NORTH COUNTRY COMMUNITY HEALTH **ASSESSMENT**

2022 - 2025

Prepared By:

North Country HEALTH CONSORTIUM

Contents

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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 our most current primary and secondary 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 consist 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 (CHIP) 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

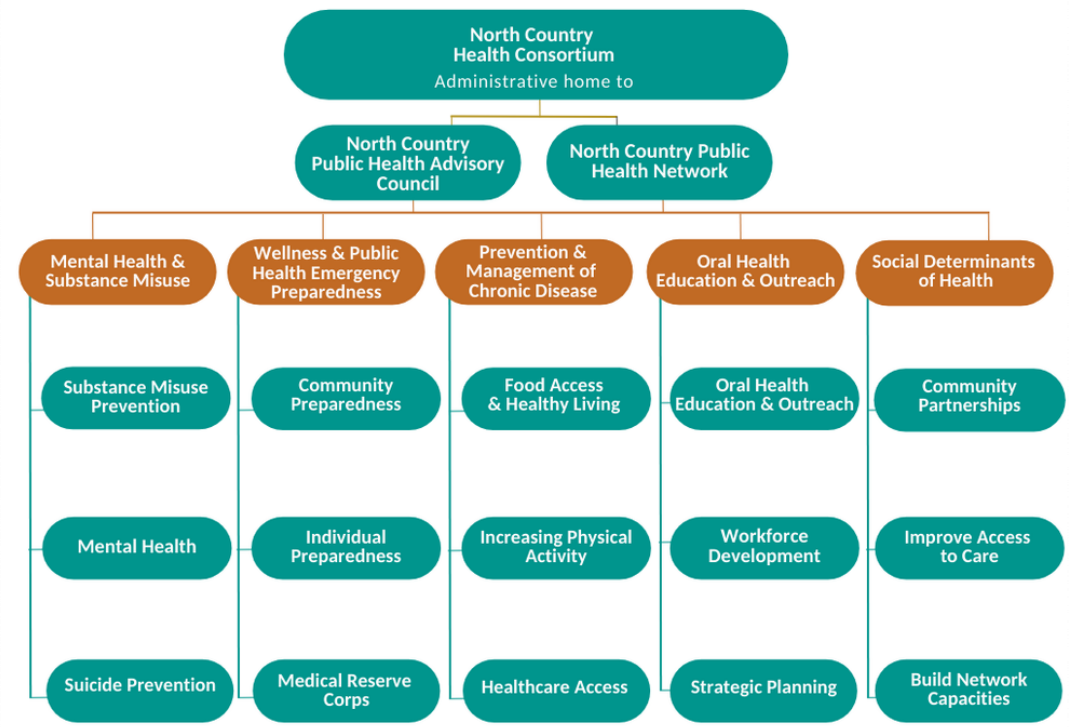
The North Country Health Consortium (NCHC) is a rural health network, created in 1997, as a vehicle for addressing common issues through collaboration among health and human service providers serving Northern New Hampshire. NCHC is engaged in activities for:

- 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
  increasing access to health care for underserved and uninsured residents of Northern New

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
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.

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.



Community Profile and Demographics

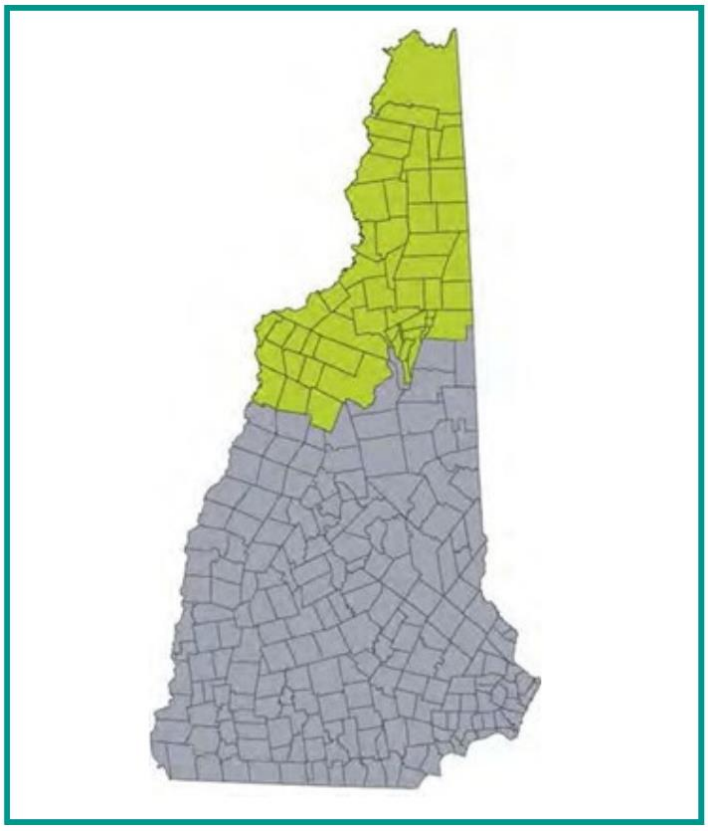
The North Country Public Health region includes thirty-eight municipalities and five unincorporated areas and serves approximately 54,000 people living in the community. The geographic area includes Coos and Northern Grafton Counties, which is referred to as The North Country.

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 Coos 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 others looking for winter recreational activities make 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.

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. It is clear from this table that 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 within the State, including in the state's northernmost region, inclusive of Coos and Northern Grafton counties, referred to as the North Country. This 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 disproportionately have higher rates of chronic disease or disability than the state as a whole. North Country health behavior data for youth and adults reveal 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 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 in NH and the US. 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 North Country population is older, less educated, and earns substantially less than other residents in the state and the nation. The data depicted below shows North Country rates substantially higher than New Hampshire and, in many cases, the United States, 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	Coos 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%
Associates 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%
Income less than $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

Variable	Coos County	New Hampshire	United States
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 timeframe the CHA update was conducted.

