2019 Maine Shared
Community Health Needs Assessment

Penobscot County

Northern Light Health℠

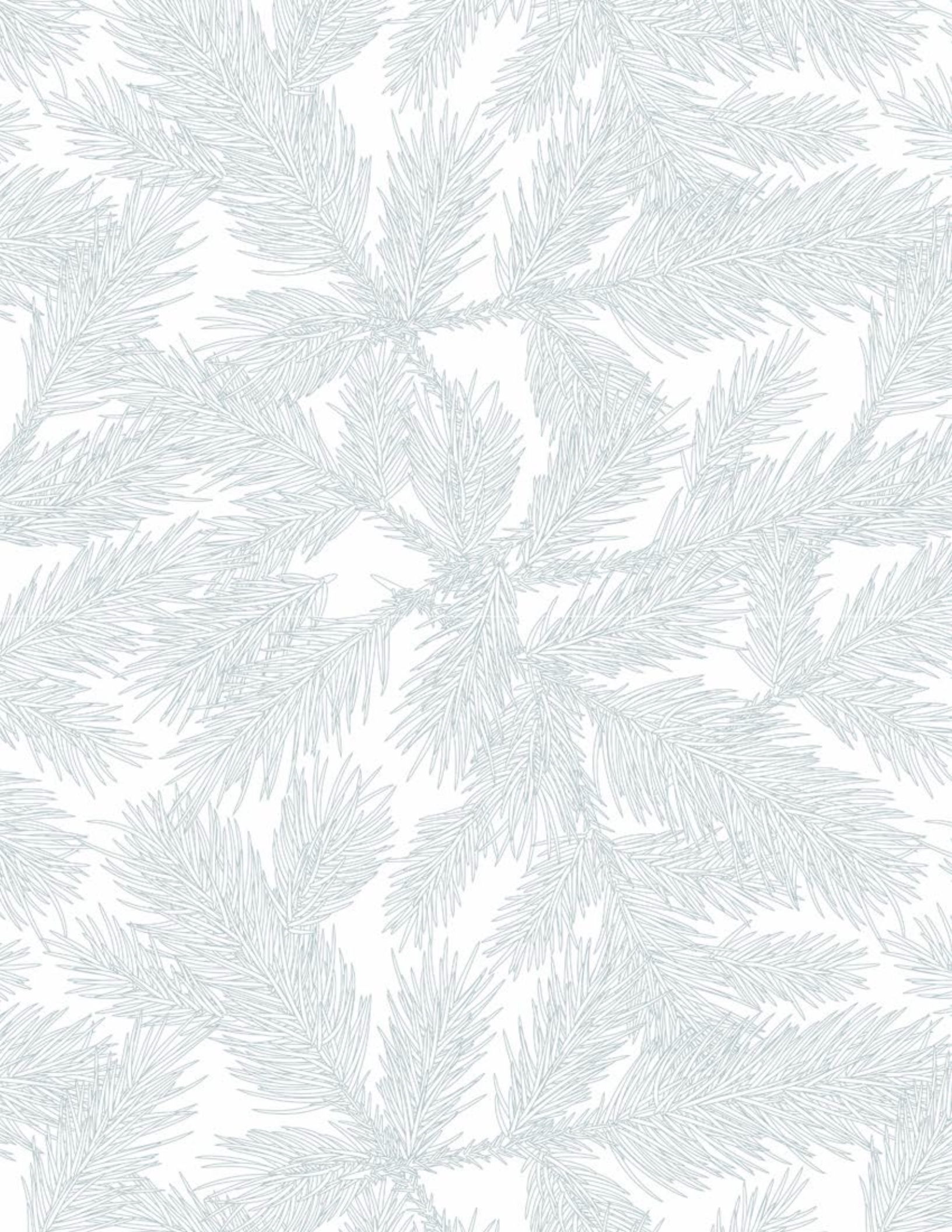


TABLE OF CONTENTS

Key companion documents available at www.mainechna.org:

- Penobscot County Health Profile
- Penquis District Health Profile
- Maine State Health Profile
- 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 CHNA) is a collaborative effort amongst Central Maine Healthcare (CMHC), Northern Light Health (NLH), MaineGeneral Health (MGH), MaineHealth (MH), and the Maine Center for Disease Control and Prevention (Maine CDC). 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.

DEMOGRAPHICS

Penobscot County is one of two counties that make up the Penquis Public Health District. The population of Penobscot County is 152,978 and 16.5% of the population is 65 years of age or older. The population is predominantly white (95.1%); 1.7% are two or more races, 1.2% are Hispanic, and 1.1% are Asian. The median household income is $45,302. The high school graduation rate (88.3%) is higher than the state overall, while the percent of the population with an associate's degree or higher (35.4%) is lower.

TOP HEALTH PRIORITIES

Forums held in Penobcot County identified a list of health issues in that community through a voting methodology. See Appendix C for a description of how priorities were chosen.

Table 1: Penobscot County Health Priorities

PRIORITY AREA	% OF VOTES
Mental Health*	19%
Social Determinants of Health*	18%
Substance Use*	15%
Access to Care*	14%
Physical Activity, Nutrition, and Weight*	12%

Also a statewide priority. For a complete list of statewide priorities, see state health profile on our website, **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 hospitals, creating an informed implementation strategy designed to address the identified needs
- 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 Central Maine Healthcare, Northern Light Health, MaineGeneral Health, and MaineHealth, with generous in-kind support from the Maine Center for Disease Control and Prevention, an office of the Department of Health and Human Services 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 of committee members please visit **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. 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, almost 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 Penobscot County Community Forum was an opportunity for review of the Penobscot County Health Profile, discussion of community needs, and prioritization in small break-out sessions followed by a forum session vote. Table 2 lists all ten priorities which arose from group break-out sessions at the forum held in Penobscot County. The priorities bolded are the five priorities which rose to the top.

This section provides a synthesis of findings for each of the top priorities. The following discussion of each priority are from several sources including the data in the county health data profiles, the information gathered at the Penobscot County Community Forum, and key informant interviews. See Appendix C for the complete methodology for all of these activities.

