological, and even chronic medical conditions of those with SMI.[27] Most individuals with chronic mental health conditions are less likely to have adequate insurance, resulting in further financial instability and socioeconomic distress during an already stressful time.[25]

The rates of suicide in the North Country are reportedly the second highest in the state.[30] Between 2017 and 2019, 4.9% of New Hampshire adults over age 18 had thoughts of suicide.[28] Suicide is the eighth leading cause of death in New Hampshire and the second leading cause of death in the US for people ages 10-44 years.[26] According to American Foundation for Suicide Prevention, in New Hampshire in 2018, almost six times as many people died by suicide than in alcohol-related motor vehicle accidents.[29]

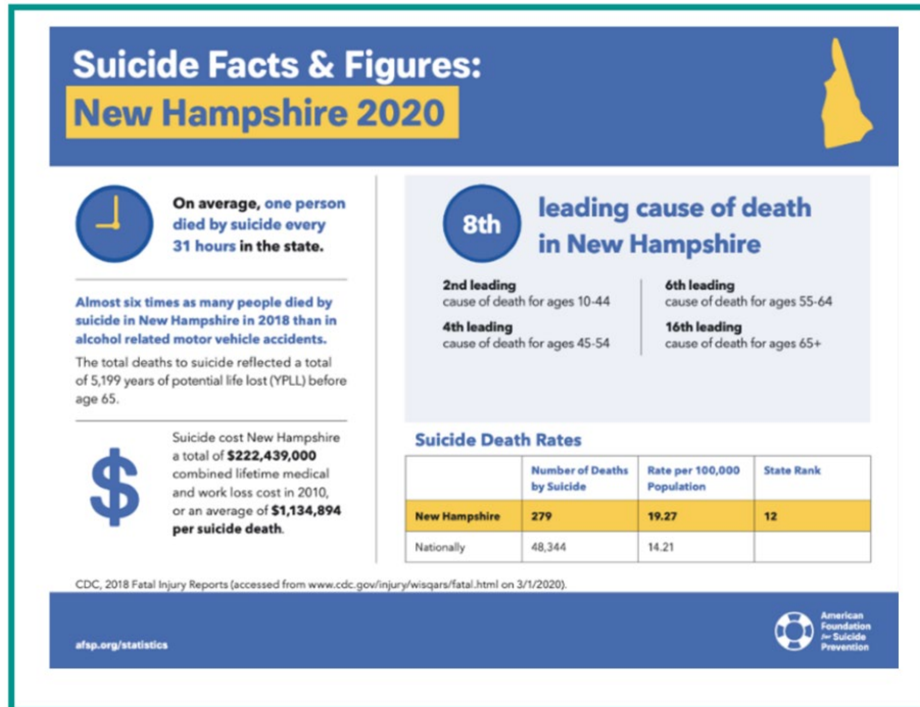

FIGURE 13: SUICIDE FACTS AND FIGURES IN NH, 2020

Mental illness is a treatable condition, with both therapy and psychiatry recommended.24 With early detection and ongoing treatment positive outcomes can be predicted. There are resources available across the state, such as local community mental health centers, NAMI New Hampshire, the Suicide prevention hotline, and mobile crisis services. Access to these services and mental healthcare providers remains a challenge for the treatment and intervention of suicide in the North Country.

Why Mental Health and Substance Abuse are Priorities in the North Country

When looking at substance abuse and mental health in the North Country, the geographic and demographic profiles of the region are vital to consider, as they play a significant role when it comes to addressing regional challenges. Throughout the strategic planning process, the North Country Public Health Network heard from youth that two primary factors causing their peers to abuse substances were a lack of alternative activities for youth and ease of evading authorities when drinking by using back country roads or holding parties in the woods. Both circumstances arise from living in a large and sparsely populated region. In a comparable way, income demographics are important because many participants in the root cause analysis focus groups cited economics as a driving factor in the distribution and ease of access to all the substances targeted by this plan. This is especially true in the case of the diversion of prescription drugs, but was also cited as a reason for the dealing of marijuana and provision of alcohol to underage youth.