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, 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:

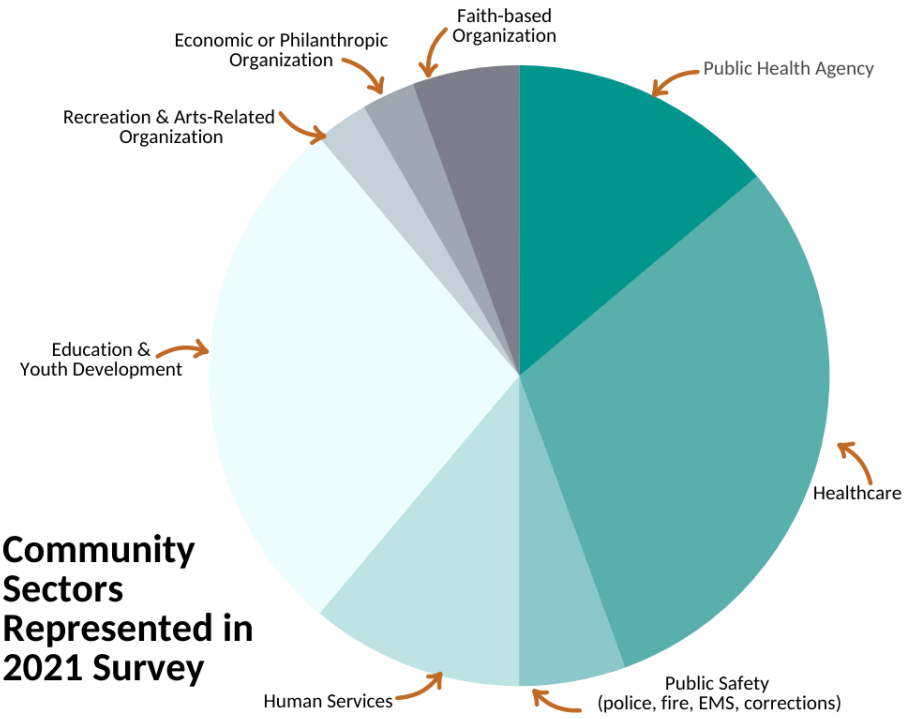
- Provides input to periodic community health needs assessments completed for the purpose of identifying health-related trends, emerging threats, and community concerns.
- Reviews and comments on regional health profiles based on needs assessments and provides input on regional health priorities and 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



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 Coos 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 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.

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 availability. 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 year between 2020 and 2021 encountered delayed data collection cycles, creating a significant gap in data sources that have previously ben 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 North Country Public Health Network updates the Community Health Improvement Plan. The health priority areas will be used to identify and determine 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 that 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, and 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 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, and active school and work environments that make physical activity easier or more accessible are 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 cigarette smoke; other risk factors include substance misuse, including 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, and men tend to have more strokes than women.[7] In 2016 it was estimated one person died every 3 minutes and 33 seconds from a stroke in the US; in 2018 it accounted for 1 of every 19 deaths.**Error! Bookmark not defined.**

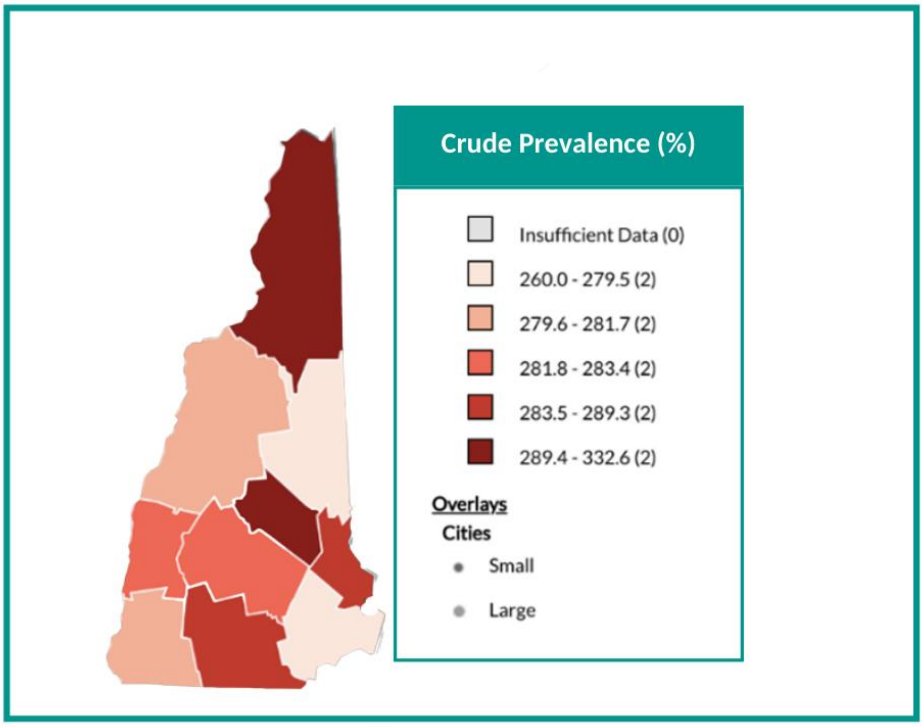


Figure 1: CDC Heart Disease Deaths 2017-2019

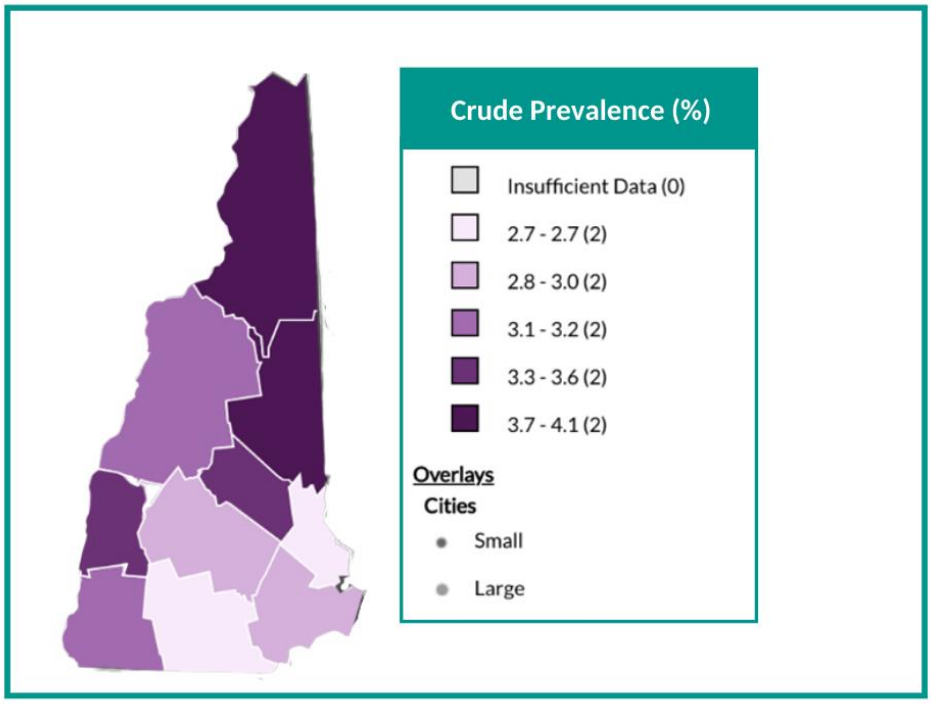


Figure 2: Prevalence of Stroke 2017-2019

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

Conversely, the protective factors for chronic childhood disease include parental college attainment, health 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 relatively 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, and 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 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 March 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 with obesity, 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; the CDC continues to report a decline in the rate of obesity for ages 2-5 as of 2013, however additional information is needed to determine the current rates.12

