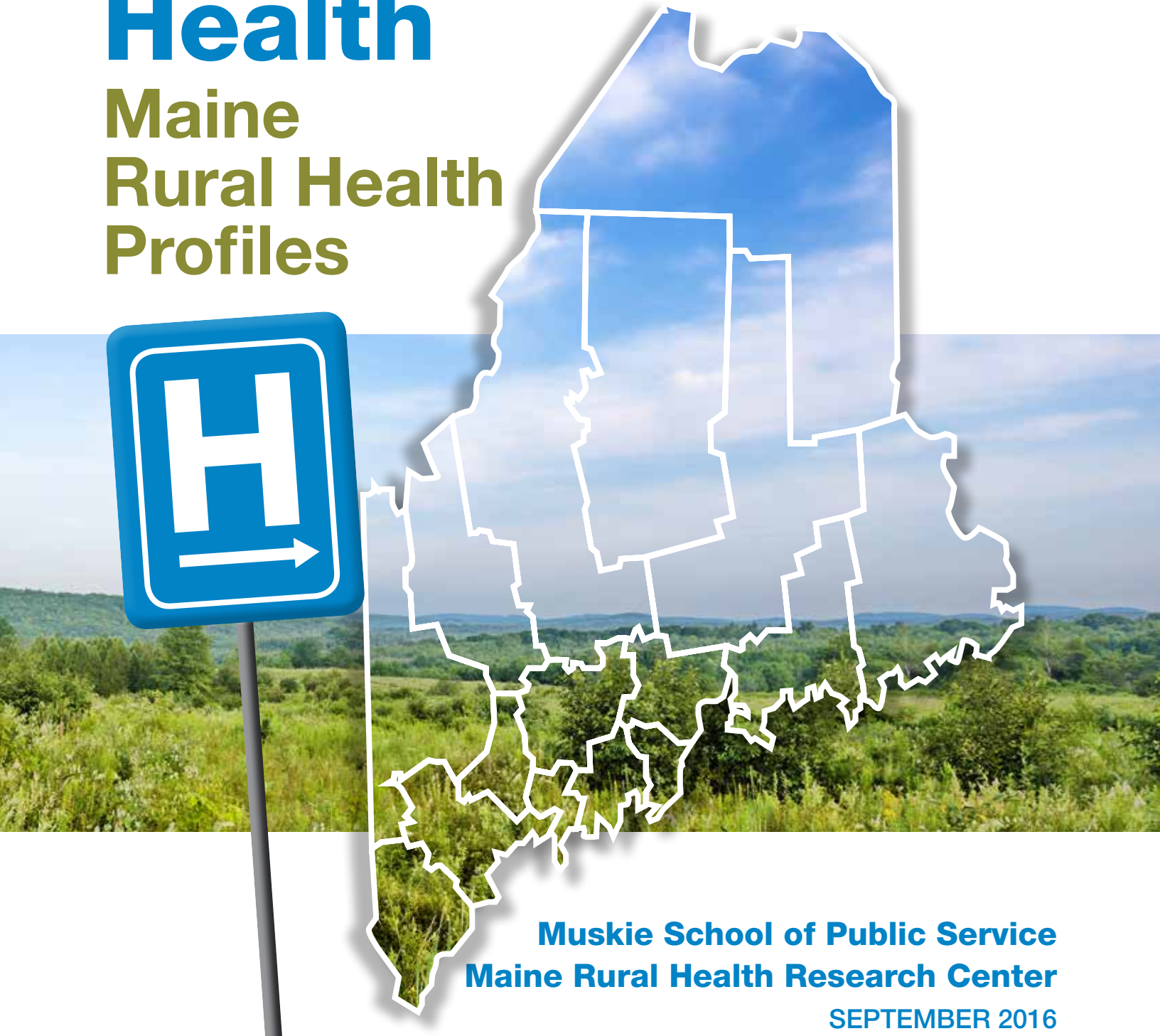
A Statewide View of Rural Health

Maine Rural Health Profiles



Muskie School of Public Service
Maine Rural Health Research Center

SEPTEMBER 2016

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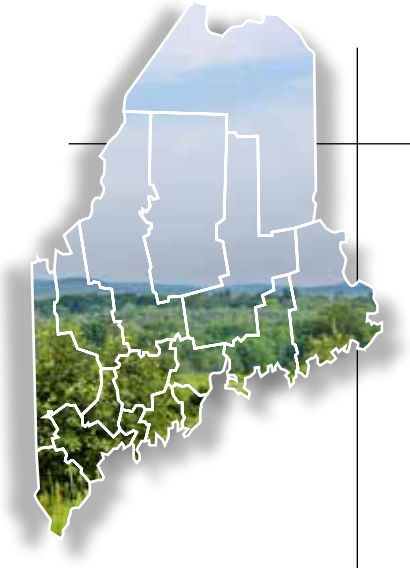

A Statewide View of Rural Health
Maine Rural Health Profiles

SEPTEMBER 2016

Prepared by the Maine Rural Health Research Center for the Maine Health Access Foundation

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When referencing or using any of the tables, maps, or other materials in the *Maine Rural Health Profiles,* please use the following recommended citation:

