Annual Report on the Health Status of Rural Residents and Health Workforce Data Collection

Calendar Year 2022

Rural Health and Primary Care Section
Bureau of Healthcare Access, Equity and Policy
Division of Public Health Services
Department of Health and Human Services

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NH DIVISION OF
Public Health Services
Department of Health and Human Services

Executive Summary

Health Status of Rural Residents

Introduction

The State Office of Rural Health (SORH) is required to submit a report, annually, on the health status of rural residents, incorporating current data. This report shall also include aggregate data and information on current and projected primary care workforce needs and the participation rate on surveys completed by clinicians for the Health Professions Data Center.

Methodology

The health status of rural residents was assessed using measures that reveal access to, and delivery and utilization of primary care. Demographic data highlights population risk factors associated with access to and utilization of these services. Additional primary care-associated health indicators were newly added to analysis upon becoming available this year. Data statistics were compiled by the Bureau of Public Health Statistics and Informatics (BPHSI), the Health Professions Data Center (HPDC), and Community Health Institute, John Snow Inc. (CHI/JSI). The indicators highlighted in this report are those in which there was determined to be a statistically significant difference (at the 95% confidence level) between rural and non-rural populations.

Results

Overall, significant health disparities exist between rural and non-rural populations, as measured by select primary care-associated health indicators. A relatively consistent pattern appears across many measures that supports the overall observation that rural residents of the state fare worse than non-rural residents when considering population risk factors, primary care access, and health outcomes. Across many health indicators, rural North Country, Winnipesaukee, and Carroll County Public Health Regions (PHRs) had significantly worse outcomes than individual PHRs or region aggregated by rurality. The exception to this pattern is found in the rates for alcohol- and/or drug-related hospital data and preventable medical complications with access to primary care for acute and chronic conditions, in which rural populations outperform non-rural.

Health Workforce Data Collection

Program Updates

With the collection of dentist data in the 2022 dentist renewal cycle, the survey is now implemented for all intended provider types. With the exception of dental providers and mental health practitioners, the 2020 medical and behavioral health workforce reports were published in December 2022. Due to a maldistribution of licensees by renewal year and a low response rate in the previous survey cycle (<25%), the mental health practitioner workforce report will not be released until 2023. Although survey legislation requires survey participation as a condition of license renewal since the July 2019 amendment (HB127), the HPDC is still contending with non-response. Implementation of a second wave of non-compliance emails issued by the Office of Professional Licensure and Certification (OPLC) has proven beneficial through further reducing (by 20-50%) the number of providers on the final non-compliance lists sent to OPLC's Enforcement Unit. For greater survey visibility to ultimately increase survey response, OPLC

included the survey notification and DHHS webpage link to the survey page on their renewal webpages for each participating provider type and is currently in the process of updating the administrative rules to add the survey requirement to the renewal questions page on the electronic renewal application, where all other requirements are listed. The Health Professions Data Center data analyst position to expand program capacity and expedite the turnaround time between data collection and dissemination, is currently vacant. As a result, workforce reports will continue to be released two years after the close of the data collection periods.

Provider Response Rate

The HPDC experienced an upturn in survey compliance for alcohol and drug counselors, physicians, and psychologists since the survey requirement was implemented as a condition of license renewal, which took effect in SFY20. APRNs are an anomaly in that the response rate has remained the same (~55%) since the rules were amended to reflect the survey requirement.

Provider Supply

None of the participating provider workforces experienced a true loss of providers during this period. APRNs and psychologists broke about even with gained and lost active licenses, while alcohol and drug counselors and physicians saw small gains (<5%), and PAs saw more moderate gains. Interestingly, mental health practitioners saw a much larger gain of providers (>10%) than the other provider workforces.

Workforce Data Summaries

2020 data summaries for medical (physicians, PAs, APRNs) and behavioral (psychiatrists, psychiatric NPs, psychologists, alcohol and drug counselors) workforces compare supply and capacity differences between provider types when considering practice status, demographics, distribution, practice capacity, retention, and access to care. Significant geographic disparities in provider and practice characteristics show statistical differences by rurality at the 95% confidence level.

Data Use

With consistent and reliable data on the supply and capacity of the New Hampshire (NH) health care workforces, data requests continue to increase each year. The HPDC supplies workforce supply and demand figures year-round to inform grants, workforce initiatives, provider association materials, and internal reports. HPDC's provider data enables Rural Health and Primary (under which the SORH and HPDC exist) to successfully conduct shortage designation work to ensure the most vulnerable areas in New Hampshire are reinforced. This past year, Health Resources and Services Administration (HRSA) developed a new shortage designation to identify areas within an existing Health Professional Shortage Area (HPSA) experiencing a shortage of maternity health care professionals. Because the HPDC collects provider data from Certified Nurse Midwives, a qualifying maternity health care provider under the new policy, NH was able to upload this provider data in Shortage Designation Management System (SDMS) for designation consideration.

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Introduction

The Department of Health and Human Services, Division of Public Health Services, Bureau of Healthcare Access, Equity and Policy, Rural Health and Primary Care (RHPC) Section includes the Primary Care Office (PCO) and the State Office of Rural Health (SORH); under which the Medicare Rural Hospital Flexibility Program (Flex), supporting Critical Access Hospitals and the Small Rural Hospital Improvement Program (SHIP); the State Loan Repayment Program (SLRP); J-1 Visa Waiver/Conrad 30 Program; and the Health Professions Data Center (HPDC) exist. The mission and function of RHPC is to support communities and stakeholders that provide innovative and effective access to quality health care services with a focus on the low income, uninsured, and Medicaid populations of New Hampshire (NH). In order to achieve this, RHPC focuses efforts on the following goals:

- Access - To increase access to quality health care services for rural and underserved populations.
- Quality - To improve the quality of care provided at Critical Access Hospitals and Rural Health Clinics.
- Sustainability – To improve financial and operational outcomes of Critical Access Hospitals and Rural Health Clinics.
- Workforce – To quantify and increase the number of health care providers serving rural and underserved populations.

In 2008, the NH SORH was established in RSA 126-A:5, XVIII(a) to

1. Link rural health and human service providers with state and federal resources;
2. Seek long-term solutions to the challenges of rural health;
3. Increase access to health care in rural and underserved areas of the state;
4. Improve recruitment and retention of health professionals in rural areas;
5. Provide technical assistance and coordination to rural communities and health organizations;
6. Maintain a clearinghouse for collecting and disseminating information on rural health care issues and innovative approaches to the delivery of health care in rural areas;
7. Coordinate rural health interests and activities; and
8. Participate in strengthening state, local, and federal partnerships.

Following the establishment and charges of the SORH, HB 1692 (Chapter 114, 2010) authorized the SORH to collect and organize data regarding the current and anticipated supply of health care professionals who make up the state's primary care workforce and the current and anticipated

demand for primary care services in the future by planning and budgeting for a NH Health Professions Data Center to collect this data.

RSA 126-A:5, XVIII-a(e) requires that the State Office of Rural Health (SORH) submit a report on or before ***December 1, 2019***, and annually thereafter to the speaker of the house of representatives, the senate president, the governor, the oversight committee on health and human services established under RSA 126-A:13, the chairs of the house and senate executive departments and administration committees, the chairs of the house and senate policy committee having jurisdiction over health and human services, and the commission on primary care workforce issues established by RSA 126-T:1, on the health status of rural residents, incorporating current data from the Bureau of Health Statistics and Data Management.

In 2019, RSA 126-A:5, XVIII-a was amended to include that the SORH shall receive and collect data regarding surveys completed by participating licensees pursuant to RSA 317-A:12-a, RSA 318:5-b, RSA 326-B:9-a, RSA 328-D:10-a, RSA 328-F:11-a, RSA 329:9-f, RSA 329-B:10-a, RSA 330-A:10-a, and RSA 330-C:9-a. Annual reports submitted by the SORH shall incorporate aggregate data and information on current and projected primary workforce needs and the participation rate on surveys completed by clinicians.

All reports produced by the RHPC can be found on the Department's Rural Health and Primary Care Reports page https://www.dhhs.nh.gov/rural-health-and-primary-care-reports. They include the State Office of Rural Health, State Loan Repayment Program, and Health Professions Data Center reports; and the Primary Care Needs Assessments.

Health Status of Rural Residents

Overview of New Hampshire

New Hampshire is one of the oldest states in the country; originating as a land grant in 1623 and becoming a state in 1775. With its 1,300 lakes and ponds, 40,000 miles of river and 18 miles of seashore, NH is the 45th largest state at 190 miles long and 70 miles wide. NH is bordered by Canada on the north and by Massachusetts on the south. On the east is the Atlantic Ocean and Maine and on the west is Vermont. New Hampshire's scenic rivers, mountain ranges, lakes and agricultural lands define the state's culture and geography but also create physical boundaries and barriers to the resources that improve health. The topography lends itself to difficult driving and long distances between places, particularly for rural residents. Access to primary and specialty medical, oral, behavioral health care can be a significant challenge due to New Hampshire's geographical location and landscape.

Over 37% of the population and 84% of the landmass in New Hampshire is considered rural;[1] most of the land area lies north and west of the capital Concord. The majority of New Hampshire towns are considered rural, with non-rural areas located in the south east and south central regions and primarily rural areas in the western, central and northern sections. The White Mountain National Forest separates the northernmost rural section of the state, which consists of Coos County. Coos County, known as the North Country, has the largest landmass but the smallest population by county. The three (3) most urban or metro areas of NH are Manchester, Nashua and Concord, all located in the state's southern tier where the majority of the population lives. NH's population is disproportionate as density increases from North to South. Population density ranges from 20 people per square mile in Coos County to 775 people per square mile in the Greater Nashua region.[2]

In July 2013, the NH DHHS, through the Bureau of Drug and Alcohol Services (BDAS) and Division of Public Health Services (DPHS) established a strategic partnership to align multiple regional and local public health partnerships into one integrated system. The Regional Public Health Networks (PHNs), a network of 13 NH regions, integrates multiple public health initiatives and services into a common network of community stakeholders for communities with comparable public health issues and priorities in order to improve health outcomes specific to these regions. In place of counties or other geographically defined areas, DPHS, including Rural Health and Primary Care (RHPC), uses these PHNs when reporting on geographic areas of the state. This ensures both consistency and use of NH-appropriate definitions. RHPC defines rurality for PHN using population and population density measures (Figure 1). RPHNs with a population of 100,000 or more and with a population density of 150 people per square mile or more are considered non-rural. RPHNs that don't meet these criteria are categorized as rural. The

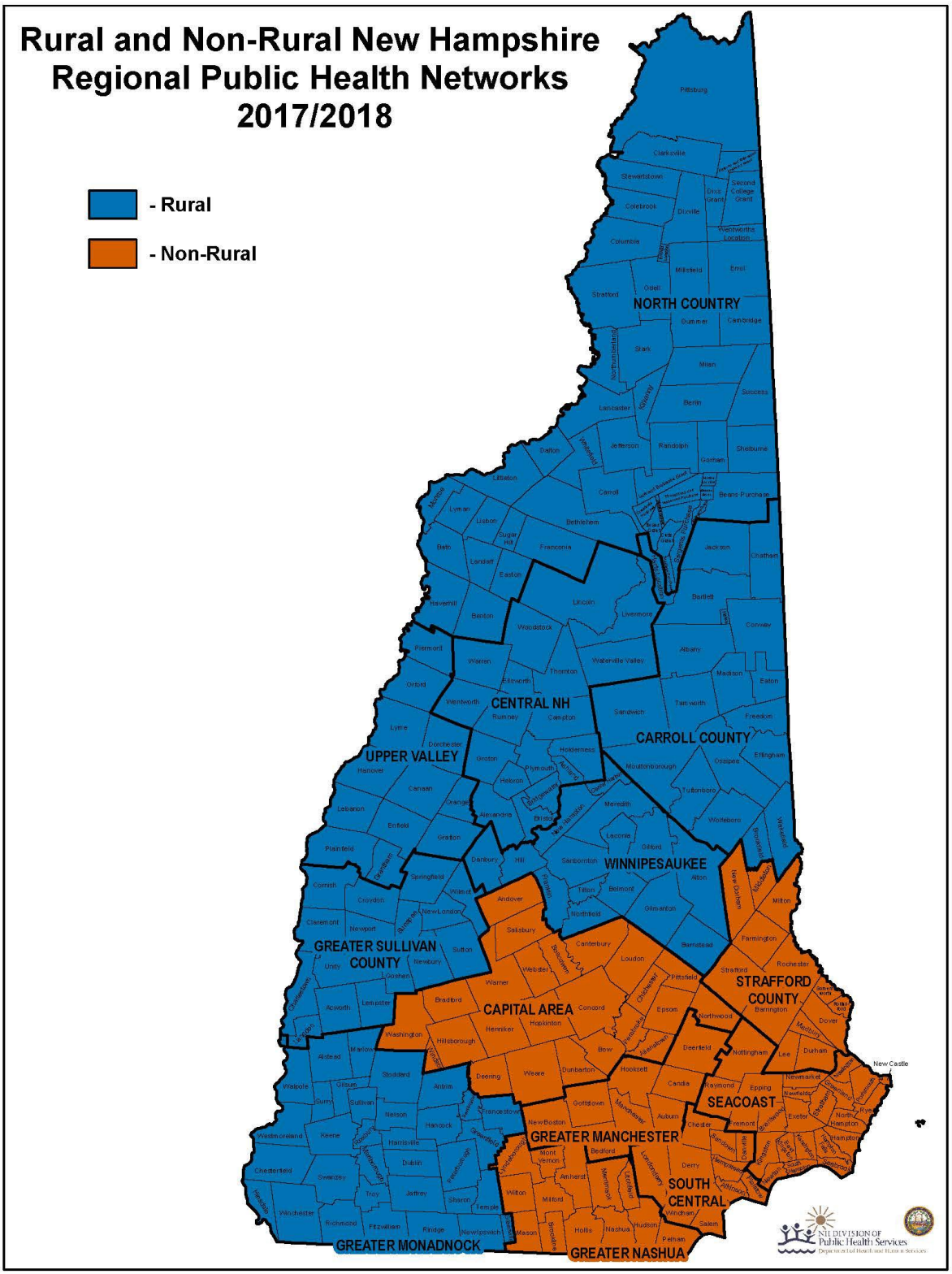
[1] Economic Research Service, United States Department of Agriculture, 2017 New Hampshire State Data. Retrieved on 12/09/2022 from https://data.ers.usda.gov/reports.aspx?ID=17854; Division of Forests and Lands, New Hampshire Department of Natural and Cultural Resources. Retrieved on 10/09/2018 from https://www.nhdfl.org/reports/forest-statistics.

[2] New Hampshire State Plan on Aging. Bureau of Elderly and Adult Services, DHHS. October 2015 – September 2019. Retrieved on 12/09/2022 from https://www.dhhs.nh.gov/dcbcs/beas/documents/stateplan.pdf.

Greater Nashua PHN has the highest population in NH with 220,652 residents (652.5 people per square mile), and Greater Manchester PHN has the greatest population density with 675.8 people per square mile (194,328 residents); while North Country - which has the largest land mass of the RPHNs (1,732.1 square miles) - is the least densely populated Region with only 29.9 people per square mile.[3]

[3] New Hampshire Office of Strategic Initiatives. 2021 Population Estimates of New Hampshire Cities and Towns. Retrieved on 12/09/2022 from https://www.nh.gov/osi/data-center/population-estimates.htm.

Figure 1.


Rural and Non-Rural New Hampshire
Regional Public Health Networks
2017/2018
- Rural
- Non-Rural
NORTH COUNTRY
CENTRAL NH
CARROLL COUNTY
UPPER VALLEY
WINNIPESAUKEE
GREATER SULLIVAN COUNTY
CAPITAL AREA
STRAFFORD COUNTY
SEACOAST
GREATER MANCHESTER
SOUTH CENTRAL
GREATER MONADNOCK
GREATER NASHUA
NH DIVISION OF Public Health Services

Data Overview and Sources

It is widely accepted that measuring the health status of a population or region is best achieved by using primary care measures. As the first point of contact for all medical concerns and the primary source of care continuity and care coordination to other networks of care, primary care measures reveal access to, and delivery and utilization of care essential to determining the health status of the population. Health disparity by geography graphics included in this report were visualized using Tableau. Because there are no national standardized measures or consensus as to which health behaviors and outcomes best predict primary care access and utilization, the indicators contained in the report were selected from the NH State Health Improvement Plan Priority Areas as the most likely to be impacted by primary care and most indicative of the population's health status. The health indicators included in this report were also included in the 2021 New Hampshire Primary Care Office Needs Assessment Report. Demographic data highlights population risk factors associated with access to and utilization of primary care. The following primary care-associated health indicators are newly added measures analyzed for the report (only included as graphics if significant), since becoming available this year:

- Obesity in children (2-5) and obesity in high school students (demographics)
- No vehicle (barriers to care)
- Provider to population ratios for primary care physicians and dentists (workforce supply)
- Lead testing in children 12-23 months/24-35 months (preventive care)
- High blood pressure and high cholesterol (outcomes)
- Lead levels in children 0-72 months (outcomes)
- Life expectancy (outcomes)

Selected measures were classified under the following categories (for a full list of analyzed health measures, see Appendix A):

- Demographics
- Barriers to Care
- *Workforce Supply
- Substance Use and Mental Health
- Maternal Health
- Preventive Care
- Outcomes

* Refer to the Health Professions Data Center figures on distribution.

Data statistics (rates and accompanying intervals at the 95% confidence level) were compiled by the Bureau of Public Health Statistics and Informatics and the Health Professions Data Center at the NH Department of Health and Human Services; and by Community Health Institute, John Snow Inc. Apart from the All-Payer Claims Database (APCD) and late-stage to all stages incidence ratio of breast cancer statistics, which do not contain confidence intervals, the visualizations contained in this report represent indicators found to be statistically different - according to confidence intervals (CI) - in rural and non-rural areas of the state. Indicators with narrowly overlapping CIs for estimated rates were also included, as these relationships warrant

further investigation using statistical analysis to compute a p-value to assess statistically significant differences at the 95% confidence level. Graphics are also included for indicators with rates not significant by rurality overall but significant in one or more RPHNs. Data analyzed for this report comes from the following sources:

NH CHIS, APCD – Managed by the NH Comprehensive Healthcare Information System (CHIS), the All-Payer Claims Database (APCD) contains claims data from commercial health insurers, public/government insurance programs, and self-insured employer plans. Claims data comes from the 2019 dataset.

ACS - The American Community Survey (ACS) is an ongoing survey by the U.S. Census Bureau. It regularly gathers information previously contained only in the long form of the decennial census, such as ancestry, citizenship, educational attainment, income, language proficiency, migration, disability, employment, and housing characteristics. The Census Bureau randomly sample addresses in every state, the District of Columbia, and Puerto Rico. Crude rates were analyzed from the 2016-2020 dataset.

BRFSS - The Behavioral Risk Factor Surveillance System (BRFSS) is a collaborative project between all of the states in the United States (US) and participating US territories and the Centers for Disease Control and Prevention (CDC). The BRFSS is administered and supported by CDC's Population Health Surveillance Branch, under the Division of Population Health at the National Center for Chronic Disease Prevention and Health Promotion. The BRFSS is a system of ongoing health-related telephone surveys designed to collect data on health-related risk behaviors, chronic health conditions, and use of preventive services from the noninstitutionalized adult population (≥ 18 years) residing in the United States. Crude rates from the 2018 dataset for colonoscopy, mammography, sigmoidoscopy, and Pap test screenings; and no dental visit were analyzed, as these measures are collected on even years. All other BRFSS measures were assessed using crude rates from the 2019 dataset. The flu shot measure was modified in the 2019 BRFSS questionnaire to ask "During the past 12 months, have you had either a flu vaccine that was sprayed in your nose or flu shot injected into your arm," resulting in higher rates of vaccination reported ($\mu = 47.5\%$). Older versions asked, "During the past 12 months, have you had either a flu shot or a flu vaccine that was sprayed in your nose," which resulted in lower rates of vaccination reported ($\mu=33.8\%$).