The Robert Wood Johnson Foundation found in a 2012 study 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, that indicates that with the current 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.[Error! Bookmark not defined.] 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, and smoking cessation services—through clinician referrals and health insurance coverage.
- 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 help people manage 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 underserved 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, now 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

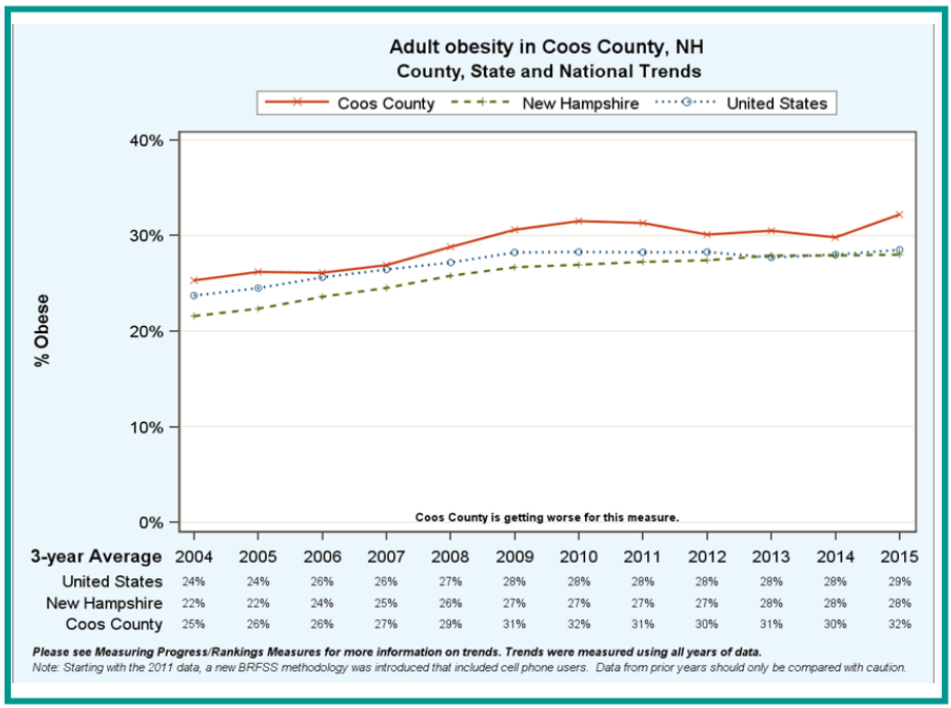
Nationally, rural residents generally fare worse than their urban counterparts in heart disease deaths, as well as the associated risk factors of obesity and physical inactivity. The populations of the North Country, particularly those over the age of 65, have more risk factors for heart disease and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

The North Country population, comprised of Coos and Northern Grafton Counties, is approximately 54,000. Of this population, 7,173 are school age children. Children whose families have yearly 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 the 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 Coos County specifically, 21.6% of students ages 7-10 were obese and 15.6% were overweight compared to statewide rates of 12.6% and 15.4% respectively. More third graders in Coos County (nearly 22%) were obese than in any other New Hampshire region in 2013-2014.[14]

Contributing factors to obesity as a recognized determinant of worsened health outcomes are that 26% of North Country residents do not engage in any leisure-time physical activity and 74% have poor access to exercise opportunities. This compares with New Hampshire percentages of 21% and 88% respectively.[15] Data from the Behavioral Risk Factor Surveillance Survey for the North Country indicate that close to 73% of Coos 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.15 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.



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. The North Country Health Consortium (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 to 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
- Coos 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, and 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 indicate 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 a disproportionately higher rates of tooth loss and are less likely to have had a dental visit within the past year.[16]

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% whose income was greater than $50,000. [17]

The New Hampshire Department of Health and Human Services' 2014 Oral Health Survey of New Hampshire Older Adults has shown oral disease disproportionately affects older adults more than any other age group, having a direct impact on their 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 their ability to afford dental care. Prevalence of oral health issues was substantially higher for those participants living in rural communities of the region.[18]

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 established dental 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.[19]

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, 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

common as 10% of North Country households.[20] Lack of personal transportation or public transit can prove a difficult barrier for patients to attain dental care.

Figure 3: NH DHHS dhhs.nh.gov/dphs/bchs/rhpc/documents/nhdhpsa-dental-2017.pdf

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

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.

Variable	Coos 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%

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
- Coos 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.[21]

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, 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 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. With unprecedented local response, supporting partners and a community-based volunteer workforce have augmented the existing healthcare systems that were depleted of human capital during the ongoing persistence of the COVID-19 pandemic.

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.[22] 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 addresses 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 had 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 the 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 rapidly changing information dissemination. 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 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
- Coos Country 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.[23] It is estimated 14.1 million individuals in the United States meet criteria to be diagnosed with a substance use disorder.23 Even in adolescents ages 12 to 17 there remained a steady percentage of alcohol use from 2016 to 2019; in 2019 there was estimated to be 9.4%, and adults ages 18 to 25 and 26 and older remain in the 50% use for the same time period.23 Heroin use has seen a decline in 18 to 25

