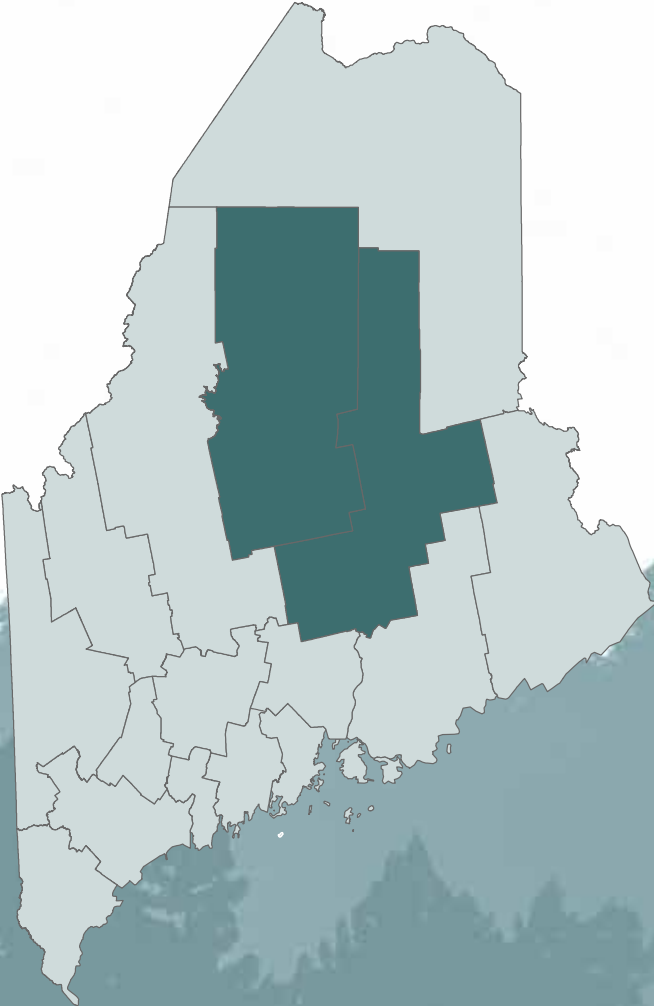
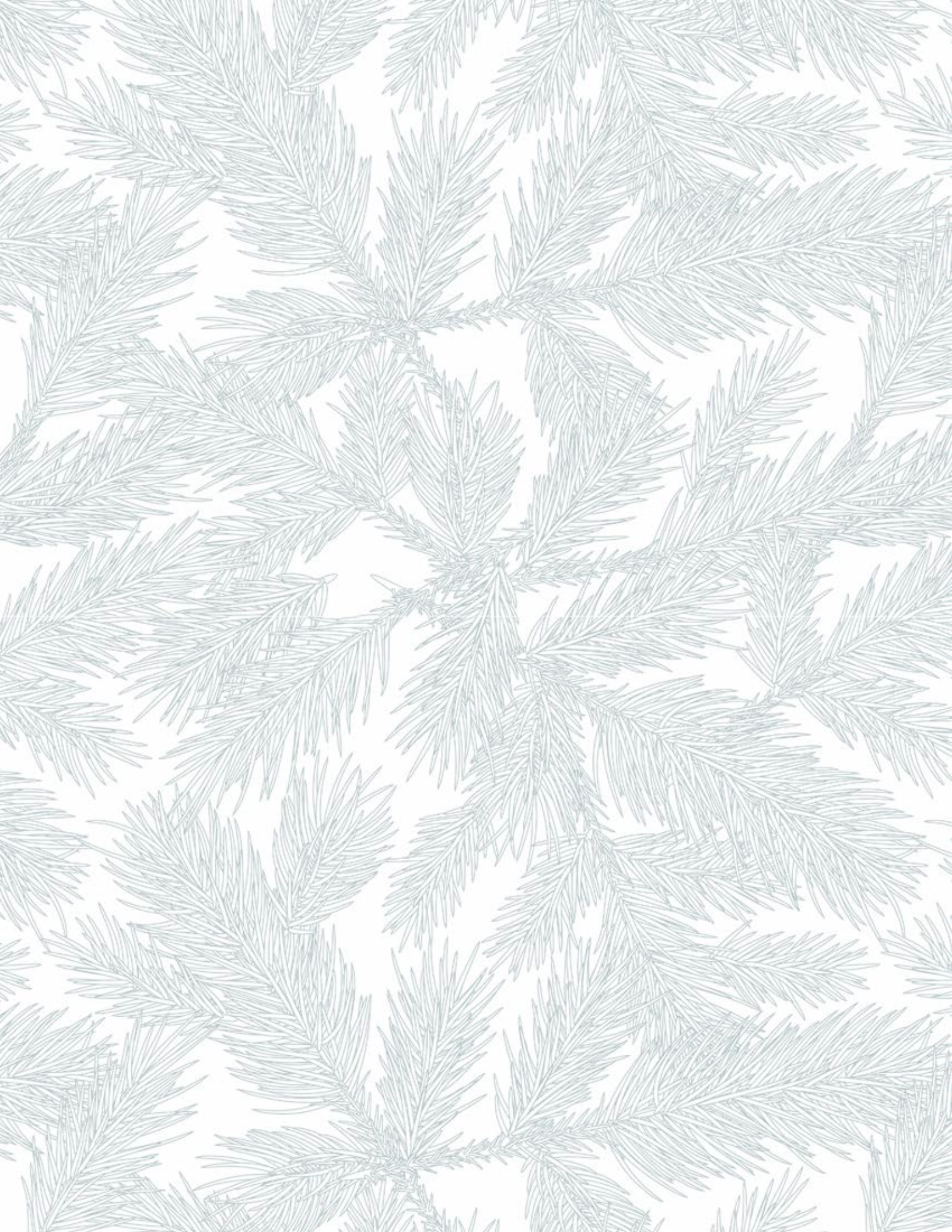


# PENQUIS DISTRICT

2019 Maine Shared Community Health  
Needs Assessment Report





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**Key companion documents available at [www.mainechna.org](http://www.mainechna.org):**

- Penobscot County Health Profile and CHNA Report
- Piscataquis County Health Profile and CHNA Report
- Penquis District Health Profile
- Maine State Health Profile and CHNA Report
- Health Equity Data Summaries, including state level data by sex, race, Hispanic ethnicity, sexual orientation, educational attainment, and income

# EXECUTIVE SUMMARY

## PURPOSE

The Maine Shared Community Health Needs Assessment (Maine Shared CHNA) is a collaborative effort amongst Central Maine Healthcare (CMHC), MaineGeneral Health (MGH), MaineHealth (MH), Northern Light Health (NLH), and the Maine Center for Disease Control and Prevention (Maine CDC), an office of Maine Department of Health and Human Services. This unique public-private partnership is intended to assess the health needs of all who call Maine home.

- **Mission:** The Maine Shared CHNA is a dynamic public-private partnership that creates shared Community Health Needs Assessment reports, engages and activates communities, and supports data-driven health improvements for Maine people.
- **Vision:** The Maine Shared CHNA helps to turn data into action so that Maine will become the healthiest state in the US.

**Table 1: Population (2012-2016)**

	PENOBSCOT COUNTY	PISCATAQUIS COUNTY	PENQUIS DISTRICT	MAINE
Population count	152,978	17,044	170,022	1,329,923
Population 65 years of age or older	16.5%	23.5%	17.2%	18.2%
White	95.1%	96.2%	95.2%	94.8%
Hispanic	1.2%	1.2%	1.2%	1.5%
Asian	1.1%	0.4%	1.1%	1.1%
Two or more races	1.7%	1.9%	1.7%	2.0%

*More information on the population characteristics of the Penquist District can be found in the Community Characteristics section on page 20.*

## TOP HEALTH PRIORITIES

Forums held in Penobscot and Piscataquis Counties identified health issues in their communities through a voting methodology outlined in the Methodology section of this report (Appendix C). Table 2 includes a list of those priorities that were identified in both Penobscot and Piscataquis Counties.

**Table 2: Top Priorities in Penquis District Counties**

<b>PENOBSCOT COUNTY PRIORITY AREA</b>	<b>% OF VOTES</b>
Mental Health*	19%
Social Determinants of Health*	18%
Substance Use*	15%
Access to Care*	14%
<b>PISCATAQUIS COUNTY PRIORITY AREA</b>	<b>% OF VOTES</b>
Mental Health*	21%
Social Determinants of Health*	19%
Access to Care*	17%
Substance Use *	14%

*\*Also a statewide priority. For a complete list of state-wide priorities, see state health profile on our website, [www.mainechna.org](http://www.mainechna.org)*

## NEXT STEPS

This assessment report will be used to fulfill the Internal Revenue Service (IRS) requirements for non-profit hospitals as well as the Public Health Accreditation Board (PHAB) requirements for state and local public health departments. Required activities include:

- Obtaining input from the community, including providers and communities served, on leading health issues and unmet needs
- Evaluating previous actions taken to address needs identified in previous assessments
- Choosing (with justification) which health needs should be addressed
- For District Coordinating Councils, creating District Health Improvement Plans
- For the Maine CDC, creating an informed State Health Improvement Plan

In the coming months and years, policymakers, non-profits, businesses, academics, and other community partners may also use these reports for their own strategic planning purposes.

# ACKNOWLEDGEMENTS

Funding for the Maine Shared CHNA is provided by four healthcare systems: Central Maine Healthcare, MaineGeneral Health, MaineHealth, and Northern Light Health, with generous in-kind support from the Maine CDC, and countless community partners and stakeholder groups. These stakeholder groups include the Metrics Committee, Data Analysis workgroup, Community Engagement Committee, Local Planning Committees, and the Steering Committee. Special thanks to the Maine Health Data Organization for working with us to access their data. For a listing please visit [www.mainechna.org](http://www.mainechna.org) and click on, "About Maine CHNA."