Table 2: Penobscot County Forum Voting Results

PRIORITY AREA	% OF VOTES
Mental Health*	**19%**
Social Determinants of Health*	**18%**
Substance Use*	**15%**
Access to Care*	**14%**
Physical Activity, Nutrition, and Weight*	**12%**
Older Adult Health/Healthy Aging*	7%
Tobacco Use	5%
Pregnancy and Birth Outcomes	6%
Environmental Health	2%
Infectious Disease	2%

**Also a statewide priority. For a complete list of statewide priorities, see state health profile on our website,* www.mainechna.org

MENTAL HEALTH

Mental health affects all segments of the population, regardless of age, socioeconomic status, race/ethnicity, or gender. Poor mental health contributes to a number of issues that affect both individuals and communities. Mental health disorders, 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 find it harder to care for themselves.[1]

More than 25% of adults with a mental health disorder 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 to experience symptoms of a mental health disorder.[2]

QUALITATIVE EVIDENCE

At the Penobscot County forum, depression, anxiety, and stress were identified as major mental health issues. While many said there was a need for more behavioral health services in general, inpatient services and providers specifically for youth and older adults were identified as specific gaps in the spectrum of care. Participants also called for more integration of behavioral health and primary care.

The mental health needs of youth and adolescents were a dominant theme in the community forum. Forum participants identified a number of underlying issues that they felt contributed to the increase in depression amongst young people, including Adverse Childhood Experiences (ACEs), bullying, the impact of social media on the development of social skills, and stress. Community members suggested that education around mental health and stigma and behavioral health screening and treatment should be provided as early as possible (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 issues.

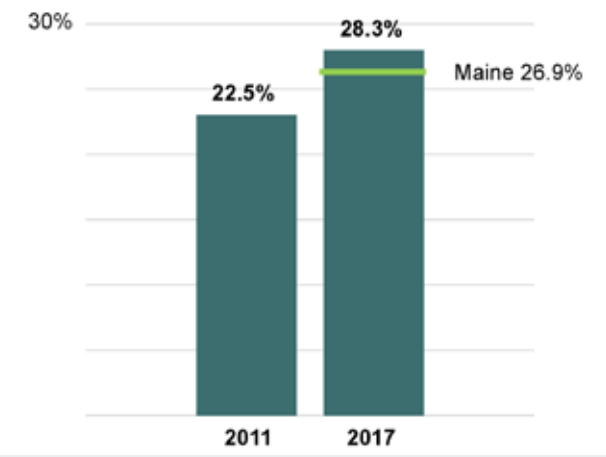
Stigma, or the disapproval or discrimination against a person based on a particular circumstance (e.g. mental health condition) was identified by several participants as a major barrier to care. Stigma prevents individuals from receiving the help they need, as individuals with a mental health issue may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

QUANTITATIVE EVIDENCE

In Penobscot County:

- 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 (23.9% vs. 16.7%) in 2014-2016.
- The percentage of adults with current symptoms of depression was higher than the state overall (9.6% vs. 8.4%) in 2014-2016.

Figure 1: Sad/Hopeless for Two or More Weeks in a Row (High School)



- 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%.
- The ratio of psychiatrists to 100,000 population was 5.7, compared to 8.4 for the state overall, in 2017.

See Key Indicators on page 20 as well as companion Health Profiles on our website **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.

Table 3: Assets and Gaps/Needs (Mental Health)

ASSETS	GAPS/NEEDS
• In-school counseling for high school students • Leverage technology to improve access • Penobscot Community Health Care - Clubhouse • Counselors • Hotlines • Hospitals • Programs that support family and community connections and social supports • Acute care • Outpatient care • Psychiatric centers (Northern Light Acadia Hospital, Dorthea Dix Psychiatric Center) • Support groups • Rehab facilities • Health Equity Alliance offers free mental health • Primary care as point of care for counseling • Telehealth/Tele-psychiatry • Medical/pharmaceutical options	• 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 • Access to quality care • ACEs/Trauma Screening • 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; early intervention • Expanded screening for substance use disorder • Need for a focus on middle school and younger kids (pre-K, preschool explosion of challenging behaviors) • Early intervention for those with disabilities (age 2.5-5 years) • Reducing stigma so individuals can talk about it (middle school age important) • Expansion of primary care integration with behavioral health and training • Lack of beds for those in need of inpatient treatment • Early screening intervention and treatment • Lack of providers • Reconsider institutionalization -safer than living on the streets • Foster care system/adoption *Continued on next page.*

Table 3: Assets and Gaps/Needs (Mental Health) CONTINUED

ASSETS	GAPS/NEEDS
	• Public health nurses • Older adults: mechanism to assure medications are taken regularly and social support • Lack of knowledge mental health knowledge of emergency room staff • Lack of in-patient beds • Expansion of school based mental health to have 1 counselor and 1 social worker at each school (elementary, middle, high school) • Decreasing holding time • Expanded facilities for mental health patients-size too small for population • Wait time for counseling and therapy appointments • Expansion of school support for prevention • Better health education that includes mental health education • Adolescent depression: need to analyze the environment youth live in • Access to medication • Emergency room as a default place for care • Support healthy environments for school and work • Resources for pregnant women with current or history of mental health issues • Change school regulations and the way they are funded to promote health rather test scores • Community support on campus and in high schools • Providers that serve LGBTQ and substance use disorder • Providers need reasonable patient loads • Schools and educators need education on trauma informed care and advocacy

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.[3]

For example, lack of access to the use of a personal vehicle may be due to any number of factors including affording the vehicle itself, or the insurance, repairs, or even perhaps a license suspension or revocation. This can be especially challenging in areas without reliable public transportation, like in rural Maine. This results in difficulty accessing health services, employment, and basic necessities (e.g., food, clothing, medication). This issue is further complicated for older adults with mobility impairments and individuals with disabilities who require specialized forms of transportation or extra assistance.