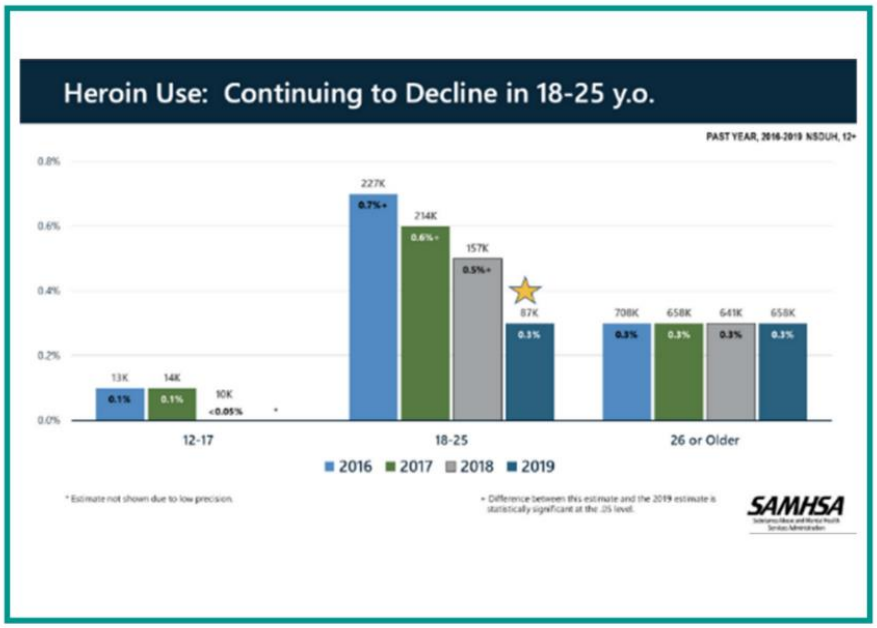


Figure 4: Heroin use across age groups

year-old age range, has remained steady with 26 and older, and has decreased among 12 to 17 year-olds.23

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.24

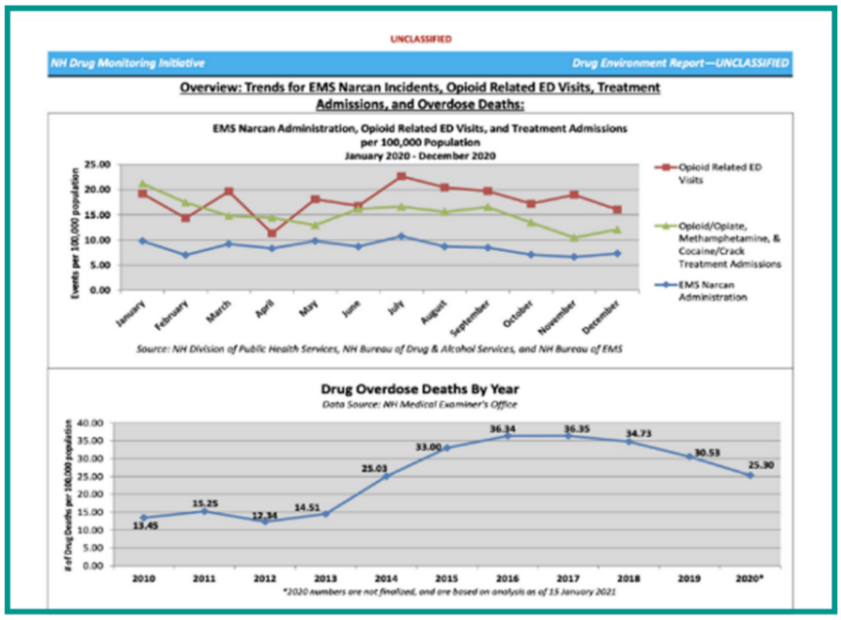


Figure 5: NH statistics/DHHS

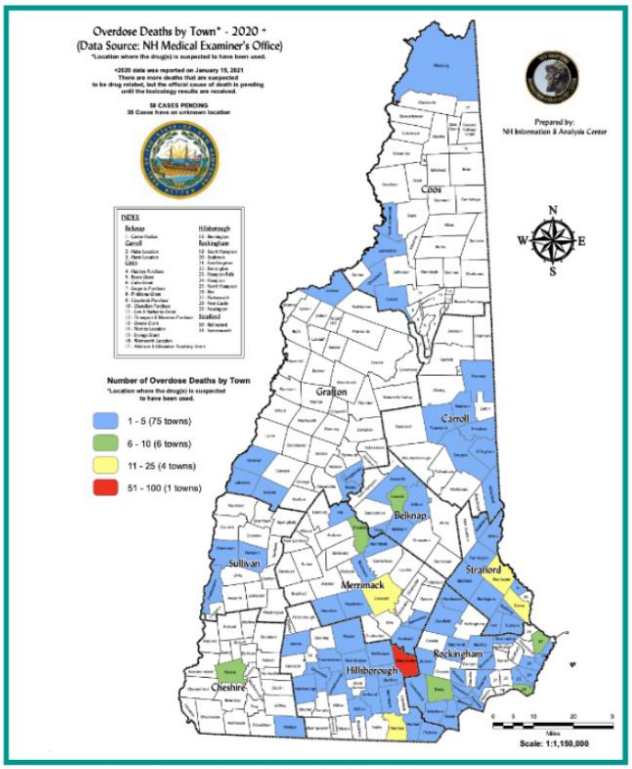


Figure 6: Overdose related deaths in 2020

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 Narcan having been used responding to the event of an overdose.24 Historically there have been instances in which inadequate treatment to match the need. In the

United States, SAMHSA reports an increase in available opioid related treatment;23 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.24

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: there were 15.2% youth diagnosed with major depression in New Hampshire and 14% overall in the US versus in 2004-2007 at 10.2% in New Hampshire and 8.5% in the US.[25] This is similar to National Survey on Drug Use and Health (NSDUH) reporting 15.85% prevalence in the state in 2019.23 In the same reporting period NSDUH found there was 15% use of any illicit substance for ages 12+; 10.10% was age 12-17.23

Though there is no specific information regarding the death rate in New Hampshire in 2020, there were 417 deaths to be confirmed and associated with substance use.24 Suicide remains the second leading cause of death for ages 10-34 despite being the 10th leading cause of death in the entire population.25 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.

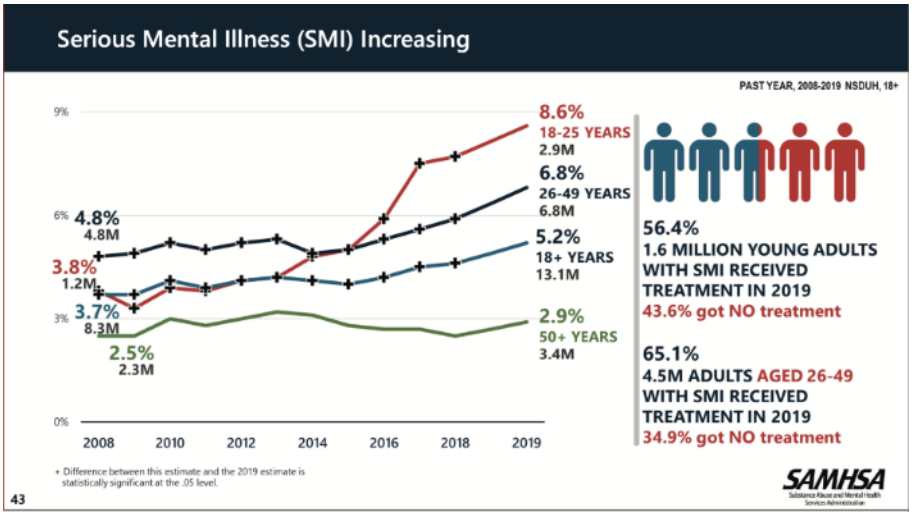


Figure 1: Rate of SMI increase

Between 2016-2019 there were 15.2% youth diagnosed with major depression in New Hampshire and 14% overall in the U.S.25 Youth ages 12-16 in New Hampshire did have a rate of 46.8% receiving treatment for their major depressive disorder in this same time period, and an overall rate of 48.3% in the US.25 There remains intersection with mental health and substance use; in 2019 there were 7.7% of the US population diagnosed with a substance use disorder, 20.6% diagnosed with a mental illness, and 3.8% diagnosed with co-occurring substance use and mental illness.23