Significant analysis was conducted by epidemiologists at the Maine CDC and the University of Southern Maine's Muskie School of Public Service. John Snow, Inc. (JSI) provided analysis, methodology, and design support.

In addition, the Steering Committee gratefully acknowledges the countless community volunteers who gave their time and passionately committed to hosting, facilitating, attending, and engaging in this effort. From Aroostook to York, Oxford to Washington County, over 2,000 Mainers gave their time and talent to this effort. Thank you.



# HEALTH PRIORITIES

Health priorities for the county, public health district, and the state were developed through community participation and voting at community forums. The forums were an opportunity for review of the County Health Profiles, discussion of community needs, and prioritization in small breakout sessions followed by forum session votes. Table 3 lists all priorities that arose from group breakout sessions in each of the counties that make up the Penquis District. The priorities in bold font represent the top priorities within each county. The shaded priorities are those that were common across both Penobscot and Piscataquis Counties. Please see Appendix C for full description of the methodology used in identifying top priorities.

This section provides a synthesis of findings for each of the top priorities that arose in each county. The discussion of each priority draws from several sources, including the data in the Penquis District Health Profile, information gathered through community engagement discussions at the community forums, and key informant interviews. See Appendix C for the complete methodology for all of these activities.

**Table 3: Penquis District County Forum Voting Results**

	<b>PENOBSCOT COUNTY</b>	<b>PISCATAQUIS COUNTY</b>
<b>PRIORITY AREA</b>	<b>% OF VOTES</b>	<b>% OF VOTES</b>
<b>Mental Health*</b>	<b>19%</b>	<b>21%</b>
<b>Social Determinants of Health*</b>	<b>18%</b>	<b>19%</b>
<b>Access to Care*</b>	<b>14%</b>	<b>17%</b>
<b>Substance Use*</b>	<b>15%</b>	<b>14%</b>
Physical Activity, Nutrition, and Weight*	12%	9%
Older Adult Health/Healthy Aging*	7%	12%
Environmental Health	2%	7%
Pregnancy and Birth Outcomes	6%	1%
Tobacco Use	5%	N/A
Infectious Disease	2%	N/A

*\*Also a statewide priority. For a complete list of statewide priorities, see state health profile on our website, [www.mainechna.org](http://www.mainechna.org)*

# MENTAL HEALTH

Mental health affects all segments of the population, regardless of age, socioeconomic status, race/ethnicity, sexual orientation, or gender. Poor mental health contributes to a number of challenges that affect both individuals and communities. Mental health conditions, when left unmanaged, may affect an individual's ability to form and maintain relationships with others, cope with challenges, and lead a healthy and productive life. Individuals with serious mental illness (e.g., major depression or schizophrenia) are at a higher risk of developing other medical conditions, including cardiovascular disease, diabetes, stroke, and Alzheimer's disease. While the reason for this link is unclear, research suggests that those with mental illness may experience more barriers to medical care and prevention strategies and may also find it harder to care for themselves.<sup>1</sup>

More than 25% of adults with a mental health condition also have a substance use disorder; this comorbidity occurs more among adults with depression, anxiety disorders, schizophrenia, and personality disorders. While mental health conditions may lead to drug or alcohol use, the reverse can also be true: the use of certain substances may cause individuals with substance use disorder to experience symptoms of a mental health condition.<sup>2</sup>

## QUALITATIVE EVIDENCE

Forum participants cited depression, anxiety, stress, and suicidality as the major mental health concerns in Penquis District. Forum participants discussed specific mental health treatment services in their counties:

- Penobscot County forum participants discussed the need for inpatient services, specialty providers for youth and older adults, and integration of behavioral health and primary care.
- Piscataquis County forum participants identified counseling and crisis treatment as specific gaps in the spectrum of care.

In both counties, forum participants mentioned the mental health needs of youth and adolescents as a particular concern.

- In Penobscot County, Adverse Childhood Experiences (ACEs), bullying, the impact of social media, and stress were thought to be underlying issues that contributed to the increase in depression amongst young people. Community members suggested behavioral health education, screening, and treatment should be provided as early as pre-kindergarten (pre-K). School personnel, particularly school nurses, counselors, and health teachers, were identified as critical partners in the early identification and treatment of mental health conditions.
- In Piscataquis County, participants also identified ACEs as a risk factor for youth mental health conditions.

Besides youth, community forum participants in Piscataquis County identified older adults and the lesbian, gay, bisexual, transgender, and queer/questioning (LGBTQ) community as segments of the populations that were at risk for poor mental health. Forum participants discussed the need for increased education and counseling in schools. For the LGBTQ community, participants identified the need for culturally competent resources, especially for LGBTQ youth. Key informants working with the LGBTQ population explained that medical professionals are provided with little training and education about how to meet the needs of non-heterosexual individuals.

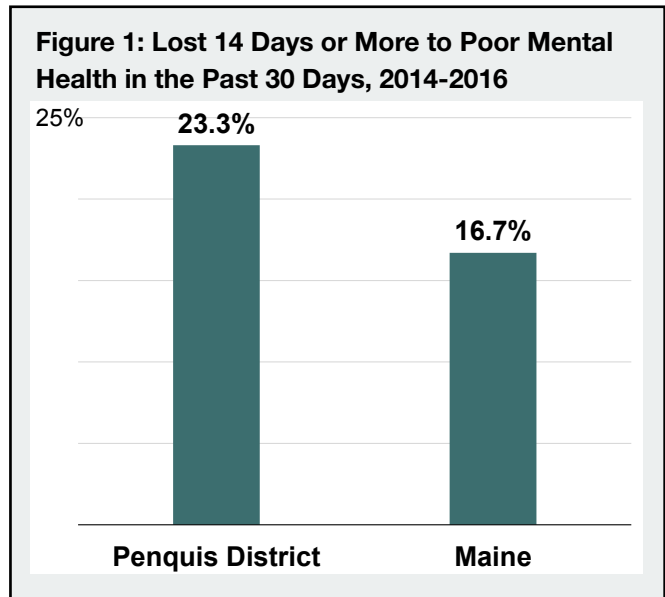
Stigma, or the disapproval or discrimination against a person based on a particular circumstance (e.g. mental health condition) was identified by several forum participants as a major barrier to seeking and receiving health care. Stigma prevents individuals from receiving the help they need, as individuals with a mental health condition may not seek care for fear that they will be shamed or discriminated against. Community members called for more education around mental health conditions, for both providers and residents, to reduce burden and stigma.



## QUANTITATIVE EVIDENCE

### In the Penquis District:

- The percentage of adults who reported 14 or more days lost due to poor mental health in the past 30 days was significantly higher than the state overall (23.3% vs. 16.7%) in 2014-2016.
- In Penobscot County, the percentage of high school students who reported that they had been sad/hopeless for more than two weeks in a row increased significantly between 2011 and 2017, from 22.5% to 28.3%.
- In Piscataquis County, the percentage of high school students who reported that they had been sad/hopeless for more than two weeks in a row increased significantly between 2011 and 2017, from 21.8% to 32.5%. The percentage was significantly higher than the state overall (26.9%).
- In Piscataquis County, the percentage of high school students who reported having seriously considered suicide increased significantly between 2011 and 2017, from 9.6% to 17.4%.
- The ratio of psychiatrists to 100,000 population was lower than the state overall (5.7 vs. 8.4) in 2017.



See Key Indicators on page 23 as well as the Penquis District Health Profile and individual county data reports on our website [www.mainechna.org](http://www.mainechna.org). Those documents also include information on data sources and definitions.

## COMMUNITY RESOURCES TO ADDRESS MENTAL HEALTH

The table below is a summary of the assets and needs identified through the community engagement process, including review by local teams. It is important to note that this is not a complete list of available resources or existing needs in the community; other resources, like 211 Maine, and local/county resource guides should be referenced as a more comprehensive inventory. Assets and gaps/needs in bold text were identified in both Penobscot and Piscataquis Counties.

**Table 4: Assets and Gaps/Needs (Mental Health) in the Penquis District**

PENOBSCOT COUNTY	
ASSETS	GAPS/NEEDS
<ul style="list-style-type: none"> <li>• In-school counseling for high school students</li> <li>• Leverage technology to improve access</li> <li>• Penobscot Community Health Care - Clubhouse</li> <li>• Counselors</li> <li>• Hotlines</li> <li>• Hospitals</li> <li>• Programs that support family and community connections and social supports</li> <li>• Acute care</li> <li>• Outpatient care</li> <li>• Psychiatric centers (<b>Northern Light Acadia Hospital</b>, Dorothea Dix Psychiatric Center)</li> <li>• Support groups</li> <li>• Rehab facilities</li> <li>• Health Equity Alliance offers free mental health</li> <li>• Primary care as point of care for counseling</li> <li>• Telehealth/tele-psychiatry</li> <li>• Medical/pharmaceutical options</li> </ul>	<ul style="list-style-type: none"> <li>• Cost barriers: Ability to afford care/insurance coverage for mental health services/affordable providers, insurance coverage for adults with children to access services including counseling, medical and substance use disorder support</li> <li>• Access to quality care</li> <li>• Increased use of ACEs/trauma screening</li> <li>• Education on ACEs at community level; one suggestion: through public service announcements, case workers and public health nurses to support families through home visiting to address ACEs</li> <li>• Early intervention</li> <li>• Expanded screening for substance use disorder</li> <li>• A focus on middle school and younger kids (pre-K, preschool explosion of challenging behaviors)</li> <li>• Early intervention for those with disabilities (age 2.5-5 years)</li> <li>• Reducing stigma so individuals feel more comfortable talking about good mental health hygiene (middle school age important)</li> <li>• Expansion of primary care integration with behavioral health and training</li> <li>• Lack of beds for those in need of inpatient treatment</li> <li>• Early screening, intervention, and treatment</li> <li>• Lack of providers</li> <li>• Reconsider institutionalization - safer than living on the streets</li> <li>• Foster care system/adoption</li> <li>• Lack of public health nurses</li> <li>• Older adults: mechanism to assure medications are taken regularly and social support</li> <li>• Lack of emergency room staff with knowledge on how to treat patients with mental illness</li> <li>• <b>Expansion of school-based mental health services to have 1 counselor and 1 social worker at each stage of school (elementary, middle, high school)</b></li> <li>• Decreasing psychiatric holding time</li> </ul>