QUALITATIVE EVIDENCE

A dominant theme from key informant interviews and the community forum was the tremendous impact that the underlying social determinants, particularly food insecurity, housing, and transportation, have on residents in Penobscot County. Poverty is 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. 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.

Forum participants stated that although there are stores and farmers markets offering fresh and nutritious foods, specifically produce, the cost of these items is prohibitive; it was also said that farmers markets were difficult to access due to their limited hours. Participants were also concerned about children's access to healthy foods, both within and outside of schools; it was suggested that schools should expand offerings of low cost and healthy lunch to students.

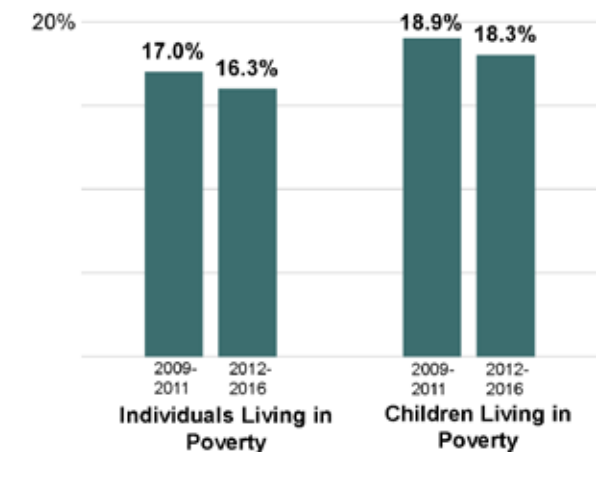
Forum participants identified several needs in the realm of housing: transitional and supportive housing, shelters for individuals and families, safety of housing stock in poor condition, and radon testing. Transportation was identified as an issue for those without a personal vehicle; though there is a public transportation system, residents suggested that buses should run more frequently and for longer periods of time.

QUANTITATIVE EVIDENCE

In Penobscot County:

- The unemployment rate was higher than the state overall (4.3% vs. 3.8%) in 2015–2017.
- The percentage of individuals living in poverty was higher than the state overall (16.3% vs. 13.5%) in 2012–2016.
- The percentage of children living in poverty was higher than the state overall (18.3% vs. 17.2%) in 2012–2016.

Figure 2: Individuals and Children Living in Poverty



- The percentage of households that lack enough food to maintain healthy, active lifestyles for all household members was similar to the state overall (16.2% vs. 15.1%) in 2014-2015.
- The percentage of high school students who are housing insecure was higher than the state overall (4.1% vs. 3.6%) in 2017.

See Key Indicators on page 20 as well as companion Health Profiles on our website 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.

Table 4: Assets and Gaps/Needs (Social Determinants of Health)

ASSETS	GAPS/NEEDS
• Food pantry • Social service agencies • Lynx (Transportation) • Penquis (Transportation) • Food bank • Eastern Agency on Aging • Annual shop around • Insurance • Integrated mental health services • Organized sports • Primary care providers • Data sharing from Health Management Information Systems • MaineCare/Medicare • Homeless shelters • Cheaper housing • Access to farm stands and personal gardens during summer months • School lunch and breakfast programs • Women, Infants, and Children • Meals on wheels • Bridging Rental Assistance Program • General Assistance • Section 8 • Transitional housing • Supplemental Nutrition Assistance Program • 3D Catering • Good Shephard Food Bank • Community suppers • Community Cafe	• Wellness integrated supportive housing sources • Transitional housing • Shelter • Data sharing from Health Management Information Systems (HMIS) • To Health Infonet (HIN and HIN to HMIS) • 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) • Family facility for homelessness • Free/reduced cost health care • Stigma education and prevention around homelessness • Job training • Coordination of efforts around food insecurity • Transportation: Expansion of public transportation hours, more frequency in bus runs • Affordable and Safe Housing: Required testing for radon and accountability • Early intervention in pre-school to support at risk-families • Financial education • School nurses stretched too thin • Building relationships across the community and opportunities for people to connect • Screening for food insecurity • Affordable food • The ability to get healthy food credit in stores • Dedicated physical activity time in schools • Expanded healthy and low cost lunches in schools • Isolation in rural communities • Stigma • Risk assessment to prevent homelessness • Health literacy education, using teach back • Robust home economics in schools

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.[4] Tobacco, alcohol, marijuana, and nonmedical use of prescription pain relievers (e.g. OxyContin, Vicodin) are the leading substance use health issues for adults.[5] Tobacco, alcohol, and marijuana are the most common substances misused by adolescents, followed by amphetamines (e.g. Adderall) and nonmedical use of prescription pain relievers.[6] 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.[7] 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.

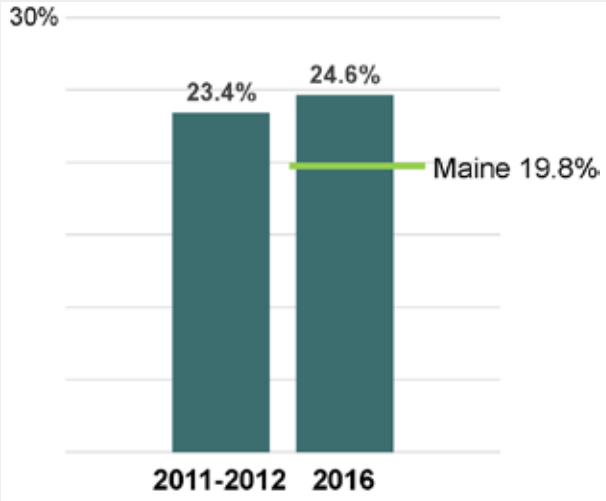
QUALITATIVE EVIDENCE

Many people in Penobscot County were concerned by the increased availability and use of e-cigarettes, also referred to as “vaping” or “Juuling.” This was especially a concern for young people. Instead of inhaling tobacco smoke from a cigarette, e-cigarette users inhale vapor from a liquid, usually containing flavoring, nicotine and other chemicals, that has been heated with a battery powered coil. While originally marketed as a healthier alternative to traditional cigarettes, e-cigarettes have been found to be unhealthy and addictive, and a recent study found that adolescents who vape are more likely to try other types of tobacco.[8] Opioid use disorder was another key theme in the community forum and key informant interviews. Participants discussed the need for more comprehensive, accessible, and affordable services to help those in need, 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.