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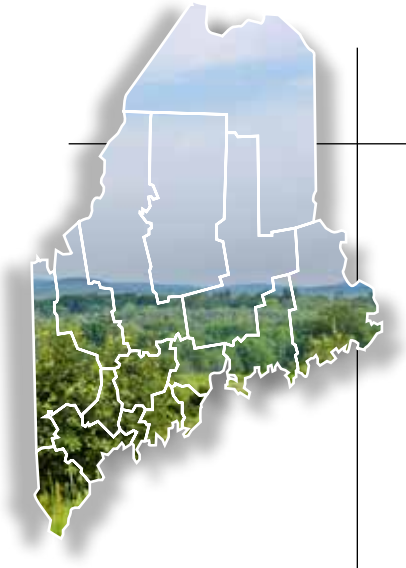
Acknowledgments: The authors thank Vinton Valentine, PhD, the Director of the Geographic Information Systems program at the University of Southern Maine, for his work developing the maps included in the *Maine Rural Health Profiles.*



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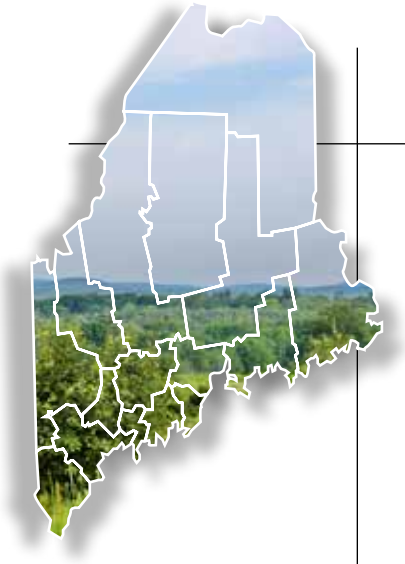


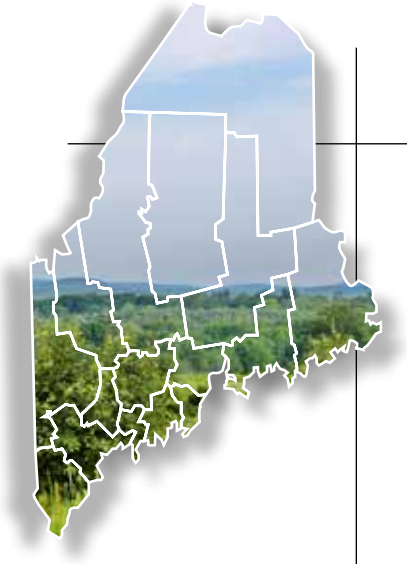
INTRODUCTION

Rapid changes in health care payment and delivery systems are driving health care providers, payers, and other stakeholders to consider how the current delivery system might evolve. This is especially true in rural communities where the historical vulnerabilities of small populations, lack of scale in the health infrastructure, and remote location are creating pressures on health care providers and communities to re-imagine strategies for sustaining (or creating) a high performance rural health system.[1]

Maine Rural Health Profiles provides a detailed look at the status of rural health and the rural health system. Each profile compares and assesses socio-economic data and health status indicators, rural health services and resources (facilities, services, and workforce), access to care, and health care economic indicators for Maine's 16 counties. Not all of Maine's counties, of course, are rural and even in urban counties, like Cumberland County, there are populations and areas that are more rural than urban. As discussed below, we have used both narrative and maps to discuss and illustrate both the degree of rurality in each county and how the data reported reflect rural health challenges and opportunities.

Maine Rural Health Profiles was designed to provide critical data and information that could inform community and regional conversations about building a health system that is responsive to the health and heath access needs of rural communities, within highly dynamic national and state contexts. Knowledge about what a community already has and what it needs both now and in the future is crucial for working towards creating a high performing rural health system in Maine. As described in Appendix I, the profiles in this report are based on existing secondary data and on data published by the *Maine Shared Health*

[1] Mueller KJ, Coburn AF, Lundblad JP, MacKinney AC, McBride TD, Watson SD. *The High Performance Rural Health Care System of the Future.* Columbia, MO: RUPRI Health Panel; September 2 2011.



Needs Assessment & Planning Process (SHNAPP) Project[2] and the *County Health Rankings,*[3] a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute.

Using information from the 16 county profiles, this section provides a statewide perspective on rural health and rural health systems in Maine. After a brief discussion of the complexities of defining rural areas and populations, we highlight some of the key demographic, health status, health service, and access to care realities facing Maine's rural populations and communities. We conclude with a discussion of the relationship of health care to Maine's rural economy.

Defining "Rural" in Maine

Most of us think we know what rural means when we see it, often in the mental picture of farms or wide open spaces. In reality, however, rural is a complex concept encompassing geography, population characteristics, social structure and culture, and other factors. The fact that there is no single preferred or accepted method for defining rural populations or areas complicates this problem even further. The methods used to define rural areas or populations are based on geographic units, sometimes in combination with population or health system/provider characteristics. Methods used by the Census Bureau, the Office of Management and Budget, and the US Department of Agriculture (USDA) differ and produce different results.

For the purpose of this report, we have chosen to use the USDA's classification system known as the Rural-Urban Continuum Codes (RUCCs). This system classifies counties as metropolitan (urban) or non-metropolitan (rural) based on population size, degree of urbanization, and adjacency to a metro area(s).[4] Based on these definitions, eleven of Maine's sixteen counties are classified as rural.[5] This fact is visually reinforced in population density maps such as

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[2] Market Decisions Research, Hart Consulting, Inc., Maine Center for Disease Control and Prevention. *Maine Shared Community Health Needs Assessment.* 2015.