# COMMUNITY RESOURCES TO ADDRESS MENTAL HEALTH (CONTINUED)

Table 4: Assets and Gaps/Needs (Mental Health) in the Penquis District (Continued)

PENOBSCOT COUNTY	
ASSETS	GAPS/NEEDS
	<ul style="list-style-type: none"> <li>• Expanded facilities for mental health patients - current size too small for population</li> <li>• Wait time for counseling and therapy appointments</li> <li>• Expansion of school support for prevention</li> <li>• Better mental health education</li> <li>• Adolescent depression: need to analyze the environment youth live in</li> <li>• Increase access to medication</li> <li>• Emergency room as a default place for care</li> <li>• Support healthy environments for school and work</li> <li>• Resources for pregnant women with current, or history of, mental health conditions</li> <li>• Change school regulations and the way they are funded to promote health rather than test scores</li> <li>• Increased community support on campus and in high schools</li> <li>• Increase number of providers that serve LGBTQ and substance use disorder</li> <li>• Providers need reasonable patient loads</li> <li>• Schools and educators need education on trauma informed care and advocacy</li> </ul>
PISCATAQUIS COUNTY	
ASSETS	GAPS/NEEDS
<ul style="list-style-type: none"> <li>• Community Health and Counseling Services</li> <li>• Mayo Regional Hospital Counseling Center</li> <li>• Partners for Peace</li> <li>• Charlotte White Center</li> <li>• <b>Northern Light Acadia Hospital</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Lack of counseling access</b></li> <li>• Community care team</li> <li>• Social Workers</li> <li>• Teaching youth skills around compassion, empathy, kindness</li> <li>• Substance use counselors</li> <li>• Psychiatric - Mental Health Nurse Practitioner (PMHNP)</li> </ul>

# SOCIAL DETERMINANTS OF HEALTH

The social determinants of health are the conditions in which people live, work, learn, and play that affect their health; factors include socioeconomic status (e.g. education, income, poverty), housing, transportation, social norms and attitudes (e.g. racism and discrimination), crime and violence, literacy, and availability of resources (e.g. food, health care). These conditions influence an individuals' health and define quality of life for many segments of the population, but specifically those that are most vulnerable. According to the Kaiser Family Foundation, social factors like education, racism, and poverty accounted for over a third of total deaths in the United States.<sup>3</sup>

Food insecurity refers to a lack of resources to access enough nutritional food for a household. Food insecurity has both direct and indirect impacts on health for people of all ages, but is especially detrimental to children.<sup>4</sup> Chronic diseases and health conditions associated with food insecurity include asthma, low birthweight, diabetes, mental health conditions, hypertension, and obesity.<sup>5</sup>

## QUALITATIVE EVIDENCE

A dominant theme from key informant interviews and the community forums in the Penquis District was the tremendous impact that the underlying social determinants have, particularly food insecurity, housing, and transportation. Poverty was often at the root of these issues; without stable employment and a livable wage, many people struggle to afford nutritious foods and to secure and maintain affordable and safe housing and transportation.

- In Penobscot County, many participants identified a need for resources to combat the causes and effects of poverty, including increased job education and training, financial management classes, and home economics courses in schools.
- In Piscataquis County, forum participants identified the intersection of poverty and rurality as the root cause of many health needs. Those that are rural

and poor tend to have more uninsured residents, fewer options for transportation, and higher rates of unemployment – all of which holds true in Piscataquis County.

Access to affordable and reliable forms of transportation was problematic in Penquis District, not only because it affects one's ability to access health care, but other goods and services (e.g. employment, groceries, socializing, etc.) Though there were options for public transportation, residents suggested that buses should run more frequently and for longer periods of time.

Housing was identified as an issue in the District.

- In Penobscot County, forum participants cited a need for safer housing and radon testing. There was also a need for transitional and supportive housing for those in recovery from substance use disorder.
- In Piscataquis County, homeless adults were identified as a population in need of support.

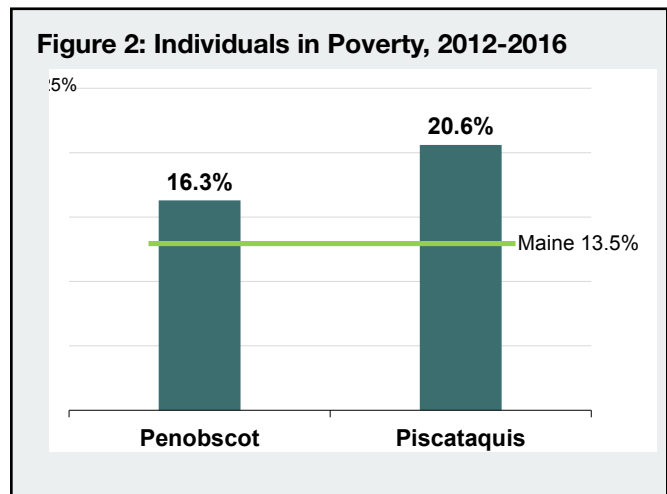
Forum participants in both counties felt that there were issues around food insecurity.

- In Penobscot County, the cost of fresh and nutritious food was cost prohibitive farmers markets were difficult to access due to limited hours. Participants were also concerned about children's access to healthy foods, both within and outside of schools; it was suggested that schools expand offerings of low cost and healthy lunch to students.
- In Piscataquis County, participants identified many community assets in the realm of nutrition and healthy foods, yet many still saw a gap in services and resources.

## QUANTITATIVE EVIDENCE

### In the Penquis District:

- The percentage of children living in poverty was higher than the state overall (19.5% vs. 17.2%) in 2012-2016.
- In Penobscot County, the percentage of individuals living in poverty was higher than the state overall (16.3% vs. 13.5%) in 2012-2016.
- In Piscataquis County, the percentage of individuals living in poverty was higher than the state overall (20.6% vs. 13.5%) in 2012-2016.
- In Penobscot County, the percentage of high school students who are housing insecure was higher than the state overall (4.1% vs. 3.6%) in 2017.
- In Piscataquis County, the unemployment rate was higher than the state overall (5.1% vs. 3.8%) in 2015-2017. The median household income was over \$10,000 less than the state overall- \$36,938 vs. \$50,826 in 2012-2016.
- In Piscataquis County, the percentage of households that lack enough food to maintain healthy, active lifestyles for all household members was higher than the state overall (16.8% vs. 15.1%) in 2014-2015.



- In Penobscot County, 16.2% of households lack enough food to maintain healthy, active lifestyles for all household members (vs. 15.1% for the state overall).
- In Piscataquis County, 16.8% of households lack enough food to maintain healthy, active lifestyles for all household members (vs. 15.1% for the state overall).

See Key Indicators on page 23 as well as the Penquis District Health Profile and individual county data reports on our website [www.mainechna.org](http://www.mainechna.org). Those documents also include information on data sources and definitions.

# COMMUNITY RESOURCES TO ADDRESS SOCIAL DETERMINANTS OF HEALTH

The table below is a summary of the assets and needs identified through the community engagement process, including review by local teams. It is important to note that this is not a complete list of available resources or existing needs in the community; other resources, like 211 Maine, and local/county resource guides should be referenced as a more comprehensive inventory. Assets and gaps/needs in bold text were identified in both Penobscot and Piscataquis Counties.

**Table 5: Assets and Gaps/Needs (Social Determinants of Health) in the Penquis District**

PENOBSCOT COUNTY	
ASSETS	GAPS/NEEDS
<ul style="list-style-type: none"> <li>• <b>Food pantry</b></li> <li>• Social Service Agencies</li> <li>• Lynx (Transportation)</li> <li>• <b>Penquis (Transportation)</b></li> <li>• <b>Food bank</b></li> <li>• Eastern Agency on Aging</li> <li>• Annual shop around</li> <li>• Insurance</li> <li>• Integrated mental health services</li> <li>• Organized sports</li> <li>• Primary care providers</li> <li>• Data sharing from Health Management Information Systems</li> <li>• MaineCare/Medicare</li> <li>• Homeless shelters</li> <li>• Cheaper housing</li> <li>• <b>Access to farm stands and personal gardens during summer months</b></li> <li>• <b>School lunch and breakfast programs</b></li> <li>• <b>Women, Infants, and Children</b></li> <li>• <b>Meals on wheels</b></li> <li>• Bridging Rental Assistance Program</li> <li>• General Assistance</li> <li>• Section 8</li> <li>• Transitional housing</li> <li>• Supplemental Nutrition Assistance Program</li> <li>• 3D Catering</li> <li>• <b>Good Shephard Food Bank</b></li> <li>• <b>Community suppers</b></li> <li>• <b>Community cafe</b></li> </ul>	<ul style="list-style-type: none"> <li>• Wellness integrated supportive housing sources</li> <li>• Transitional housing</li> <li>• Shelter</li> <li>• Data sharing from Health Management Information Systems (HMIS) to Health Infonet (HIN) and HIN to HMIS</li> <li>• Drop in centers to triage and support people in transition (ie. those recently incarcerated and housing insecure, those discharged from the emergency room and housing insecure)</li> <li>• Family facility for homelessness</li> <li>• <b>Free/reduced cost health care</b></li> <li>• Stigma education and prevention around homelessness</li> <li>• <b>Job training</b></li> <li>• Coordination of efforts around food insecurity</li> <li>• Transportation: Expansion of public transportation hours, more frequency in bus runs</li> <li>• Affordable and safe housing: required testing for radon and accountability</li> <li>• Early intervention in preschool to support at-risk-families</li> <li>• Financial education</li> <li>• School nurses stretched too thin</li> <li>• Building relationships across the community and opportunities for people to connect</li> <li>• Screening for food insecurity</li> <li>• <b>Affordable food</b></li> <li>• <b>The ability to get healthy food credit in stores</b></li> <li>• Dedicated physical activity time in schools</li> <li>• Expanded healthy and low cost lunches in schools</li> <li>• <b>Isolation in rural communities</b></li> <li>• Stigma</li> <li>• Risk assessment to prevent homelessness</li> <li>• Health literacy education, using teach back</li> <li>• Robust home economics in schools</li> </ul>