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. Another key theme was the need to provide better access to many of the resources that make up the social determinants of health: affordable, safe, and supportive housing; transportation; and nutritious foods.

QUANTITATIVE EVIDENCE

Figure 3: Current Smoking (Adults)



In Penobscot County:

- The percentage of adults who currently smoke was higher than the state overall (24.6% vs. 19.8%) in 2016.
- Overdose emergency medical service responses per 10,000 population were higher than the state overall (128.0 vs. 93.0) in 2016-2017.
- Alcohol-induced deaths per 100,000 population were higher than the state overall (11.0 vs. 9.7) in 2012-2016.

See Key Indicators on page 20 as well as companion Health Profiles on our website 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.

Table 5: Assets and Gaps/Needs (Substance Use)

ASSETS	GAPS/NEEDS
• Medication-Assisted Treatment (MAT) providers • Methadone and clean needle programs • Controlled substance initiative: organizations partnering to implement consistent and safer approaches to prescribing • Opioid grant with Cary Medical Center • Community Health and Counseling Services (CHCS) • Substance Abuse Services: Suboxone in primary care offices • Health care providers to support reduction in tobacco use • Resources for mothers and infants following discharge • Recovery groups at many sites • Naloxone for anyone who asks • Bangor Area Recovery Network • Northern Light Acadia Hospital • Hotlines • Alcoholics Anonymous and Narcotics Anonymous • Northeast Occupational Exchange • Penobscot Community Health Care - Clubhouse • Wellspring • Tobacco school based education and prevention • Bangor Public Health • Education on vaping	• Substance use prevention • Provider shortage • Increased access to mental health services • Increased access to tobacco help/quit programs • More research on effects of use of e-cigarettes on health • 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 • Screening, Brief Intervention, and Referral to Treatment (SBIRT) screening in school and brief intervention program like “Teen Intervene” • Aggressive case management • Collaboration with police to support monitoring • Addressing the effects of criminalizing drug addiction • Relapse prevention • Low cost access to recovery supports • Coordination of efforts • Education on how to access resources • E-cigarette vape culture in young adults • Need to track stimulant and benzodiazepine use, provide education • Increased access to Naloxone • Attention to all substances • Transportation to groups and appointments • Cost of treatment providers • Certified recovery coaching • Increased access to counseling for long term or intensive care • Stigma/lack of support

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. 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.

QUALITATIVE EVIDENCE

Many forum 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.

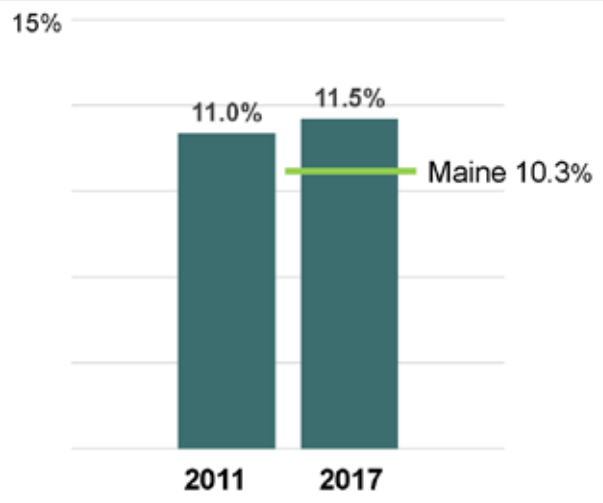
Beyond the need for Medicaid expansion, which was signed into law on January 3, 2019, participants discussed the need for comprehensive and affordable health services, specifically primary care, dental care, behavioral health, and prenatal care. Even for those with insurance, deductibles, co-pays, and 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.

QUANTITATIVE EVIDENCE

In Penobscot County:

- The percentage of the population that is uninsured was higher than the state overall (10.5% vs. 9.5%) in 2012-2016.
- 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.
- The ratio of primary care physicians to 100,000 population was lower than the state overall (59.5 vs. 178.4) in 2017.

Figure 4: Individuals Unable to Afford Healthcare Due to Cost



See Key Indicators on page 20 as well as companion Health Profiles on our website **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.

Table 6: Assets and Gaps/Needs (Access to Care)

ASSETS	GAPS/NEEDS
• Federally Qualified Health Centers (FQHC) • Mabel Wadsworth Health Center • Physical therapy providers • Church involvement • Family shelters • Community care nurse management • Penobscot Community Health Care • Websites for education such as CDC • Northern Light Health • St. Joseph's Healthcare • Just in time specialist scheduling • Telemedicine	• Universal health insurance- state level • Consistent care providers (system issue) • Expanded education and access to falls risk assessments • Same day care • Affordable insurance and affordable care • Out of pocket cost deter people from getting care even if they have a provider and insurance • School nurse shortage- have 1 school nurse per 200 students • Increased staffing for nursing homes • Increased access to prenatal care for low income families

PHYSICAL ACTIVITY, NUTRITION, AND WEIGHT

Lack of physical fitness and poor nutrition are among the leading risk factors associated with obesity and chronic health issues. Adequate nutrition helps prevent disease and is essential for the healthy growth and development of children and adolescents, while overall fitness and the extent to which people are physically active reduces the risk for many chronic conditions and is linked to good emotional health. Over the past two decades, obesity rates in the United States have doubled for adults and tripled for children. Overall, these trends have spanned all segments of the population, regardless of age, sex, race, ethnicity, education, income, or geographic region.

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.[9] Chronic diseases and health conditions associated with food insecurity include asthma, low birthweight, diabetes, mental health issues, hypertension, and obesity.[10] 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).