[3] University of Wisconsin Population Health Institute, Robert Wood Johnson Foundation. County Health Rankings and Roadmaps. 2016; http://www.countyhealthrankings.org/. Accessed June 13, 2016.

[4] Coburn AF, MacKinney AC, McBride TD, Mueller KJ, Slifkin RT, Wakefield MK. *Choosing Rural Definitions: Implications for Health Policy.* Columbia, MO: RUPRI Health Panel; March 2007.

[5] Maine's rural counties are: Aroostook, Franklin, Hancock, Kennebec, Knox, Lincoln, Oxford, Piscataquis, Somerset, Waldo, and Washington. They are highlighted in bold throughout this document.

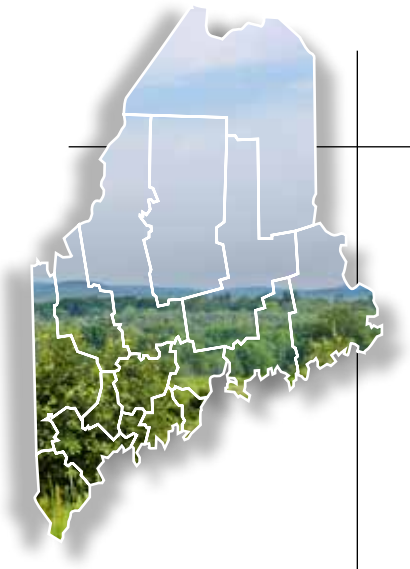
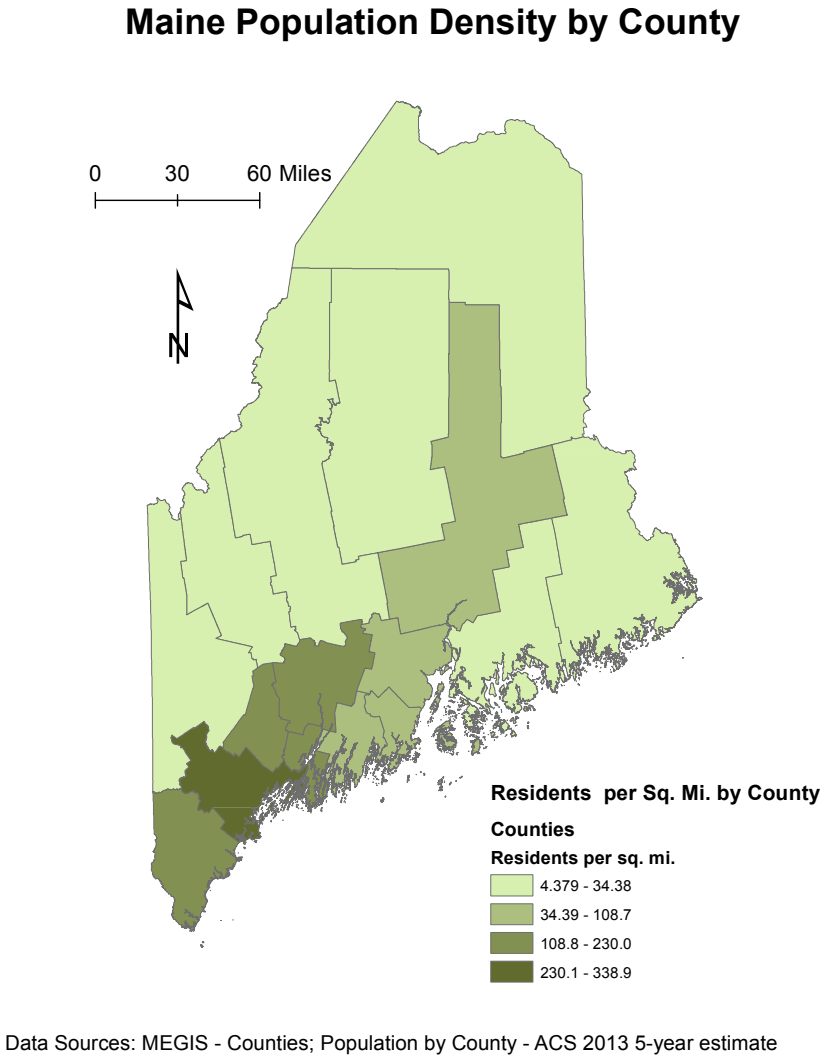
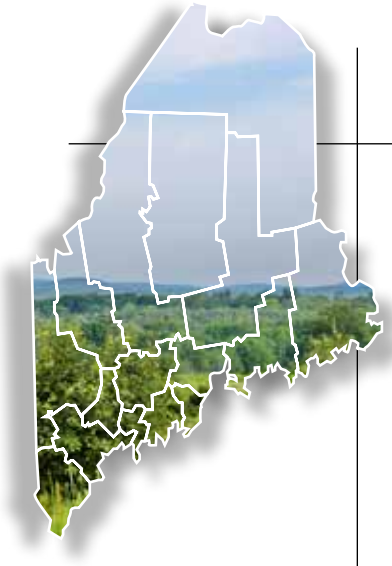


Figure 1 that show that 50% of Maine's land area is almost completely uninhabited—about 9,000 people live in the 400 townships and coastal islands that comprise the state's unorganized territory.

