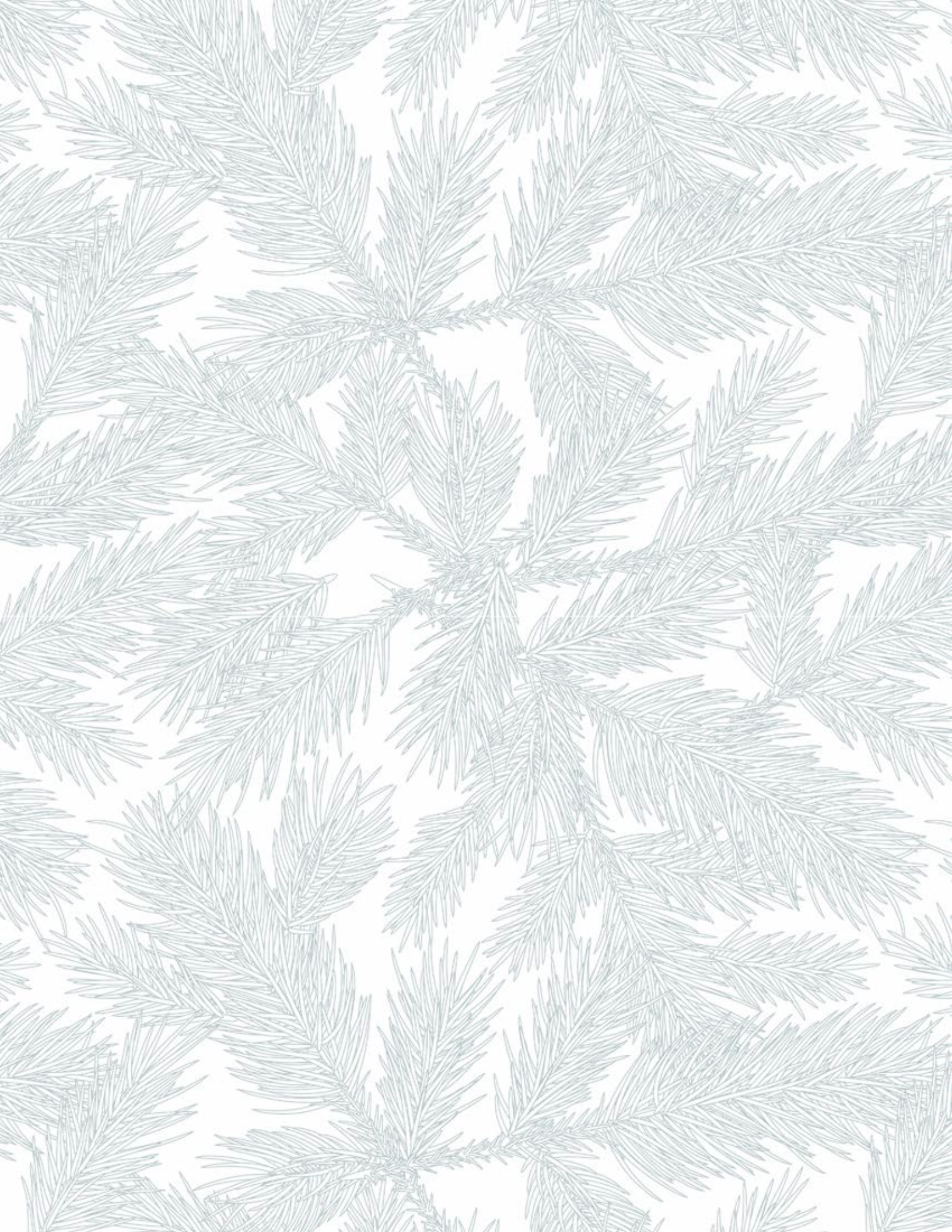


2019 Maine Shared  
Community Health Needs Assessment

# Kennebec County



Northern Light  
Health<sup>SM</sup>



# TABLE OF CONTENTS

Executive Summary.....	2
Acknowledgements.....	3
Health Priorities .....	4
Mental Health .....	5
Substance Use.....	7
Social Determinants of Health .....	9
Physical Activity, Nutrition, and Weight.....	11
Older Adult Health/Healthy Aging .....	13
Access To Care .....	15
Community Characteristics .....	17
Key Indicators.....	20
Appendix A: References .....	23
Appendix B: History and Governance.....	24
Appendix C: Methodology .....	25