## COMMUNITY RESOURCES TO ADDRESS SOCIAL DETERMINANTS OF HEALTH (CONTINUED)

Table 5: Assets and Gaps/Needs (Social Determinants of Health) in the Penquis District (continued)

PISCATAQUIS COUNTY	
ASSETS	GAPS/NEEDS
<ul style="list-style-type: none"> <li>• <b>Access to healthy foods-food cupboards, food banks, community dinners, redistributing food from Good Shepherd to county pantries, food insecurity screening at Mayo Hospital, farmshare, home gardeners and growers, 4H classes about how to grow food, farmers that donate fresh food</b></li> <li>• Workforce-vocational rehab for people with disabilities, tele-educator programs</li> <li>• Helping Hands with Heart</li> <li>• <b>Transportation through Penquis</b></li> <li>• ACEs training</li> <li>• Piscataquis Regional YMCA programs</li> <li>• School wellness programs</li> <li>• <b>Meals on Wheels</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Patient financial assistance</b></li> <li>• Mayo Hospital Nursing Program</li> <li>• Living wage</li> <li>• Lack of employment assistance</li> <li>• Need mentoring across ages</li> <li>• <b>Improving access to employment</b></li> <li>• <b>Healthy food</b></li> <li>• <b>Basic affordable care</b></li> <li>• Mental health services</li> <li>• <b>Transportation</b></li> <li>• Department of Health and Human Services (DHHS) support</li> <li>• Universal basic income</li> <li>• Shrinking social supports</li> <li>• Utilize public landscaping for food</li> </ul>

# ACCESS TO CARE

Whether an individual has health insurance and the extent to which it helps to pay for needed acute services and access to a full continuum of high-quality, timely and accessible preventive and disease management or follow-up services is critical to overall health and well-being. Access to a usual source of primary care is particularly important, since it greatly affects the individual's ability to receive regular preventive, routine and urgent care and to manage chronic conditions.

Barriers to accessing care also include the availability and affordability of care. Low-income individuals, people of color, those with less than a high school diploma, and LGBTQ populations face even greater disparities in health insurance coverage compared to those who are straight, white, and well educated. For example, in Maine, over 20.3% of American Indian/Alaska Native adults report they are unable to receive or have delayed medical care due to cost, compared to 10.3% of white adults. Compared to heterosexual residents (11.6%), 19.3% of bisexual residents, and 22.5% of residents who identified as something other than heterosexual, gay or lesbian, or bisexual, were uninsured. More information on health disparities by race, ethnicity, education, sex, and sexual orientation can be found in the Health Equity Data Summaries, available at [www.mainechna.org](http://www.mainechna.org).

## QUALITATIVE EVIDENCE

In Penquis District forums, participants and key informants identified the social determinants of health, particularly inability to access reliable and affordable forms of transportation, as significant barriers to care. These are discussed in more details in the “Social Determinants of Health” section of this report.

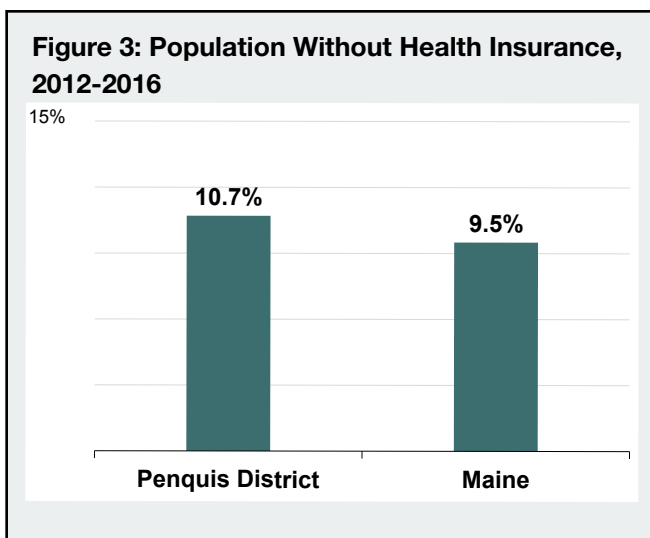
Beyond the need for Medicaid expansion, which was signed into law on January 3, 2019, participants in both counties discussed the need for comprehensive and affordable health services. Even for those with insurance, deductibles, co-pays, and prescription medications are unaffordable and prevent people from seeking care. The out-of-pocket costs associated with some forms of care deter people from getting the services or medications that they need.

- In Penobscot County, participants identified a need for more primary care, dental care, behavioral health, and prenatal care.
- In Piscataquis County, participants identified a need for dental care, substance use specialists, mental health counselors, home health services, walk-in clinics, and oncology. Participants also identified access to clinics or health services where payments could be made on a sliding scale based on income. For those with MaineCare, access to behavioral health and dental health services were particularly limited.

## QUANTITATIVE EVIDENCE

### In the Penquis District:

- The percentage of the population that was uninsured was higher than the state overall (10.7% vs. 9.5%) in 2012-2016.
- The ratio of primary care physicians to 100,000 population was lower than the state overall (55.2 vs. 67.3) in 2017.
- In Penobscot County, the percentage of the population who reported an inability to access healthcare due to cost was slightly higher than the state overall (11.5% vs. 10.3%) from 2014–2016.





- In Piscataquis County, the percentage of adults who visited a dentist in the past year was significantly lower than the state overall (55.5% vs. 63.3%) in 2016.

See Key Indicators on page 23 as well as the Penquis District Health Profile and individual county data reports on our website [www.mainechna.org](http://www.mainechna.org). Those documents also include information on data sources and definitions.

## COMMUNITY RESOURCES TO ADDRESS ACCESS TO CARE

The table below is a summary of the assets and needs identified through the community engagement process, including review by local teams. It is important to note that this is not a complete list of available resources or existing needs in the community; other resources, like 211 Maine, and local/county resource guides should be referenced as a more comprehensive inventory. Assets and gaps/needs in bold text were identified in both Penobscot and Piscataquis Counties.

**Table 6: Assets and Gaps/Needs (Access To Care) in the Penquis District**

PENOBSOT COUNTY	
ASSETS	GAPS/NEEDS
<ul style="list-style-type: none"> <li>• Federally Qualified Health Centers (FQHC)</li> <li>• Mabel Wadsworth Health Center</li> <li>• Physical therapy providers</li> <li>• Church involvement</li> <li>• Family shelters</li> <li>• Community care nurse management</li> <li>• Penobscot Community Health Care</li> <li>• Websites for education such as CDC</li> <li>• <b>Northern Light Health</b></li> <li>• St. Joseph Healthcare</li> <li>• Just in time specialist scheduling</li> <li>• Telemedicine</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Universal health insurance- state level</b></li> <li>• Consistent care providers (system issue)</li> <li>• Expanded education and access to falls risk assessments</li> <li>• Same day care</li> <li>• <b>Affordable insurance and affordable care</b></li> <li>• Out of pocket cost deter people from getting care even if they have a provider and insurance</li> <li>• School nurse shortage - have 1 school nurse per 200 students</li> <li>• Increased staffing for nursing homes</li> <li>• Increased access to prenatal care for low income families</li> </ul>
PISCATAQUIS COUNTY	
ASSETS	GAPS/NEEDS
<ul style="list-style-type: none"> <li>• Mayo Regional Hospital and Primary Care Providers</li> <li>• Dental Clinics</li> <li>• Recovery clinics through hospitals</li> <li>• Helping Hands with Heart</li> <li>• Transportation - Lynx, area taxis</li> <li>• <b>Northern Light CA Dean Hospital</b></li> </ul>	<ul style="list-style-type: none"> <li>• Piscataquis DHHS Offices</li> <li>• Childbirth education</li> <li>• Universal parent education</li> <li>• <b>Universal Health Care</b></li> <li>• Walk in Clinics</li> <li>• Planned Parenthood</li> <li>• Penquis transportation cancer care</li> <li>• <b>Affordable deductibles</b></li> <li>• Revamp payer system</li> <li>• <b>Insurance access donut hole</b></li> </ul>

# SUBSTANCE USE

The Substance Abuse and Mental Health Services Administration (SAMHSA) estimated that 8% of adults in the United States have had a substance use disorder in the past year.<sup>6</sup> Tobacco, alcohol, marijuana, and nonmedical use of prescription pain relievers (e.g. OxyContin, Vicodin) are the leading substance use health issues for adults.<sup>7</sup> Tobacco, alcohol, and marijuana are the most common substances used by adolescents, followed by amphetamines (e.g. Adderall) and nonmedical use of prescription pain relievers.<sup>8</sup> Those with substance use disorders often face a number of barriers that limit access and hinder engagement in care; one study estimates that more than 50% of individuals with mental health and substance use issues are not engaged in needed services.<sup>9</sup> Barriers to care include a lack of education, awareness, and understanding around the signs, symptoms, risk factors, and consequences associated with substance use, social stigma, and workforce shortages. Statewide, many forum participants and key informant interviewees identified gaps in access to substance use treatment and recovery services. Finally, those who are uninsured or underinsured are more likely to face barriers to care, and historically, coverage for substance use services has been less comprehensive than for physical health services. This is further complicated by the cost of co-pays, transportation, and medications, even for those who are eligible for free or discounted services, or for those with commercial insurance, as many private substance use treatment providers do not accept insurance and require cash payments.