QUALITATIVE EVIDENCE

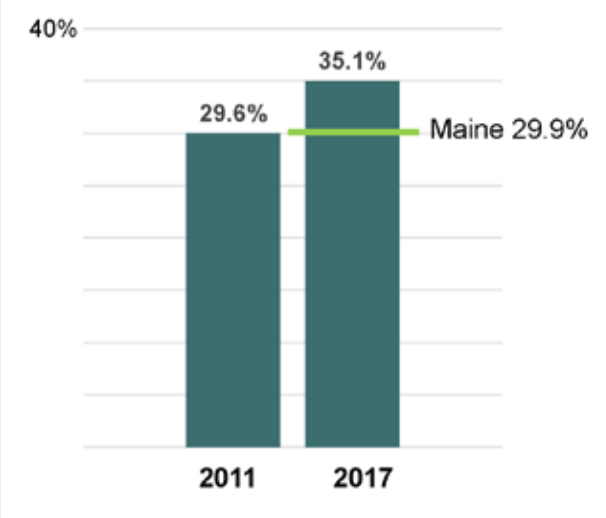
In the community forum, obesity was identified as an issue for both youth and adults. Participants and key informants suggested several reasons for the increase in obesity, including the high cost of healthy foods, poor eating habits (unhealthy and not enough food), sedentary lifestyle and lack of physical activity, and lack of education. As discussed in the section on the Social Determinants of Health, forum participants identified a need to improve the quality and nutrition of food provided within the school systems.

QUANTITATIVE EVIDENCE

In Penobscot County:

- The percentage of adults who are obese was higher than the state overall (35.1% vs. 29.9%) in 2016. The percentage was significantly higher than the national average (29.6%).
- The percentage of high school students who were obese was higher than the state overall (16.8% vs. 15.0%) in 2017.
- The percentage of high school students who reported having five or more fruits and vegetables a day was significantly lower than the state (11.1% vs. 15.6%) in 2017.
- The percentage of high school students who reported having one or more soda/sports drinks a day was significantly higher than the state overall (24.6% vs. 20.5%) in 2017.

Figure 5: Obesity (Adults)



See Key Indicators on page 20 as well as companion Health Profiles on our website www.mainechna.org. Those documents also include information on data sources and definitions.

COMMUNITY RESOURCES TO ADDRESS PHYSICAL ACTIVITY, NUTRITION, AND WEIGHT

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.

Table 7: Assets and Gaps/Needs (Physical Activity, Nutrition, and Weight)

ASSETS	GAPS/NEEDS
• Food Bank • Nutrition education for kids at Northern Light Eastern Maine Medical Center • City paths information • Schools for education and healthy lunches • Healthcare providers • Nutrition education (Eastern Area Agency on Aging) • Health centers • YMCA • Public Health • Way to Optimal Weight (WOW) peer groups • Organized sports programs • Provider assessment and education of patients • Counseling • Obesity education • Farmers markets at University of Maine campus • Local gardens providing fresh produce	• Public Education • Food insecurity • Social isolation • Increased use of technology and social media • Coordination of efforts • Education prioritization • Weather appropriate places to exercise at night • More physical education time at school • Culture of wellness at work and schools. This includes giving breaks for physical activity • Addressing poverty • Affordable mental health counseling • Access to affordable food • More community gardens accessible for individuals who are food insecure

COMMUNITY CHARACTERISTICS

AGE DISTRIBUTION

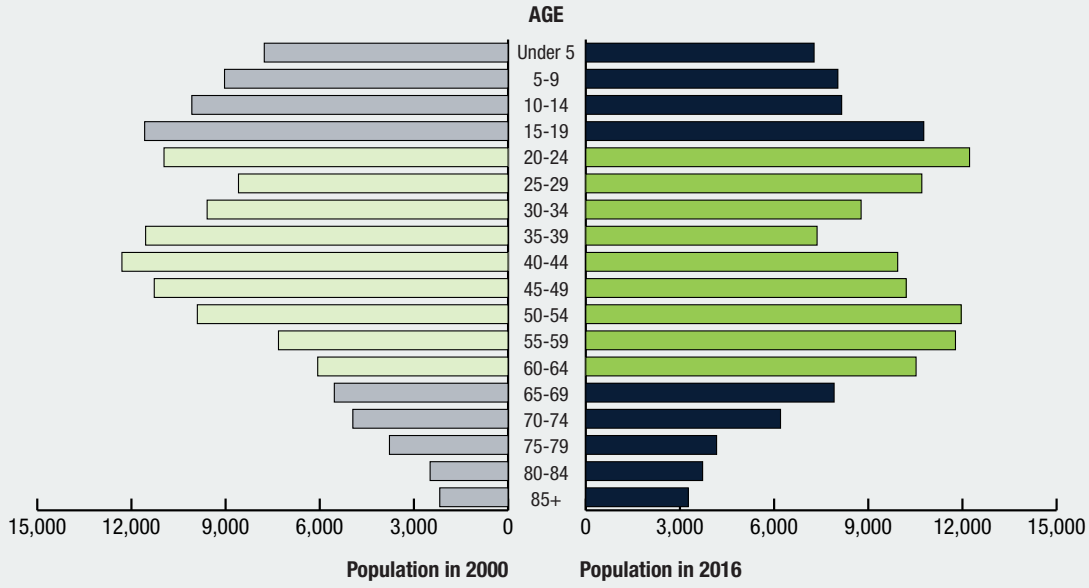
Age is a fundamental factor to consider when assessing individual and community health status. In particular, older adults with chronic conditions can typically have more physical and mental health vulnerabilities, and are more likely to rely on immediate community resources for support compared to young people.[11] An aging population leads to 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.[12]

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

For key companion documents visit www.mainechna.org and click on "Health Profiles."

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

Figure 6: Age Histogram of Penobscot County



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 US Centers for Disease Control, non-Hispanic Blacks have higher rates of premature death, infant mortality, and preventable hospitalization than non-Hispanic Whites.[13] 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 health literacy or comprehension of medical information. This leads to higher rates of medical issues and complications, such as adverse reactions to medication.[14],[15] 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.