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."[26] Often an SMI is thought to be related to a major depression disorder, bipolar affective

disorder, or thought disorder such as schizophrenia.[27] By gender, females have much higher rates of impairment due to their mental illness than males across all ages; this also increased over time from 2016-2019.25

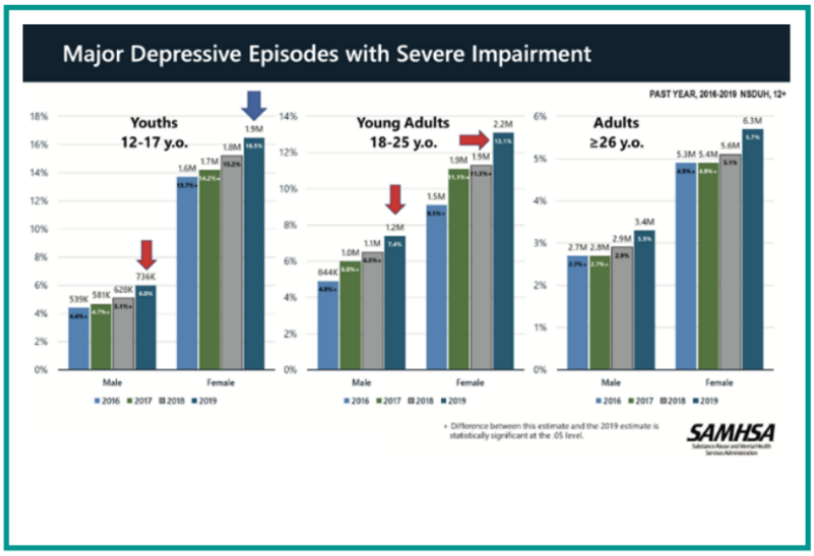
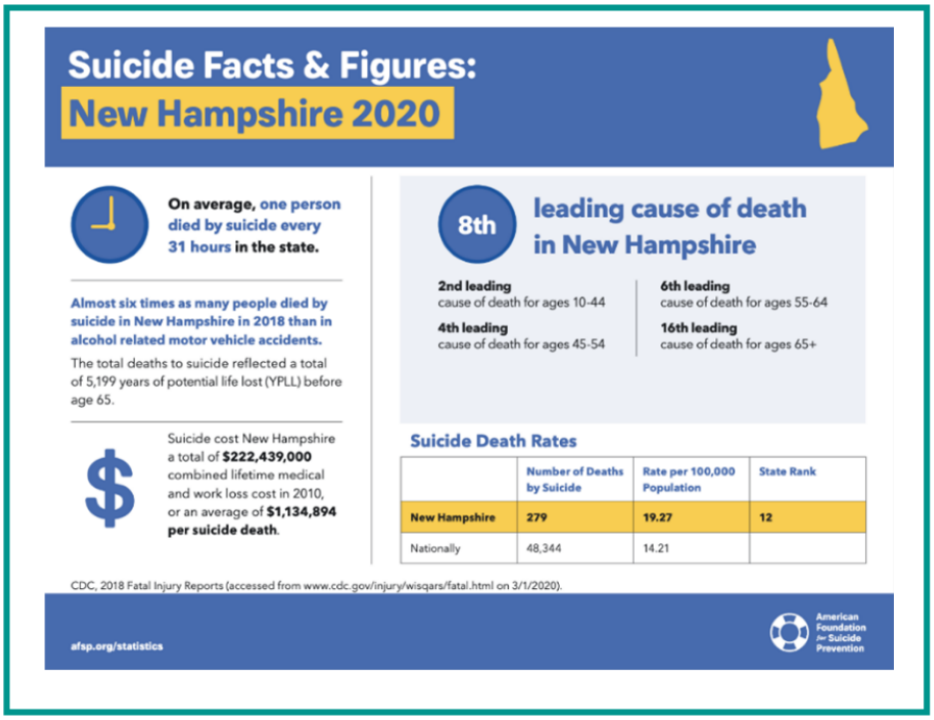


Figure 8: Severe Impairment Comparison

Social determinants of health are impactful to 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.10 Most individuals with chronic mental health conditions are less likely to have adequate insurance, resulting in further financial instability and socioeconomic distress in an already stressful time.[28]

In New Hampshire between 2017 and 2019 a total of 4.9% of adults over age 18 thought of suicide.[6] Suicide remains the eighth-leading cause of death in New Hampshire; it is the 2nd leading cause of death for people in the age range of 10-44.[29] According to American Foundation for Suicide Prevention "almost six times as many people died by suicide in New Hampshire in 2018 than in alcohol related motor vehicle accidents."[11] National Alliance on Mental Illness (NAMI) reported in the 2019 DHHS suicide prevention annual report that males tend to die by suicide more frequently than females due to using more lethal means.[30] The state currently has a monthly suicide prevention council that meets to help address this area.[31]



North Country's rates of suicide are reported as the second highest rates in the state. 30 Mental illness remains a treatable condition, with both therapy and psychiatry recommended.27 There are resources available across the state, such as local community mental health centers, NAMI, Suicide prevention hotline, and mobile crisis services. With early detection and ongoing treatment good outcomes can be predicted. Access to these services and mental healthcare providers remains a challenge of 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 because these factors play a significant role in addressing regional challenges. Throughout the strategic planning process, the North Country heard from youth that two of the primary factors causing their peers to engage in substance abuse were a lack of alternative activities for youth and the ease of evading the authorities by using back roads or holding parties in the woods. Both these factors 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 also was cited as a reason for the dealing of marijuana and the 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 Region, as per 2017 YRBS data, in 2017

among high school aged youth, 34.8% of North Country youth drank alcohol in the last 30 days compared to 29.6% in New Hampshire.[32]