Figure 1.

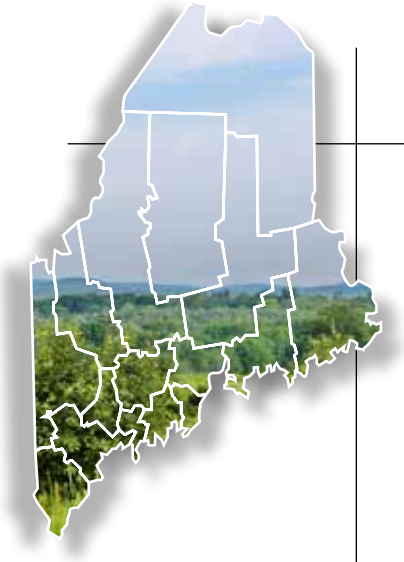


Data Sources: MEGIS - Counties; Population by County - ACS 2013 5-year estimate



Implications of Maine's Geography

Geography is an important factor in considering how rural health services should be located to ensure appropriate access. However, appropriate access has to be determined on a service-specific basis. More immediate or proximate access to emergency medical services and primary care, for example, is critical for any rural health system. In contrast, low patient volumes make access to many specialty services unrealistic in rural areas. While distance to services is often the easiest measure of health care access, it is not always the best. Empirical analyses of how people use services demonstrate that patient preferences, cultural factors, and many other considerations often come into play. In addition, technology, such as telehealth, is making access to many services more convenient and equally effective.



THE SOCIO-DEMOGRAPHIC CHARACTERISTICS OF RURAL MAINE

Socio-demographic factors such as income and education are important determinants of health status and outcomes. The characteristics of the people who live in rural and urban counties in Maine differ in some significant ways:

Rural counties in Maine have a higher concentration of older adults and veterans.

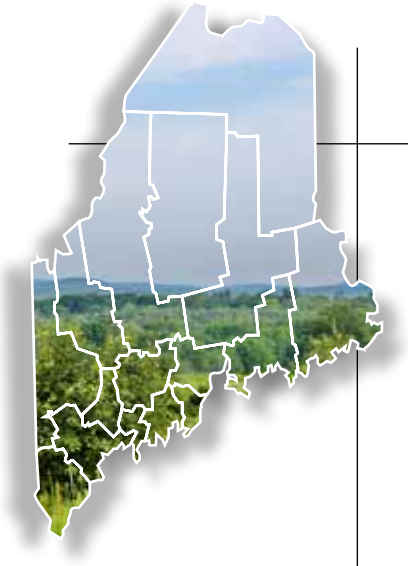
- **Lincoln, Piscataquis,** and **Washington** counties have the highest percentage of their population aged over 65; Androscoggin, Penobscot, and Cumberland counties have the lowest percentage.
- **Piscataquis,** Sagadahoc, and **Washington** counties have the highest percentage of residents who are Veterans. Urban counties account for four of the five counties with the smallest proportion of residents who are veterans.

Maine's rural residents are more likely to live in poverty.

- **Washington, Piscataquis,** and **Somerset** counties, all predominantly rural counties, have the largest percentages of residents living below 100 percent and 150 percent of the Federal Poverty Level (FPL). In **Washington** County, nearly a third of residents are living below 150 percent of the FPL.
- **Piscataquis, Aroostook,** and **Washington** counties have the lowest median household incomes in the state.
- **Piscataquis, Washington,** and **Somerset** counties also have the largest percentages of children living in poverty.
- **Aroostook, Washington,** and **Piscataquis** counties have the highest percentages of seniors living in poverty.
- Residents of **Somerset, Washington,** and **Aroostook** counties have the highest levels of unemployment in the state.

Maine's rural residents have lower levels of educational attainment.

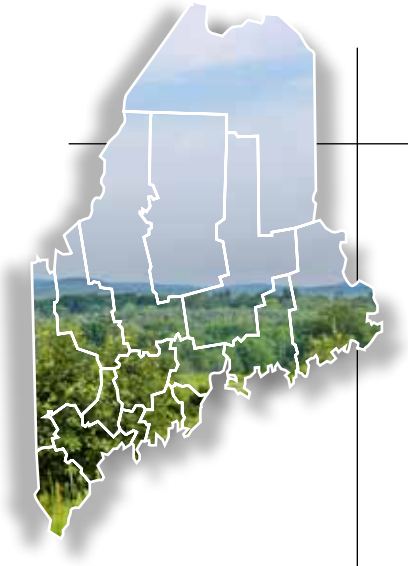
- Residents of **Somerset, Piscataquis,** and **Aroostook** counties are the least likely to hold bachelor's degrees compared to other counties.
- **Aroostook, Washington,** and **Somerset** counties have the highest percentage of residents who have not even finished high school.



Implications of Socio-demographic Characteristics of Rural Maine

The fact that rural Mainers are less healthy than their urban counterparts is, in part, the result of their lower incomes and educational achievement. The concentration of socio-economically vulnerable populations in rural Maine also has significant implications for the health system. Nationally, half of all rural workers are employed in industries in which less than 80 percent of workers are covered by employer-sponsored insurance.[6] Lack of insurance or heavy reliance on public insurance among rural Maine populations creates significant financial burdens for rural hospitals and other providers. Among older, vulnerable populations, the ability to age in place in the community is often compromised by housing and other problems linked to socio-economic status.