In Penobscot County:

- The population is predominantly White (95.1%); 1.7% of the population are two or more races; 1.2% are Hispanic; 1.1% are Asian.
- Penobscot County has 1,751 American Indian residents, 1% of the total population, and is home to one of four federally recognized Tribes in Maine, The Penobscot Nation.

Table 8: Race/Ethnicity Penobscot County, 2012–2016

	PERCENT/NUMBER
American Indian/Alaskan Native	1.1% / 1,751
Asian	1.1% / 1,724
Black/African American	.8% / 1,174
Hispanic	1.2% / 1,895
Some other race	0.2% / 258
Two or more races	1.7% / 2,571
White	95.1% / 145,472

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 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. Table 9 includes a number of data points comparing Penobscot County to the state overall.

Additionally, in Penobscot County:

- The estimated high school graduation rate was higher than the state overall (88.3% vs. 86.9%) in 2017.
- The percent of the population over 25 with an associates' degree or higher was lower than the state overall in 2017 (35.4% vs. 37.3%) in 2012-2016.

Table 9: Socioeconomic Status in Penobscot County, 2012–2016

	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%

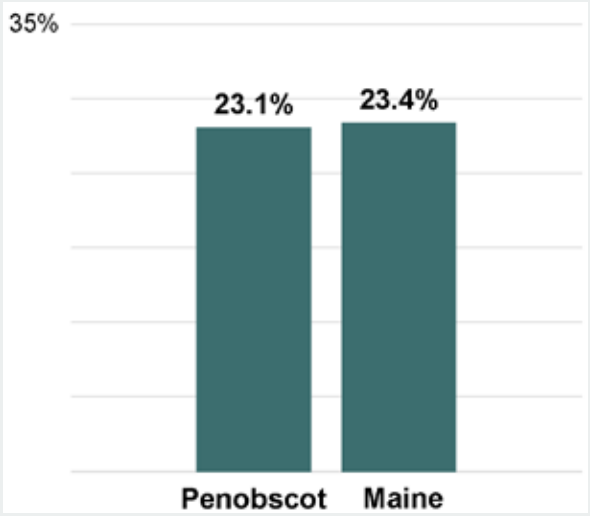
SPECIAL POPULATIONS

Through community engagement activities, several populations in Penobscot County 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 issues (specifically depression, anxiety and stress), substance use (particularly e-cigarettes/vaping), and lack of education and promotion around nutrition and physical activity. The community discussed the impact of ACES on youth health, and the need to focus on mental health to support at risk youth. 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.

Figure 7: Adverse Childhood Experiences, 2017 (High School)



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) 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 each county. They are a broad sampling of health topics, including health behaviors, outcomes, living conditions, and health care quality and access. See the Penobscot County Health Profile for a full set of data. The table uses symbols to show whether there are important changes in each indicator over time, and to show if local data is notably better or worse than the state or the nation. See the box below for a key to the symbols:

CHANGE shows **statistically significant changes** in the indicator over time, based on 95% confidence interval (see description above).

★	means the health issue or problem is **getting better** over time.
!	means the health issue or problem is **getting worse** over time.
○	means the change was not statistically significant.
N/A	means there is not enough data to make a comparison.

BENCHMARK compares Penobscot County data to state and national data, based on 95% confidence interval (see description above).

★	means Penobscot County is doing **significantly better** than the state or national average.
!	means Penobscot County is doing **significantly worse** than the state or national average.
○	means there is no statistically significant difference between the data points.
N/A	means there is not enough data to make a comparison.

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.

	PENOBSCOT COUNTY DATA			BENCHMARKS			
KEY INDICATOR	**POINT 1**	**POINT 2**	**CHANGE**	**MAINE**	**+/–**	**U.S.**	**+/–**
SOCIAL, COMMUNITY & PHYSICAL ENVIRONMENT							
Children living in poverty	2007-2011 **18.9%**	2012-2016 **18.3%**	N/A	2012-2016 **17.2%**	N/A	2016 **21.1%**	N/A
Median household income	2007-2011 **$43,601**	2012-2016 **$45,302**	N/A	2012-2016 **$50,826**	N/A	2016 **$57,617**	N/A
Estimated high school student graduation rate	2014 **86.9%**	2017 **88.3%**	N/A	2017 **86.9%**	N/A	–	N/A
Food insecurity	2012-2013 **16.5%**	2014-2015 **16.2%**	N/A	2014-2015 **15.1%**	N/A	2015 **13.4%**	N/A
HEALTH OUTCOMES							
14 or more days lost due to poor physical health	2011-2013 **22.0%**	2014-2016 **27.0%**	○	2014-2016 **19.6%**	!	2016 **11.4%**	N/A
14 or more days lost due to poor mental health	2011-2013 **19.8%**	2014-2016 **23.9%**	○	2014-2016 **16.7%**	!	2016 **11.2%**	N/A
Years of potential life lost per 100,000 population	2010-2012 **6,821.5**	2014-2016 **6,931.3**	○	2014-2016 **6,529.2**	○	2014-2016 **6,658.0**	N/A
All cancer deaths per 100,000 population	2007-2011 **193.7**	2012-2016 **176.7**	○	2012-2016 **173.8**	○	2011-2015 **163.5**	!
Cardiovascular disease deaths per 100,000 population	2007-2011 **241.5**	2012-2016 **216.7**	★	2012-2016 **195.8**	!	2016 **218.2**	○
Diabetes	2011-2013 **10.3%**	2014-2016 **10.3%**	○	2014-2016 **10.0%**	○	2016 **10.5%**	○
Chronic obstructive pulmonary disease (COPD)	2011-2013 **7.9%**	2014-2016 **8.1%**	○	2014-2016 **7.8%**	○	2016 **6.3%**	○
Obesity (adults)	2011 **29.6%**	2016 **35.1%**	○	2016 **29.9%**	○	2016 **29.6%**	!
Obesity (high school students)	2011 **15.0%**	2017 **16.8%**	○	2017 **15.0%**	○	–	N/A
Obesity (middle school students)	2015 **18.3%**	2017 **17.5%**	○	2017 **15.3%**	○	–	N/A
Infant deaths per 1,000 live births	2007-2011 **5.6**	2012-2016 **8.1**	○	2012-2016 **6.5**	○	2012-2016 **5.9**	!
Cognitive decline	2012 **13.2*%**	2016 **10.2*%**	○	2016 **10.3%**	○	2016 **10.6%**	○
Lyme disease new cases per 100,000 population	2008-2012 **13.5**	2013-2017 **42.2**	N/A	2013-2017 **96.5**	N/A	2016 **11.3**	N/A
Chlamydia new cases per 100,000 population	2008-2012 **216.2**	2013-2017 **339.2**	N/A	2013-2017 **293.4**	N/A	2016 **494.7**	N/A
Fall-related injury (unintentional) emergency department rate per 10,000 population	2009-2011 **280.5**	2012-2014 **283.7**	○	2012-2014 **340.9**	★	–	N/A
Suicide deaths per 100,000 population	2007-2011 **13.4**	2012-2016 **14.8**	○	2012-2016 **15.9**	○	2016 **13.5**	○
Overdose deaths per 100,000 population	2007-2011 **13.8**	2012-2016 **17.0**	○	2012-2016 **18.1**	○	2016 **19.8**	○