Cancer Registry - The New Hampshire State Cancer Registry (NHSCR) is a statewide, population-based cancer surveillance program that collects incidence data on all cancer cases diagnosed or treated in the State of New Hampshire. This dataset utilizes 2015-2019 data. Late-stage diagnosis for colon and rectal cancer includes only distant, while late-stages for breast cancer includes both regional and distant states. The In-situ stage was excluded from all cancer events (incidence) in this analysis to target rates of invasive cancers.

NH HPDC – The NH State Office of Rural Health, Division of Public Health Services developed the Health Professions Data Center (HPDC) to collect and store key practice and capacity data from primary care-associated, licensed health care providers in NH. The Health Professions Survey is a required component of New Hampshire license renewal for the following participating provider types: physicians, physician assistants (PAs), advanced practice registered nurses (APRNs), dentists, registered dental hygienists (RHDs), psychologists, alcohol and drug

counselors (LADCs/MLADCs), and mental health practitioners (LICSWs, LCMHCs, LMFTs, LPPs). Provider data is collected with an electronic survey during license renewal under the respective New Hampshire licensing boards. This report utilizes crude rates from the 2020 dataset.

HHLPPP – The Healthy Homes and Lead Poisoning Prevention Program (HHLPPP) works to address the risk of lead poisoning and other health and safety issues that stem from the home environment. As part of this mission, the HHLPPP is mandated to collect the data on blood lead levels of children and adults across the state in order to target resources towards the high-risk communities and populations. This report analyzes crude rates from the 2019 dataset.

OPLC License Records – The Office of Professional Licensure and Certification (OPLC) electronically stores initial and renewal licensure application fields for licensees. Supply indicators such as initial license and expiration dates, date of birth, specialty, and active practice in New Hampshire are accessed by the HPDC to better understand provider and practice characteristics across the state. License records from 2020 were accessed for this report.

PedNSS - The Pediatric Nutrition Surveillance System (PedNSS) is a program-based surveillance system that monitor the nutritional status of low-income infants and children in federally funded child health programs. PedNSS data represent over 8 million children from birth to age 5. This surveillance system provides data that describes prevalence and trends of nutrition, health, and behavioral indicators for children. This report analyzes crude rates from the 2019 dataset.

UHFDDS - The New Hampshire Uniform Healthcare Facility Discharge Dataset (UHFDDS) contains data on health care encounters reported by hospitals licensed by the New Hampshire Department of Health and Human Services, as well as from select specialty facilities. UHFDDS contains patient-level data with demographic variables including age, sex, and county or state of residence, and clinical variables including primary and secondary diagnoses and procedures. Drug and alcohol related visits include acute alcohol and/or drug poisoning as well as injuries/conditions related to acute drug and/or alcohol use. Records with diagnosis codes describing intentional self-harm or assault were not included in the alcohol/drug count, nor were records with only codes for chronic drug or alcohol related conditions, not indicating acute use. This report utilizes age-adjusted rates from the 2020 dataset. 2020 indicator rates for alcohol and drug data jumped from 2019 rates due to an update in methodology to be consistent with the CDC State Injury Indicators Guidance. Intentional poisoning is now included in alcohol and drug-related ED and inpatient data as well as in the self-inflicted harm measure.

Vital Records – Division of Vital Records Administration (DVRA), a division of the New Hampshire Department of State. DVRA is responsible for recording births, deaths, marriages, and divorces. Datasets utilized include Birth Certificates, 2017-2021; Death Certificates, 2012-2020. The indicator “Smoked during Pregnancy” uses percentages based on the number of live births where tobacco use was self-reported and indicated as being used in any time during pregnancy. Late prenatal care is defined as care received after the first trimester of pregnancy.

YRBSS - The Youth Risk Behavior Surveillance System (YRBSS) was developed in 1990 to monitor priority health risk behaviors that contribute markedly to the leading causes of death, disability, and social problems among youth and adults in the United States. These behaviors,

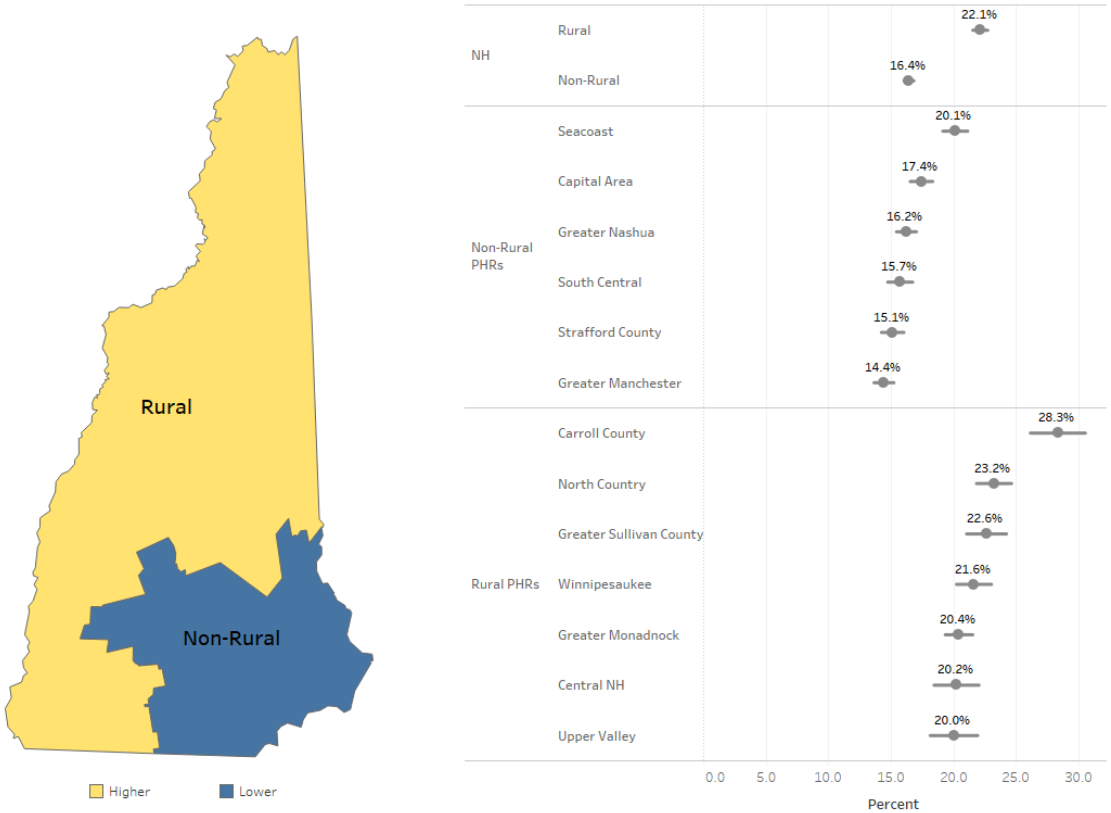
often established during childhood and early adolescence, include behaviors that contribute to unintentional injuries and violence; sexual behaviors that contribute to unintended pregnancy and sexually transmitted infections, including HIV infection; alcohol and other drug use; tobacco use; unhealthy dietary behaviors; and inadequate physical activity. In addition, the YRBSS monitors the prevalence of obesity and asthma and other priority health-related behaviors plus sexual identity and sex of sexual contacts. Indicator data is comprised from either Local Aggregate Sample or the Random Sample. This report utilizes crude rates from the 2019 dataset.

Data Summary

Demographics

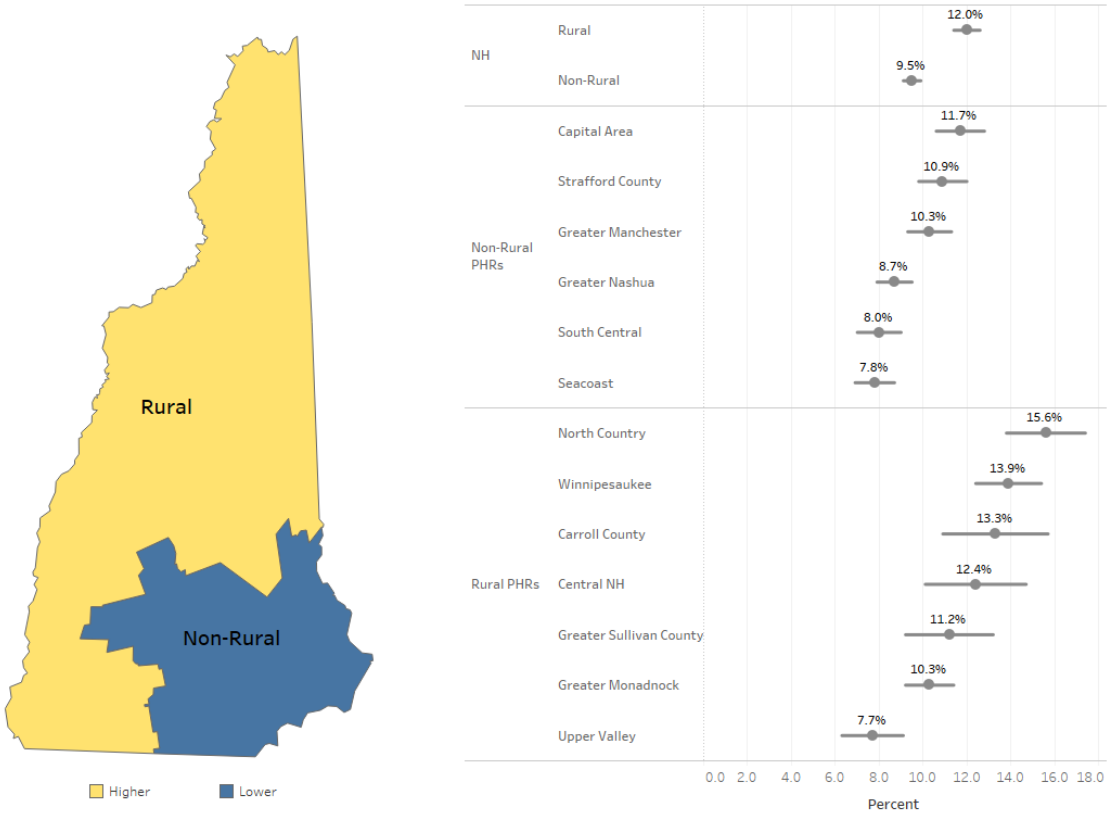
Significant demographic differences exist between rural and non-rural regions (Figures 2-8). Rural rates are higher than non-rural rates for senior age-65+ (by 35%), disability (by 26%), low income (by 42%), poverty (by 37%), uninsurance (by 33%), and veteran status (by 13%). Rates are highest in North Country for all measures with the exception of senior age and percentage uninsured, in which Carroll County and Central NH rates, respectively, are highest. While there was no statistically significant disparity between rurality for percentage with no vehicle, it's worth noting that North Country rates are statistically higher than all but four other PHRs, regions by rurality, and NH. The rate of non-fluent English speakers is four times as high in non-rural New Hampshire than in rural. These demographic differences are consistent with the previous year's report.

Figure 2. Percentage of Population 65+ Years Old, Rural/Non-Rural, 2016-2020



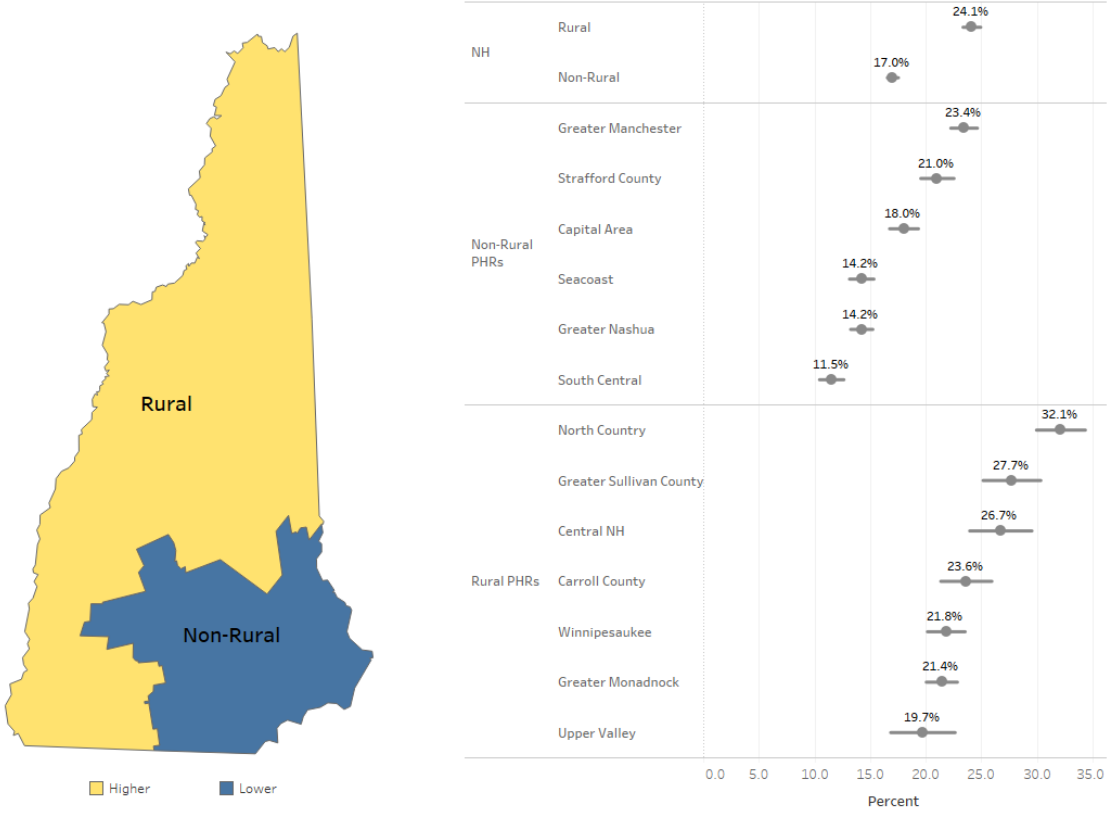
Source: U.S. Census Bureau, American Community Survey (ACS) 5 year estimates

Figure 3. Percentage of Population (18-64) Disabled, Rural/Non-Rural, 2016-2020



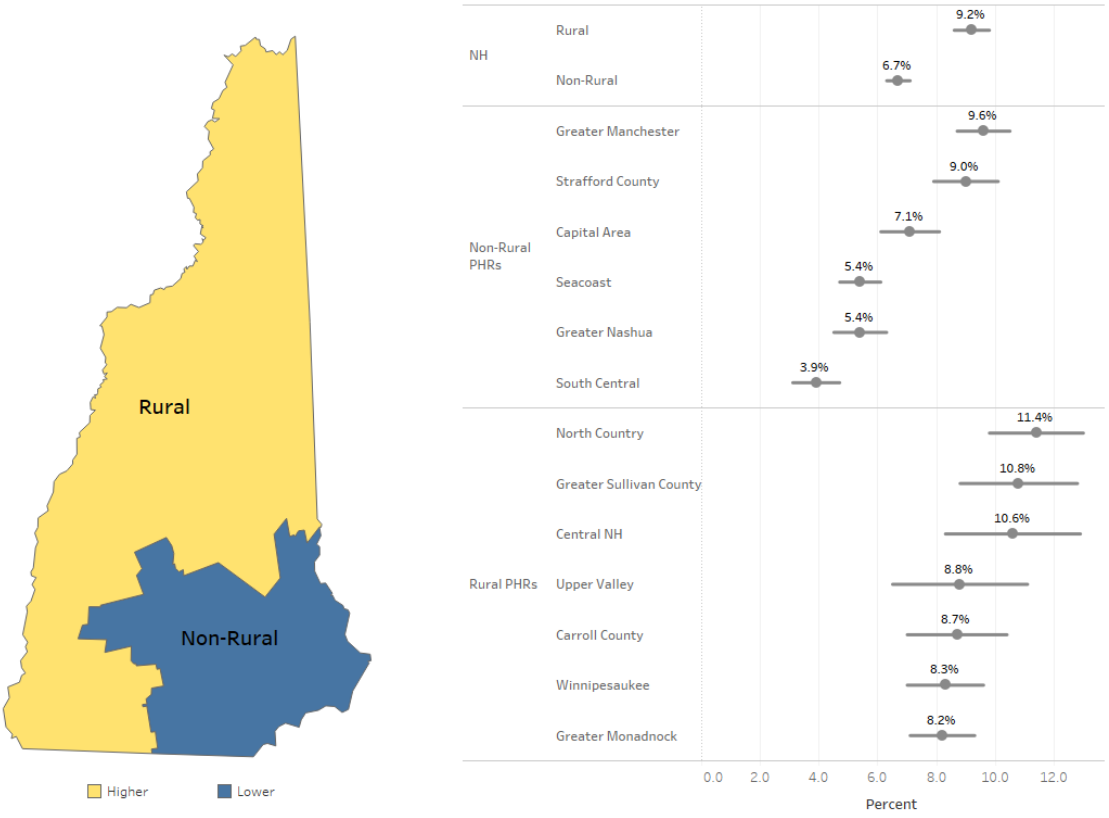
Source: U.S. Census Bureau, American Community Survey (ACS) 5 year estimates

Figure 4. Percentage of Low-Income Population (below 200% of the Federal Poverty Level, All Ages), Rural/Non-Rural, 2016-2020



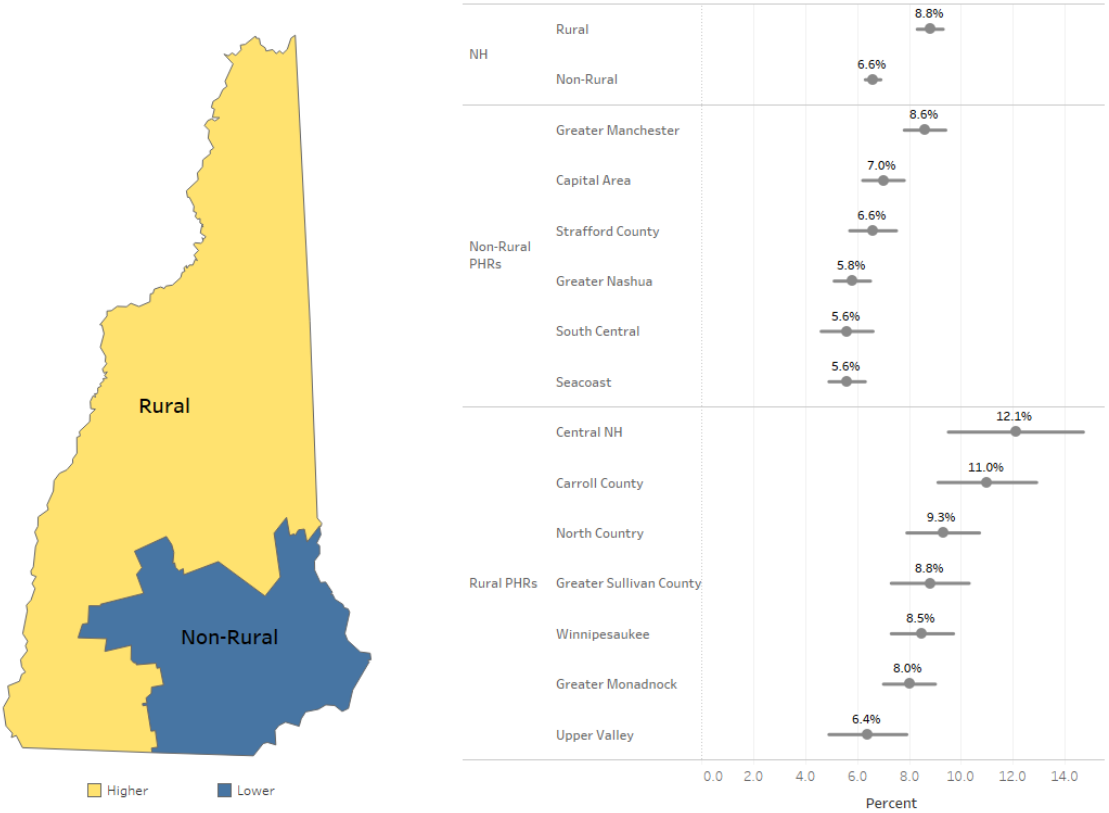
Source: U.S. Census Bureau, American Community Survey (ACS) 5 year estimates