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 as another priority substance of concern for its residents. Given the recently passed legislation to decriminalize marijuana and approve it for medical use, along with a decreased perception of risk of harm of marijuana use among youth, the strategic planning participants identified marijuana as another substance to address. The data from the Youth Risk Behavior Survey bore this out, with an increase in the past 30-day use rate of marijuana from 20.8% in 2015 to 21.7% in 2017. Even more concerning was that the rate at which students perceived elevated risk in regular marijuana use had fallen from 18.4% in 2015 to 14.4% in 2017.32

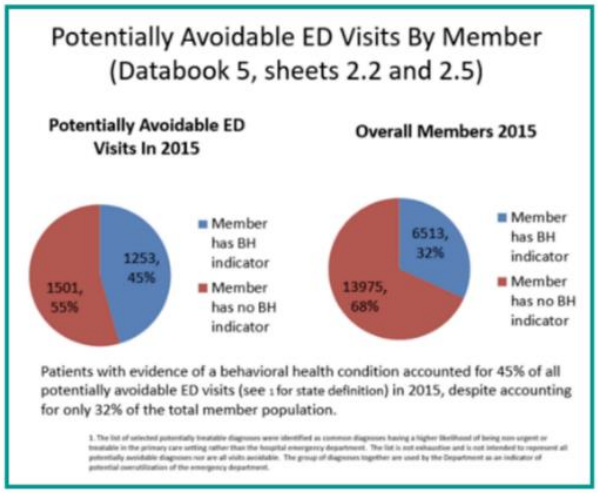
Non-medical prescription drugs were identified as a priority due to the prevalence of use in the North Country Region. Between 2009 and 2011 the rate of lifetime use measured in the Youth Risk Behavior Survey stayed above 17%, or more than one in every six high school students.32 At the time we had concerns about 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"[33]) that the prescription drug misuse problem is a contributing factor in the current heroin epidemic. Therefore, any effort to tackle the heroin issue must address prescription drug misuse as well. Put succinctly, the prescription drug initiates of today are significantly more likely to be heroin users within the year than the population as a whole.

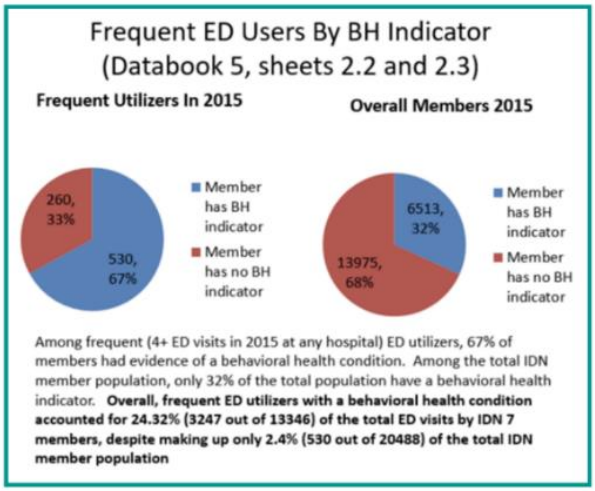
Regional planning efforts were also informed by a University of New Hampshire Carsey Institute of Public Policy study that found a correlation between levels of stress and rates substance misuse in Coos County youth.[34] The Carsey Institute further highlighted the level which individual youth felt connected to their community and schools as a protective factor that helps youth deal with this stress without resorting to substance misuse. This 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 a 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 overall 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 delivery and compliance of mental healthcare in the region.

Access to mental health care is a crucial factor in reducing suicide rates. Youth in rural regions of 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, the services available can be vastly different. Mental healthcare needs are often not met in many rural communities across the region because the need exceeds the capacity to treat. Workforce shortages, access issues, anonymity, and stigma create significant barriers to 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 the population's needs.





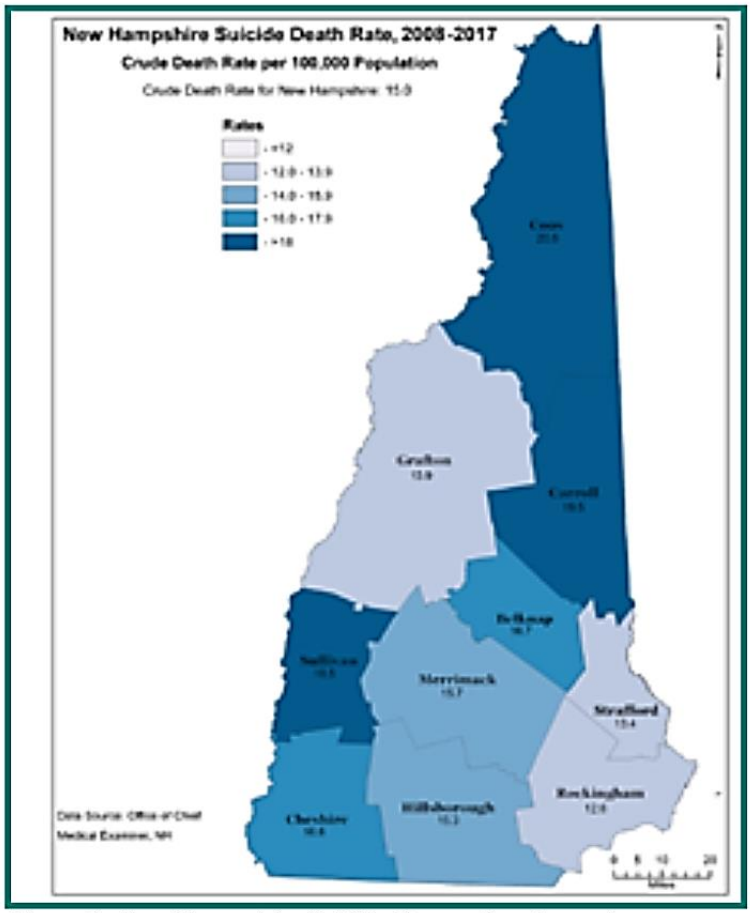


Figure 9: New Hampshire Suicide Prevention Annual Report, 2017

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 health care
- 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 opioid, including heroin, addiction
- 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 ACO
- 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 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."[35]

Figure 10: Healthy People 2030, Social Determinants of Health

Social determinants of health have an impact on health outcomes and are directly linked to the relationship between health equity, health inequities, and health disparities. The United States' spending per capita on medical services exceeds all other nations spending, while spending less on social services[36] Health outcomes, especially in children, are more often impacted to a higher degree by social determinants. Historically, social determinants have been treated as secondary to delivery of healthcare services. There are ways to focus upstream and explore how to identify social determinants that impact health needs during medical visits.