The data as well as community feedback obtained in interviews and focus groups indicated that youth alcohol use has been and continues to be a problem in the North Country. As per 2017 YRBS data, that year amongst

high school aged youth, 34.8% of North Country youth drank alcohol in the last 30 days compared to 29.6% in the state.[27]

Contributing to this was an identification of an environment of acceptance of misuse that is present in the North Country, with "alcohol as a rite of passage" for youth as described by youth participating in several focus groups during root cause analysis activities. Youth alcohol use was, therefore, chosen as a priority substance to address.

Feedback from the community obtained through focus groups identified youth marijuana use as another priority of concern for its residents. According to data from the Youth Risk Behavior Survey, the past 30-day use rate of marijuana increased from 20.8% in 2015 to 21.7% in 2017. The rate at which students perceived elevated risk in regular marijuana use has also fallen from 18.4% in 2015 to 14.4% in 2017.27 Given the recently passed legislation to decriminalize marijuana and approve it for medical use, along with a decreased perception of risk of harm amongst youth, the strategic planning participants identified marijuana as another substance to address.

Non-medical prescription drugs were identified as a priority due to the prevalence of use in the North Country Region. Between 2009 and 2011 the rate of lifetime use measured in the Youth Risk Behavior Survey stayed above 17%, or more than one in every six high school students.27 At the time regional concerns included opioid overdoses and the risk of lethality posed by this emerging trend. Since then, the rates have levelled off and even fallen (posting a 9.1% lifetime use rate in the 2017 YRBS[32]). However, we have also learned from a variety of research sources (including a 2019 article published in the Substance Abuse and Behavioral Health Service Administration's Data Review Journal: "Associations of Non-Medical Pain Reliever Use and Initiation of Heroin Use and Initiation in America"[28]) that the prescription drug misuse problem is a contributing factor in the current heroin epidemic. In other words, individuals who initiate prescription drug use today are significantly more likely to be heroin users within the year than the population as a whole. Therefore, any effort to tackle the heroin issue must address prescription drug misuse as well.

Regional planning efforts were also informed by a University of New Hampshire Carsey Institute of Public Policy study that found a correlation between levels of stress and rates of substance misuse in Coös County youth.[29] The Carsey Institute further highlighted the level of connection youth felt to their community and schools as a protective factor that helps them deal with stress without resorting to substances. Stress can originate from a variety of sources, with youth in focus groups indicating family problems, and in-school issues being the primary drivers. The idea of stress as a contributing factor to youth substance misuse and community attachment being a protective factor was a concept that helped inform the selection of youth leadership development and the strengthening of community and school connections as means to address the substance misuse problems within the region.

Increasing rates of suicide among teens and young adults on both a national and local level show suicide is now the second leading cause of death in these groups. Geographic differences in youth suicide rates between rural and urban areas show youth and young adults living in rural areas at a greater risk of suicide than those living in urban areas. Isolation and reduced access to resources during the pandemic has

compounded risk factors and increased suicide risk among North Country's youth. Access to providers was limited before the pandemic and continues to be a barrier to attaining mental health care. The mental healthcare provider landscape in the North Country faces chronic shortages and contributes significantly to reduced mental healthcare access. Rural North Country residents are also susceptible to the stigma of needing or receiving mental healthcare where most people know one another, and fewer choices of trained professionals can lead to a lack of trust for confidentiality. This challenges initiation and compliance of mental healthcare in the region.

Access to mental health care is a crucial factor in reducing suicide rates. Youth in the North Country have access to fewer mental health services than those in urban and suburban counties of the state. While the prevalence of mental illness is similar between rural and urban residents, there is a disparity between these groups in their ability to access services. Mental healthcare needs often remain unmet in many rural communities because the need exceeds capacity to treat. Workforce shortages, issues around access, stigma, and the desire for anonymity create significant barriers to receiving mental healthcare services. The North Country PHN collaborates with partners and stakeholders across the region to alleviate these barriers by collaborating resources to develop, implement, evaluate, and sustain rural mental health programs that prevent and treat mental illness.