Figure 5. Percentage of Population in Poverty (below 100% of the Federal Poverty Level, All Ages), Rural/Non-Rural, 2016-2020



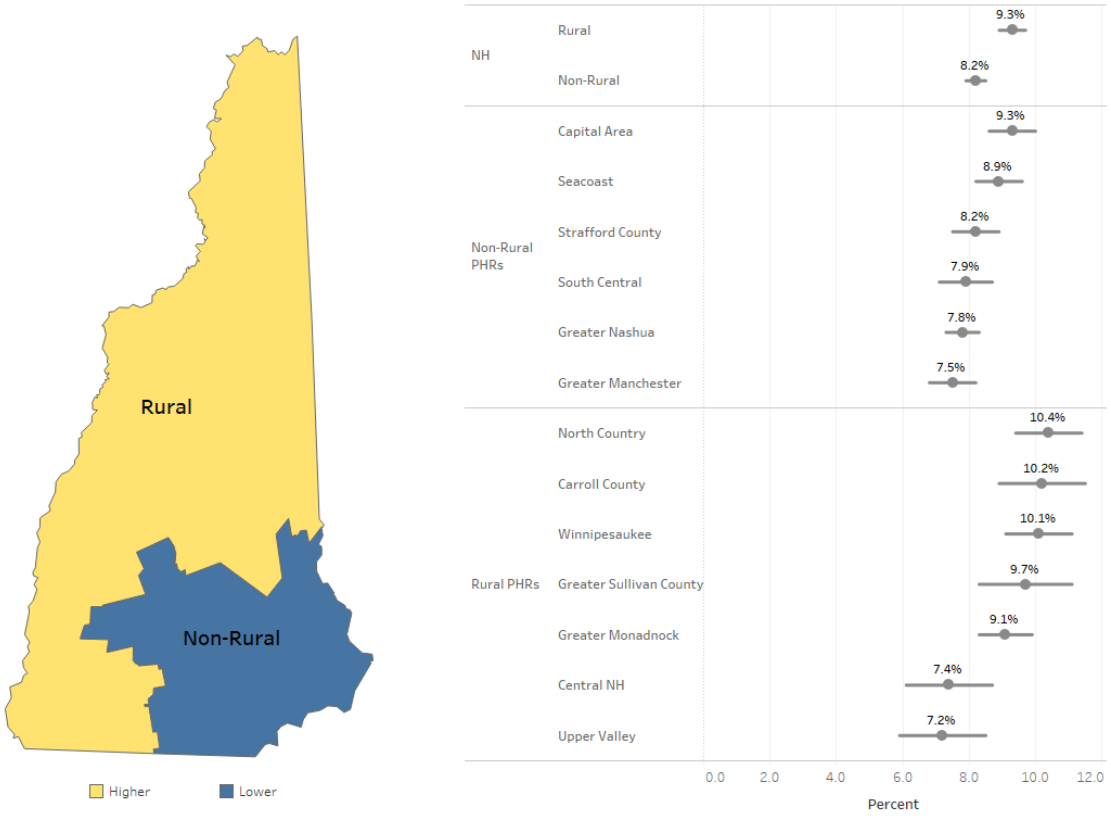
Source: U.S. Census Bureau, American Community Survey (ACS) 5 year estimates

Figure 6. Percentage of Population (<65+) Uninsured, Rural/Non-Rural, 2016-2020



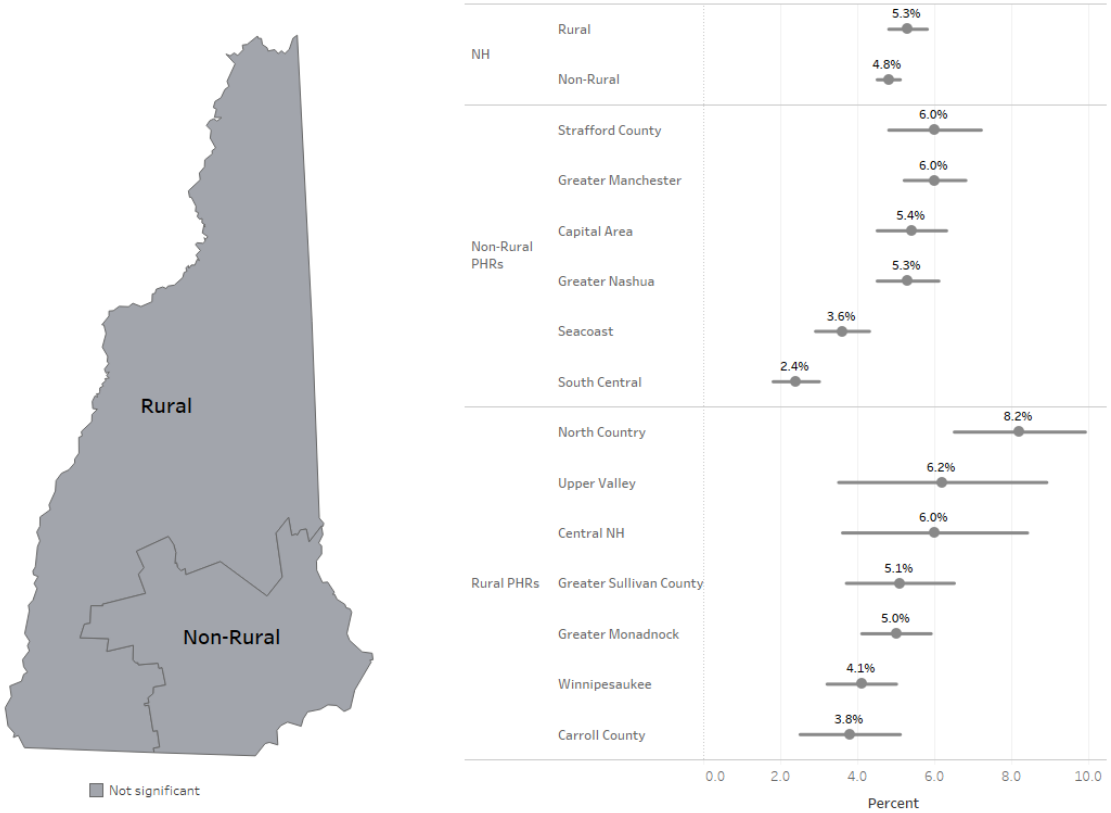
Source: U.S. Census Bureau, American Community Survey (ACS) 5 year estimates

Figure 7. Percentage of Population (18+) that is a Veteran, Rural/Non-Rural, 2016-2020



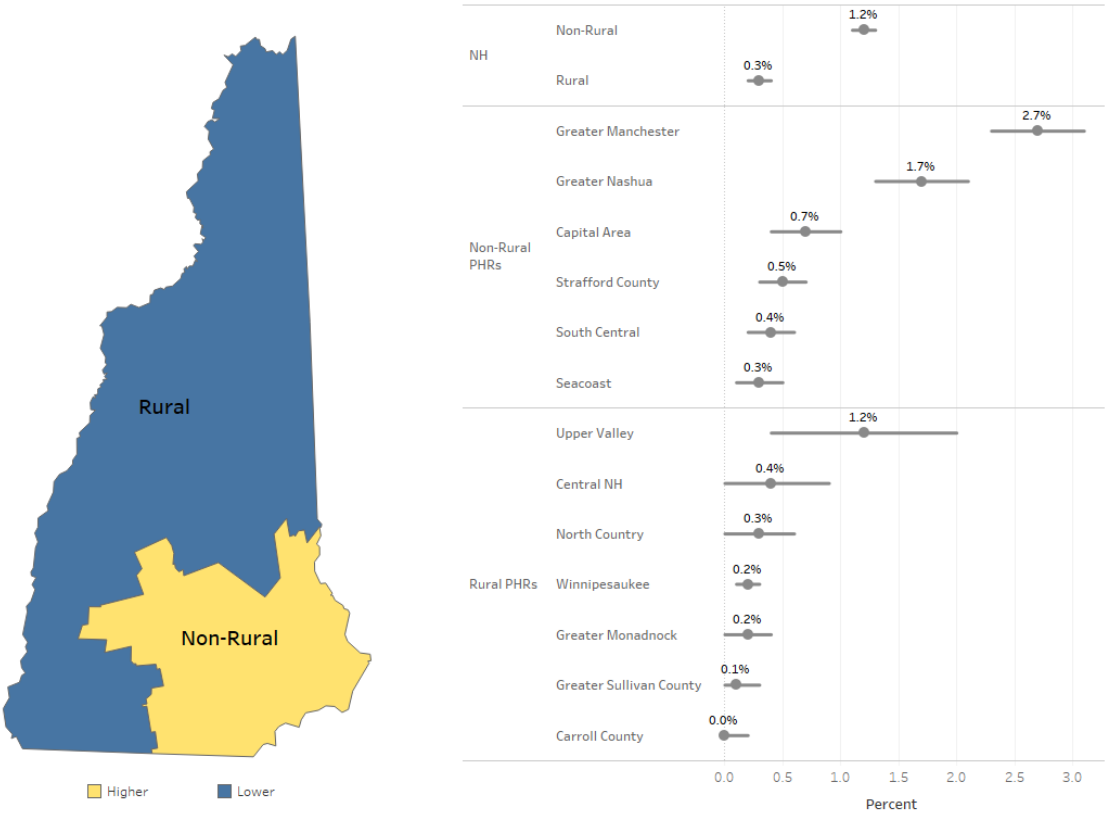
Source: U.S. Census Bureau, American Community Survey (ACS) 5 year estimates

Figure 8. Percentage of Households that do not have a Vehicle, Rural/Non-Rural, 2016-2020



Source: U.S. Census Bureau, American Community Survey (ACS) 5 year estimates

Figure 9. Percentage of Population (5+) not Fluent in English, Rural/Non-Rural, 2016-2020

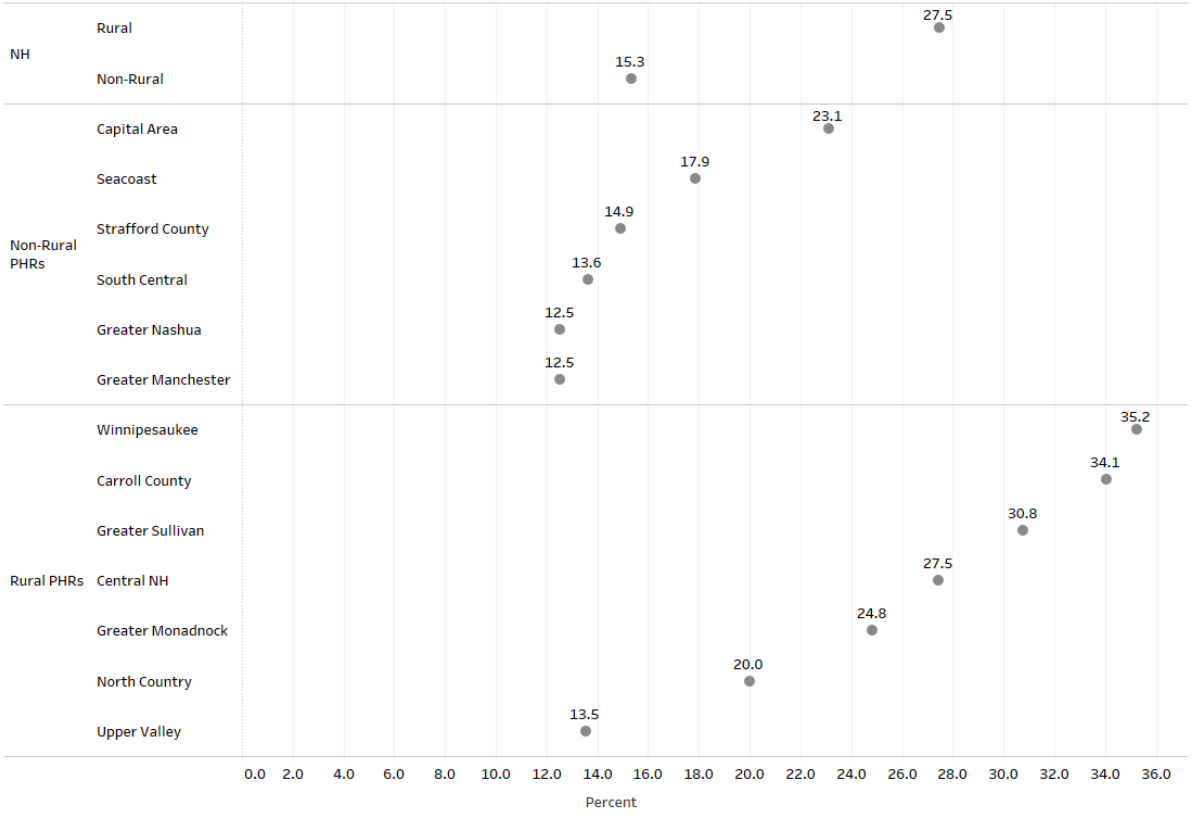


Source: U.S. Census Bureau, American Community Survey (ACS) 5 year estimates

Barriers to Care

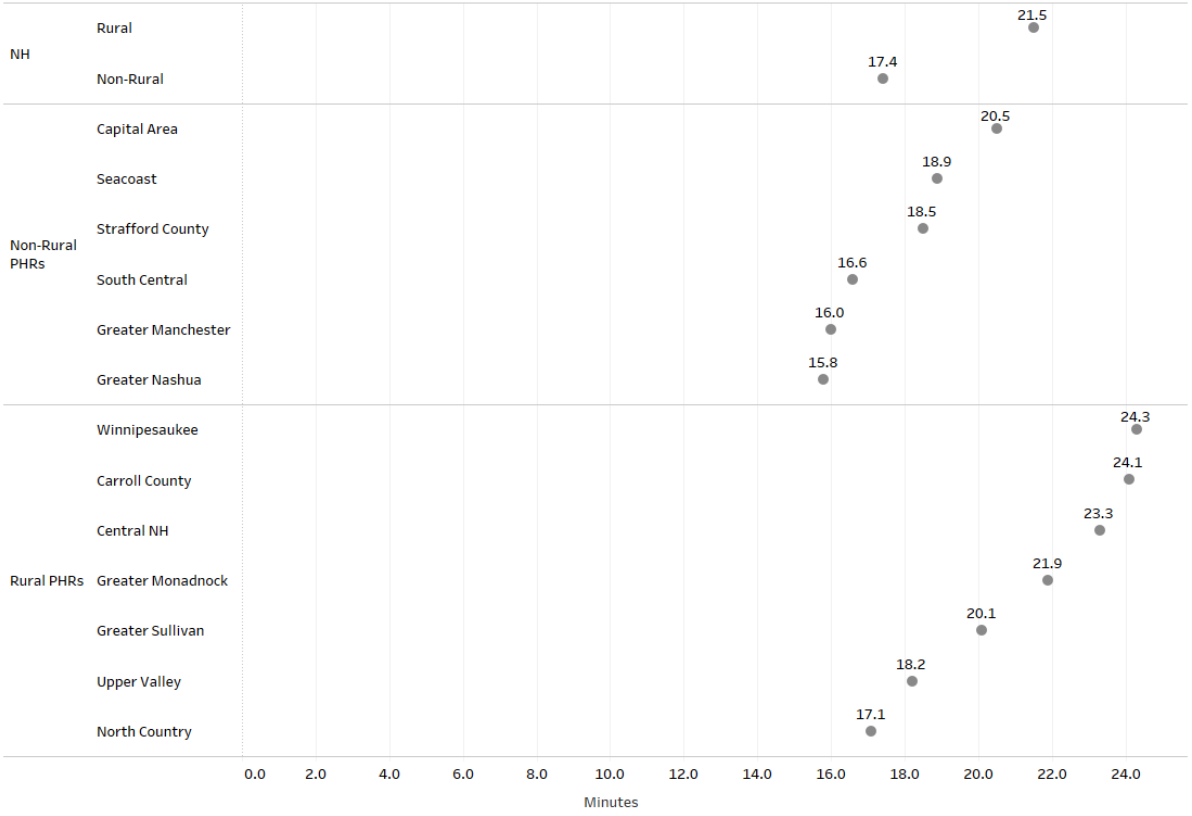
Primary care travel time statistics were not updated since last year's report. Travel times to health care visits are predictably longer for rural populations compared to non-rural, as rural residents face greater geographic barriers during travel. The percentage of primary medical care visits with travel times greater than 30 minutes, one way, is 1.8 times as high for rural populations than non-rural (Figure 10). PHRs Winnipesaukee and Carroll County had the highest rates at 35% and 34% of visits, respectively; and as expected, the two most populated PHRs - Greater Manchester and Greater Nashua - had the lowest rates at 12.5% of visits each. The difference in mean travel time between rural and non-rural residents is less striking, with data reflecting just a four-minute difference by rurality (Figure 11). Once again, Winnipesaukee and Carroll County had the highest mean travel times (24 minutes), while Greater Manchester and Greater Nashua had the lowest (16 minutes). While there is slight confidence interval overlap for the percentage of New Hampshire's population without a personal doctor or health care provider by rurality, all rural PHRs except Upper Valley show higher rates than non-rural PHRs, with Winnipesaukee leading with 20% indicating no PCP (Figure 12).