Connecting medical providers to community-based partnerships that advance integration and address the social determinant of health needs of patients, reducing environmental barriers can improve health outcomes can support health equity. The patient care experience (including quality and satisfaction) can be

improved when addressing social determinants of health. This can be beneficial to improving the health of populations; and reduce the per capita cost of health care. What determines someone's health is a combination of genetic predisposition, behaviors, the medical services received, and the social and physical environment.[37] 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.[38]

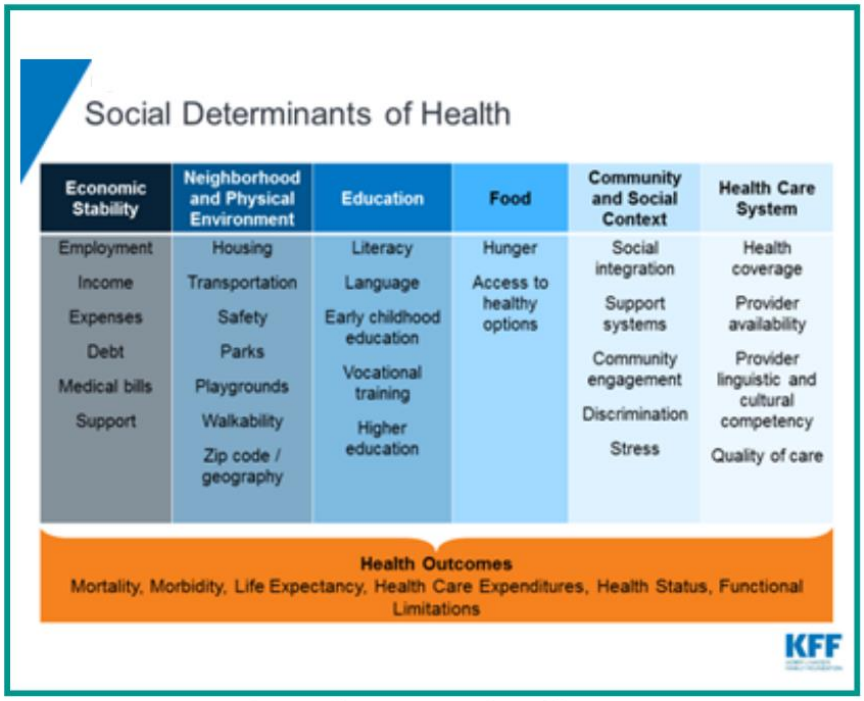


Figure 11: Kaiser Family Foundation, Beyond Healthcare

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 and just 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 toward health equity is assessed by measuring how these disparities change over time.

Achieving health equity requires actions to increase opportunities to be as healthy as possible. Change and implementation of policies, laws, systems, environments, and practices can reduce inequities. Examples of historically excluded/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. Voter registration requirements in some states, such as showing 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."[39]

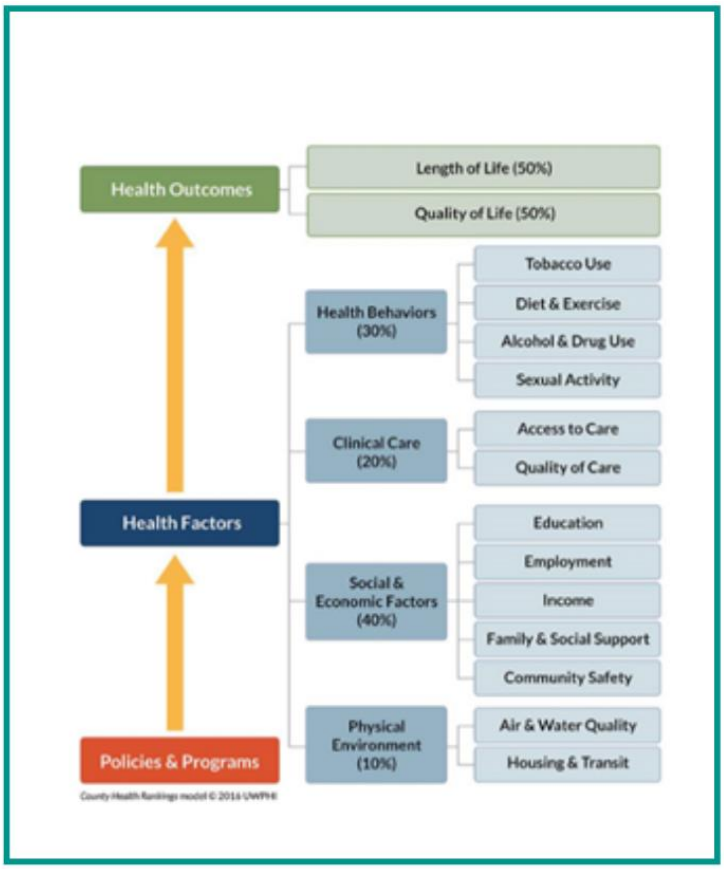


Figure 12: Social Determinants of Health

Exploring Social Determinants of Health

It is important to note that it is not equity to simply provide every individual with the same resources; that would be equality. To achieve health equity, resources must be allocated based on an individual need-based principle. Unconscious bias is strong; the public may not realize the bias that exists, even if they are living in the conditions under which there is bias present.

The Triple Aim

The Institute for Healthcare Improvement (IHI) developed The Triple Aim as a framework within which the healthcare system can be optimized. It is comprised of three different dimensions: improving the patient experience, improving population health, and decreasing cost of care. It is a systemic approach to reforming the delivery of healthcare, applying at all levels of the healthcare delivery system, and the use of patient-centered measures that evaluate both quality of care and satisfaction with the care provided. The Triple Aim

is one approach that can be used to address some health factors, but not all. Specifically, it can address the following areas in the following ways:

- 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 social determinants of health can have on individuals.[40] Transportation can impact an individual's ability to access routine consistent employment, medical care, and even food; this is especially evident in more rural areas of the country. This barrier has become more recognized by health systems as a barrier to achieving consistent medical care and good health outcomes.[41] Across the country health care systems have been looking to address transportation needs and utilized grant funding to address this barrier.40

Housing Security

Housing stability in the US has been a long-standing concern, and especially since 2020 the impact has been more notable.[42] Evidence shows that one impact of the COVID-19 pandemic has been an increase in the difficulty many Americans have in paying their rent or mortgage on 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.41 Many homeless individuals would spend a majority of their time in places such as fast-food restaurants, however this has not been possible with the closing of these establishments due to the coronavirus.42 Even so, this population frequently relocates and experiences unstable living environments which makes long-term, established patient-providers relationships difficult to achieve.