	PENOBSCOT COUNTY DATA			BENCHMARKS			
KEY INDICATOR	**POINT 1**	**POINT 2**	**CHANGE**	**MAINE**	**+/–**	**U.S.**	**+/–**
HEALTH CARE ACCESS AND QUALITY							
Uninsured	2009-2011 **10.6%**	2012-2016 **10.5%**	N/A	2012-2016 **9.5%**	N/A	2016 **8.6%**	N/A
Ratio of primary care physicians to 100,000 population	–	2017 **59.5**	N/A	2017 **178.4**	N/A	–	N/A
Ratio of psychiatrists to 100,000 population	–	2017 **5.7**	N/A	2017 **8.4**	N/A	–	N/A
Ratio of practicing dentists to 100,000 population	–	2017 **35.0**	N/A	2017 **32.1**	N/A	–	N/A
Ambulatory care-sensitive condition hospitalizations per 10,000 population	–	2016 **96.6**	N/A	2016 **74.6**	N/A	–	N/A
Two-year-olds up-to-date with recommended immunizations	2014 **78.5%**	2017 **78.6%**	N/A	2017 **73.7%**	N/A	–	N/A
HEALTH BEHAVIORS							
Sedentary lifestyle – no leisure-time physical activity in past month (adults)	2011 **27.0%**	2016 **22.7%**	○	2016 **20.6%**	○	2016 **23.2%**	N/A
Chronic heavy drinking (adults)	2011-2013 **5.3%**	2014-2016 **6.6%**	○	2014-2016 **7.6%**	○	2016 **5.9%**	N/A
Past-30-day alcohol use (high school students)	2011 **30.3%**	2017 **19.9%**	★	2017 **22.5%**	○	–	N/A
Past-30-day alcohol use (middle school students)	2011 **6.0%**	2017 **3.6%**	○	2017 **3.7%**	○	–	N/A
Past-30-day marijuana use (high school students)	2011 **21.4%**	2017 **16.5%**	○	2017 **19.3%**	○	–	N/A
Past-30-day marijuana use (middle school students)	2011 **3.8%**	2017 **2.7%**	○	2017 **3.6%**	○	–	N/A
Past-30-day misuse of prescription drugs (high school students)	2011 **7.7%**	2017 **5.0%**	★	2017 **5.9%**	○	–	N/A
Past-30-day misuse of prescription drugs (middle school students)	2011 **3%**	2017 **1.7%**	○	2017 **1.5%**	○	–	N/A
Current (every day or some days) smoking (adults)	2011-2012 **23.4%**	2016 **24.6%**	○	2016 **19.8%**	○	2016 **17.0%**	N/A
Past-30-day cigarette smoking (high school students)	2011 **17.1%**	2017 **8.8%**	★	2017 **8.8%**	○	–	N/A
Past-30-day cigarette smoking (middle school students)	2011 **3.0%**	2017 **1.4%**	○	2017 **1.9%**	○	–	N/A

Leading Causes of Death

The following chart compares the leading causes of death for the state of Maine and Penobscot County.

RANK	STATE OF MAINE	PENOBSCOT COUNTY
1	Cancer	Cancer
2	Heart disease	Heart disease
3	Chronic lower respiratory diseases	Chronic lower respiratory diseases
4	Unintentional injuries	Unintentional injuries
5	Stroke	Stroke

APPENDIX A: REFERENCES

1 National Institute of Mental Health. (n.d.).Chronic illness & mental health. Retrieved fromhttps://www.nimh.nih.gov/health/publications/chronic-illness-mental-health/index.shtml

2 National Institute of Mental Health. (2017). Mental health and substance use disorders. Retrieved from https://www.mentalhealth.gov/what-to-look-for/mental-health-substance-use-disorders

3 Bernazzani, S. (2016). The importance of considering the social determinants of health. Retrieved from https://www.ajmc.com/contributor/sophia-bernazzani/2016/05/the-importance-of-considering-the-social-determinants-of-health

4 Substance Abuse and Mental Health Services Administration. (2016). Mental health and substance use disorders. Retrieved from https://www.samhsa.gov/disorders.