Figure 10. Percentage of Primary Medical Care Visits (All Ages) with Travel Times Greater than 30 Minutes One Way, Rural/Non-Rural, 2019, Crude Rate



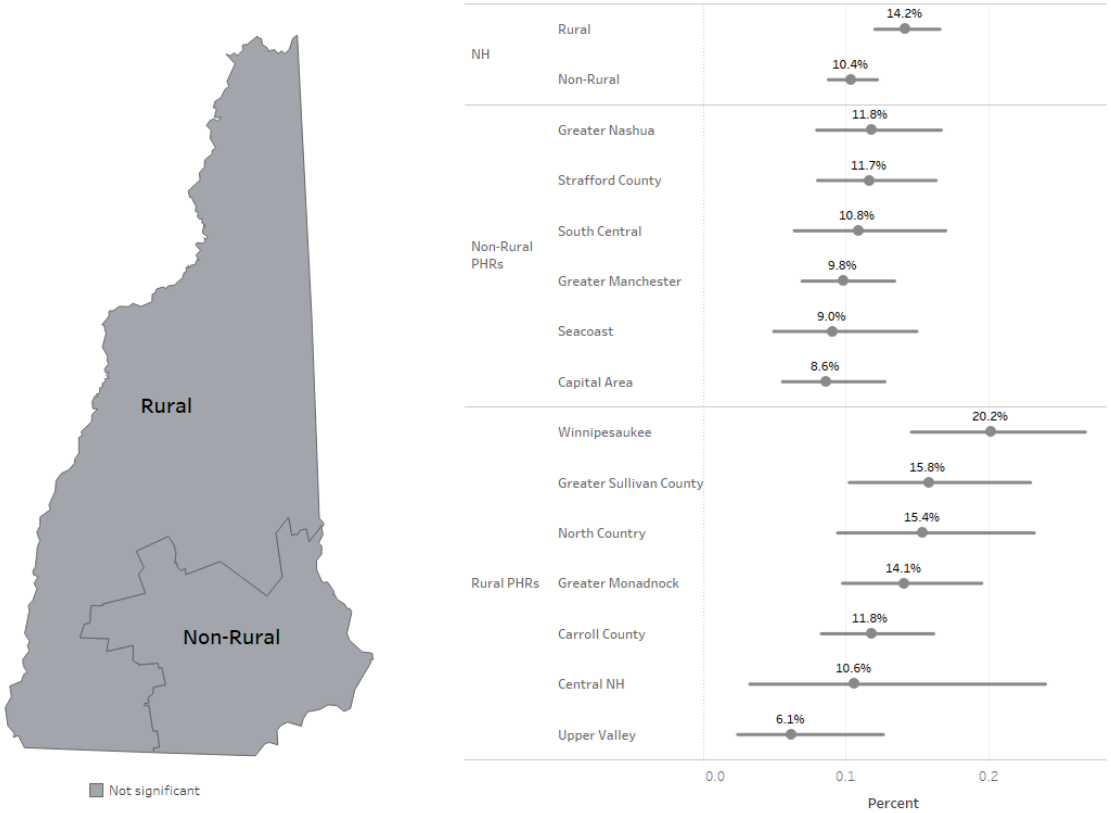
Source: New Hampshire Comprehensive Health Care Information System (CHIS)

Figure 11. Mean Travel Time to Primary Medical Care Visits (All Ages), Rural/Non-Rural, 2019, Crude Rate



Source: New Hampshire Comprehensive Health Care Information System (CHIS)

Figure 12. Percentage of Population (18+) without a Personal Doctor/Health Care Provider, Rural/Non-Rural, 2019

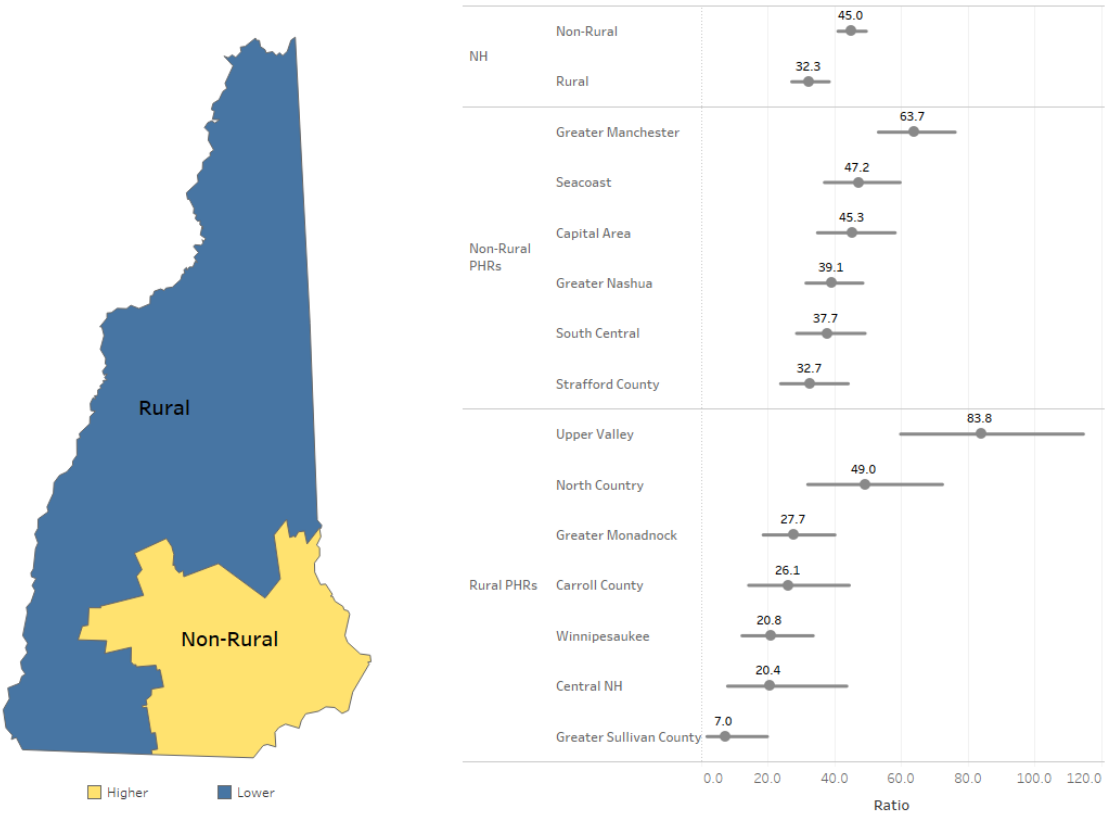


Source: Behavioral Risk Factor Surveillance Survey (BRFSS)

Workforce Supply

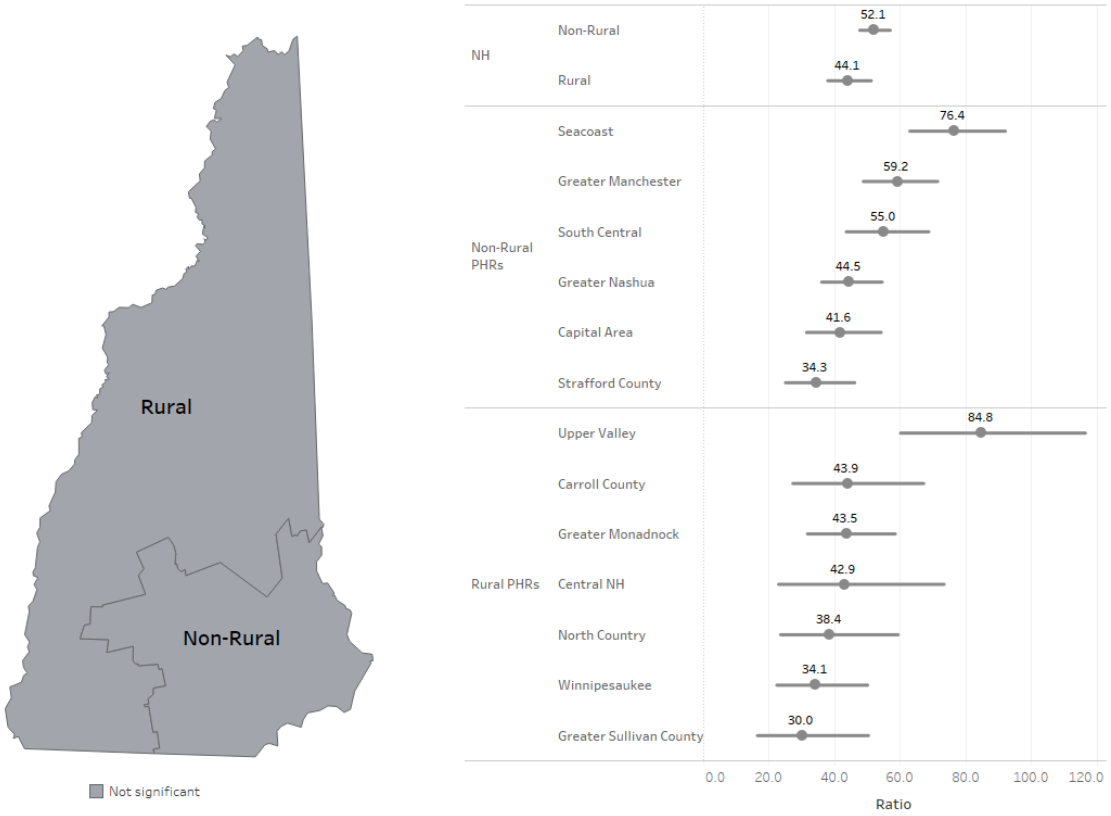
There is significantly more in-person primary care practice, as measured by provider full-time equivalent (FTE), in non-rural versus rural NH (Figure 13). This disparity is especially striking considering rural Upper Valley has the highest primary care FTE in the state, by an estimated 20 FTE above the second highest PHR (non-rural, Greater Manchester). The estimate for Greater Sullivan County (7.0) is far below the ratio for any of the non-rural PHRs. There isn't a significant disparity by rurality for dental provider supply, but similarly to the primary medical care landscape, the dental provider supply trends lower in rural compared to non-rural NH, overall (Figure 14). As is the case with medical primary care, the provider to population ratio is highest in Upper Valley, with an estimated 40 provider difference from the next highest ratio in a rural PHR (Carroll County).

Figure 13. Primary Care FTE:Population Ratio, 2020



Source: New Hampshire Health Professions Data Center

Figure 14. Dental Provider:Population Ratio, 2020

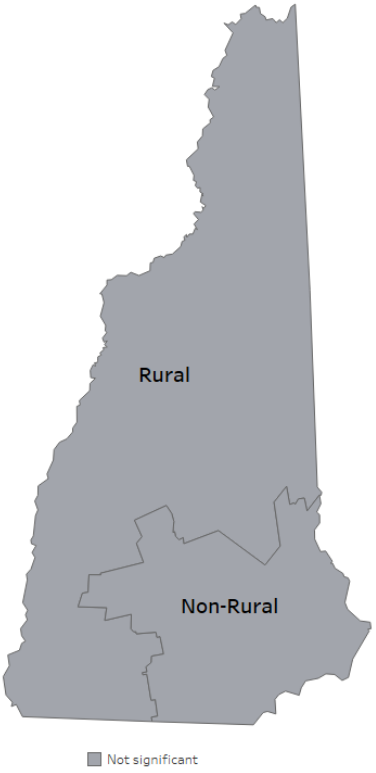


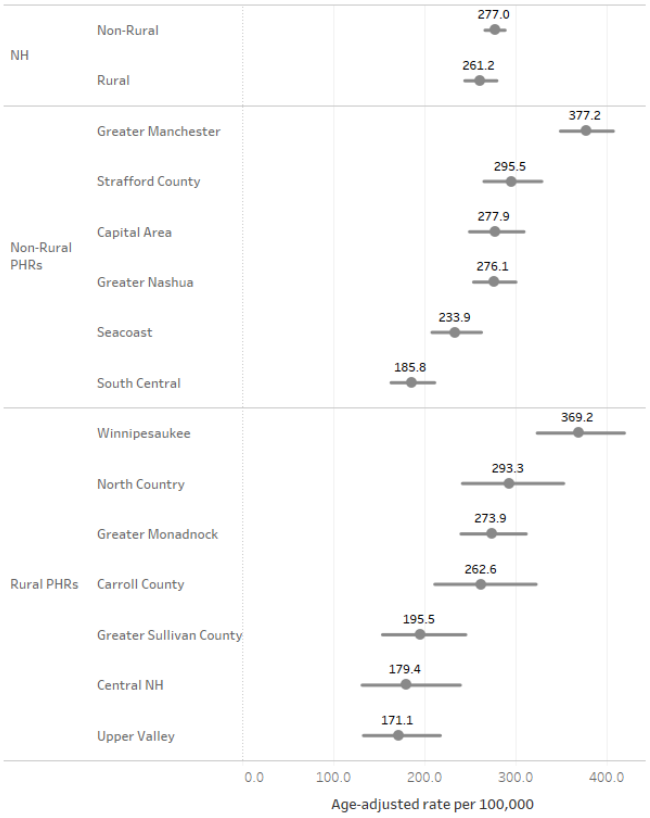
Source: New Hampshire Office of Professional Licensure and Certification

Substance Use and Mental Health

Figures 15-17 present the substance use and mental health indicators found to be statistically different by geography, with non-rural populations faring worse than rural. The rates of alcohol- and/or drug-related emergency department (ED) visits are not significantly different by rurality overall; however, both non-rural Greater Manchester and rural Winnipesaukee PHR rates stand out as significantly higher than any other individual PHR or NH region by rurality (Figure 15). ED admission rates are over one-third higher in Greater Manchester as compared to the aggregated non-rural estimate and 40% higher in Winnipesaukee as compared to the aggregated rural estimate. The geographic rates for alcohol- and/or drug-related inpatient admissions by rurality are significantly different, with the Greater Manchester rate far above all other rates by PHR and regions aggregated by rurality (Figure 16). ED visits for self-inflicted harm by rurality shows an opposite trend, with rural rates significantly higher than non-rural rates (Figure 17). Suicide rates were not found to be significantly different, though the trend follows that of self-harm: higher rates in rural versus non-rural areas.

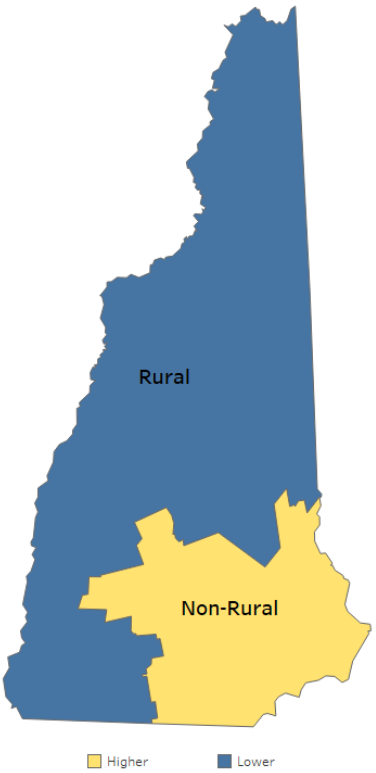
Figure 15. Drug & Alcohol Related Emergency Department Visits (All Ages), Rural/Non-Rural, 2020, Age-Adjusted Rate

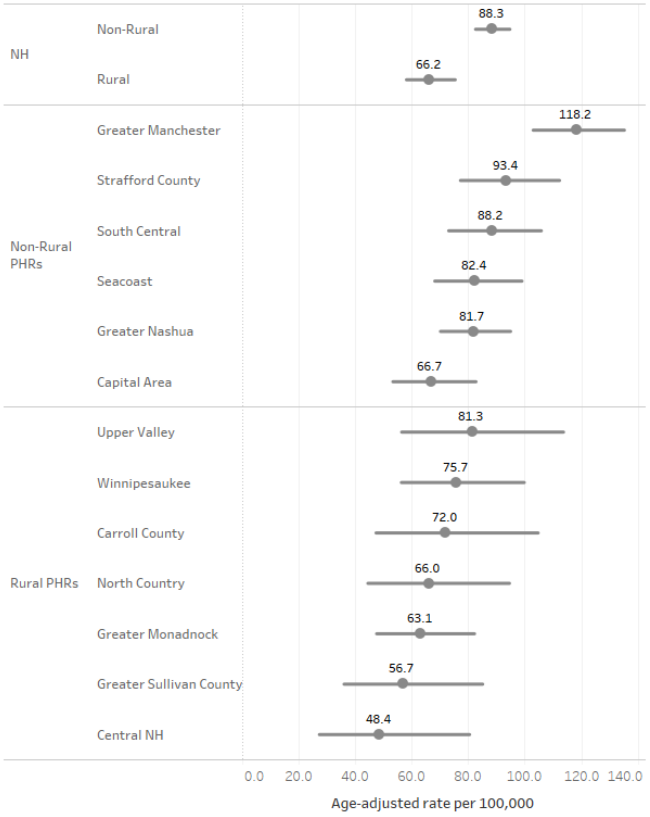




Source: NH Hospital Discharge Data Set (HDDS)

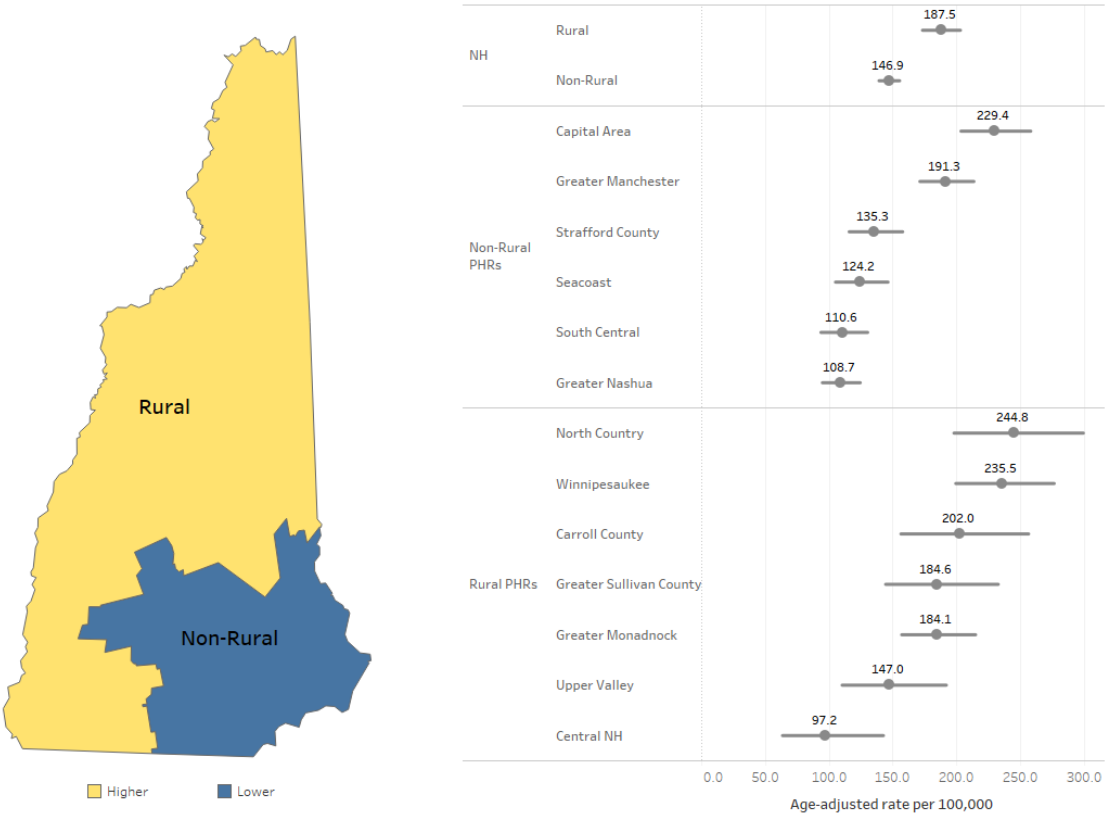
Figure 16. Drug & Alcohol Related Inpatient Hospitalizations (All Ages), Rural/Non-Rural, 2020, Age-Adjusted Rate





Source: NH Hospital Discharge Data Set (HDDS)

Figure 17. Self-Inflicted harm - Emergency Department Visits (All Ages), Rural/Non-Rural, 2020, Age-Adjusted Rate

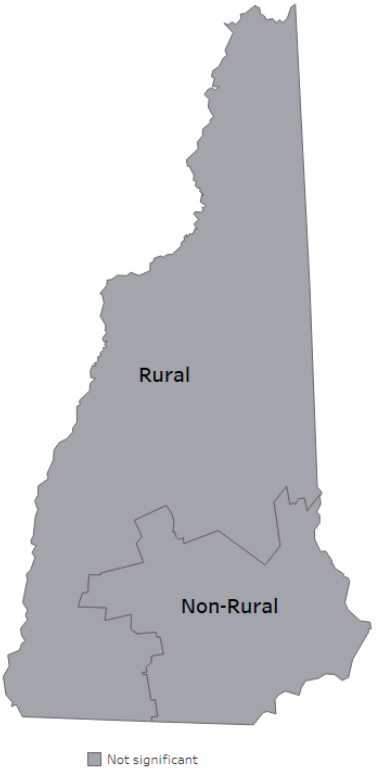


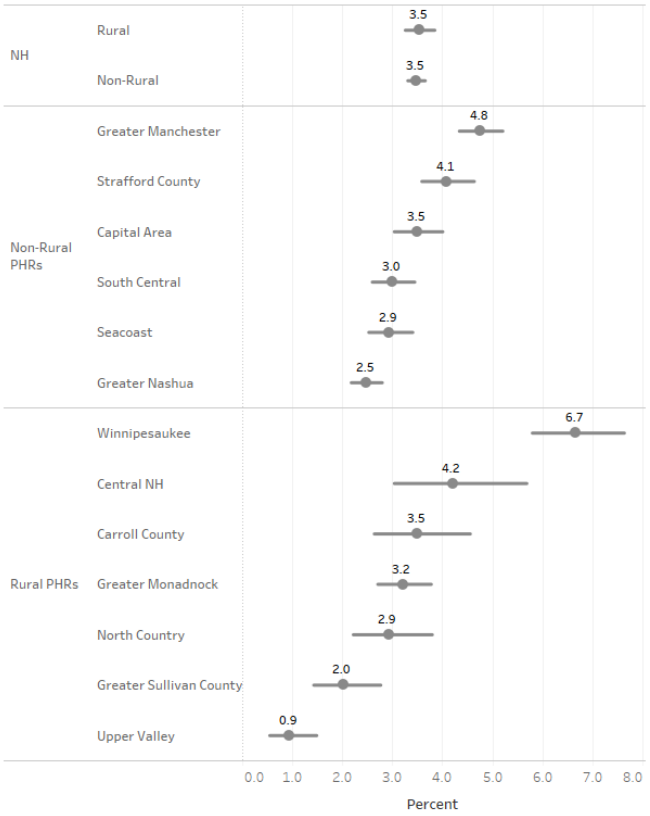
Source: NH Hospital Discharge Data Set (HDDS)

Maternal Health

Figures 18 and 19 visualize the maternal health disparities in NH when considering no or late prenatal care and smoking during pregnancy. While rates are equal for no or late prenatal care rates for regions aggregated by rurality, rates in Winnipesaukee are considerably higher when compared to rates by PHR and aggregated regions (Figure 18). Rural residents continue to have higher rates of smoking during pregnancy than their non-rural counterparts (Figure 19), though both rural and non-rural rates continue to fall each year.