## QUALITATIVE EVIDENCE

Forum participants in both forums discussed the need for more comprehensive, accessible, and affordable services to help those with substance use issues.

- In Piscataquis County, the need for counselors, recovery coaches, and support groups like Alcoholics Anonymous and Narcotics Anonymous were identified as specific gaps in the spectrum of care.

The impact of opioids was a major theme in both counties.

- In Penobscot County, participants discussed the need for services, including recovery coaches and case managers. At the community level, participants suggested that residents would benefit from education around coping mechanisms and breaking down stigma, which was identified as a barrier to substance use treatment.
- In Piscataquis County, forum participants felt that opioid use was the leading issue for individuals between the ages of 20 and 60. Participants suggested poverty as a risk factor for heroin use, as it is more accessible than prescription drugs.

In both counties, the increased availability, marketing, and use of e-cigarettes, also referred to as “vaping” or “Juuling,” was a critical concern for youth.

Key informants identified a number of priority health issues for individuals with substance use disorders and those in treatment/recovery: education and outreach around how to access healthcare and treatment options, routine basic health care (primary care, dental care), and care that addresses co-occurring mental health and substance use issues. Informants also identified needs specific to youth, including information on where and how to access treatment and better access to confidential services.

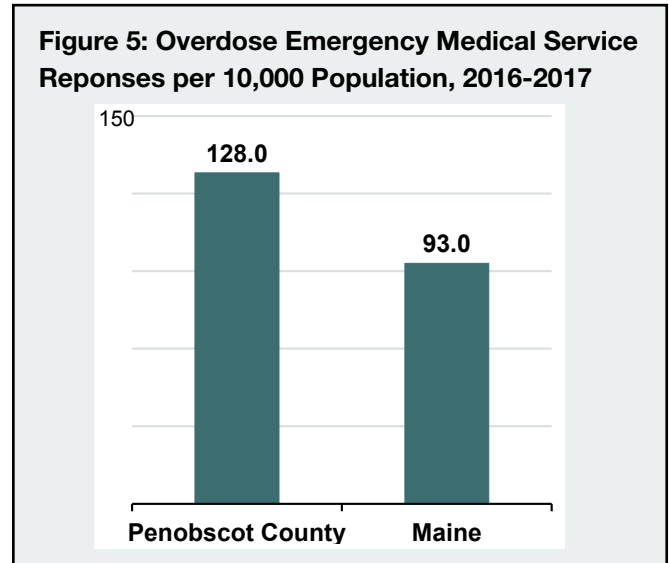
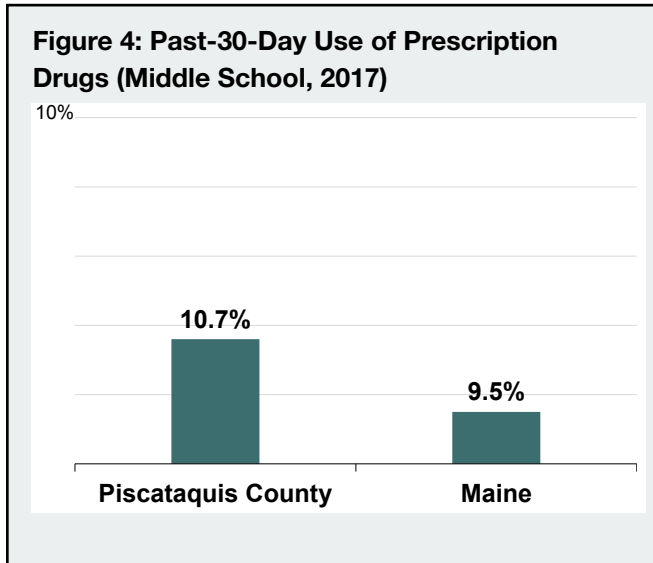
## QUANTITATIVE EVIDENCE

### In the Penquis District:

- The percentage of adults who currently smoke cigarettes was higher than the state overall (24.2% vs. 19.8%) in 2016.
- Past-30-day cigarette smoking amongst high school students was higher than the state overall (9.2% vs. 8.8%) in 2017.
- In Penobscot County, the overdose emergency medical service responses per 10,000 population were higher than the state overall (128.0 vs. 93.0) in 2016-2017.

- In Piscataquis County, past-30-day use of prescription drugs amongst middle school students was significantly higher than the state overall (3.6% vs. 1.5%) in 2017.

See Key Indicators on page 23 as well as the Penquis District Health Profile and individual county data reports on our website [www.mainechna.org](http://www.mainechna.org). Those documents also include information on data sources and definitions.



## COMMUNITY RESOURCES TO ADDRESS SUBSTANCE USE

The table below is a summary of the assets and needs identified through the community engagement process, including review by local teams. It is important to note that this is not a complete list of available resources or existing needs in the community; other resources, like 211 Maine, and local/county resource guides should be referenced as a more comprehensive inventory. Assets and gaps/needs in bold text were identified in both Penobscot and Piscataquis Counties.

**Table 7: Assets and Gaps/Needs (Substance Use) in the Penquis District**

PENOBSCOT COUNTY	
ASSETS	GAPS/NEEDS
<ul style="list-style-type: none"> <li>• Medication-Assisted Treatment (MAT) providers</li> <li>• Methadone and clean needle programs</li> <li>• Controlled substance initiative: organizations partnering to implement consistent and safer approaches to prescribing</li> <li>• Opioid grant with Cary Medical Center</li> <li>• <b>Community Health and Counseling Services (CHCS)</b></li> <li>• <b>Substance abuse services: Suboxone in primary care offices</b></li> <li>• Health care providers to support reduction in tobacco use</li> <li>• Resources for mothers and infants following discharge</li> <li>• Recovery groups at many sites</li> <li>• Naloxone for anyone who asks</li> <li>• Bangor Area Recovery Network</li> <li>• Northern Light Acadia Hospital</li> <li>• Hotlines</li> <li>• Alcoholics Anonymous and Narcotics Anonymous</li> <li>• Northeast Occupational Exchange</li> <li>• Penobscot Community Health Care - Clubhouse</li> <li>• Wellspring</li> <li>• Tobacco school based education and prevention</li> <li>• Bangor Public Health</li> <li>• Education on vaping</li> </ul>	<ul style="list-style-type: none"> <li>• Substance use prevention</li> <li>• Provider shortage</li> <li>• Increased access to mental health services</li> <li>• Increased access to tobacco help/quit programs</li> <li>• More research on effects of use of e-cigarettes on health</li> <li>• Education: Community education, education to address stigma for substance use disorder; Community education on coping mechanisms other than using substances; required substance use education in schools</li> <li>• Screening, Brief Intervention, and Referral to Treatment (SBIRT) screening in school and brief intervention program like “Teen Inter-vene”</li> <li>• Aggressive case management</li> <li>• Collaboration with police to support monitoring</li> <li>• Addressing the effects of criminalizing addiction</li> <li>• Relapse prevention</li> <li>• Low cost access to recovery supports</li> <li>• Coordination of efforts</li> <li>• Education on how to access resources</li> <li>• E-cigarette vape culture in young adults</li> <li>• Need to track stimulant and benzodiazepine use, provide education</li> <li>• Increased access to Naloxone</li> <li>• Attention to all substances</li> <li>• Transportation to groups and appointments</li> <li>• Cost of treatment providers</li> <li>• <b>Certified recovery coaching</b></li> <li>• <b>Increased access to counseling for long term or intensive care</b></li> <li>• Stigma/lack of support</li> </ul>

## COMMUNITY RESOURCES TO ADDRESS SUBSTANCE USE

Table 7: Assets and Gaps/Needs (Substance Use) in the Penquis District (continued)

PISCATAQUIS COUNTY	
ASSETS	GAPS/NEEDS
<ul style="list-style-type: none"> <li>• Local hypnotist</li> <li>• National Alliance on Mental Illness (NAMI) Maine</li> <li>• Public health grants</li> <li>• Mayo Regional Hospital grant</li> <li>• <b>Primary care</b></li> <li>• Schools</li> <li>• <b>Community Health Counseling Services</b></li> <li>• Charlotte White Center</li> </ul>	<ul style="list-style-type: none"> <li>• Alcoholics Anonymous/Narcotics Anonymous</li> <li>• <b>Substance use counseling</b></li> <li>• Recovery coaches</li> </ul>