Legal Involvement

Social determinants of health are both affected by, and sometimes related to, involvement with the criminal justice system.[43] Overwhelmingly, this population tends to be of lower socioeconomic status, and more consistently has unmet mental health and/or substance misuse treatment needs. An example of the impact this can have:

A non-violent, first-time criminal offender who can pay a large fee may qualify for “diversion,” resulting in not being incarcerated and having the offense removed from their records. This is opposed to an individual with low or no income who cannot afford the same diversion fee and becomes more likely to be sentenced and having criminal records that negatively impact their future opportunities to earn a livable wage, establish stable housing, and sustain adequate and safe social environments.

The total population of the prisons system in 2018 within the United States was approximately 6.4 million.[44] The fine system can often result in long term homelessness instead of a deterrent for offenders to commit crimes.[45] The rate of homeless is often higher for those with history of conviction and are repeat offenders.45 There is also an increased rates of substance misuse and mental illness in this population; as of 2017, an estimated 27% of the population utilizing the jail system (a sentence less than two years), carried a mental

health diagnosis and 61% lived with a substance use disorder.[46] The majority of this population would benefit from community-based treatment as a deterrent to crimes.

Healthcare Workforce

One barrier health equity is the lack of diversity of the current healthcare workforce. Often patients feel a distrust of a system when they do not feel they have competent, qualified and diversified care within a health system.41 This has been an area of focus at all levels of healthcare workforce development efforts across the US, resulting in a number of initiatives aimed at increasing the diversity and distribution of healthcare providers, including increased tuition assistance toward appropriate education and an increased focus by Area Health Education Centers on the placement of diverse health professions students in rural and underserved communities. Lack of coordination of care between the providers within the healthcare system is where the workforce barrier becomes the most difficult to manage.41 An ongoing goal to address SDOH is to build a workforce which will integrate social care into health care delivery.

Screenings for SDOH

Screenings for social determinants can help determine the risk patients face for poor health outcomes and can be advantageous in a variety of settings. In a clinical setting, it is important for healthcare providers to know social determinants could be an indicator for at risk patients in areas such as re-infection of disease, or non-compliance with treatment.[47] A few of these screenings include:

The Comprehensive Core Standardized Assessment, or CCSA Screening[48,] views the areas of medical, behavioral, and social needs to determine an appropriate plan of care. In the instances this is being conducted with youth, there is separate information for at risk behaviors.48 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.[49] This tool was designed to be used in an inpatient setting, though has shown effectiveness in outpatient practice.[49]

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

Collaborative initiatives that address health disparities in the rural 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. 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. Additionally, timely data can aid policy makers to make informed decisions about how best to distribute public health resources in New Hampshire, especially those areas with the highest need.

Transportation

In the North Country there is a lack of public transportation, and often individuals and families lack access to reliable forms of personal transportation as well. Winters are harsh and the expense of keeping an automobile can create a barrier to owning and operating a reliable vehicle. 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.[50] Though NH identified the needs for transportation throughout the state in 2019, planning for transportation in the North Country began in 2021.

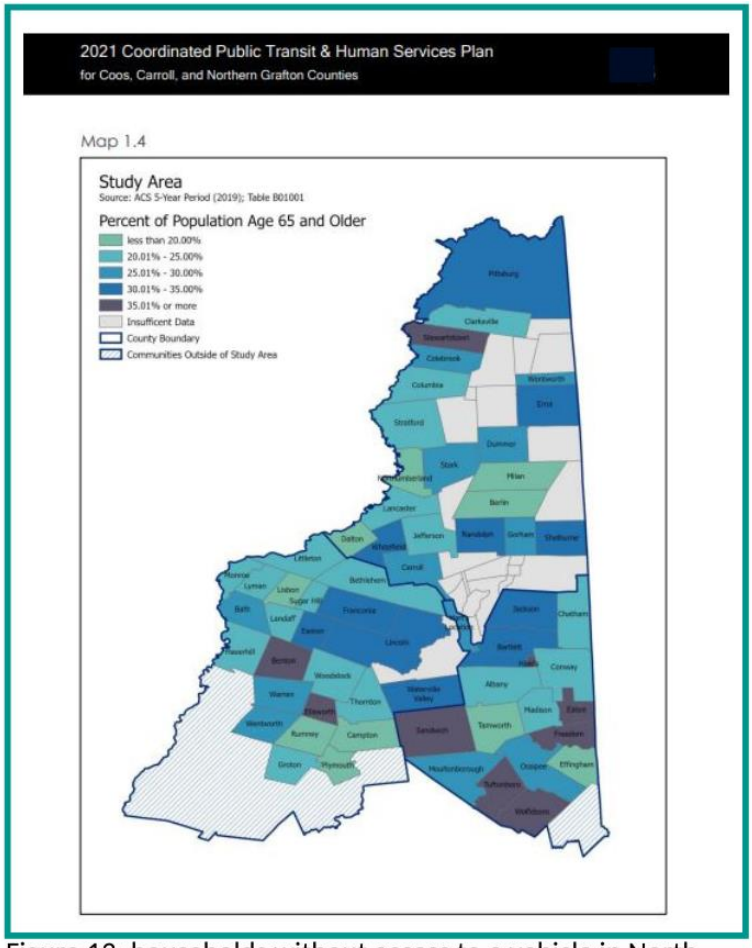


Figure 13: households without access to a vehicle in North Country

In a survey conducted by North Country Council and the state of New Hampshire, 251 participants requested there be more available transportation, and for a broader scope other than medical needs, including finding employment.[51]

Housing

Inadequate housing has been an overarching issue; there is a lack of inventory available both for rent and purchase, and those that are available have become increasingly expensive. New Hampshire Housing (NHH)

conducted a study which concluded the North Country, and in particular Coos county, suffered the consequences of low inventory, high costs, and low wages to contribute to housing security.[18] Of the seven key issues found with North Country, one of concern is the lack of capacity at a local level to address this issue; simply put, the workforce for housing is understaffed, and even if the inventory were not an issue the needs likely cannot be adequately addressed.[18] Furthermore, NHH found socially those who have the most difficult time securing housing are those with criminal history, poor rental history, and "undesirable issues;" indicating that those who have the greatest needs for housing have the most difficulty, including those who are in substance misuse recovery, creating more vulnerability for this population.[52]

The housing needs in North Country are only going to increase as time goes on. 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 even further from reality for some of Northern New Hampshire's most vulnerable citizens.

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