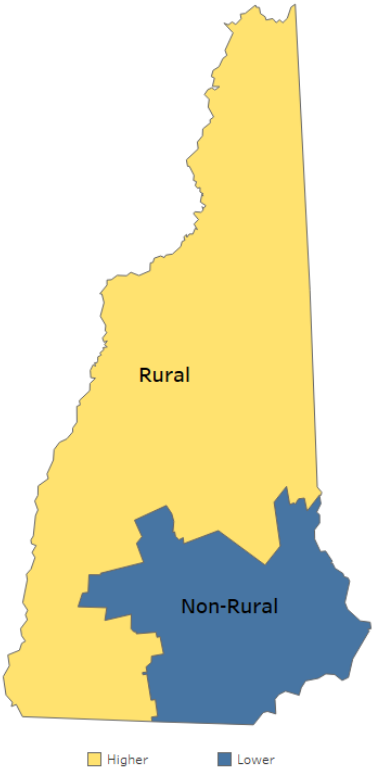
Figure 18. Percentage of Population (Females, Live Births, All Ages) that Received No or Late Prenatal Care, Rural/Non-Rural, 2017-2021

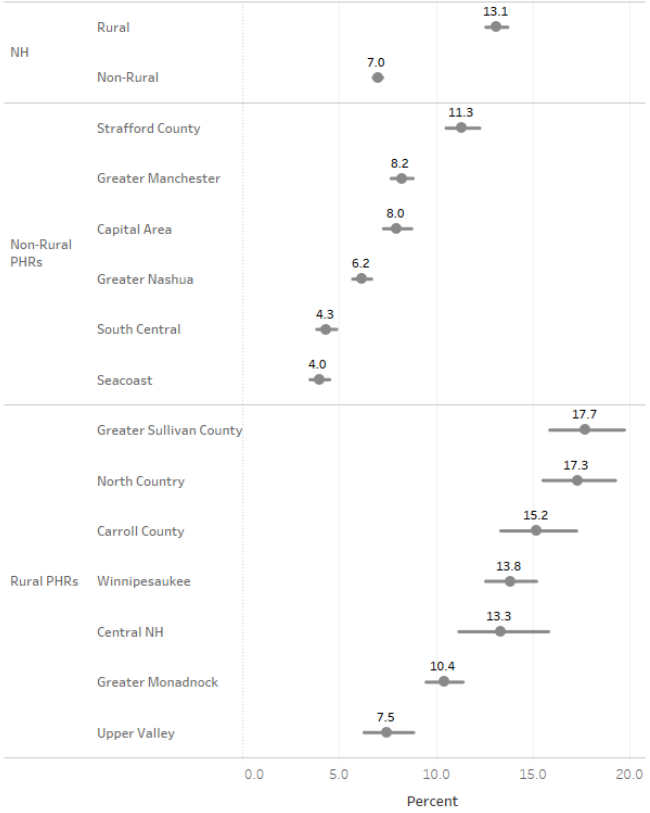




Source: NH Vital Records Birth Certificate Data

Figure 19. Percentage of Population (Females, Live Births, All Ages) that Smoked during Pregnancy, Rural/Non-Rural, 2017-2021



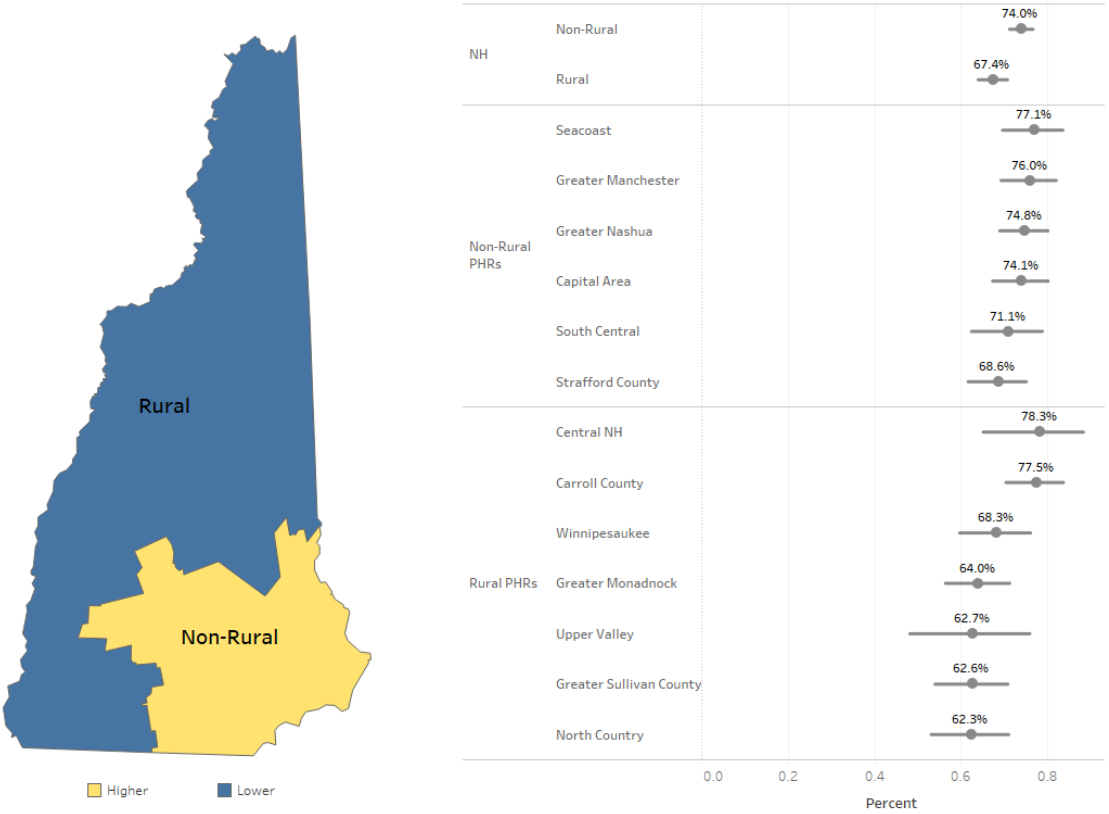


Source: NH Vital Records Birth Certificate Data

Preventive Care

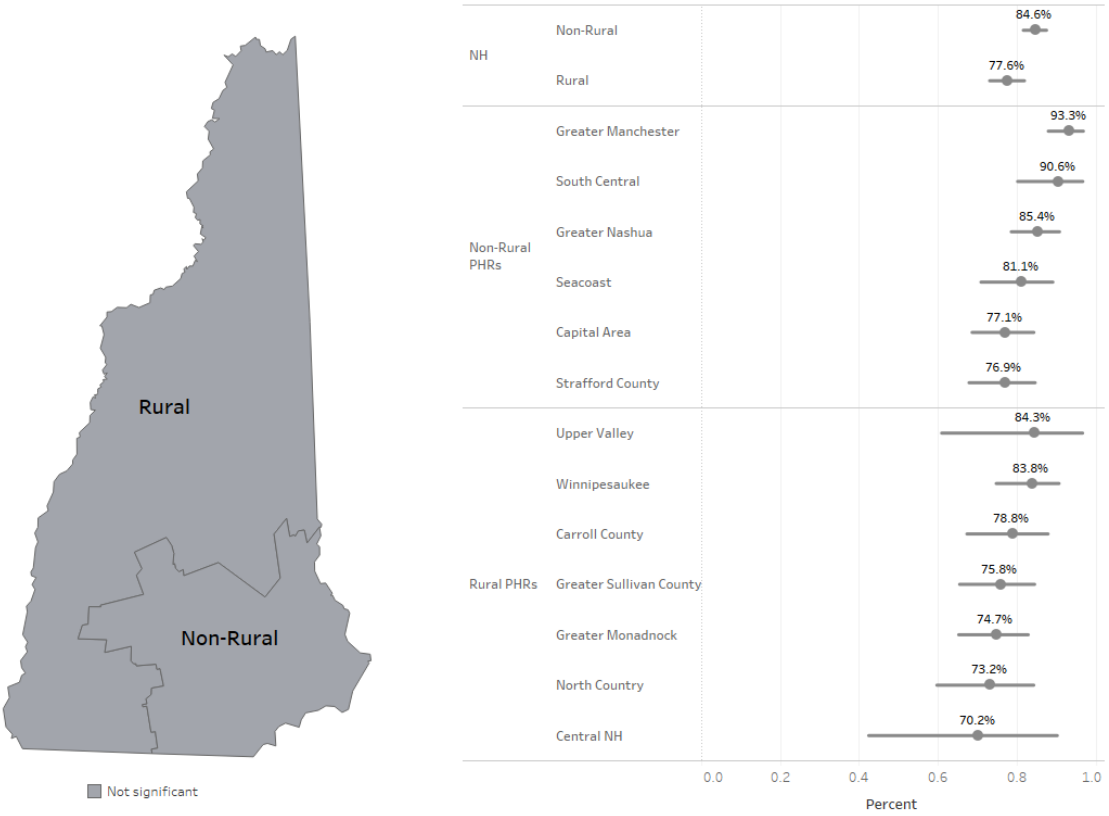
As illustrated in Figures 20-22 below, screening rates are lower in rural compared to non-rural NH for colonoscopy, mammography (not statistically), and 2-year-old lead testing. Because the confidence intervals for mammography rates overlapped by a slight margin (0.3%) – statistical analysis to compute a p-value, which indicates statistical significance, will better assess whether differences exist by rurality. These findings are consistent with previous years' reports. Although Winnipesaukee figures throughout this report show the PHR to have elevated risk when considering many primary care indicators, this region had the second-highest rural rate of mammography, less than 1% lower than Upper Valley's rate, which contains Dartmouth Hitchcock Medical Center (Figure 21). Lead testing is also significantly lower in rural than in non-rural NH (Figure 22). Rural Central NH trails far behind the other PHRs in the state with an estimated 29% of children tested. One of the strongest indicators of primary care access, check-up in the past year, shows the same trend by rurality (Figure 23); annual check-up rates are lower in rural regions.

Figure 20. Percentage of Population (50-75) that had a Colonoscopy in the past 10 Years, Rural/Non-Rural, 2018



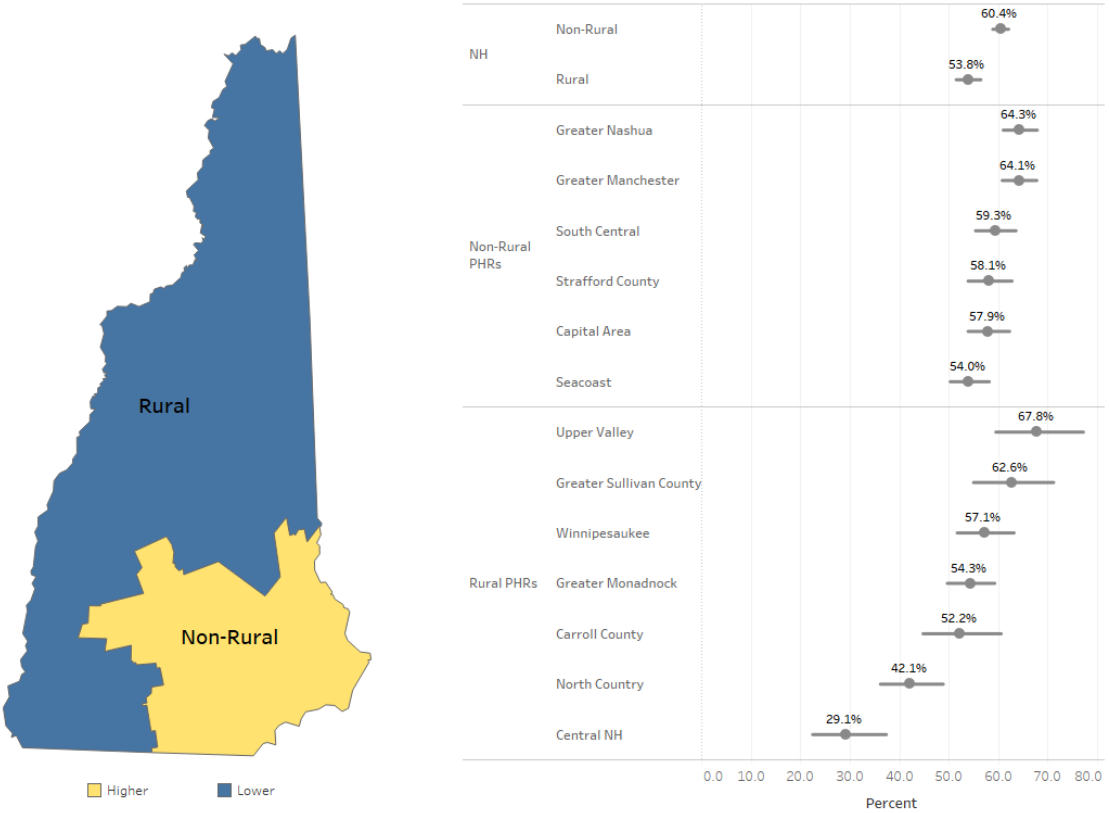
Source: Behavioral Risk Factor Surveillance Survey (BRFSS)

Figure 21. Percentage of Women (50-74) that had a Mammogram in the past 2 Years, Rural/Non-Rural, 2018



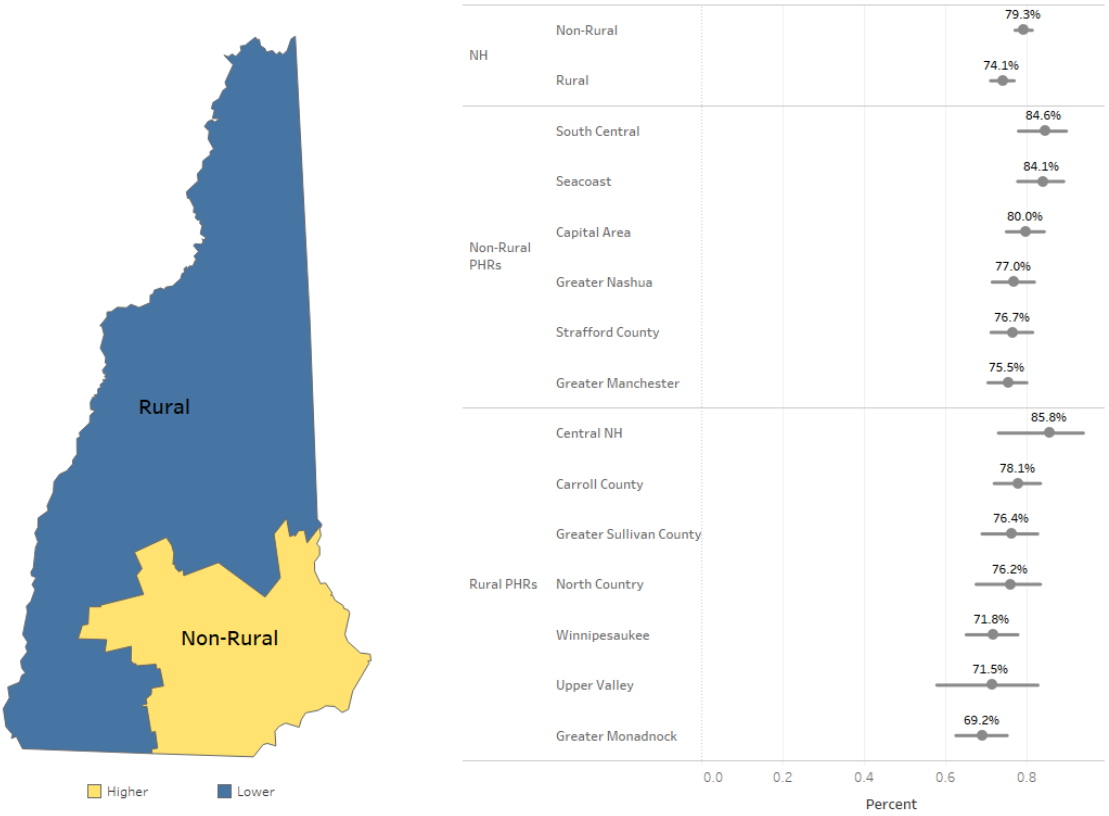
Source: Behavioral Risk Factor Surveillance Survey (BRFSS)

Figure 22. Percentage of Children Tested for Blood Lead Levels, 24 to 35 Months of Age, 2016-2020



Source: Testing Data from NH Healthy Homes and Lead Poisoning Prevention Program (HHLPPP)

Figure 23. Percentage of Population (18+) who had Check-Up in the past Year, Rural/Non-Rural, 2019