[6] Levitt L, Claxton G, Damico A, Cox C. Assessing ACA Marketplace Enrollment. March 2016.



RURAL MAINERS ARE LESS HEALTHY THAN THEIR URBAN COUNTERPARTS

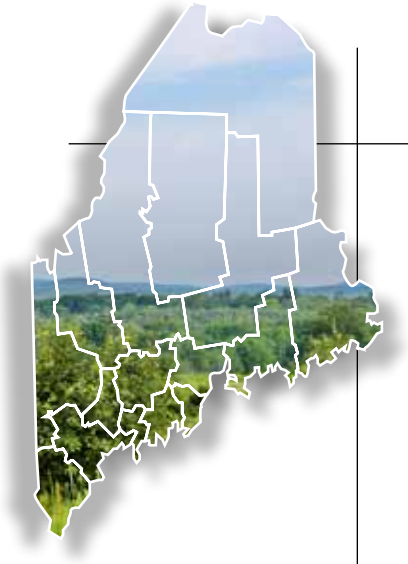
Residents of rural areas experience significant health challenges due to a combination of factors including a higher concentration of older residents, lower incomes and educational achievement, harmful health behaviors, and geographic and financial barriers to accessing health care services, including reduced access to employer-sponsored health insurance. In line with national trends, Maine's rural residents are generally in poorer health than those living in the state's urban areas:

- More than one in five residents of **Piscataquis, Washington,** and **Aroostook** counties are living with a disability, the highest percentages in the state.
- Maine's rural residents are more likely to report multiple chronic conditions.
- Maine's rural residents are more likely to report that they are in fair or poor health.
- Diabetes prevalence is higher in rural areas of Maine.
- Maine's rural residents are less likely to report that they are receiving treatment for mental health despite reporting rates of depression comparable to their urban counterparts.
- Maine's rural residents have higher rates of hospitalizations and emergency room visits for ambulatory sensitive conditions than urban residents.[7]

Implications of Health Status of Rural Maine

The poor health of Maine's rural communities strains rural health systems that have limited resources in terms of finances, infrastructure, and clinical workforce. Financial challenges include low Medicare margins for the outpatient and home health care needed to manage the chronic conditions that are more prevalent among rural residents. Poor health status also has a detrimental economic impact on families and rural communities through lost wages and productivity, increased health care expenses, and, in aggregate, an unhealthy workforce that limits economic growth—further exacerbating low levels of

[7] Market Decisions Research, Hart Consulting Inc., Maine Center for Disease Control and Prevention. Maine Shared Community Health Needs Assessment. 2015.



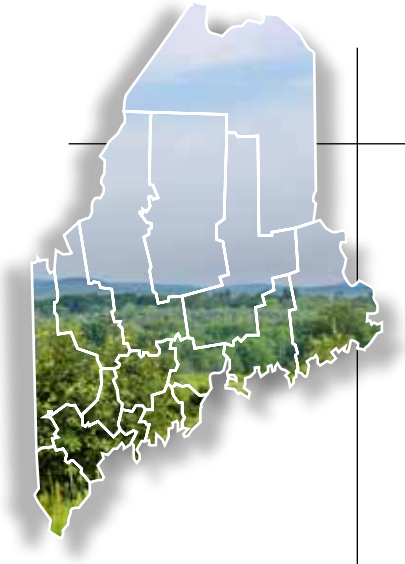
employer-sponsored insurance coverage in rural areas.

HEALTH RESOURCES AND SERVICES IN RURAL MAINE

A high performing rural health system requires access to basic health services, including primary care, emergency medical services (EMS), behavioral health, and oral health. Some rural communities in Maine lack access to these essential services because of workforce shortages, limited financial resources, and other problems. Although Maine has a robust network of Federally Qualified Health Centers (FQHCs) and Rural Health Clinics (RHCs) to fill gaps in primary care, as well as a strong Veterans Affairs (VA) Maine Healthcare system including Community-Based Outpatient Clinics (CBOCs), recruiting and retaining a primary care workforce remains a challenge in a number of counties. Likewise, access to behavioral health services, including substance use disorder treatment, is a serious problem in many parts of the state.

As in most states, rural health resources and services in Maine are characterized by the predominant role of small, community hospitals that have increasingly become the organizational and financial foundation for other critical services, including emergency medical services and primary care. These hospitals are frequently the largest employer in the community. In a number of communities in Maine, public health, home health, skilled nursing home, and other critical services are tied to the local rural hospital. As noted later in this section, recruiting and retaining a workforce needed to sustain these services is a long-standing challenge in a number of rural communities. Rural hospitals have increasingly employed local physicians in part to strengthen the hospital's and the community's ability to recruit and retain primary care and other physicians.

Over the past decade, three important trends have affected the status and role of rural hospitals in Maine. First, since 1999, 16 rural hospitals in Maine have transitioned to become designated as Critical Access Hospitals (CAHs) in order to obtain more favorable, cost-based payment from Medicare and the Medicaid program. In doing so, these hospitals have chosen to limit their inpatient beds to 25 with a mix of inpatient and "swing beds" which function as skilled nursing-level beds. The second major trend has been the consolidation of rural hospitals with larger health systems. In Maine, most rural hospitals have become a part of or affiliated with one of Maine's four major health systems: MaineHealth, Eastern Maine Healthcare System, Central Maine Medical Family, or MaineGeneral Health. And finally, we are seeing significant effort to integrate services across different health sectors, including behavioral health and long-term services and supports (LTSS).