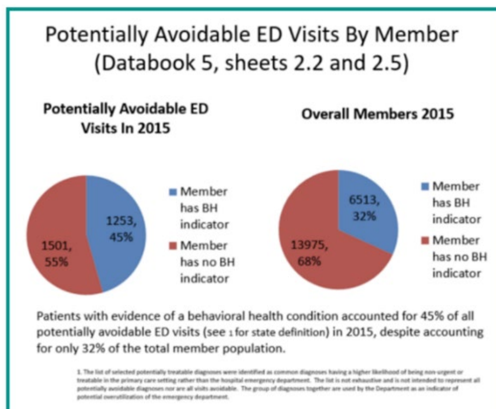

FIGURE 14: POTENTIALLY AVOIDABLE ED VISITS BY MEMBER WITH AND WITHOUT BH INDICATOR

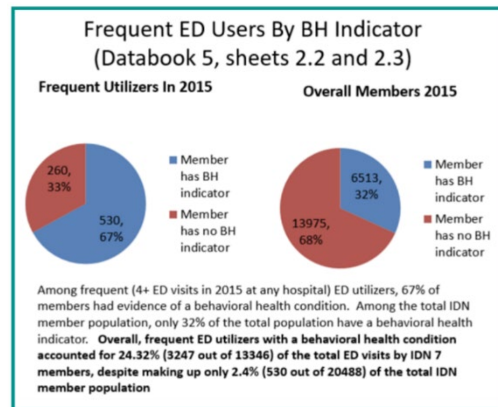

FIGURE 15: FREQUENT ED USERS BY BH INDICATOR

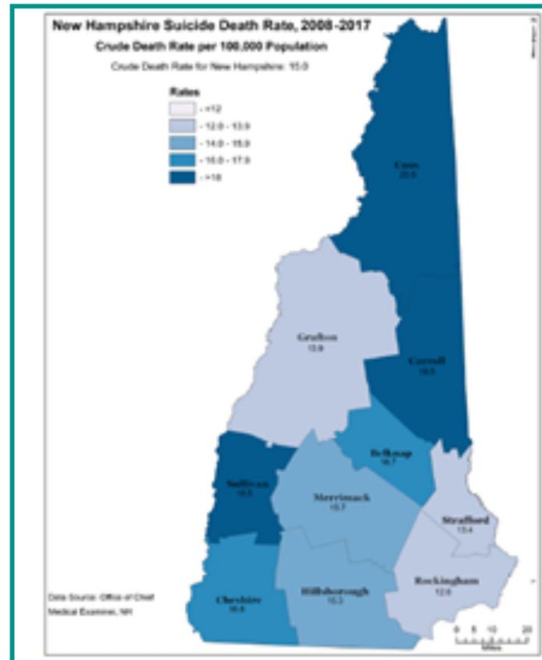

FIGURE 16: NH SUICIDE DEATH RATE, NH SUICIDE PREVENTION ANNUAL REPORT 2017

State and Regional Assets

- Regional Public Health Networks
- North Country Health Consortium
- Northern Human Services
- Network of Student Assistance Professionals
- Youth Leadership Groups
- Northern New Hampshire Area Health Education Center
- Collaboration with the Governor's Commission on Alcohol and Other Drug Abuse Prevention Intervention and Treatment
- Community coalitions and task force groups with representation from community sectors, including education, businesses, local law enforcement, and healthcare
- Use of evidence-based practice by community health centers (such as SBIRT) to identify, reduce, and prevent use, abuse, and dependence on alcohol and illicit drugs
- Promoting collaboration between primary care physicians and alcohol and other drug treatment providers in the treatment of addiction, including opioid/heroin use disorder
- Project AWARE through the Berlin Public Schools
- New Hampshire Charitable Foundation/Tillotson Fund
- North Country Suicide Prevention Implementation Team
- Health Improvement Working Group
- National Alliance on Mental Illness- New Hampshire