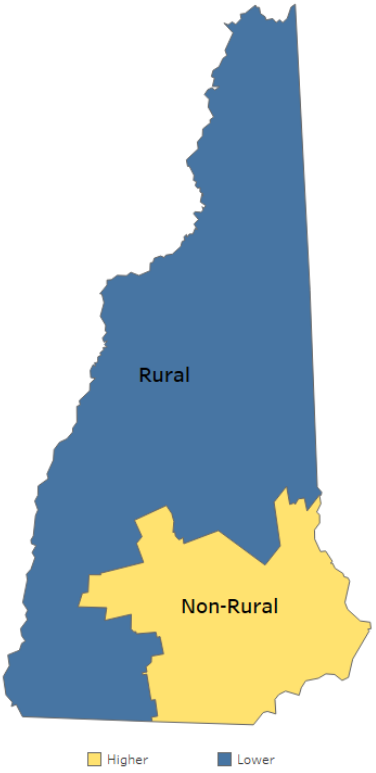


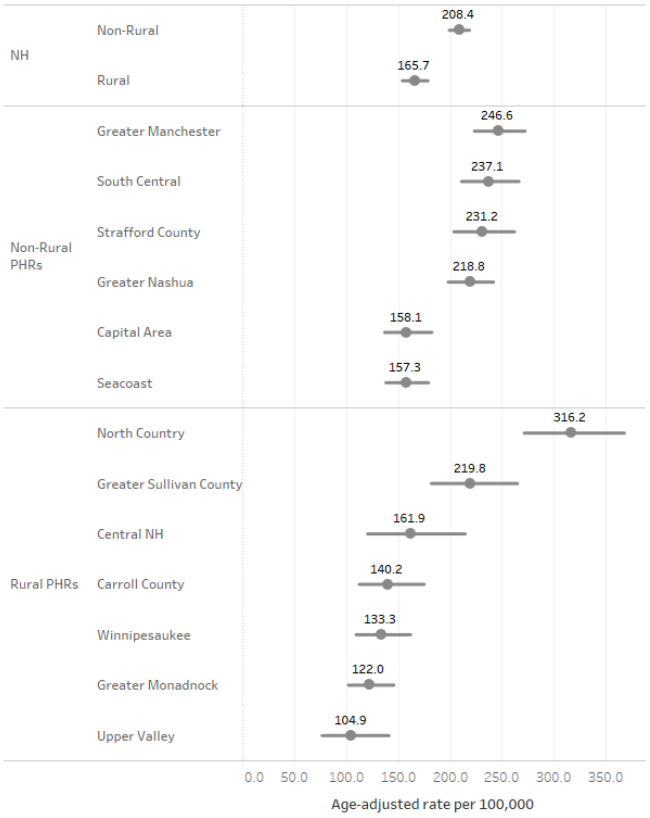
Source: Behavioral Risk Factor Surveillance Survey (BRFSS)

Outcomes

Prevention Quality Indicators (PQIs) are a measure of inpatient admissions that could have been avoided with proper access to primary care. Consistent with previous years, the rates of PQIs are statistically higher in non-rural NH compared to rural. In other words, non-rural residents are more likely to be admitted to the hospital for preventable medical complications than their rural counterparts. While the acute composite measure, which includes bacterial pneumonia and urinary tract infection, is significantly higher in non-rural compared to rural NH (Figure 24); interestingly, the highest rate is in rural North Country, which far exceeds any other rate by PHR or region aggregated by rurality (50% higher than the non-rural rate). The chronic composite rate; which includes diabetes, COPD or asthma, and cardiovascular complications, is almost one-third higher in non-rural than in rural NH, with the rate in Greater Manchester one-quarter higher than the overall rate in non-rural NH (Figure 25). Differences in the overall composite rate, which combines both acute and chronic measures, follows the chronic composite rate closely, with the non-rural rate 30% higher than the rural rate and Greater Manchester markedly higher than any other individual PHR or aggregated region by rurality (Figure 26).

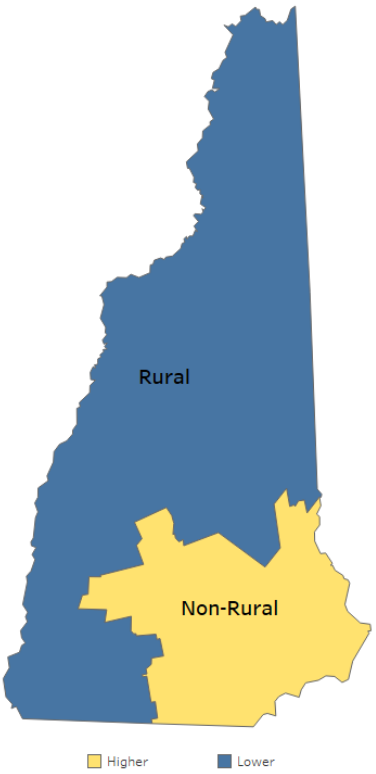
Figure 24. Preventation Quality Indicators (PQI): Acute Composite - Inpatient Admissions (18+), Rural/Non-Rural, 2020, Age-Adjusted Rate

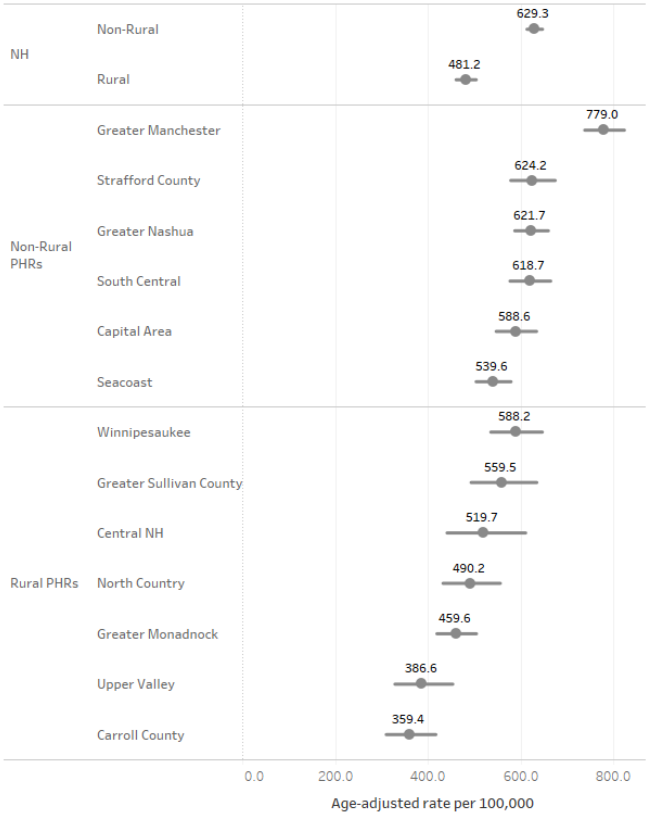




Source: NH Hospital Discharge Data Set (HDDS)

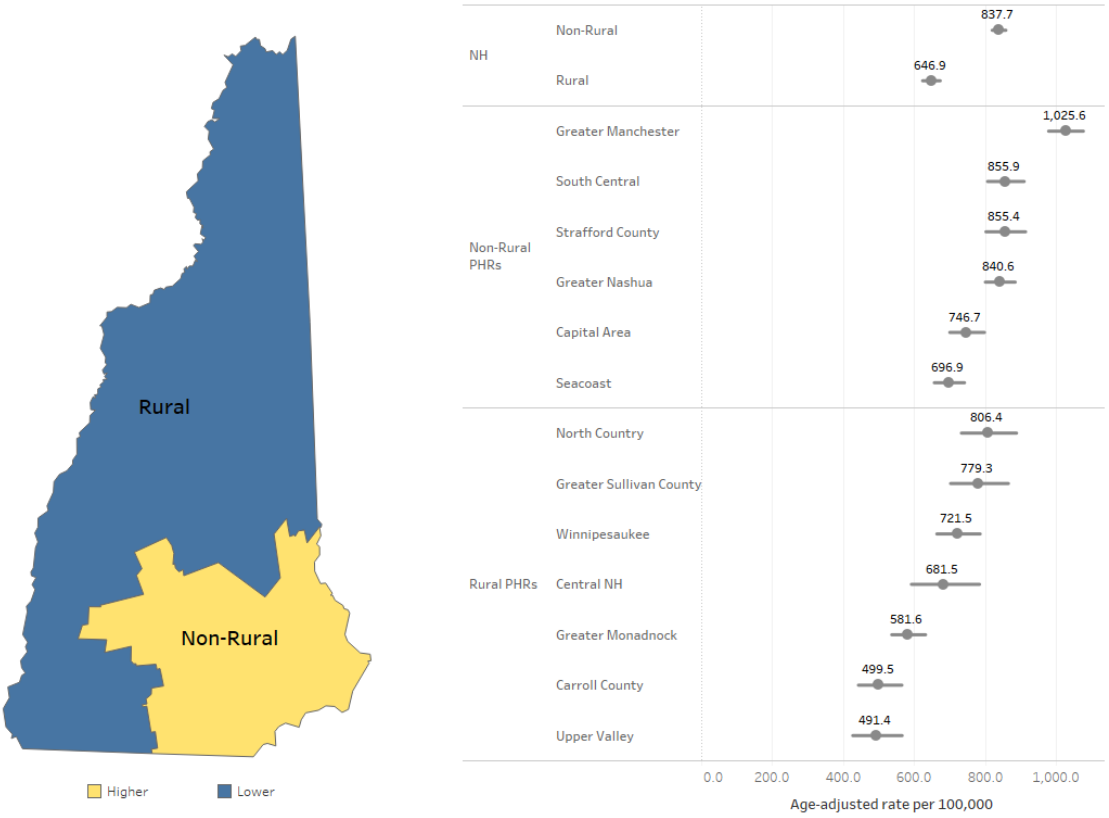
Figure 25. Preventation Quality Indicators (PQI): Chronic Composite - Inpatient Admissions (18+), Rural/Non-Rural, 2020, Age-Adjusted Rate





Source: NH Hospital Discharge Data Set (HDDS)

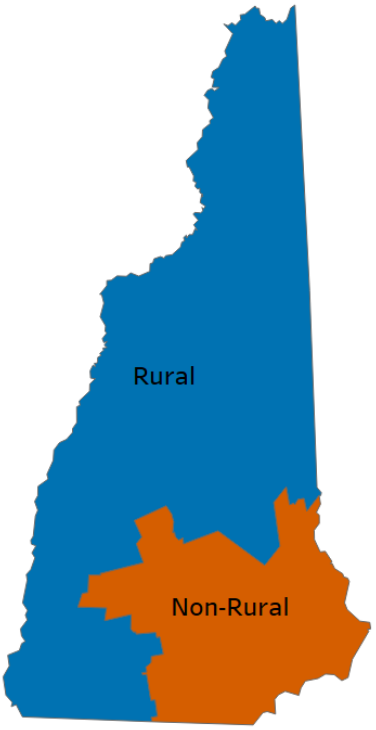
Figure 26. Preventation Quality Indicators (PQI): Overall Composite - Inpatient Admissions (18+), Rural/Non-Rural, 2020, Age-Adjusted Rate

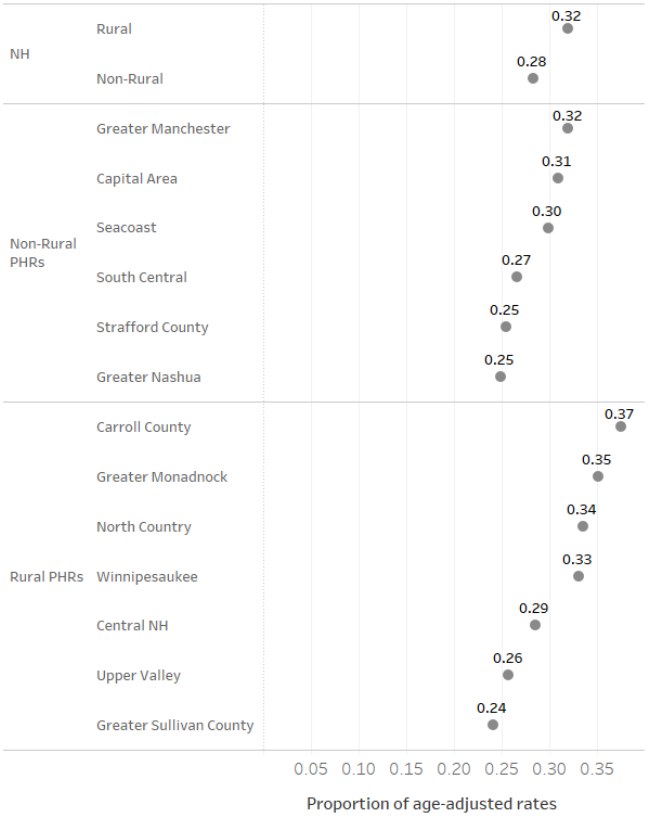


Source: NH Hospital Discharge Data Set (HDDS)

Figures 27 and 28 illustrate the geographic differences in the proportion of late stage to all breast cancer diagnoses and elevated lead levels for children up to 3-years-old. Because this report aims to capture disparities in access and utilization of primary care services between rural and non-rural areas, we used the proportion of all breast cancer incidence diagnosed at a late stage to measure geographic differences as opposed to late-stage rate only, which doesn't capture the primary care lens. Figure 27 illustrates the disparity in late-stage proportional rates between rural and non-rural residents, with late-stage diagnosis rate about 15% higher in rural than non-rural NH (45.1/141.2 v. 40.2/142.3). Figure 28 demonstrates the significant discrepancy between rural and non-rural lead levels, with rural children about twice as likely as non-rural children to have elevated levels.

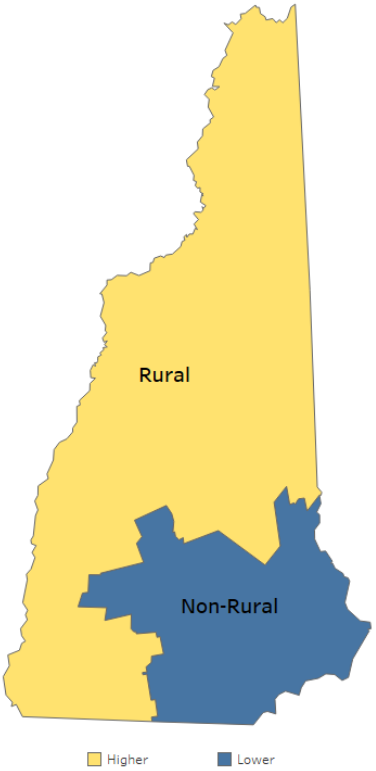
Figure 27. Proportion of Breast Cancer (Female) Cases Diagnosed at Late Stage (All Ages), Rural/Non-Rural, 2015-2019, Age-Adjusted Proportional Rate

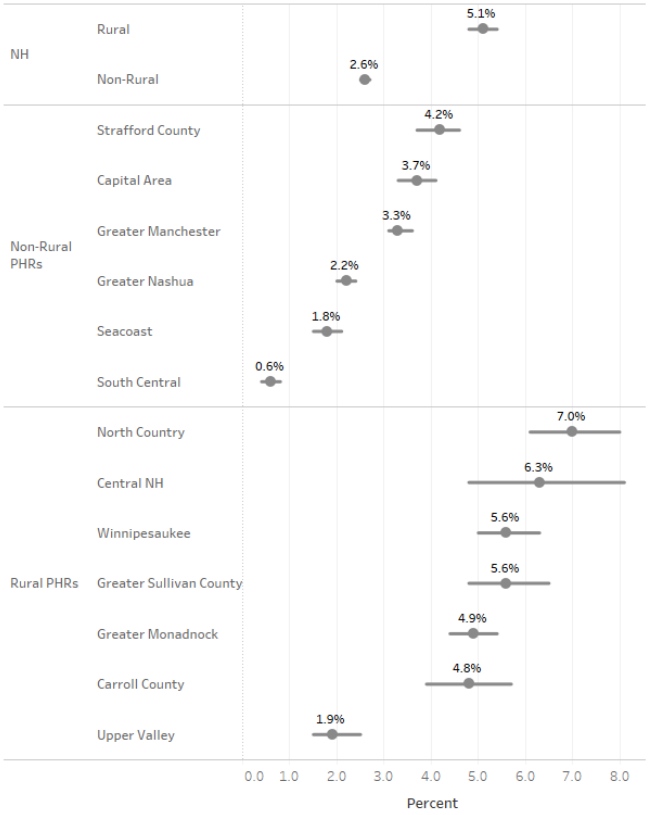




Source: NH State Cancer Registry (NHSCR)

Figure 28. Percentage of Children Tested with Elevated Blood Lead Level of 5 µg/dL or greater, 0 to 72 Months Old, 2016-2020

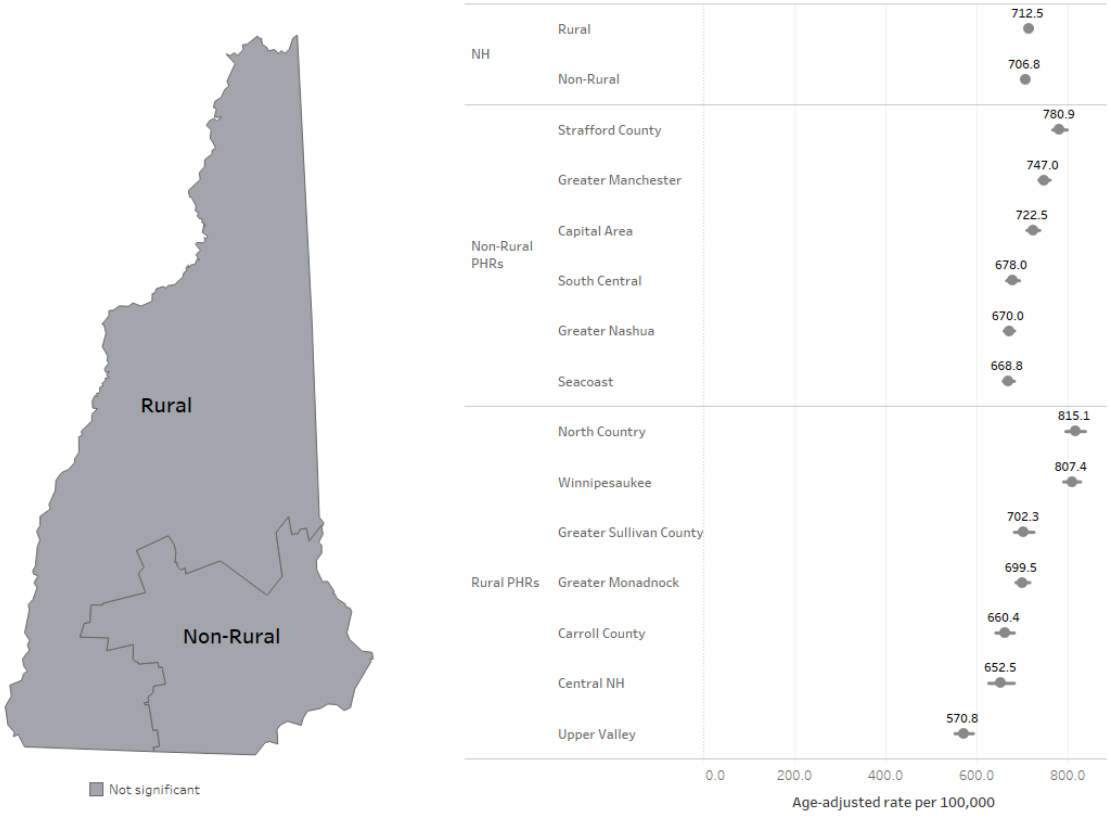




Source: Testing Data from NH Healthy Homes and Lead Poisoning Prevention Program (HHLPPP)

While there was no statistical difference between rates of death from all causes by rurality, a few PHRs stood out against the rest with considerably higher age-adjusted rates (Figure 29). Rates of death from all causes are higher in North Country, Winnipesaukee, and Strafford County compared to all other geographic estimates (individual PHR, overall rurality).