Despite favorable public payment, many rural hospitals across the country are facing significant financial challenges. More attention is being paid to whether there are new models for organizing, delivering, and paying for essential health services in rural communities. In their report on the "high performing rural health system", the Rural Policy Research Institute (RUPRI) identified a set of three core services as fundamental for rural populations: primary care, EMS, and public health.[8] How these and other services are configured geographically and in relation to the communities and users, is essential for ensuring access to a high quality, affordable health system. New, innovative models for organizing and delivering services are developing in Maine and across the country in response to policy and market forces.

LTSS are also a critical element of the rural health system, especially in light of the higher proportion of older and disabled persons living in rural Maine counties. National studies suggest that older rural residents tend to use nursing home care at higher rates than those in urban areas and that access to home and community based services is more challenging in rural communities.[9] In general our data show considerable variation across counties in the supply and availability of nursing home, residential care, and other LTSS resources.

Many rural counties face challenges achieving and maintaining an adequate supply of primary care and other essential providers.

- Primary care practices are reasonably well distributed around the state with a robust supply of RHCs and FQHCs. FQHCs and RHCs often serve communities that are a significant distance from hospitals or other health care facilities, and play a crucial role in maintaining local access to primary care.
- Many rural areas in Maine are considered MUPs (medically underserved areas) and HPSAs (Health Professional Shortage Areas) for primary care, dental care, and mental health providers.
- The health care workforce is concentrated in the urban counties, particularly Cumberland, Penobscot, and Androscoggin. Cumberland County has 50 percent more health workers per 1,000 residents than the state average, and Kennebec County 20 percent more. More rural counties—**Franklin, Oxford,** and **Washington** counties in particular—have 20 to 50 percent fewer health workers per population.

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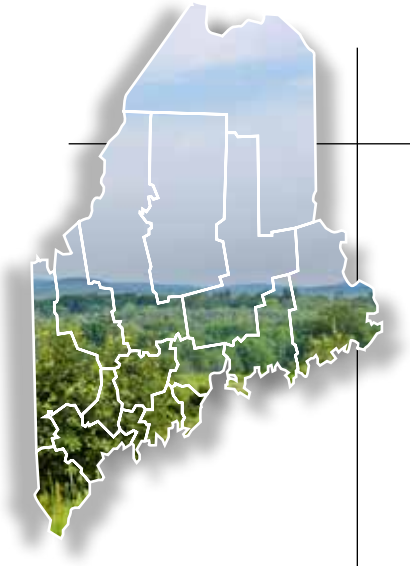
[8] Mueller KJ, Coburn AF, Lundblad JP, MacKinney AC, McBride TD, Watson SD. *The High Performance Rural Health Care System of the Future.* Columbia, MO: RUPRI Health Panel; September 2, 2011.

[9] Li H. "Rural Older Adults' Access Barriers to in-Home and Community-Based Services." Soc Work Res. 2006;30(2):109-118.



There are fewer behavioral health care providers and organizations in rural counties.

- Maine's behavioral health care providers are disproportionately located in urban counties.
- Maine's behavioral health homes, a care coordination initiative, are located almost entirely in urban areas (7 out of 51 behavioral health homes are in rural counties).
- **Washington** and **Knox** counties are the only rural counties with methadone clinics.

The VA health system in Maine has good rural coverage.

- Maine's VA system has made an effort to ensure that Maine's veterans have relatively easy access to outpatient clinics. There are eleven CBOCs around the state, with most located in smaller communities and rural areas. The Caribou CBOC was the first rural VA clinic in the nation.
- Togus Veterans Affairs Medical Center is located in Augusta, closer to many veterans than a facility in Cumberland County would be.
- Of the five Vet Centers located in Maine, two are in rural areas (Caribou and Sanford).

Hospitals in rural areas are more likely to be smaller and focused on acute inpatient care.

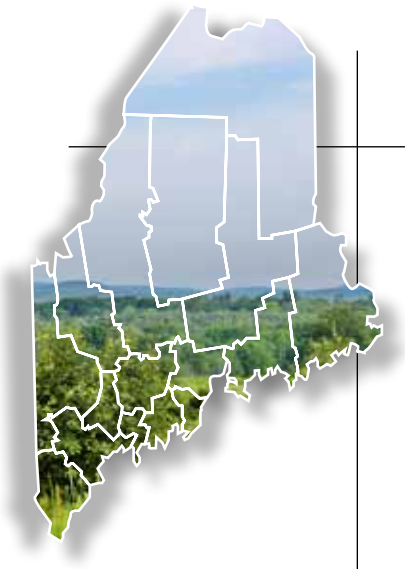
- Maine has 16 CAHs in 10 counties.
- Hospital bed count in rural counties ranges from 3.2 beds per 1,000 population in **Aroostook** County to 0.64 beds per 1,000 people in **Waldo** County.

The supply of different long-term services and supports varies across Maine counties.