# COMMUNITY CHARACTERISTICS

## AGE DISTRIBUTION

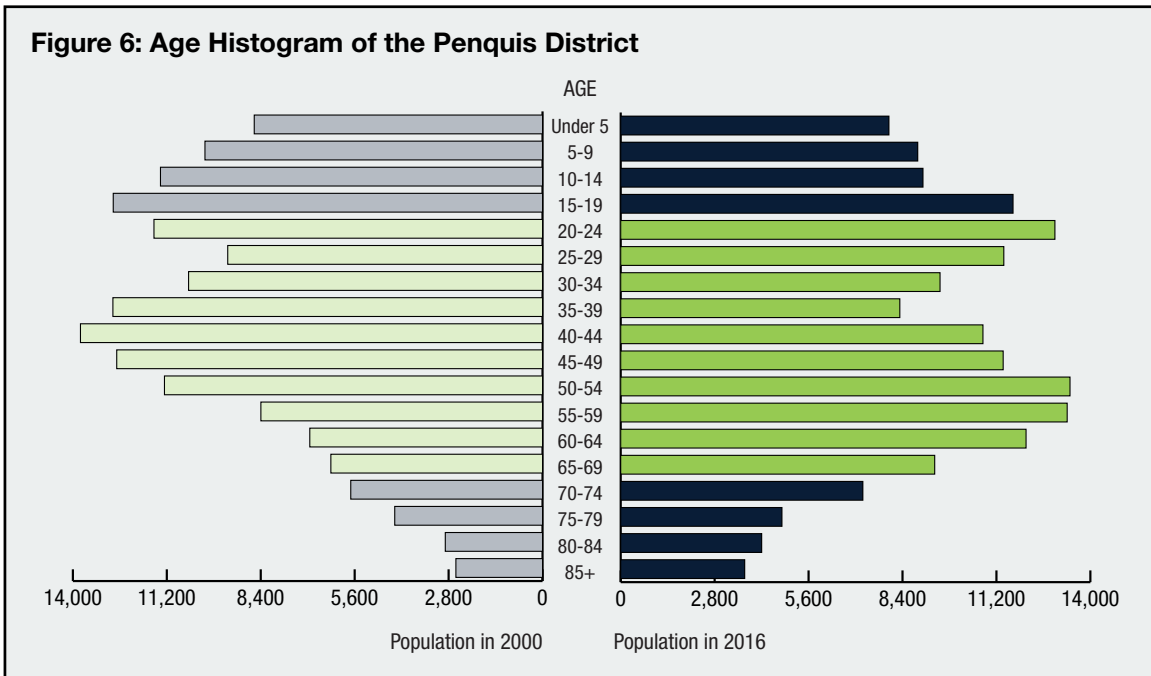
Age is a fundamental factor to consider when assessing individual and community health status; older individuals typically have more physical and mental health vulnerabilities and are more likely to rely on immediate community resources for support compared to young people.<sup>10</sup> With an aging population comes increased pressure on the healthcare system and shortages in the healthcare workforce, especially geriatricians, nurses, social workers, and direct care workers like home health aides and certified nursing assistants, to meet the needs of older adults.<sup>11</sup>

- In Penobscot County, 16.5% of the population is 65 years of age or older.
- In Piscataquis County, 23.5% of the population is 65 years of age or older.

The following is a summary of findings related to community characteristics for the Penquis District counties. Conclusions were drawn from quantitative data and qualitative information collected through forums and key informant interviews.

The following companion reports are available at [www.mainechna.org](http://www.mainechna.org).

- Penobscot County Health Profile and CHNA Report
- Piscataquis County Health Profile and CHNA Report
- Penquis District Health Profile
- Maine State Health Profile and CHNA Report
- Health Equity Data Summaries



## RACE/ETHNICITY

An extensive body of research illustrates the health disparities that exist for racial/ethnic minorities, non-English speakers, and foreign-born populations. According to the Centers for Disease Control and Prevention (CDC), non-Hispanic blacks have higher rates of premature death, infant mortality and

preventable hospitalization than non-Hispanic whites.<sup>12</sup> Individuals with limited English proficiency (LEP), defined as the ability to read, speak, write or understand English “less than very well,” have lower levels of medical comprehension. This leads to higher rates of medical issues and complications, such as adverse reactions to medication.<sup>13,14</sup> Cultural differences such as, but not limited to, the expectations of who is

involved in medical decisions can also impact access to health care and to health information. These disparities show the disproportionate and often avoidable inequities that exist within communities and reinforce the importance of understanding the demographic makeup of a community to identify populations more likely to experience adverse health outcomes.

**Table 8: Race/Ethnicity in the Penquis District 2012-2016**

	PERCENT/NUMBER
American Indian/Alaskan Native	1.1% / 1,845
Asian	1.1% / 1,7882
Black/African American	0.7% / 1,262
Hispanic	1.2% / 2,105
Some other race	0.2% / 327
Two or more races	1.7% / 2,899
White	95.2% / 161,873

*Data Source: US Census Bureau, American Community Survey, 2012-2016*

## SOCIOECONOMIC STATUS

Socioeconomic status (SES) is measured by such things as income, poverty, employment, education, and neighborhood characteristics. Individuals with low SES are more likely to have chronic health issues, die prematurely, and have overall poor health. Low-income status is highly correlated to a lower than average life expectancy. Lack of gainful employment is linked to several barriers to care, such as lack of health insurance, inability to pay for health care services, and the inability to pay for transportation to receive services. Higher education is associated with improved health outcomes and social development at individual and community levels.

The health benefits of higher education typically include better access to resources, safer and more stable housing, and better engagement with providers. Factors associated with low education impact an individual's ability to navigate the healthcare system, disparities in personal health behaviors, and exposure to chronic stress.

It is important to note that, while education affects health, poor health status may also be a barrier to education. Tables 9 includes a number of data points comparing Penquis District counties to the state of Maine overall.

**Table 9: Socioeconomic Status in Penobscot and Piscataquis Counties**

	PENOBSCOT/MAINE
Median household income	\$45,302/ \$50,826
Unemployment rate*	4.3% / 3.8%
Individuals living in poverty	16.3% / 13.5%
Children living in poverty	18.3% / 17.2%
65+ living alone	44.5% / 45.3%
	PISCATAQUIS/MAINE
Median household income	\$36,938 / \$50,826
Unemployment rate*	5.1% / 3.8%
Individuals living in poverty	20.6% / 13.5%
Children living in poverty	31.4% / 17.2%
65+ living alone	— / 45.3%

*Data Source: US Census Bureau, American Community Survey, 2012-2016*  
*\*US Bureau of Labor Statistics, 2015-2017*

## SPECIAL POPULATIONS

Through community engagement activities, several populations in the Penquis District were identified as being particularly vulnerable or at-risk for poor health or health inequities.

### Youth

Youth were identified as a priority population in the community forum. Specific issues of concern were youth mental health conditions (specifically depression, anxiety and stress), substance use (particularly e-cigarettes/vaping), and lack of education and promotion around nutrition and physical activity. One key informant who works with youth also identified a need for them to be able to access low-cost and anonymous health services, specifically reproductive and substance use services, without parent permission.

## Low-Income/Rural

Piscataquis County is the only county in Maine where 100% of the population lives in a rural area. Nationally, an ever-evolving economic structure has placed extra strain on individuals and families living in large rural areas with low population density; some of the most well-known causes and conditions of hardship include a lack of and outsourcing of jobs, limited long-term employment opportunities, barriers to accessing health care services, and the need for a personal vehicle. Generational poverty—when a family has lived in poverty for at least two generations—differs from situational poverty in that it typically includes the constant presence of hopelessness. This lack of hope and near-constant state of perpetual crisis creates a cycle of poverty that persists from one generation to the next. Forum participants in Piscataquis County identified low-income individuals, families, and older adults as populations that were particularly vulnerable to poor health.

## Older Adults

Maine is the oldest state in the nation by median age. Older adults are more likely to develop chronic illnesses and related disabilities, such as heart disease, hypertension, diabetes, depression, anxiety, Alzheimer’s disease, Parkinson’s disease, and dementia. They also lose the ability to live independently at home. According to qualitative information gathered through interviews and the Piscataquis County Community Forum, issues around healthy aging and the health of older adults were priorities in Piscataquis County—specifically barriers to access to care for older adults (e.g. transportation, limited financial resources) and depression/isolation.

In addition to the data collected and analyzed for the County Health Profiles, the Maine CDC created Health Equity Data Summaries (available at [www.mainechna.org](http://www.mainechna.org)) which provides selected data analyzed by sex, race, ethnicity, sexual orientation, education, and income. These data are at the state level, as much of the county level data would be suppressed due to small numbers and privacy concerns, and the previous analyses have shown that health disparities found at the state level are generally similar in individual counties.



# KEY INDICATORS

The Key Indicators provide an overview of the health of the district and of each county within the district. They are a broad sampling of health topics, including health behaviors, outcomes, living conditions, and health care quality and access.

The tables use symbols to show if the data for each district or each county within the district is notably better or worse than the state.

**BENCHMARK**, as indicated by the +/- in the table, compares district and county data to state data, based on 95% confidence interval.

★ means the district or county is doing **significantly better** than the state.

! means the district or county is doing **significantly worse** than the state.

○ means there is no statistically significant difference between the district or county and the state.

N/A means there is not enough data to make a comparison.

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## ADDITIONAL SYMBOLS

\* means results may be statistically unreliable due to small numbers, use caution when interpreting.

— means data is unavailable because of lack of data or suppressed data due to a small number of respondents.