Figure 29. Deaths - All Causes (All Ages), Rural/Non-Rural, 2012-2020, Age-Adjusted Rate



Source: NH Vital Records Death Certificate Data

Health Professions Data Center

Overview

Pursuant to RSA 126-A:5, XVIII-a, Chapter 254 Laws of 2019, the Health Professions Data Center (HPDC) collects provider data from participating New Hampshire licensed health care professionals, as a condition of license renewal under the respective licensing boards. Administrative rules for the survey requirement were established for all provider types under their respective boards by the end of 2020. With the collection of dentist data in the 2022 dentist renewal cycle, the survey is now implemented for all intended provider types. Licenses are renewed biennially, every two years, after the initial license is issued. As a result, full workforce data collection by provider type is achieved every two years. Because renewals are determined by initial license year (save for dental providers and advanced practice registered nurses (APRNs)), data collection on the full licensed workforces is achieved every two years. Dental provider types renew all together, dentists on even years and registered dental hygienists (RDHs) on odd years. APRN renewals occur two years after the initial registered nurse (RN) license, which is a prerequisite for APRN licensure and must be maintained together with the APRN license. With the exception of dental providers and mental health practitioners, the 2020 medical and behavioral health workforce reports were published in December 2022. Due to a maldistribution of licensees by renewal year and a low response rate in the previous survey cycle (<25%), the mental health practitioner workforce report will not be released until 2023.

Although survey legislation requires survey participation as a condition of license renewal since the July 2019 amendment (HB127), the HPDC is still contending with non-response. However, with high response rates and year-to-year comparisons, the data suggests the HPDC workforce data is largely representative of the workforces as a whole.

Since SFY21, funding has been available for the HPDC to hire an additional data analyst to expand program capacity and expedite the turnaround time between data collection and dissemination. The position is currently vacant. As a result, workforce reports will continue to be released two years after the close of the data collection periods (see Future Plans below). With the exception of dentists and RDHs, who have even and odd year renewals, respectively, workforce data reports are released annually for participating provider types. Refer to Table 1.1 below for HPDC survey cycles of the provider data summarized in this report.

Reports are developed in Tableau, a visual analytics platform, and accessed on the HPDC page of the Rural Health and Primary Care (RHPC) website (https://www.dhhs.nh.gov/programs-services/health-care/rural-health-primary-care/health-professions-data-center). Workforce reports include the following sections:

- Response rate
- Practice status
- Demographics
- Recruitment - education/training
- Capacity – sites, hours, and specialties
- Distribution – geographic practice location
- Access – payment and wait time
- Retention – years in practice, NH ties, and anticipated capacity
- Statistically significant rural associations

Table 1.1 Data Collection Years for 2022 Reports

Provider Type	Data Collection Period
Advanced Practice Registered Nurse (APRN)	SFY2020
Alcohol & Drug Counselor (MLADC/LADC)	2020
Physician	2020
Physician Assistant (PA)	2020
Psychologist	2019 & 2020

Provider Response Rate Data

Table 1.2 contains the response rate statistics for workforce reports scheduled to be published this year (2022). This includes the data collection period, the number of licensees who met the survey requirement by completing the survey or the opt-out form, the number who completed the opt-out form of those who met the survey requirement, and total renewals from those due to renew. Of note is the upturn in survey compliance for alcohol and drug counselors, physicians, and psychologists since the survey requirement was implemented as a condition of license renewal, which took effect in SFY20.

Table 1.2. Provider Response Rate Data, 2020

Provider Type	Data Collection Period	Survey Compliance *2020*	Survey Compliance *2019*	Opt Outs	*Total Renewals
Advanced Practice Nurse Practitioner (APRN)	Jul 1, 2019-Jun 30, 2020	610 **(55.4%)**	759 **(54.1%)**	5 (0.8%)	1,101 of 1,330
Alcohol & Drug Counselor (MLADC/LADC)	Apr-Jun 30, 2020	248 **(98.0%)**	88 **(53.4%)**	3 (1.2%)	253 of 279
Physician	Mar-Jun 30, 2020	2,991 **(95.1%)**	2,105 **(70.3%)**	66 (2.2%)	3,144 of 3,688
Physician Assistant (PA)	Oct-Dec 31, 2020	851 **(96.4%)**	812 **(97.8%)**	5 (0.6%)	883 of 953
Psychologist	Apr-Jun 30, 2020	174 **(95.1%)**	158 **(43.6%)**	3 (1.7%)	183 of 220

*Active status license renewals of active status licenses due for renewal

Provider Supply

Table 1.3 identifies changes in provider supply in the state by calculating the net change with providers lost and providers gained during the data collection period ending in 2020. Due to the significant differences in provider distribution by even/odd renewal year for mental health practitioners and psychologists, two-year data is combined for these provider types. Other current and anticipated supply indicators reported by the HPDC – and which are included in the workforce data summaries within this report - include active practice status of providers who renewed, provider 60+ years old, and anticipated practice in five years. None of the participating provider workforces experienced a true loss of providers during this period. APRNs and psychologists broke about even with gained and lost active licenses, while alcohol and drug counselors and physicians saw small gains (<5%), and PAs saw more moderate gains. Interestingly, mental health practitioners saw a much larger gain of providers (>10%) than the other provider workforces, which remains even when data is analyzed by one-year cycles with age as a confounder. It's worth noting that while the provider workforces seemingly remain stable in supply during the COVID-19 pandemic, it's unclear whether providers maintaining an active license are clinically practicing in New Hampshire or practicing at the top of their license versus just aiding in pandemic efforts.

Table 1.3. Net Change of Provider Supply, 2020

Provider Type	Year	Eligible to Renew	*Providers Lost	**Providers Gained	Provider Change	Net Change
Advanced Practice Nurse Practitioner (APRN)	Jul 1, 2019-Jun 30, 2020	1330	184	196	12	**1.0%**
Alcohol & Drug Counselor (MLADC/LADC)	2020	278	25	32	7	**2.5%**
Mental Health Practitioner (LICSW/LCMHC/LMFT/LPP)	Jul 1, 2018-Jun 30, 2020	2,216	231	504	273	**12.3%**
Physician	2020	3,668	508	653	145	**4.0%**
Physician Assistant (PA)	2020	953	70	136	66	**6.9%**
Psychologist	2019-2020	600	67	63	-4	**-0.8%**

* Non-renewals/Inactive renewals
** Initial licenses issued

SFY20 Workforce Data Summary – Medical Providers

Supply and capacity indicators of the surveyed provider workforces actively practicing in NH

Definitions:

APRNs – Advanced Practice Registered Nurses (Masters level)
PAs – Physician Assistants
Physicians – Includes psychiatrists

Table 2.1. Nearly all PAs with an active New Hampshire license are clinically practicing in the state. The percentage of physicians with an active license clinically practicing in New Hampshire is considerably less than PAs and APRNs. Over one-third of physicians who maintain an active medical license in New Hampshire are not clinically practicing.

Practice Status	Physicians	PAs	APRNs
Active, Clinical Practice	64.5%	90.3%	78.0%

Includes full-time/part-time practice and practice as a locum tenens at a NH location for one year or longer.

Table 2.2. While the vast majority of APRNs and over two-thirds of PAs are female, the physician workforce continues to be male dominated. The medical provider workforces are primarily non-Hispanic White, to a greater extent with PAs and APRNs (~95%) than physicians. While over half of the PA workforce is under 40 years old, under 20% of physicians fall into this age bracket. Age is a measure to better understand anticipated supply; younger workforces can offset workforce shortages that result from retiring providers.

Demographics	Physicians	PAs	APRNs
Female	36.8%	68.0%	88.0%
Non-Hispanic White	82.3%	94.1%	94.9%
Under 40 Years Old	18.3%	53.9%	30.3%

Table 2.3. Medical practice is limited in rural NH; between approximately one-quarter to about one-third of health care practice exists in rural regions, across provider types. The highest FTE in the state is in non-rural, Greater Manchester Public Health Region and the lowest is in rural, Central NH Public Health Region. Of note is the comparable physician practice in densely populated Greater Manchester and rural Upper Valley, where Dartmouth-Hitchcock Medical Center sits. With the exception of PA practice, outpatient practice as a proportion of overall practice is higher in non-rural NH.

Distribution			Physicians	PAs	APRNs
Percentage of Total FTE in Rural Regions - *Overall* - *Outpatient*			34.7% 13.4%	26.2% 9.5%	35.8% 14.2%
Percentage of Total FTE by PHR	*Rural*	**Upper Valley*	18.0%	12.4%	13.0%
		Greater Monadnock	5.1%	3.0%	7.0%
		North Country	3.2%	3.4%	4.9%
		Winnipesaukee	3.1%	1.9%	3.3%
		Carroll County	2.7%	3.0%	3.2%
		Greater Sullivan County	1.7%	1.6%	2.7%
		Central NH	1.5%	1.0%	1.8%
Percentage of Total FTE in Non-Rural Regions - *Overall* - *Outpatient*			65.3% 35.4%	73.8% 31.4%	64.2% 38.5%
Percentage of Total FTE by PHR	*Non-Rural*	*Greater Manchester*	18.6%	22.1%	17.7%
		Greater Nashua	11.6%	11.6%	13.4%
		Capital Area	10.9%	12.5%	10.3%
		Seacoast	11.2%	11.9%	9.3%
		Strafford County	7.9%	8.2%	8.0%
		South Central	5.2%	7.5%	5.6%

Telemedicine and non-direct patient office setting FTE is excluded from practice location analysis.
Public Health Regions (PHRs) are not sorted by FTE for all provider types.
** DHMC in Lebanon sits within Upper Valley.*

Table 2.4. Rural physicians and PAs have similar, limited practice in outpatient, primary care; less than 5% of the total FTE for each provider type. APRNs have over twice as much of their total FTE in outpatient primary care practice in both rural and non-rural NH compared to PAs. Physicians have the largest discrepancy in practice between rural and non-rural areas (3.3x as much FTE in non-rural).

Specialty		Physicians	PAs	APRNs
*Outpatient, Primary Care Practice by % of Total FTE				
	Rural	4.4%	4.2%	9.0%
	Non-Rural	14.6%	9.7%	21.1%

** Primary care practice as indicated by primary care specialty and outpatient, primary care hours.*

Table 2.5. Older age is a strong indicator of nearing retirement, and taken with other retention indicators, anticipated provider shortages. Physicians and APRNs are over 3.5x as likely as PAs to be 60+ years old, with one-quarter of the workforces falling into this age bracket. PAs and APRNs are much more likely (>2.5x) than physicians to have ties to New Hampshire, which is associated with a greater likelihood of staying in the state; but about twice as likely to be less experienced, as indicated by practicing for less than five years. One-quarter of physician practice is expected to decrease in five years, with APRNs and PAs figures following close behind.

Retention	Physicians	PAs	APRNs
60+ Years Old	24.5%	6.8%	23.0%
NH Ties	23.1%	61.8%	60.3%
Less than 5 Years Practicing in NH	26.2%	46.6%	40.0%
*Anticipated Reduction in Capacity (by FTE) in 5 Years	25.4%	18.0%	21.4%

** Indicated by an anticipation of reduced hours, practice in another state, or no clinical practice.*

Table 2.6. Providers across all types indicated a high percentage of new patient acceptance at outpatient, primary care practice sites. Access to physician care, on average, is almost double the wait as it is for accessing APRN or PA care for established patients (2 weeks compared to 1).

***Outpatient, Primary Care Access**	Physicians	PAs	APRNs
Accepting New Patients	89.2%	93.5%	89.3%
Average Wait for Routine Appointments, Established Patients (days)	13.1	7.8	6.2
Average Wait for Routine Appointments, New Patients (days)	21.2	11.3	14.3

** Analyzed by site count.*

Tables 2.7-2.9. Chi-Square tests of independence were run for select variables to assess whether significant associations exist by geography (rural v. non-rural). The following tables contain indicators that were found to be significantly different by geography at the 95% confidence level. For test statistics, please refer to the individual provider workforce reports, available on the New Hampshire Health Professions Data Center website.

There is little consistency among all three provider types when considering geographic disparities by provider characteristic and practice with the exception of anticipated practice. Rural practicing providers in all three provider types – physicians, APRNs, and PAs - are more likely to anticipate a reduction in NH practice in five years compared to their non-rural counterparts; suggesting continued primary care provider shortages and access to care challenges in rural NH. Moreover, rural physicians are less likely than their non-rural counterparts to practice a primary care or mental health specialty (psychiatry) or provider outpatient primary care services. Overall, APRNs and PAs are more similar when comparing provider and practice characteristics than physicians are to either provider type. Non-rural practicing APRNs and PAs are more likely to have graduated from a New England school and have NH ties prior to receiving their NH license. While rural practicing APRNs and PAs are more likely than non-rural providers to be 60+ years old and non-rural providers are more likely to be under 40 years old, rural physicians trend in the opposite direction for age, though not significantly. Both physicians and APRNs practicing in rural were more likely to practice at outpatient locations that offer financial assistance (Medicaid and/or sliding fee scale) compared to their non-rural counterparts; and both non-rural provider types were more likely to practice in outpatient settings.

Table 2.7. Significant Geographic Disparities, Rural Physicians

More likely to…	Less likely to…
Have NH ties prior to receiving initial NH license	Be an international medical graduate (IMG)
Anticipate a reduction in NH practice in 5 years	Practice a primary care specialty
Have graduated from a NH medical school	Practice in outpatient settings
Practice at outpatient locations that offer financial assistance	Provide outpatient, primary care services
Have trained at a residency within New England and NH	Practice a mental health specialty

Table 2.8. Significant Geographic Disparities, Rural PAs

More likely to…	Less likely to…
Be 60+ years old	Be female
Anticipate a reduction in NH practice in 5 years	Be <40 years old
	Have graduated from a New England PA school
	Have NH ties prior to receiving initial NH license

Table 2.9. Significant Geographic Disparities, Rural APRNs

More likely to…	Less likely to…
Be 60+ years old	Be <40 years old
Practice 40+ clinical hours/week	Have graduated from a nursing school within New England and NH
Anticipate a reduction in NH practice in 5 years	Practice part time (<30 clinical hours/week)
Practice at locations that offer payment assistance	Have NH ties prior to receiving initial NH license
	Practice in outpatient settings

SFY20 Workforce Data Summary – Behavioral Health Providers

Supply and capacity indicators of the surveyed provider workforces actively practicing in NH

Note: Due to the low response rate in 2019-20, mental health practitioner (LICSW, LCMHC, LMFT, LPP) workforce figures will not be available until 2023.

Definitions:

- ADCs – Bachelors (LADC) and Masters level (MLADC) Alcohol and Drug Counselors
- Psychiatrists – Includes child & adolescent psychiatry
- Psych NPs – Licensed as a Psychiatric Mental Health Nurse Practitioner under the NH Board of Nursing

Table 3.1. The percentage of licensed psychiatrists and psych NPs who are actively, clinically practicing in New Hampshire is limited compared to other provider types with an active license. ADCs have the largest proportion of active NH practice (>80%) of all listed providers.

Practice Status	**Psychiatrists	**Psych NPs	Psychologists	ADCs
*Active, Clinical Practice	64.3%	68.6%	74.1%	81.5%

** Includes full-time/part-time practice and practice as a locum tenens (if applicable) at a NH location for one year or longer.*
*** According to the specialty list maintained by the Board of Medicine.*

Table 3.2. With the exception of psychiatrists, the majority of the behavioral health workforce is female. There is little racial/ethnic diversity within the mental health workforce, overall; but almost one-quarter of the active psychiatry workforce identifies as another race/ethnicity. The mental health workforce, as a whole, has a limited proportion of providers under forty, hovering between 11 and 15 percent for all provider types with data.

Demographics	Psychiatrists	Psych NPs	Psychologists	ADCs
Female	41.9%	88.2%	64.2%	72.5%
Non-Hispanic White	78.0%	94.1%	92.9%	93.9%
Under 40 Years Old	13.7%	11.4%	14.7%	*Unavailable

** ADC date of birth is not consistently stored in the electronic licensing list.*

Table 3.3. Behavioral health practice in rural NH is limited, with psychologist practice providing the greatest proportion, one-third of the workforce's total FTE. At least half of the behavioral health capacity for all provider types is in non-rural outpatient settings. Compared to other provider types, psychologists mostly practice in outpatient/office-based practices, as evidenced by the similar rates of outpatient and overall FTE for both rural and non-rural NH. Much of the psychiatrist practice in rural is in outpatient compared to non-rural; whereas with psych NPs, the opposite is indicated. Overall, behavioral health practice is highest in non-rural, Greater Manchester, Greater Nashua, and Capital Area Public Health Regions (PHRs) and lowest is in rural, Greater Sullivan PHR; though there is significant variation in behavioral health capacity by provider type and PHR. Note: Location analyses exclude telemedicine settings, as patient locations may vary.

Distribution			Psychiatrists	Psych NPs	Psychologists	ADCs
Percentage of Total FTE in Rural Regions						
- *Overall*			20.8%	20.3%	33.1%	24.0%
- *Outpatient*			16.9%	11.5%	26.5%	14.5%
Percentage of Total FTE by PHR	*Rural*	**Upper Valley*	9.7%	5.2%	16.4%	3.8%
		Greater Monadnock	3.2%	8.7%	9.2%	4.8%
		North Country	2.7%	4.7%	1.6%	4.8%
		Winnipesaukee	3.4%	0.0%	0.7%	6.7%
		Carroll County	1.2%	1.5%	1.2%	2.2%
		Central NH	0.6%	0.0%	3.1%	1.2%
		Greater Sullivan County	0.0%	0.2%	1.0%	0.5%
Percentage of Total FTE in Non-Rural Regions						
- *Overall*			79.3%	79.7%	66.9%	76.0%
- *Outpatient*			48.9%	59.8%	60.6%	51.5%

Percentage of Total FTE by PHR	*Non-Rural*	*Greater Manchester*	23.6%	13.6%	11.7%	19.1%
		Greater Nashua	12.2%	24.1%	16.5%	7.6%
		Capital Area	19.2%	17.3%	14.5%	17.4%
		Seacoast	14.4%	4.6%	13.5%	10.7%
		Strafford County	6.1%	18.1%	7.7%	13.0%
		South Central	3.8%	6.1%	3.0%	8.3%

Note: PHRs are not exclusively sorted by FTE value for all provider types.
** DHMC in Lebanon sits within Upper Valley.*

Table 3.4. With the exception of psych NPs, a significant proportion (~40%) of the behavioral health workforce is 60 years and older. While NH ties are less likely in the psychiatrist workforce, the majority of psych NPs and psychologists, and nearly all ADCs, lived or worked in NH prior to receiving their initial license. A large percentage of ADCs have been practicing for less than five years; and while a significant proportion of psychiatrists are 60+ years old, about one-third have been practicing in NH for five years or less. With the exception of ADCs, the anticipated reduction in capacity for all provider types closely follows that of medical providers.

Retention	Psychiatrists	Psych NPs	Psychologists	ADCs
60+ Years Old	42.7%	28.6%	39.2%	**Unavailable
NH Ties	25.0%	70.6%	69.2%	96.0%
Less than 5 Years Practicing in NH	31.0%	23.5%	18.8%	41.5%
*Anticipated Reduction in Capacity (by FTE) in 5 Years	23.9%	22.4%	27.5%	14.2%

** Indicated by an anticipation of reduced hours, practice in another state, or no clinical practice.*
*** ADC date of birth is not consistently stored in the electronic licensing list.*

Table 3.5. Overall, access to ADC services, according to indicators of new patient acceptance and wait times, is more accessible than other behavioral health provider types. With the exception of psychiatrists, where the wait time is two weeks, the wait time for behavioral health services is around one week for established patients. New patient wait times are about one week longer for psychiatrist and psychologist services and almost two weeks longer for psych NP care.