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

- Kennebec County Health Profile
- Central District Profile
- Maine State Health Profile
- Health Equity Data Summaries, including state-level data by race, Hispanic ethnicity, sex, 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

Kennebec County is one of two counties that make up the Central Public Health District. Kennebec County is one of two counties that make up the Central Public Health District. The population of Kennebec County is 120,953 and 17.5% of the population is 65 years or older. The predominant age group is between 50 and 64 years old. The population is predominantly white (95.9%); 1.4% are Hispanic, and 1.4% are two or more races. The median household income is \$48,570. Educational attainment measures for high school graduation (84.0%) and an associates' degree or higher (35.7%) are lower than the state average.

## TOP HEALTH PRIORITIES

Forums held in Kennebec 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: Kennebec County Health Priorities**

PRIORITY AREA	% OF VOTES
Mental Health*	19%
Substance Use*	18%
Social Determinants of Health*	14%
Physical Activity, Nutrition, and Weight*	12%
Older Adult Health/Healthy Aging*	11%
Access to Care*	11%

*\*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 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](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. 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 were developed through community participation and voting at community forums. The forums were an opportunity for review of the 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 forums held in Kennebec County. The priorities shaded are the five priorities which rose to the top.

This section provides a synthesis of findings for each of the shaded 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 community engagement discussions at the community forums, and key informant interviews. See Appendix C for the complete methodology for all of these activities.

**Table 2: Kennebec County Forum Voting Results**

PRIORITY AREA	% OF VOTES
<b>Mental Health*</b>	<b>19%</b>
<b>Substance Use*</b>	<b>18%</b>
<b>Social Determinants of Health*</b>	<b>14%</b>
<b>Physical Activity, Nutrition, and Weight*</b>	<b>12%</b>
<b>Older Adult Health/Healthy Aging*</b>	<b>11%</b>
<b>Access to Care*</b>	<b>11%</b>
Chronic Disease	8%
Oral Health	4%
Intentional Injury	2%
Infectious Disease	1%

*\*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, or gender. Poor mental health contributes to 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.<sup>1</sup>

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.<sup>2</sup>

## QUALITATIVE EVIDENCE

Forum participants cited depression/isolation, stress, and suicidality as major mental health issues. While many said there was a need for behavioral health services in general, they identified inpatient services, counselors and peer-counselors, and psychiatry as specific gaps in the spectrum of care.

Although mental health issues affect all individuals, community forum participants identified youth, the lesbian, gay, bisexual, transgender, and queer/questioning (LGBTQ) community, and older adults as segments of the populations who are at risk for poor mental health, or as segments who had unique mental health needs. For youth, many participants discussed the need for increased education, training, and child psychiatrists. For the LGBTQ community, participants identified the need for culturally competent providers, especially for LGBTQ youth and older adults. Key

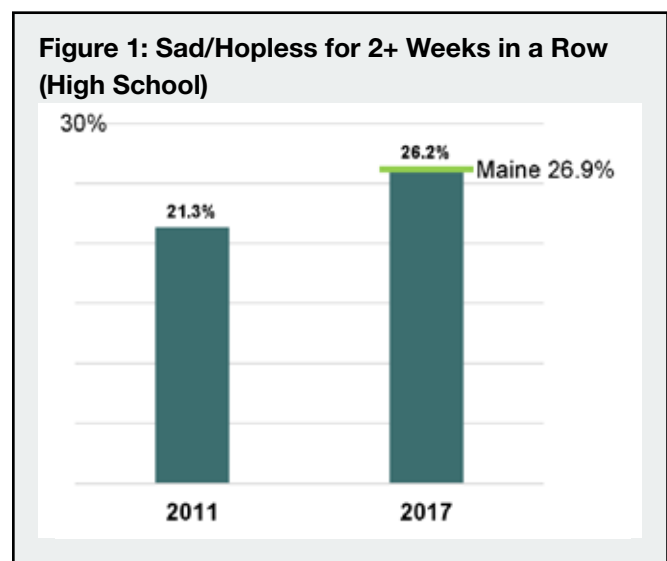
informants working with the LGBTQ population explained that medical professionals are provided with little education about how to meet the needs of non-heterosexual individuals. While LGBTQ populations face the same mental health issues as the rest of the population, they are more than three times as likely to experience major depression and anxiety disorder.<sup>3</sup>

Several participants identified stigma, or the disapproval or discrimination against a person based on a particular circumstance (e.g., mental health condition), 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 the burden and stigma.