INDICATOR	BENCHMARK		PENQUIS DISTRICT				
	MAINE	DISTRICT	+/-	PENOBSCOT	+/-	PISCATAQUIS	+/-
<b>SOCIAL, COMMUNITY &amp; PHYSICAL ENVIRONMENT</b>							
Children living in poverty	2012-2016 17.2%	2012-2016 19.5%	N/A	2012-2016 18.3%	N/A	2012-2016 31.4%	N/A
Median household income	2012-2016 \$50,826	—	N/A	2012-2016 \$45,302	N/A	2012-2016 \$36,938	N/A
Estimated high school student graduation rate	2017 86.9%	2017 87.7%	N/A	2017 88.3%	N/A	2017 83.3%	N/A
Food insecurity	2014-2015 15.1%	—	N/A	2014-2015 16.2%	N/A	2014-2015 16.8%	N/A
<b>HEALTH OUTCOMES</b>							
14 or more days lost due to poor physical health	2014-2016 19.6%	2014-2016 26.3%	!	2014-2016 27.0%	!	2014-2016 29.7%	!
14 or more days lost due to poor mental health	2014-2016 16.7%	2014-2016 23.3%	!	2014-2016 23.9%	!	2014-2016 24.2%	○
Years of potential life lost per 100,000 population	2014-2016 6,529.2	—	N/A	2014-2016 6,931.3	○	2014-2016 8,138.9	○
All cancer deaths per 100,000 population	2012-2016 173.8	2012-2016 180.6	○	2012-2016 176.7	○	2012-2016 206.6	!
Cardiovascular disease deaths per 100,000 population	2012-2016 195.8	2012-2016 219.1	!	2012-2016 216.7	!	2012-2016 238.2	!
Diabetes	2014-2016 10.0%	2014-2016 10.3%	○	2014-2016 10.3%	○	2014-2016 9.8%	○
Chronic obstructive pulmonary disease (COPD)	2014-2016 7.8%	2014-2016 8.3%	○	2014-2016 8.1%	○	2014-2016 10.5%	○
Obesity (adults)	2016 29.9%	2016 35.1%	○	2016 35.1%	○	2016 35.1%	○
Obesity (high school students)	2017 15.0%	2017 17.4%	○	2017 16.8%	○	2017 23.0%	!
Obesity (middle school students)	2017 15.3%	2017 17.4%	○	2017 17.5%	○	2017 18.0%	○
Infant deaths per 1,000 live births	2012-2016 6.5	2012-2016 7.9	○	2012-2016 8.1	○	2012-2016 8.3*	N/A
Cognitive decline	2016 10.3%	2016 10.3%	○	2016 10.2*	○	2016 11.2*	○
Lyme disease new cases per 100,000 population	2013-2017 96.5	2013-2017 39.5	N/A	2013-2017 42.2	N/A	2013-2017 15.3	N/A

INDICATOR	BENCHMARK		PENQUIS DISTRICT				
	MAINE	DISTRICT	+/-	PENOBSCOT	+/-	PISCATAQUIS	+/-
<b>HEALTH OUTCOMES (CONTINUED)</b>							
Chlamydia new cases per 100,000 population	2013-2017 293.4	2013-2017 322.7	N/A	2013-2017 339.2	N/A	2013-2017 173.6	N/A
Fall-related injury (unintentional) emergency department rate per 10,000 population	2012-2014 340.9	2012-2014 296.4	★	2012-2014 283.7	★	2012-2014 420.6	!
Suicide deaths per 100,000 population	2012-2016 15.9	2012-2016 15.0	○	2012-2016 14.8	○	2012-2016 16.3**%	○
Overdose deaths per 100,000 population	2012-2016 18.1	2012-2016 16.9	○	2012-2016 17.0	○	2012-2016 17.7	○
<b>HEALTH CARE ACCESS AND QUALITY</b>							
Uninsured	2012-2016 9.5%	2012-2016 10.7%	N/A	2012-2016 10.5%	N/A	2012-2016 12.8%	N/A
Ratio of primary care physicians to 100,000 population	2017 67.3	2017 55.2	N/A	2017 59.5	N/A	2017 18.3	N/A
Ratio of psychiatrists to 100,000 population	2017 8.4	2017 5.7	N/A	2017 5.7	N/A	2017 5.7	N/A
Ratio of practicing dentists to 100,000 population	2017 32.1	2017 32.9	N/A	2017 35.0	N/A	2017 14.8	N/A
Ambulatory care-sensitive condition hospitalizations per 10,000 population	2016 74.6	2016 97.0	N/A	2016 96.6	N/A	2016 99.3	N/A
Two-year-olds up-to-date with recommended immunizations	2017 73.7%	2017 77.5%	N/A	2017 78.6%	N/A	2017 62.5%	N/A
<b>HEALTH BEHAVIORS</b>							
Sedentary lifestyle – no leisure-time physical activity in past month (adults)	2016 20.6%	2016 22.8%	○	2016 22.7%	○	2016 23.5%	○
Chronic heavy drinking (adults)	2014-2016 7.6%	2014-2016 6.5%	○	2014-2016 6.6%	○	2014-2016 5.6%	○
Past-30-day alcohol use (high school students)	2017 22.5%	2017 19.9%	○	2017 19.9%	○	2017 21.4%	○
Past-30-day alcohol use (middle school students)	2017 3.7%	2017 3.3%	○	2017 3.6%	○	2017 2.5%	○
Past-30-day marijuana use (high school students)	2017 19.3%	2017 16.6%	○	2017 16.5%	○	2017 19.4%	○
Past-30-day marijuana use (middle school students)	2017 3.6%	2017 2.9%	○	2017 2.7%	○	2017 3.6%	○

INDICATOR	BENCHMARK					PENQUIS DISTRICT				
	MAINE	DISTRICT	+/-	PENOBSCOT	+/-	PISCATAQUIS	+/-			
<b>HEALTH BEHAVIORS (CONTINUED)</b>										
Past-30-day misuse of prescription drugs (high school students)	2017 5.9%	2017 4.9%	○	2017 5.0%	○	2017 3.6%	○	2017 3.6%	★	
Past-30-day misuse of prescription drugs (middle school students)	2017 1.5%	2017 1.6%	○	2017 1.7%	○	2017 3.6%	○	2017 3.6%	!	
Current (every day or some days) smoking (adults)	2016 19.8%	2016 24.2%	○	2016 24.6%	○	2016 20.8%	○	2016 20.8%	○	
Past-30-day cigarette smoking (high school students)	2017 8.8%	2017 9.2%	○	2017 8.8%	○	2017 14.5%	○	2017 14.5%	!	
Past-30-day cigarette smoking (middle school students)	2017 1.9%	2017 1.4%	○	2017 1.4%	○	—	○	—	N/A	

# APPENDIX A: REFERENCES

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# APPENDIX B: HISTORY AND GOVERNANCE

Maine is one of the few states in the nation that conducts a shared public-private statewide community health needs assessment—the Maine Shared CHNA—which was born out of a unique public-private partnership. The partnership began as the OneMaine Health Collaborative in 2007, involving Northern Light Health (formerly Eastern Maine Healthcare Systems), MaineGeneral Health, and MaineHealth. After conversations with the Statewide Coordinating Council for Public Health, the Maine Center for Disease Control and Prevention, an office of the Department of Health and Human Services joined in 2012. In 2013, Central Maine Healthcare (CMHC) joined the group and in 2014, leadership from the signatory partners signed a formal Memorandum of Understanding outlining mutual goals and expectations. A charter was drafted by all five partners to guide a statewide assessment process.

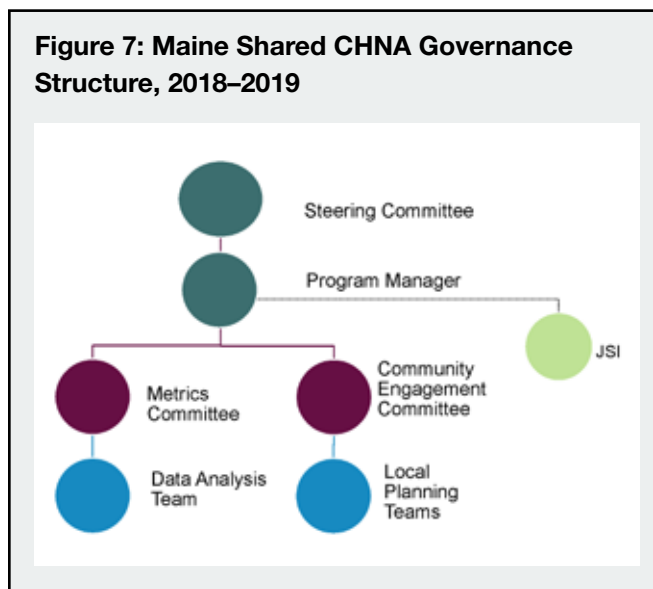
The Maine Shared CHNA is intended to coordinate state and county needs assessments to meet the needs of hospitals, to support state and local public health accreditation efforts, and to provide valuable population health assessment data for a wide variety of organizations across Maine. Our vision is to turn data into action so that Maine will become the healthiest state in the nation.

The Metrics Committee drafted the list of data indicators, and the Community Engagement Committee drafted a method to ensure a robust community engagement process – both of which were approved by the Steering Committee. Each committee was led by the Program Manager, who was the primary point of contact for all entities and partners and was responsible for drafting and implementing the work plans which drove this process. A more detailed outline of these efforts follows. For more information about the committee structure and our partners, please visit the "About Us" page on our website [www.mainechna.org](http://www.mainechna.org).

The Metrics Committee is charged with updating the common set of health indicators; developing the preliminary data analysis plan; reviewing indicators on emerging health issues; making recommendations for annual data-related activities; and estimating projected

costs associated with these recommendations. Members of the Metrics Committee create processes and deliverables for the Steering Committee to review and approve. Members of the Metrics Committee include representatives of the Steering Committee, public health system partners, Federally Qualified Health Centers, academia, non-profits, and others with experience in epidemiology.

**Figure 7: Maine Shared CHNA Governance Structure, 2018–2019**



The Community Engagement Committee is charged with making recommendations for approval by the Steering Committee outlining a consistent and robust community engagement process. This process should identify priorities among significant health issues and identify local, regional, or statewide assets and resources that may potentially address the significant health needs identified. Members of the Community Engagement Committee share their expertise to create processes and deliverables for the Steering Committee to review and approve. Members of the Community Engagement Committee include representatives of the Steering Committee, public health system partners, Federally Qualified Health Centers, academia, and Maine non-profits such as United Ways, Community Action Programs, and others with an interest in broad community representation and input.