***Outpatient, Mental Health Access**	Psychiatrists	Psych NPs	Psychologists	ADCs
Accepting New Patients	85.9%	84.2%	70.2%	89.8%
Average Wait for Routine Appointments, Established Patients (days)	14.9	8.2	10.7	5.6
Average Wait for Routine Appointments, New Patients (days)	23.1	20.8	16.0	8.9

** Analyzed by site count.*

Tables 3.6-3.7. Chi-Square tests of independence were run for select variables to assess whether significant associations exist by geography (rural v. non-rural) for psychologists and ADCs. Numbers for psych NPs and psychiatrists were too small to produce reliable statistics. The following table contains indicators that were found to be significantly different by geography at the 95% confidence level. For test statistics, please refer to the individual provider workforce reports, available on the New Hampshire Health Professions Data Center website.

Table 3.6. Significant Geographic Disparities, Rural ADCs

More likely to…
▲ Practice with a LADC (not MLADC) license

3.7. Significant Geographic Disparities, Rural Psychologists

More likely to…	Less likely to…
⅄ Work in outpatient practices with wait times >1 week for established patients	⅄ Be female

Administrative Rules Update

Health Status of Rural Residents

No update.

Health Professions Data Center

DHHS administrative rules, He-C 801, established the requirements for the collection of health care provider data by the State Office of Rural Health's Health Professions Data Center – which sits under the Office of Rural Health and Primary Care (RHPC) - and the purpose of data collection (http://gencourt.state.nh.us/rules/state_agencies/he-c800.html).
The administrative rules are amended annually, to reflect the current iterations of the Health Professions Survey.

In addition to the DHHS administrative rule, each participating licensing board promulgated rules requiring licensees to fulfill the survey requirement – completion of the Health Professions Survey or completion of the opt-out form - as a condition of license renewal. All six participating health professions licensing boards have formally adopted survey rules, with the last, the Board of Dental Examiners, completing the process at the end of 2020.

OPLC is currently in the rulemaking process to amend the electronic renewal application question form to include the survey requirement. Once approved and updated, the survey requirement will be more visible, resulting in increased compliance.

Program Updates

Health Status of Rural Residents

The NH Health and Human Services Data Portal continues to develop its capabilities since the transition to Tableau. Some of the visualizations in this report were taken directly from the data portal and others were created for the report as they were not available on the dashboard yet.

Health Professions Data Center

Compliance

The Health Professions Data Center (HPDC) continues to work closely with the Office of Professional Licensure and Certification (OPLC) to implement surveying as a condition of license renewal, as the legislature intended. However, due to understaffing, which limits the capacity of licensing boards to review renewal requirements for each licensee, renewals are currently being issued prior to certifying survey requirement compliance. In lieu of survey compliance confirmation by licensing board staff, providers attest to survey compliance on the electronic license renewal form.

Last year, the OPLC Enforcement Office was created to better manage non-compliance of regulatory requirements, which includes the Health Professions Survey. OPLC and the HPDC continue to work collaboratively to tackle ongoing challenges to survey compliance. Through our collaborative efforts, we have targeted processes to significantly improve compliance while simultaneously reducing administrative burden.

In the last year, we saw significant improvement in compliance efforts with the following actions:

1. Standing weekly meetings between the OPLC Enforcement Office administrator and the HPDC Manager for updates on the formal complaint process.

2. Standing monthly meetings between the OPLC executive director and the State Office of Rural Health (under which the HPDC was granted statutory authority to collect provider data) to address current challenges and improvements to survey implementation and compliance.

3. Including the survey notification and DHHS webpage link to the survey page on OPLC's renewal webpages for each participating provider type.

4. Expanding the survey compliance reminder process to include an email notification from OPLC, sent two weeks after the HPDC's first wave of email reminders to providers who successfully renewed their active license but did not meet the survey requirement.

Implementation of a second wave of non-compliance emails issued by OPLC (4) has proven beneficial through further reducing (by 20-50%) the number of providers on the final non-compliance lists sent to Enforcement.

The Enforcement Office is developing protocol to issue formal complaints to licensees that remain non-compliant after email reminders are sent, which the licensee is required to respond to. As with all other license requirements left unmet, the complaint will outline the violation and potential enforcement action - a board hearing and potential disciplinary action - in the event that the response is left unmet or determined to be unacceptable.

As previously mentioned in the administrative rules update, adding the survey requirement to the renewal questions page - where licensees are required to attest to completing each requirement - prior to submitting the application, will increase survey compliance.

Administration

Through access to key contacts within the OPLC and current provider license data, the HPDC continues to run efficiently and leverage the data and relationships made available by OPLC to provide critical workforce statistics on the current and anticipated supply of the primary care workforce. The Business Systems Analyst (BSA) assigned to the HPDC has been an invaluable partner to address any data concerns or anticipated changes. This relationship has effectively improved workflow and reduced administrative inefficiencies. This year, physicians and PA

education and training fields collected with initial license applications were successfully merged into OPLC's electronic system, and made available to the HPDC, eliminating the need for these questions to be included on the survey. Direct access to license records via the State File Transfer Protocol (SFTP) site, granted in 2020, allows the HPDC to run net supply (provider gains and losses) analysis, as well as pull current figures of active licenses and other stored workforce characteristics for data requests apart from HPDC reporting.

Data Use

With consistent and reliable data on the supply and capacity of the New Hampshire (NH) health care workforces, data requests continue to increase each year. The HPDC is the only entity in the state that can provide the level of granularity necessary for accurate provider workforce estimates. As such, the HPDC supplies workforce supply and demand figures year-round. This past year, the HPDC has informed the work of the following stakeholder organizations:

- Higher education - University of New Hampshire (UNH) and Geisel School of Medicine at Dartmouth College grants
- Provider associations - NH Dental Society, the NH Nurse Practitioner Association and the NH Alcohol & Drug Abuse Counselors Association;
- Workforce organizations - UNH's Citizens Health Initiative and the NH Recruitment Center;
- Internal stakeholders at DHHS, including Maternal and Child Health and the NH Ryan White CARE program

The HPDC was primarily created to collect current and accurate provider data critical for federal shortage designation work. Shortage designations bring providers and funding to underserved areas of the state. A variety of grants and other federal and state programs with funding opportunities, including the State Loan Repayment Program, use these designations to target resources to areas of need. Collected health workforce data allows our office to validate providers within the Health Resources and Services Administration's (HRSA) Shortage Designation Management System (SDMS) so we can effectively identify physician supply and practice in existing or potential designated areas within New Hampshire. Because HRSA utilizes the National Provider Identifier (NPI) database to indicate provider practice within SDMS, and this database is notoriously inaccurate for current provider supply and capacity, our office relies heavily on the HPDC's provider data to reliably perform shortage designation work. Provider validation is essentially the most important component of this work, as Health Professional Shortage Area (HPSA) scores, designed to identify areas of greater need, depend heavily on population-to-provider ratios. These scores affect whether facilities will be eligible locations for National Health Service Corps and Nurse Corps providers; Centers for Medicaid and Medicare Services (CMS) HPSA Bonus Payments for delivering Medicare-covered services to patients; and status as a designated Rural Health Clinic, which have enhanced reimbursement and other financial incentives. This past year, HRSA developed a new shortage designation, called Maternal Care Target Areas (MCTAs), to identify areas within an existing HPSA experiencing a shortage of maternity health care professionals. Because the HPDC collects provider data from Certified Nurse Midwives, a qualifying maternity health care provider under the new MCTA policy, NH was able to easily upload this provider data in SDMS for designation consideration.

With HPDC's provider data, our office will continue to successfully conduct shortage designation work to ensure the most vulnerable areas in New Hampshire are reinforced.

Future Plans

Health Status of Rural Residents

Rural Health and Primary Care (RHPC) plans to create a Rural Health dashboard in Tableau that will be hosted on the NH Health and Human Services Data Portal and will contain rural relevant indicators for core public health indicators such as basic demographics, health status, morbidity rates, mortality rates, health care access, social determinants, and environmental determinants. The link for the rural dashboard will be on our section website and also used for future annual reports. This data will be updated annually at a minimum but as often as the datasets change.

Health Professions Data Center

Workforce Reports

As previously mentioned, workforce reports with aggregated provider data are released two years after the close of the data collection/renewal cycle for each participating provider type. Because renewals are determined by initial license year (save for dental professionals), data collection on the full license list is achieved every two years to capture providers who renew on both even and odd years. Since annual reporting began, workforce reports have been released for one year of data collection, or approximately half of all licensed providers. Dental professionals are the exception, as dentist renewals occur on even and registered dental hygienist (RDH) renewals on odd years, with all providers under the respective license type (i.e. dentist/RDH) renewing all together in one year. Dental provider workforce reports will reflect all active license status dentists and RDHs in the state, save for initial licenses not yet subject to renewal. Due to the renewal schedule for these provider types, the reports will be released biennially, not annually. 2020 legislation and the subsequent administrative rules change moved physician assistant (PA) renewals from an annual to biennial basis to be consistent with all other licensed health professions under the Office of Professional Licensure and Certification (OPLC). Prior to this change, PAs were the only health professions license type to renew annually and, as such, workforce reports prior to this legislative amendment (i.e. 2018-2020) reflected data collected from the full NH-licensed PA workforce, excluding initial licenses. Starting next year (2023) PA reports will contain data from approximately half the NH-licensed workforce, which will represent the workforce as a whole.

It was recently discovered that there are significant differences in the distribution of mental health practitioners and psychologists by odd/even renewal year. This came as a surprise, as the license renewal policy for all participating boards maintains that license renewal comes every two years after the initial license; with APRN renewals by birthday, and mental health practitioners by initial license date. Because licensees should have been randomized by way of renewal year being dependent on license issue year only, workforce reports have been released

by survey year. With this significant discovery, the published 2019 and 2018-19 mental health provider reports have been taken down. Moving forward, data from two-year collection cycles will be used to build these provider reports to ensure accurate representation of the workforces. The 2019-20 psychologist report will be released with the other behavioral health provider reports this state fiscal year (SFY23). The mental health practitioner report will not be released until SFY24 due to unusable 2019-20 data.

See Appendix B for renewal cycle details of each participating provider type. As of June 30, 2022, the HPDC has collected data on the full NH workforces of all participating provider types since implementation of the survey requirement in 2019: physicians, APRNs, PAs, mental health practitioners (LICSWs/LCMHCs/LMFTs/LPPs), psychologists, alcohol and drug counselors (LADCs/MLADCs), dentists, and RDHs. Annual provider data collection will continue for every renewal cycle to ensure data on the full NH-licensed workforces is maintained.

Compliance

The Health Professions Data Center's (HPDC) ability to collect responses from all renewing providers is impeded by OPLC's understaffing because it prevents confirmation of compliance prior to issuing renewals. With the formation of the Enforcement Office in OPLC last year and commitment to pursue disciplinary action for licensees who fail to meet the regulatory requirement, the HPDC is confident that as soon as the enforcement plan (in compliance section above) is implemented, the response rate will increase each year and near-complete data will be achieved during the data collection periods.

Data Use

Together with state and national stakeholders, the HPDC designed the Health Professions Surveys to collect rich, comprehensive workforce data that would lend itself to improved healthcare access planning and workforce assessment, including

- Federal shortage designations, which brings providers and grant funding to underserved areas of the state;
- Strengthened recruitment/retention initiatives including scholarships, loan repayment, and waiver programs;
- The expansion of existing educational programs and employment training programs; and
- Stronger emergency preparedness.

Together with subject matter experts, the HPDC reviews and amends the provider surveys each year. With changing reimbursement policies brought about by the COVID-19 pandemic, the HPDC modified the Health Professions Survey to include several telemedicine considerations to delineate between in-person and remote provided services. These changes will be reflected in all SFY23 provider surveys, beginning with PAs.

With the 2019 legislative amendment requiring survey completion, the HPDC houses near-complete, representative data on all participating NH-licensed providers. Rural Health and Primary Care (RHPC) will continue to rely on this data as the most current and accurate source of provider data for shortage designation work. Provider-to-population ratios and workforce

supply and distribution statistics needed for emergency preparedness on a granular level will be reliable and accessible.

In addition, analysis considerations include rural disparity data, which will help RHPC to further delineate statistically significant regional differences for provider and practice characteristics suggesting a disparity in health care access; such as practice capacity (hours, specialty, setting), financial assistance offered, wait time, and retention of providers.

Equipped with the most accurate and current provider workforce data in the state, RHPC will continue to educate stakeholders and inform workforce policy. Beginning in January 2023, the HPDC will be joining the HealthForce NH data workgroup, a collective of partners focused on expanding the capacity of cross-sector partners across the state to grow, retain, and sustain a robust health care workforce. Working alongside health care workforce entities in NH and nationally will strengthen best practices and ensure a complete collaborative approach to identifying and addressing health professions workforce challenges.

Staffing

The HPDC's work will be supported by a data analyst; a position funded by legislation (HB 4, Laws of 2019). The position is currently vacant but posted externally for applications. Once the job listing expires on the state website at the end of 2022, RHPC will move to update the position classification and requirements in an attempt to receive more applications. With the program expansion resulting from the legislative amendment and greater stakeholder reliance on and requests for current workforce data, a data analyst is critical to the success of the HPDC as the primary resource for health workforce data in the state. Currently, the HPDC manager is the sole employee for the HPDC, executing all aspects of the program, including provider tracking and follow up; survey development, building, and administration; implementation coordination with OPLC and DoIT; HPDC website management; and data cleaning, analysis, and reporting. A data analyst will allow the HPDC to release reports more expediently in order to meet the intended purposes for the data (i.e. healthcare access planning, workforce assessment) while it is still relevant.

Appendix A

Category	Measure	Source	Year(s)	Rate Type
Demographics	65+	ACS	2016-2020	Crude
Demographics	Percent Not Fluent in English (5+)	ACS	2016-2020	Crude
Demographics	Disabled (18-64)	ACS	2016-2020	Crude
Demographics	Veteran (18+)	ACS	2016-2020	Crude
Demographics	Low Income (below 200% of FPL)	ACS	2016-2020	Crude
Demographics	Poverty (below 100% of FPL)	ACS	2016-2020	Crude
Demographics	Obese children (2-5)	PedNSS	2019	Crude
Demographics	Obesity in high school students	YRBSS	2019	Crude
Demographics	Uninsured	ACS	2016-2020	Crude
Barriers to Care	Have health care coverage (18-64)	BRFSS	2019	Crude
Barriers to Care	Delayed/Avoided care due to cost (18+)	BRFSS	2019	Crude
Barriers to Care	No personal doctor or health care provider (18+)	BRFSS	2019	Crude
Barriers to Care	No vehicle (% of households)	ACS	2016-2020	Crude
Barriers to Care	Primary care visits > 30 minutes away	APCD	2019	Crude
Barriers to Care	Mean travel time	APCD	2019	Crude
Barriers to Care	Primary care visits per year	APCD	2019	Crude
Workforce Supply	PCP:Population (Pcfte:100k)	Health Professions Data Center	2020	Crude
Workforce Supply	General Dentist:Population	OPLC	2020	Crude
Workforce Supply	Pediatric Dentist:Population	OPLC	2020	Crude
Workforce Supply	Practice status	Health Professions Data Center	2020	Crude
Workforce Supply	Demographics	Health Professions Data Center	2020	Crude
Workforce Supply	Distribution	Health Professions Data Center	2020	Crude
Workforce Supply	Specialties	Health Professions Data Center	2020	Crude
Workforce Supply	Retention	Health Professions Data Center	2020	Crude
Workforce Supply	Access	Health Professions Data Center	2020	Crude
Workforce Supply	Significant associations by rurality	Health Professions Data Center	2020	Crude
Substance Use and Mental Health	Alcohol/drug-related-ED	UHFDDS	2020	AA
Substance Use and Mental Health	Alcohol/drug-related-inpatient	UHFDDS	2020	AA
Substance Use and Mental Health	Self-inflicted harm-ED	UHFDDS	2020	AA
Substance Use and Mental Health	Self-inflicted harm-inpatient	UHFDDS	2020	AA
Substance Use and Mental Health	Current smoker (18+)	BRFSS	2019	Crude
Substance Use and Mental Health	Suicide	Vital Records	2012-2020	AA
Maternal Health	No/Late prenatal care	Vital Records	2017-2021	Crude
Maternal Health	Smoked during pregnancy	Vital Records	2017-2021	Crude
Maternal Health	Delivery at 42+ weeks	Vital Records	2017-2021	Crude
Preventive Care	Check-up in past year (18+)	BRFSS	2019	Crude
Preventive Care	No dental visit within past year (18+)	BRFSS	2018	Crude
Preventive Care	Ever had pneumonia vaccine (65+)	BRFSS	2019	Crude
Preventive Care	Cholesterol checked within last 5 years (18+)	BRFSS	2019	Crude
Preventive Care	Flu shot (18+)	BRFSS	2019	Crude
Preventive Care	Colonoscopy (50-75)	BRFSS	2018	Crude
Preventive Care	Mammogram (50-74)	BRFSS	2018	Crude
Preventive Care	Sigmoidoscopy in past 5 years (50-74)	BRFSS	2018	Crude
Preventive Care	Never tested for HIV (18+)	BRFSS	2019	Crude
Preventive Care	Lead Testing (<3)	HHLPPP	2019	Crude
Preventive Care	Pap test (21-65)	BRFSS	2018	Crude
Outcomes	Acute composite	UHFDDS	2020	AA
Outcomes	Chronic composite	UHFDDS	2020	AA
Outcomes	Overall composite	UHFDDS	2020	AA
Outcomes	High blood pressure (18+)	BRFSS	2019	Crude
Outcomes	High cholesterol (18+)	BRFSS	2019	Crude
Outcomes	Proportional rate, late-stage (distant and regional) to breast cancer incidence of all stages (excluding in situ)	Cancer Registry	2015-2019	AA
Outcomes	Proportional rate, late-stage (distant) colon & rectal cancer to all incidence (excluding in situ)	Cancer Registry	2015-2019	AA
Outcomes	Lead levels (<3)	HHLPPP	2019	Crude
Outcomes	Life expectancy	Vital Records	2019	Crude
Outcomes	Death-all causes	Vital Records	2012-2020	AA

Appendix B

Board	List of Provider Surveys as of December 2022	License Renewal Cycles
Board of Licensing for Alcohol and Other Drug Use Professionals	Alcohol and Drug Counselor Licensure Survey ▪ Licensed Alcohol and Drug Counselors (LADCs) ▪ Master Licensed Alcohol and Drug Counselors (MLADCs)	Biennially, 4/1-6/30, by initial license year
Board of Nursing	Advanced Practice Registered Nurse (APRN) Licensure Survey	Biennially, rolling, by birthday
Board of Dental Examiners	Dentist Licensure Survey	Biennially on even years, 2/1-4/30
Board of Dental Examiners	Dental Hygienist Licensure Survey	Biennially on odd years, 2/1-4/30
Board of Mental Health Practice	Mental Health Practitioner Licensure Survey ▪ Licensed Independent Clinical Social Workers (LICSWs) ▪ Licensed Clinical Mental Health Counselors (LCMHCs) ▪ Marriage and Family Therapists (MFTs) ▪ Pastoral Psychotherapists (PPs)	Biennially, rolling, *by initial license date
Board of Medicine	Physician Licensure Survey	Biennially, mid-Mar-6/30, by initial license year
Board of Medicine	Physician Assistant Licensure Survey	Biennially, mid-Oct-12/31, by initial license year
Board of Psychologists	Psychologist Licensure Survey	Biennially, 4/1-6/30, **by initial license year

* Initial license issued before year 2000, are renewed in June of odd years

** Initial license issued before year 2000, are renewed in odd years