## QUANTITATIVE EVIDENCE

### In Kennebec County:

- The percentage of high school students who reported that they had been sad/hopeless for more than two weeks in a row increased between 2011 and 2017, from 21.3% to 26.2%.
- The percentage of high school students who reported having seriously considered suicide increased between 2011 and 2017, from 12.2% to 14.6%.



- The percentage of adults who have ever been told by a healthcare provider that they have an anxiety disorder increased between 2011–2013 and 2014–2016, from 19.0% to 20.9%.

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

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

ASSETS	GAPS/NEEDS
<ul style="list-style-type: none"> <li>• Kennebec Behavioral Health</li> <li>• Private Counselors</li> <li>• Quarry Road (Recreation Area)</li> <li>• Integrated Mental Health providers with Primary Care Physicians</li> <li>• Training programs at community colleges</li> <li>• Faith-based organizations and other community organizations</li> <li>• Northern Light Acadia Hospital- Bangor</li> <li>• Emergency Department services</li> <li>• Tele-psychiatry</li> <li>• LGBTQ services</li> </ul>	<ul style="list-style-type: none"> <li>• Child psychologists</li> <li>• Not enough services/types of care/providers</li> <li>• Ability to pay</li> <li>• Medicaid expansion</li> <li>• Lack of inpatient/crisis beds</li> <li>• Decrease stigma overall, especially towards LGBTQ youth and older adults</li> <li>• Lack of Primary Care Physicians training</li> <li>• More education around food/stigma/services</li> <li>• Food banks and shelters</li> <li>• Isolation</li> <li>• Peer group counseling/community services</li> <li>• Caregivers support</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>4</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>5</sup> 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.<sup>6</sup> Those with substance use disorders often face 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>7</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

Opioid misuse was the leading substance use issue discussed in the community forum. Participants discussed the need for more comprehensive, accessible, and affordable services to help those in need, including intensive outpatient services, treatment in primary care, faith-based programs, short and long-term inpatient services, recovery services, and harm reduction (e.g., needle exchange) services.

Key informants identified many priority health issues for individuals with substance use disorder and those in treatment/recovery: education and outreach around

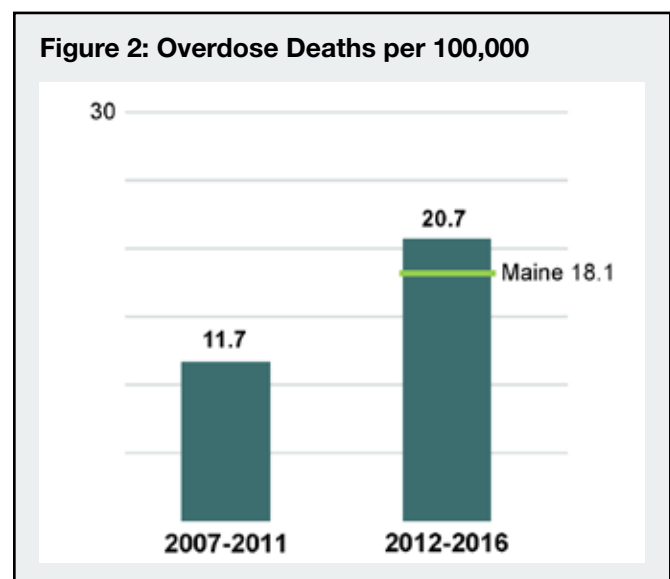
how to access healthcare and treatment options, routine basic health care (primary care, dental care), and care that addresses co-occurring mental health and substance use issues. Informants identified needs specific to youth, including information on where and how to access treatment and access to confidential services. Another theme was the need to provide access to many of the resources that make up the social determinants of health: affordable, safe, and supportive housing; transportation; and nutritious foods.

Tobacco, alcohol, and marijuana were also identified as issues of concern. Tobacco and alcohol use are risk factors for many chronic and complex conditions, including cancer, respiratory diseases, cardiovascular diseases, and liver disease; they may also contribute to mental health issues, obesity, and cognitive decline. Some participants identified marijuana use as an emerging issue—there is a lack of clarity on health effects, recreational vs. medicinal use, and the short-term and long-term impacts on both individuals and communities.