5 Lipari, R.N. & Van Horn, S.L. (2017). Trends in substance use disorders among adults aged 18 or older. Retrieved from https://www.samhsa.gov/data/sites/default/files/report_2790/ShortReport-2790.html

6 National Institute on Drug Abuse. (2014). Principles of adolescent substance use disorder treatment: A research based guide. What drugs are most frequently used by adolescents? Retrieved from https://www.drugabuse.gov/publications/principles-adolescent-substance-use-disorder-treatment-research-based-guide/frequently-asked-questions/what-drugs-are-most-frequently-used-by-adolescents

7 Mental Health America. (2017). Access to care. Retrieved from http:// www. mentalhealthamerica.net/issues/mental-health-america-access-care-data

8 Korioth, Trisha. American Academy of Pediatrics News. (2018). 5 facts about vaping to talk about with your teen. Retrieved from http://www.aappublications.org/news/2018/01/30/PPVaping020118

9 Food Research and Action Center. (2017). Hunger and health: The impact of poverty, food insecurity, and poor nutrition on health and well-being. Retrieved from http://frac.org/wp-content/uploads/hunger-health-impact-poverty-food-insecurity-health-well-being.pdf

10 Food Research and Action Center, Hunger and Health

11 Lyons, L. (2013, March 11). Age, religiosity, and rural America. Retrieved from http://www.gallup.com/poll/7960/age-religiosity-rural-america.aspx

12 Rowe, J.W. et al. (2016, September 19). Preparing for better health and health care for an aging population: A vital direction for health and health care. Retrieved from https://nam.edu/wp-content/uploads/2016/09/Preparing-for-Better-Health-and-Health-Care-for-an-Aging-Population.pdf

13 Centers for Disease Control and Prevention. (2015, September 10). CDC Health Disparities and Inequalities Report (CHDIR). Retrieved from https://www.cdc.gov/minorityhealth/chdireport.html, September 10, 2015

14 Wilson, E., Chen, A.H., Grumbach, K., Wang, F., & Fernandez, A. (2005). Effects of limited English proficiency and physician language on health care comprehension. Journal of General Internal Medicine, 20(9), 800-806.

15 Coren, J.S., Filipetto, F.A., & Weiss, L.B. (2009). Eliminating barriers for patients with limited English proficiency. Journal of the American Osteopathic Association, 109(12), 634-640.

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.

The Metrics Committee is charged with updating the common set of health indicators; developing the preliminary data analysis plan reviewing the 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 8: 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 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. See Penobscot County Health Profile at www.mainechna.org.
- **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 MeCDC 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?
- 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.

Data Health Profiles include:

- 1 State Health Profile
- 16 County Health Profiles
- 5 Public Health District Profiles (One for each of the geographically-based multi-county district. A Tribal District Profile as not possible at this time.)
- 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
  - Income

*These reports, along with an interactive data form, can be found under the Health Profiles tab at **www.mainechna.org**.*

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.

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.

The community forum participants also shared knowledge on gaps and assets available in their communities to address each of the top four priorities identified. The information gathered in this report is a start for further asset and gap mapping for each priority selected by the county.

Penobscot County Forums

One community engagement activity was held in Penobscot County.

Table 10: Community engagement activites in Penobscot County, 2018

TYPE OF ENGAGEMENT	LOCATION & DATE	FACILITATOR	ATTENDEES
Community Forum	Bangor September 19, 2018	JSI	131

COMMUNITY ENGAGEMENT

Persons representing broad interests of the community who were consulted during the engagement process:

- Bangor Area Public Health Advisory Board
- Bangor Public Health and Community Services
- Bangor Public Health Department
- Catholic Charities
- Center for Community Inclusion and Disability Studies, University of Maine
- Charlotte White Center
- Eastern Area Agency on Aging
- Health Access Network
- Health Equity Alliance
- Husson University - Nursing
- Maine CDC/DHHS
- Maine Quality Counts
- Millinocket Regional Hospital
- Missionary Sisters of the Immaculate Conception
- Northern Light Acadia Healthcare
- Northern Light Acadia Hospital
- Northern Light Eastern Maine Medical Center
- Northern Light Eastern Maine Medical Center Auxiliary
- Northern Light Health
- Northern Light Home Care & Hospice
- Northern Light Sebasticook Valley Hospital
- Partners for Peace
- Penobscot Community Health Care
- Penobscot Valley Hospital
- Penquis
- Penquis Public Health District
- Retiree
- St. Joseph Healthcare
- St. Joseph Hospital
- St. Joseph Internal Medicine
- Starboard Leadership
- United Methodist Church
- United Way of Eastern Maine
- University of Maine
- University of Maine School of Nursing
- University of Maine School of Nursing - Community Nursing 452
- U.S. Senator Angus King's Office
- Wellspring, Inc.

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 medically underserved category and/or worked for an organization that focused on providing services or advocacy to a medically underserved population. The ten medically underserved populations identified by the Steering Committee included:

- Veterans
- Tribal communities
- 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 following is a list of organizations who participated in Key Informant Interviews conducted both by JSI and local planning committee members. No Tribal representatives were able to be interviewed. In the future we hope to include this important group of in the CHNA process.

- Alpha One
- Androscoggin Home Healthcare + Hospice
- Bingham Foundation
- Cary Medical Center
- Catholic Charities of Maine
- Community Concepts
- Community Caring Collaborative
- Edmund Ervin Pediatric Center, MaineGeneral Health
- EqualityMaine
- Family Medicine Institute
- Frannie Peabody Center
- Greater Portland Council of Governments
- Healthy Acadia
- Healthy Androscoggin
- Healthy Communities of the Capitol Area
- Kennebec Valley Council of Governments
- Long Creek Youth Development Center
- Maine Access Immigrant Network
- Maine Alliance for Addiction and Recovery
- Maine Alliance to Prevent Substance Abuse
- Maine Chapter Multiple Sclerosis Society
- Maine Council on Aging
- Maine Migrant Health
- Maine Seacoast Mission
- Millinocket Chamber of Commerce
- National Alliance on Mental Illness
- Nautilus Public Health
- Northern Light Maine Coast Hospital
- Office of Aging and Disability Services
- Penquis
- Portland Public Health
- Seniors Plus
- Sunrise Opportunities
- Tri-County Mental Health Services
- United Ambulance Service
- Veterans Administration Maine Healthcare System
- York County Community Action Corporation

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.

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.

For more information, contact: **Info@mainechna.org**.

Northern Light Health
43 Whiting Hill
Brewer, ME 04412

northernlighthealth.org