Partners Working on this Priority

- Northern Human Services
- Gorham Family Resource Center
- North Country Accountable Care Organizations
- Critical Access Hospitals
- North Country Health Consortium/Northern New Hampshire AHEC
- Region 7 Integrated Delivery Network
- Public Health Network leadership teams
- Local police departments
- Northern Human Services
- Tri County Community Action Program
- Federally Qualified Health Centers
- Local municipalities
- Regional hospitals
- Local legislators
- Schools and other educational institutions
- NAMI New Hampshire

Priority Area 5: Social Determinants of Health

According to the World Health Organization (WHO), Social Determinants of Health (SDoH) are "the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life, including economic policies and systems, development agendas, social norms, social policies, and political systems."[30]

FIGURE 17: HEALTHY PEOPLE 2030, SOCIAL DETERMINANTS OF HEALTH

Social Determinants of Health have an impact on health outcomes and are directly linked to health equity, inequities, and disparities. The United States' spending per capita on medical services exceeds that of all other nations, while spending less on all social services than other nations.[31] Health outcomes, especially in children, are more often impacted to a higher degree by Social Determinants. Historically, addressing Social Determinants of Health has been treated as secondary to the delivery of healthcare services. However, there are ways to focus upstream in the healthcare treatment space and explore ways to identify Social Determinants that impact health needs during medical visits.

Improving health outcomes means supporting health equity. This can look like partnerships between medical providers and community-based agencies to improve integration and service coordination, while also

addressing other needs around environmental barriers and Social Determinants of Health. The patient experience, including perception of quality and satisfaction, can also be improved while addressing Social Determinants of Health. This can go a long way to benefit population health, while reducing the per capita cost of health care. One's health is determined by a combination of genetic predisposition, behaviors, medical services provided, and the social and physical environment.[32] Recent estimates attribute 10 to 20 percent of health outcomes to medical care, 30 percent to genetics, 40 to 50 percent to behavior, and 20 percent to the social and physical environment.[32]

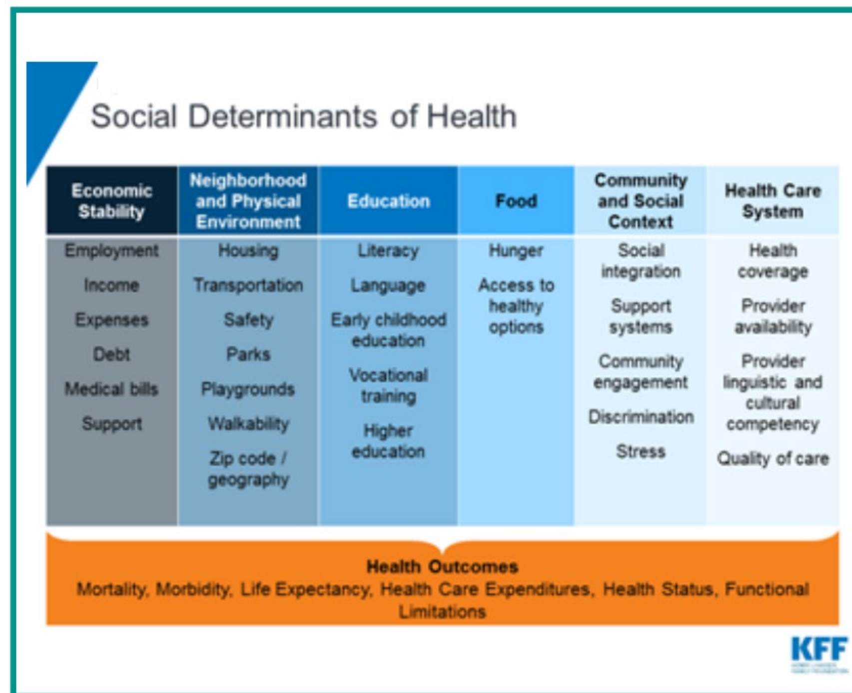

FIGURE 18: SOCIAL DETERMINANTS OF HEALTH, KAISER FAMILY FOUNDATION, BEYOND HEALTHCARE

Many disparities in health are rooted in inequities in the opportunities and resources needed to be as healthy as possible. Health equity and health disparities are closely related to each other. A health disparity is a difference in health or in the key determinants of health that adversely affect marginalized or excluded groups. With health equity, everyone has a fair opportunity to be as healthy as possible. Health equity is the principle that motivates us to eliminate health disparities. Creating health equity happens when obstacles to achieving health are removed such as poverty, discrimination, and their consequences, including powerlessness and lack of access to good jobs with fair pay, quality education and housing, safe environments, and health care. Progress in health equity is measured by assessing how these disparities change over time.