# APPENDIX C: METHODOLOGY

Per the Maine Shared CHNA charter, the effort was conducted by the Steering Committee, Metrics Committee, and Community Engagement Committee. The Community Engagement Committee was led by the program manager who was the point of contact for all entities and partners and was responsible for meeting planning and facilitation. These committees worked in partnership with the Maine CDC and the contracted vendor, JSI. Maine CDC and its epidemiology contractor, University of Southern Maine, provided a significant amount of data analyses, technical support, and website development. JSI was contracted to support forum facilitation, a subset of data analysis, profile development, and report writing.

The Maine Shared CHNA process was rolled out in three stages:

## Data Analysis

- **County Health Profiles** were released in September 2018. Two hundred indicators were selected to describe health outcomes, health behaviors, healthcare access and quality, and the social, community, and physical environments that affect health and wellness.
- **District Health Profiles** were released in November 2018.
- **City Health Profiles** for Lewiston/Auburn, Bangor, and Portland were released in January 2019.

## Outreach and Engagement

- **Community outreach** was conducted between September 2018 and January 2019. Community forums with residents and service providers were held in all 16 counties. All forms of engagement included forums and key informant interviews. Some local planning teams also conducted additional targeted outreach, focus groups, and surveys. The purpose of this outreach was to gather feedback on data and to identify health priorities, community assets, and gaps in resources to be used in health improvement planning.

## Final Reports

- **Final CHNA reports** for the state, each county, and districts were released in April 2019. These reports included information from the health data profiles, summaries of qualitative information gathered from engagement activities, and a presentation of community health priorities.

## DATA ANALYSIS

The Metrics Committee identified the approximately 200 health indicators from over 30 sources to be used for the Maine Shared CHNA. The initial list was based on the indicators from the 2016 effort. This list was first scored against the following set of criteria:

- Was it already analyzed for a Maine CDC program?
- Is the data from this indicator collected within the last few years?
- Does it “round out” the description of population health?
- Does it address one or more social determinants of health?
- Does it describe an emerging health issue?
- Does it measure something “actionable” or “impactful”?
- Does the indicator measure an issue that is known to have high health and social costs?

Further refinement included ensuring a mix of Outcomes, Behaviors, Healthcare Access and Quality, as well as Social, Community, and Physical Environment Measures. The final list was then arranged under the current 24 health topics as outlined in the Data Health Profiles.

The Metrics Committee, led by Maine CDC staff, then drafted a data analysis plan that included which indicator was to be analyzed by which demographic characteristics (i.e. gender, race/ethnicity, sexual orientation, income, educational attainment, and insurance status), and geographic stratification (state, public health district, county, and city). This analysis plan was then approved by the Steering Committee.

The **Data Analysis Workgroup** used the set of indicators and the data analysis plan, as laid out by the Metrics Committee, and collected and analyzed the data. Members of the Data Analysis Workgroup shared their years of epidemiological and data analysis experience and knowledge of best practices to inform all aspects of the final health profiles at the county, public health district, city, and state level. This included not only the data analysis but recommendations on best practices for data presentation and visualization.

The Data Analysis Workgroup met weekly from March through August 2018 to discuss and coordinate an approach for analysis and data sharing between the University of Southern Maine (USM), Maine CDC, and John Snow, Inc. (JSI). The group developed rules regarding time frame (e.g., comparisons across time were to be of periods of equal duration; the most recent data used was from 2010 to present), handling complexity (e.g., how to combine years of data when an indicator's data definition changed over time, such as ICD9/ICD10 coding or BRFSS question changes), benchmarking, map and graph formats, and iconography to be used in profile tables. Some of the methodologies are documented in the Data Definitions section of each health profile. More is provided in the "2018 Maine Shared CHNA Data Analysis Technical Definitions" posted on the Maine Shared CHNA website.

## OUTREACH AND ENGAGEMENT

Community outreach and engagement for the Maine Shared CHNA included coordination at both the statewide, public health district, and county level. The statewide Community Engagement Committee met monthly from March 2018 through January 2019 to review and provide input on every aspect of engagement process.

In addition to the state-level Community Engagement Committee, a **Local Community Engagement Planning Committee** in each of Maine's 16 counties planned and implemented the logistics of community forums and events within each district. These committees were comprised of hospitals, public health district liaisons, and a variety of additional partners.

### Data Health Profiles include:

- 1 State Health Profile
- 16 County Health Profiles
- 5 Public Health District Profiles (for those Public Health Districts comprised of multiple counties)
- 3 City Health Profiles (Bangor, Lewiston/Auburn, and Portland)
- 6 Health Equity Data Sheets, one for each of the following demographic characteristics:
  - Sex
  - Race
  - Hispanic ethnicity
  - Sexual orientation
  - Educational attainment
  - Insurance status

*These reports, along with an interactive data form, can be found under the Health Profiles tab at [www.mainechna.org](http://www.mainechna.org).*

The 2018 Community Engagement Toolkit was designed to assist the Local Community Engagement Planning Committees in this effort.

### Forums and Health Priorities

Criteria for visualizing data included areas identified as a health priority in the last CHNA, significant changes in the data over time, or where a county's data was notably better or worse than the state or the nation. Forum agenda items included remarks from health leaders; a review of previous health improvement efforts; a review of county-level data, discussion, and prioritization in small groups; and an overall forum-wide voting process. The Community Engagement and Steering Committees created and approved a rubric to guide the selection criteria for the subset of data to be presented in each forum's PowerPoint presentations.

Small groups had 35-45 minutes to discuss the data in the presentation and the full county profile, and to share their own experiences in order to identify their top county health priorities. Table facilitators guided these discussions using key questions and worksheets



for reporting purposes. Health priorities identified during these small groups were collated and presented to the larger plenary session, where each attendee voted for their top four priorities. Votes were tallied and a hierarchy emerged.

The summary votes for each forum were used to develop the county level priorities. If multiple forums were held in a county, the forum results for forums held with the general community were included in the total votes for the county. In cases where a forum was held with a specific population, for example, LGBTQ youth or older adults, then the results of their voting and discussion were included in the section describing the needs of that particular population. To arrive at the top countywide community health issues, votes from

the broad community forums were combined for each of the priority areas to identify priority areas which fell within 70% of the combined voting total.

To arrive at the top countywide community health issues, votes from the broad community forums were combined for each of the priority areas to identify priority areas which fell within 70% of the combined voting total. Priorities that fell within the 70% combined voting total received an in-depth analysis within the Maine Shared CHNA county report..

### Penquis District Forums

Two community forums were held in the Penquis District.

**Table 10: Community engagement activities in the Penquis District, 2018**

<b>PENOBSCOT COUNTY</b>			
<b>TYPE OF ENGAGEMENT</b>	<b>LOCATION &amp; DATE</b>	<b>FACILITATOR</b>	<b>ATTENDEES</b>
Community Forum	Bangor 09/19/2018	JSI	131
<b>PISCATAQUIS COUNTY</b>			
<b>TYPE OF ENGAGEMENT</b>	<b>LOCATION &amp; DATE</b>	<b>FACILITATOR</b>	<b>ATTENDEES</b>
Community Forum	Dover-Foxcroft 09/18/2018	JSI	61

## Key informant interviews

The Steering Committee identified ten categories of medically underserved and vulnerable populations to ensure their input was heard and captured. A list of 80 potential interview subjects was created with statewide input. Selected key informants either had lived experience in the category and/or worked for an organization that focused on providing services or advocacy to a population. The populations identified were:

- Veterans
- Adults ages 65 and older who are isolated or have multiple chronic conditions
- Non-English speakers, undocumented individuals, immigrants, and refugees
- Deaf individuals and those with other physical disabilities
- Adolescents/youth
- LGBTQ
- People with mental health conditions and developmental disabilities
- Rural individuals
- Individuals in substance use disorder recovery/ substance use disorder prevention and treatment professionals

The key informant interview guide was developed with input from the Community Engagement and Steering Committee members and consisted of the following five questions.

- We are interested in learning more about the priority health needs for this population (reference population(s) of expertise of interviewee). How would you characterize the health needs for this population? How are they different than for the general population?
- From where you sit and the work you do, what do you feel are the most important health needs to address? Why?
- What do you see as the major resource gaps with respect to health and wellness for this population?

- Are you currently working on anything that contributes to community health and wellness for this population? Are there any areas of health you would like to work on in partnership with others?
- Are there any particular assets or resources to address the needs of this population that can be leveraged?

Thirty-one interviews were conducted by JSI and 11 by members of Local Community Engagement Planning Committees. Information gathered from the key informant interviews is included in discussions where applicable in the county level report within each of the county priorities. For example, when discussing substance use, a discussion of the needs of vulnerable populations within this priority was also included. The state level report provides a summary of key findings from these interviews for each of the ten vulnerable populations.

For full lists of individuals representing broad interests of the community who were consulted during the engagement process, please see Penobscot and Piscataquis Needs Assessment Reports at [www.mainechna.org](http://www.mainechna.org).

## Data collection

All outcomes from these efforts were collected via the Community Outreach Reporting Tool or the Key Informant Reporting tool. Both of these collection tools were online surveys within Survey Monkey. Other data collection tools included Table Facilitators notes, forum registrations, and sign-ins.

## FINAL REPORTS

Integrated analysis of all quantitative and qualitative activities and findings was conducted between December 2018 and January 2019. These were used to develop a full description of the risk factors underlying the health priorities for each county.

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