- The supply of nursing home residential care beds varies considerably across the state. Lincoln County has the oldest population in the state but also the third lowest ratio of nursing home beds per 1,000 residents over the age of 65.
- About a third of the long-term care facilities that offer Alzheimer's care are located in rural counties (33/93).

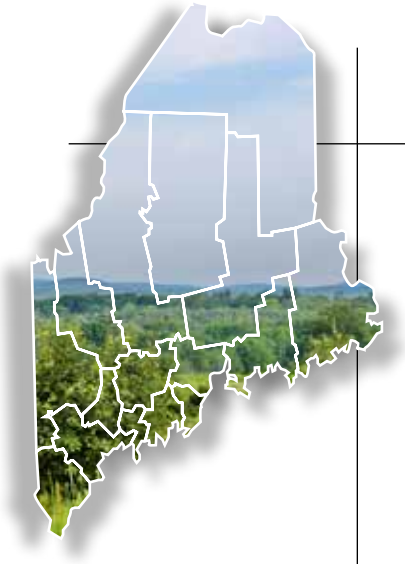
The availability and use of telehealth services to provide rural access to services is unclear.

- Although the use of telehealth is expanding, we currently lack data that could help us assess the extent to which these services are enhancing access to care in rural Maine.



Implications of Health Resources and Services in Rural Maine

The availability and distribution of some essential health services in rural Maine undoubtedly creates access problems for some residents. Any assessment of the availability and appropriateness of facilities and services in rural counties requires information on location/distance of services to populations, the distribution of essential versus non-essential services, and factors affecting access to and use of services. Profiles of facility and service availability contained in this report are only partially useful in assessing the state of rural health services in Maine because they tell us little about whether patient and community needs are actually being met. It is hard to assess adequacy without more information on service capacity relative to need and demand. In addition, rural health services such as hospital or behavioral health may be locally available and have excess capacity but are not used by some local populations who prefer and are able to travel outside the community to seek care.



HEALTH ACCESS AND INSURANCE COVERAGE IN RURAL MAINE

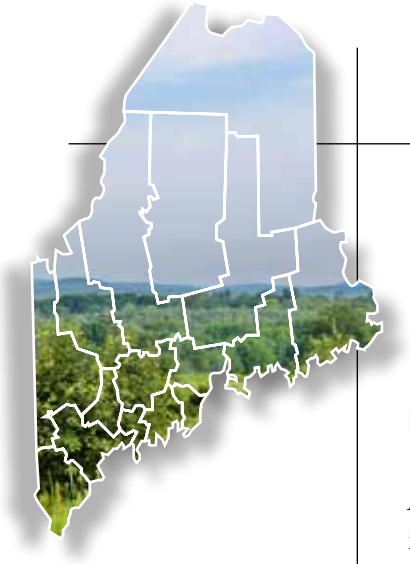
Access to health care is important for overall health status, and prevention, detection, and treatment of disease. Access to, and affordability of, health care services depends on a myriad of factors including insurance coverage, geographic isolation and availability of transportation, availability of services, and provider supply. As noted earlier, some essential services—including mental health care, dental care, and substance use disorder services—are frequently difficult to access in rural areas.

Rural Maine residents are somewhat more likely to report having difficulty accessing some health services than urban residents, but there is considerable variability across counties.

- Residents of **Piscataquis** and **Aroostook** counties rank among the most likely to report that they had a check-up in the past year, along with Androscoggin County, while the residents of **Knox, Franklin,** and **Waldo** counties are the least likely.
- The urban counties of Androscoggin and Penobscot rank highest for residents reporting that they were unable to access care due to cost, along with **Oxford** County. Two of the three counties ranking lowest on this measure (i.e., unlikely to report that cost was a barrier to care) are also urban (Sagadahoc and Kennebec, along with **Washington** County).
- **Washington** and **Somerset** counties rank highest for their residents not having a personal primary care provider or other usual source of care, along with Penobscot County.
- Residents of **Somerset, Washington,** and **Aroostook** counties are least likely to report that they have had a dental visit in the past year.
- **Aroostook** County has the highest rate of women receiving mammograms in the past two years in the state; **Waldo, Washington,** and **Hancock** counties have the lowest rates.

Rural residents are less likely to be insured.

- Residents of **Hancock, Piscataquis,** and **Washington** counties are the least likely to have private or public health insurance in Maine; these counties also have the highest percentage of uninsured children.

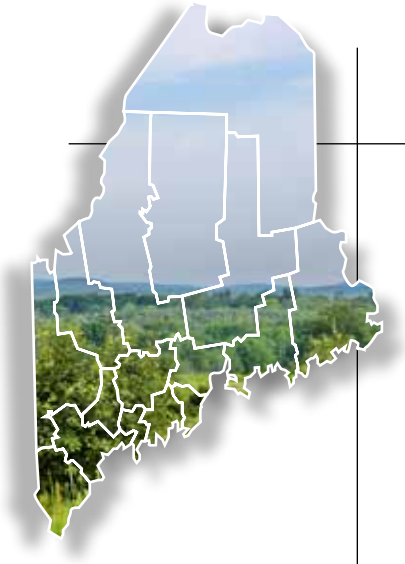


- Rural Mainers are less likely to have private insurance coverage, and more likely to rely on MaineCare.[10] (People may have more than one type of insurance.)