Achieving health equity requires actions that increase opportunities for everyone to be as healthy as possible. Change and implementation of policies, laws, systems, environments, and practices can reduce health

inequities. Examples of historically excluded and marginalized or disadvantaged groups include, but are not limited to: people of color, people living in poverty, particularly across generations, religious minorities, people with physical or mental disabilities, LGBTQ+ persons, and women. For example, voter registration requirements in some states, such as having to show a birth certificate, may discriminate against immigrants who are less likely to have the necessary documentation despite meeting federal voter qualifications. When every person can attain his or her full health potential, and no one is disadvantaged from achieving this potential because of social position or other socially determined circumstances, then health equity has been achieved.[33]

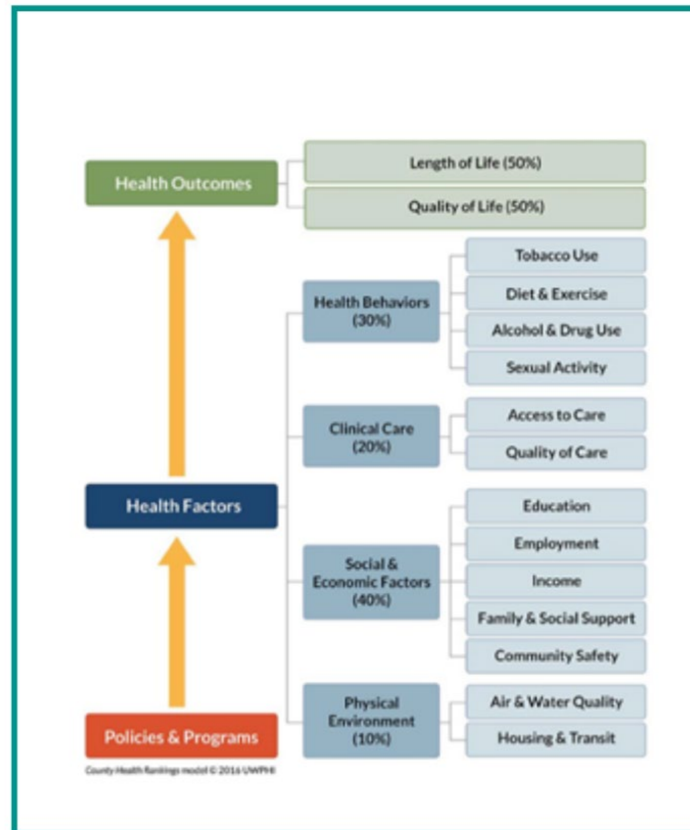

FIGURE 19: SOCIAL DETERMINANTS OF HEALTH

Exploring Social Determinants of Health

It is important to note that equity is not simply providing every individual with the same resources; that is equality. To achieve health equity, resources must be allocated on an individual needs-basis.