## QUANTITATIVE EVIDENCE

### In Kennebec County:

- Overdose deaths per 100,000 increased significantly between 2007–2011 and 2012–2016, from 11.7 to 20.7.



- Overdose emergency medical service responses per 10,000 were significantly higher compared to the state overall (131.7 vs. 93.0) from 2016–2017.
- Alcohol-induced deaths per 100,000 increased between 2007–2011 and 2012–2016, from 7.6 to 9.8.

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

**Table 4: Assets and Gaps/Needs (Substance Use)**

ASSETS	GAPS/NEEDS
<ul style="list-style-type: none"> <li>• Central District Partners for Recovery Human Resources and Services Administration (HRSA) Grant</li> <li>• MaineGeneral Needle exchanges</li> <li>• MaineGeneral Opiate Steering committee</li> <li>• Opioid prescribing laws</li> <li>• Capital Area Healthy Community Coalition</li> <li>• Healthy Northern Kennebec – Drug-free community</li> <li>• Intensive Outpatient Programs</li> <li>• Medical staff X waiver trained for the treatment opioid use disorder</li> <li>• Operation Hope</li> <li>• Waterville Police</li> <li>• Medication-Assisted Treatment (MAT)/Addiction treatment in primary care</li> <li>• Medication take-back programs</li> <li>• Media awareness</li> <li>• Drug-Free Communities programs</li> <li>• Access to methadone, Suboxone, Narcan</li> <li>• Northern Light Acadia Hospital</li> <li>• Alcoholics Anonymous, Narcotics Anonymous, Private counselors</li> <li>• Hub and Spoke model</li> <li>• MaineGeneral Emergency Department (ED) induction program</li> <li>• Blue Sky Counseling</li> </ul>	<ul style="list-style-type: none"> <li>• Working in silos</li> <li>• Data Surveillance</li> <li>• Funding</li> <li>• Intensive Outpatient Program (IOP) treatment</li> <li>• Primary care treatment</li> <li>• X-waiver training to allow buprenorphine to be prescribed for use in Medication-Assisted Treatment for addiction</li> <li>• Rapid access to treatment</li> <li>• Recovery services/Recovery Coaches</li> <li>• Faith-based programs</li> <li>• More short/long term inpatient beds</li> <li>• Education in schools</li> <li>• Wide availability of Naloxone</li> <li>• Stigma</li> <li>• Community awareness and support</li> <li>• Treatment centers</li> <li>• Expanded needle exchange hours</li> <li>• Education for doctors/schools/youth</li> <li>• Community-based services</li> <li>• Facilities that will help the uninsured</li> <li>• More providers</li> <li>• Addressing the social determinants of health</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 the 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>8</sup>

## QUALITATIVE EVIDENCE

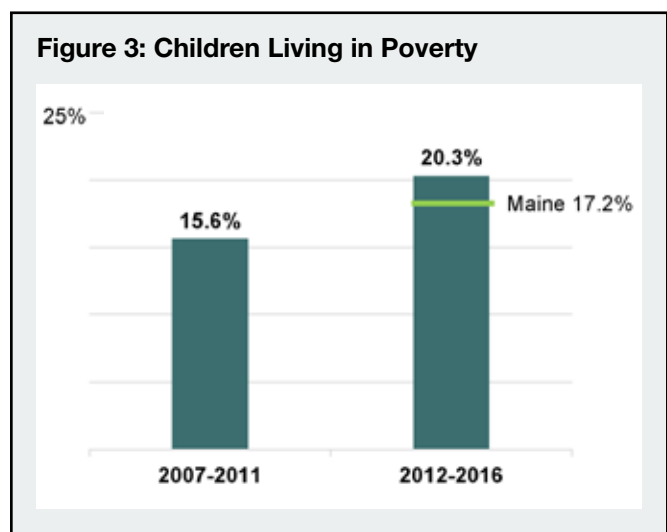
A dominant theme from key informant interviews and at the community forums was the tremendous impact that the underlying social determinants, particularly housing, transportation, have on residents in Kennebec County. Access to affordable and reliable forms of transportation was problematic, especially for low-income individuals outside of Augusta and Waterville. 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.