Implications of Access and Insurance Coverage in Rural Maine

A lack of access to preventative, screening, and treatment services negatively impacts health status. Access issues also have significant equity implications. Traveling a significant distance to receive health care services can be particularly burdensome for low-income rural residents who may lack transportation options and/or paid time off from work. Additionally, lower levels of health insurance coverage in rural areas increases financial risk for rural residents who are already disproportionately low-income. While the provision of specialty services is unrealistic in many rural areas given low patient volumes, telehealth approaches, alternate delivery models, and rural workforce recruitment and retention strategies can make access to care more convenient.

[10] MaineCare is Maine's Medicaid program. As of the date of publication, eligibility for MaineCare is 100 percent of the FPL for seniors, 105 percent for parents with minor children at home, 213 percent for children under 19 years, 161 percent for young adults (aged 19 & 20), and 214 percent for pregnant women. Subsidized private health insurance is available through the state and federal health insurance Marketplaces for individuals with incomes between 138-400 percent of the FPL. Maine has chosen not to expand Medicaid coverage to all non-elderly adults earning less than 138 percent of the FPL. This leaves a coverage gap for all non-elderly adults without dependents who earn up to 138 percent of the FPL, and parents who earn too much to qualify for MaineCare but do not earn enough to qualify for subsidies on the health insurance marketplace.



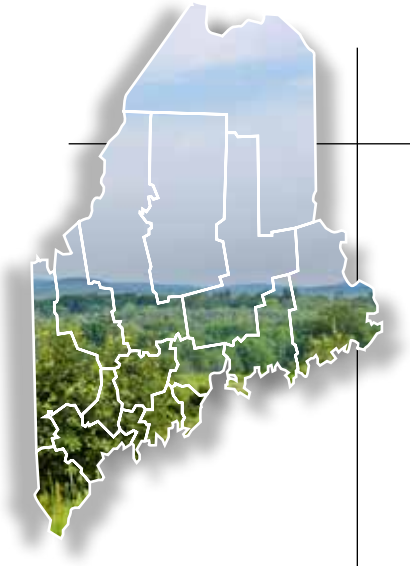
THE RELATIVE IMPORTANCE OF THE HEALTH CARE ECONOMY IN RURAL MAINE

Health care is a critical component of Maine's economy and the state enjoys a relatively greater concentration of employment in the health care sector compared to the nation as a whole. The health care sector is the largest source of jobs in the state. While more than half of the jobs are located in Cumberland, Penobscot, and Kennebec counties, employment in the health care sector in many of the smaller and midsized rural counties makes up a disproportionally higher share of all employment in the county. Most of this employment comes from hospitals, followed by ambulatory health care services, and nursing and residential care facilities. Wages paid by hospitals are a crucial element of Maine's economy: half of all health care wages come from hospitals, and hospital workers earn wages that are 45 percent higher than the average worker in the state. In **Piscataquis** and **Kennebec** counties, hospital employment comprises 2.7 and 2 times (respectively) as many workers relative to the size of the county's workforce compared to the nation.

With the exception of Cumberland and Penobscot counties, the ambulatory health care services industry is underrepresented across Maine's counties. In particular, the counties of **Franklin, Hancock, Oxford, Piscataquis, Sagadahoc,** and **Waldo** all have a disproportionately smaller share of workers in the ambulatory health care field relative to the rest of the country. However, statewide, the average wage in ambulatory health care services is 28 percent higher than the average wage for all industries. While the nursing and residential care industry is highly concentrated in Maine, making up a 60 percent larger share of the state's economy than nationally, wages are 20 percent lower than the national average.

Health care is a critical component of Maine's economy.

- The health care sector is the largest source of jobs in Maine, employing 15 percent of the workforce, ahead of retail trade (12 percent) and education (10 percent).
- Health care makes up a higher share of employment in some smaller and midsized rural counties, including **Piscataquis** (19 percent), **Aroostook** (19 percent), and **Washington** counties (16 percent).
- The average wage in the health care sector is 17 percent higher than the average for all industries in the state.
- In all counties except Sagadahoc, the average wage in the health care sector is on average 20 percent higher than the countywide average wage.



Hospitals are the major driver of health care employment.

- Employment in hospitals makes up about 40 percent of health care employment, followed by 32 percent in ambulatory health care services, and 28 percent in nursing and residential care facilities.
- Half of all health care wages in the state come from hospitals.
- Wages paid in the hospital industry are significant. Statewide, hospital workers earned 45 percent more than the average worker in the state.
- With the exception of York, **Lincoln,** and Sagadahoc counties, hospital employment comprises a larger share of each county's economy relative to the nation.

Implications of the Rural Health Economy

The large role of the health care system in rural areas cannot be overstated. As the largest source of jobs in rural Maine, hospitals and other health care facilities and service providers employ nearly one-fifth of all rural Mainers in jobs that pay higher than average wages. These data clearly demonstrate the importance of health care to rural economies generally, but especially those that are shrinking due to mill closures or other economic disruptions.

It is important, however, to also view these data from the perspective of those who purchase health care services, including consumers, employers, government, and health plans. Although these data do not tell us anything about the relative cost of health care in Maine's rural and urban counties, they raise the important question of whether there are efficiencies to be gained that could reduce the rate of growth in health care spending. Such efficiencies might be gained, for example, through greater resource sharing, rationalization of the distribution of technology and services, and/or other health system changes.