The Triple Aim

The Institute for Healthcare Improvement (IHI) developed the Triple Aim framework within which the healthcare system can be optimized. Triple Aim is comprised of three different dimensions: improving the patient experience, improving population health, and decreasing cost of care. It is a systematic approach to

reforming the delivery of healthcare, applies at all levels of the healthcare delivery system, and uses patient-centered measures that evaluate both quality of care and satisfaction with the care provided. While Triple Aim cannot be used to address all health factors, the following are some areas that it does:

- Overall health: differences in rates or incidence of disease
- Access to care: differences in availability of and opportunity to get proper care
- Payment for care: differences in insurance status

Transportation

Across the United States there has been an increase in knowledge about the impact of Social Determinants of Health on individuals.[33] Transportation can affect an individual's ability to access consistent employment, medical care, and even food, which is especially true for rural residents. This has become increasingly recognized by health systems as a barrier to achieving routine medical care and good health outcomes.[34] Health care systems around the country now consider transportation needs and utilize grant funding to address this barrier.33

Housing Security

Housing stability in the US has been a long-standing concern, and since onset of the COVID pandemic in 2020, the impact has been more notable.[35] Evidence shows that the pandemic has made it more difficult for Americans to pay their rent or mortgage on time. At the same time, those who have difficulty managing their household expenses are less likely to care for themselves medically, especially if they are working low-wage jobs.34 Many homeless individuals would spend a majority of their time in places such as fast-food restaurants. However, this group was displaced with the closing of these establishments during the COVID pandemic.35 Even so, this population frequently relocates and experiences unstable living environments, which makes long-term, established patient-provider relationships difficult to achieve.

Legal Involvement

Social Determinants of Health are both affected by, and sometimes related to, one's involvement with the criminal justice system.[36] Overwhelmingly, individuals involved with the criminal justice system tend to be of lower socioeconomic status, and more consistently have unmet mental health and/or substance misuse treatment needs.

A non-violent, first-time criminal offender who can afford to pay a large fee may qualify for "diversion," resulting in avoiding incarceration and having the offense removed from their records. On the other hand, an individual with low or no income who cannot afford the same diversion fee is likelier to be sentenced and incur a criminal record that negatively impacts their future opportunities to earn a livable wage, establish stable housing, and sustain adequate and safe social environments.

In 2018, the total population of the prisons system in the United States was approximately 6.4 million.[37] The fine system can often result in long-term homelessness instead of deterring offenders from crime.[38] The rate of homelessness is often higher for those with a history of conviction and are repeat offenders.38 There is also increased rates of substance misuse and mental illness in this population; as of 2017, an estimated 27%

of the population in the jail system (a sentence of less than two years) had a mental health diagnosis, while 61% lived with a substance use disorder.[39] The majority of this population could benefit from community-based treatment as a deterrent to crimes.

Healthcare Workforce

One barrier to health equity is the lack of diversity of the current healthcare workforce. Patients often feel a distrust of a system when they do not feel they have competent, qualified, and diversified care within a health system.34 Increasing diversity and distribution of healthcare providers has been an area of focus at all levels of healthcare workforce development efforts across the US. Efforts have included increased tuition assistance programs provided to reimburse healthcare providers' education costs, and an increased interest by Area Health Education Centers on the placement of diverse health professions students in rural and underserved communities. Lack of care coordination amongst providers within the healthcare system is where the workforce barrier becomes the most difficult to manage.34 An ongoing goal to address SDoH is to build a workforce that integrates social care into health care delivery.

Screenings for Social Determinants of Health (SDoH)

Screenings for SDoH can help determine patient risk for poor health outcomes and be advantageous in a variety of settings. In the clinical setting, it is important for healthcare providers to know Social Determinants are indicators for risk in patients regarding reinfection of disease or non-compliance with treatment.[40] Examples of these screenings include:

- The Comprehensive Core Standardized Assessment, or CCSA Screening[41,] looks at medical, behavioral, and social needs to determine an appropriate plan of care. For screening youth, there is separate information for at-risk behaviors.41
- *Income, Housing, Education, Legal Status, Literacy, Personal Safety*, or IHELLP, is a screening tool developed by Boston Medical Center and Boston Children's Hospital to identify Social Determinant of Health areas that are impacted by poverty.[42] This tool was designed to be used in an inpatient setting, though has also shown effectiveness in outpatient practice.[42]

Why are Social Determinants of Health a Priority in the North Country?

The North Country has a total population that is comparably lower than the rest of the State but disparately experiences a lack of services, economic instability, geographic isolation, generational poverty, and access to needed medical, dental, and mental health care. Data consistently shows the North Country is disadvantaged by SDoH, and these SDoH negatively impact North Country residents' overall health outcomes. Strategies that address SDoH by working upstream will make the biggest impact.

Transportation

In the North Country there is a lack of public transportation, individuals and families may not have reliable forms of personal transportation. Winters are harsh and the expense of maintaining an automobile can be a barrier to ownership and regularly operating it. Lack of transportation can reduce an individual's ability to maintain consistent employment, attain adequate healthy foods, and receive routine preventive healthcare.

Social Determinants of Health are often interconnected, and the lack of supporting infrastructure for public transportation can further decrease the ability of North Country residents to get routine healthcare. New Hampshire Department of Transportation has devised a plan for ongoing transportation assessment and increase in transportation for the North Country.[43] Though NH identified the needs for transportation throughout the state in 2019, planning for transportation in the North Country began in 2021.

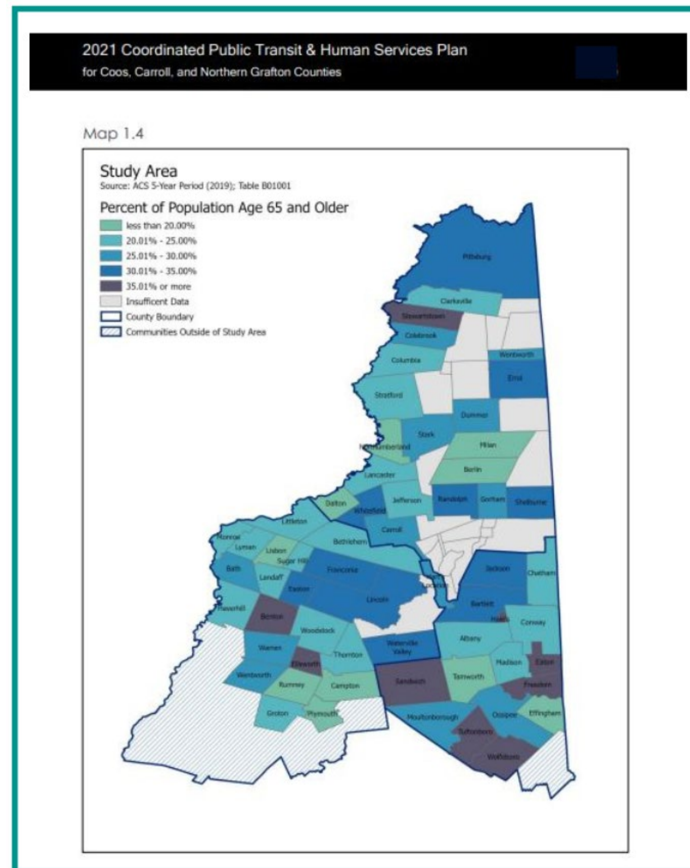

FIGURE 20: HOUSEHOLDS WITHOUT ACCESS TO A VEHICLE IN THE NORTH COUNTRY

A survey conducted by North Country Council and the state of New Hampshire, 251 participants requested there be more available transportation in order to access their medical needs and employment obligations.[44]

Housing

Inadequate housing has been an overarching issue; there is a lack of inventory available in the North Country available for rent or purchase, and those properties that are available have become increasingly expensive. New Hampshire Housing (NHH) conducted a study which concluded the North Country, and in particular Coös county, suffered the consequences of low inventory, high costs, and low wages to contribute to housing insecurity.[18] Of the seven key issues found with North Country study is the lack of capacity on a local level to affordably house the workforce.[18] Furthermore, NHH found socially those who have the most difficult time

securing housing are those with criminal history and/or a poor rental history, indicating that those who have the greatest needs for housing have the most difficulty obtaining it, including those who are in substance misuse recovery, creating more vulnerability for this population.[45]

The housing needs in the North Country are only going to increase with time. The pandemic has put additional strain on an already difficult market, driving prices higher and making the out-of-reach home ownership or rental opportunities an even further reality for some of Northern New Hampshire's most vulnerable citizens.

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