Participants also identified a need for affordable housing, especially for older adults who may no longer be able to stay in their homes (for financial or safety reasons). Food insecurity was a concern for youth and low-income families. Supplemental Nutrition Assistance Program (SNAP) benefits were an asset; however, lack of access to transportation challenges families' ability to access stores and markets. Participants suggested universal free school lunch programs as a way to address this issue among school-aged youth.

## QUANTITATIVE EVIDENCE

### In Kennebec County:

- The percentage of individuals living in poverty was higher than the state overall (14.6% vs. 13.5%) in 2012–2016.
- The percentage of children living in poverty was higher than the state overall (20.3% vs. 17.2%) in 2012–2016.
- The percentage of households without a vehicle was similar to the state overall (2.8% vs. 2.4%) in 2012–2016.
- The percentage of adults over the age of 65 living alone was higher than the state overall (46.1% vs. 45.3%).
- The percentage of households that lack enough food to maintain healthy, active lifestyles for all household members was similar to the state overall (14.7% vs. 15.1%) in 2014-2015.



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

**Table 5: Assets and Gaps/Needs (Social Determinants of Health)**

ASSETS	GAPS/NEEDS
<ul style="list-style-type: none"> <li>• Primary Care Social Workers</li> <li>• Food banks/soup kitchens</li> <li>• Career centers</li> <li>• Waterville General Assistance/Action Team</li> <li>• Youth Empowerment Supports at mid-Maine Homeless shelter</li> <li>• Hospitals and clinics</li> <li>• Low-cost/free services from community organizations</li> <li>• More folks with higher education</li> <li>• More awareness of Adverse Childhood Experiences (ACEs)</li> <li>• Healthy Northern Kennebec</li> <li>• Kennebec Valley Community Action Agency</li> <li>• Safe Families</li> <li>• Supplemental Nutrition Assistance Program Education (SNAP-Ed)</li> <li>• Supplemental Nutrition Assistance Program (SNAP)</li> <li>• Women, Infants, and Children (WIC)</li> </ul>	<ul style="list-style-type: none"> <li>• Transportation</li> <li>• Extended hours of availability for services/publicity of services</li> <li>• Low paying jobs</li> <li>• Lack of funding for poverty services</li> <li>• Decreased access to healthy food</li> <li>• Stigma</li> <li>• Universal free school lunch</li> <li>• Living minimum wage</li> <li>• Homelessness</li> <li>• Community groups and resources</li> <li>• Lack of housing</li> <li>• Lack of capacity of nonprofits/volunteers</li> </ul>

# 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.

## QUALITATIVE EVIDENCE

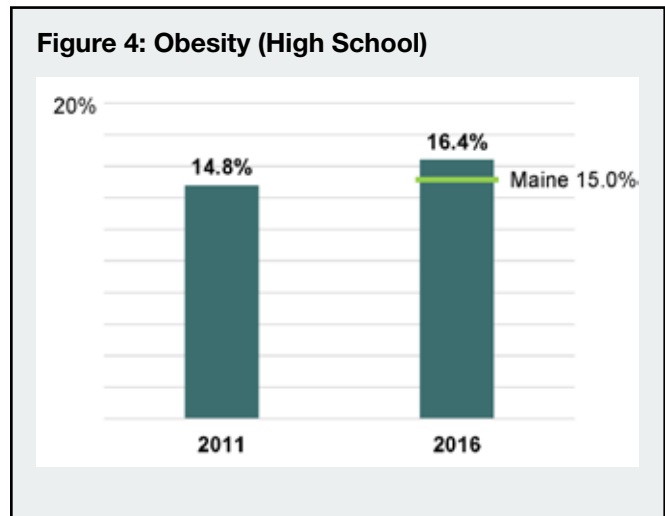
Obesity was an issue for youth and adults. Key informants, including school nurses, suggested several reasons for the increase in obesity among youth people, including poor eating habits (unhealthy and not enough food) and increased use of technology and sedentary activities.

Participants reported that environmental factors discouraged physical activity and that there were few places to be active (e.g., parks and recreational areas). In a forum with employers, participants noted that there was a lack of support to create healthy working environments.

## QUANTITATIVE EVIDENCE

### In Kennebec County:

- The percentage of high school students who are obese was higher than the state overall (16.4% vs. 15.0%) in 2017.
- The percentage of high school students who reported eating five or more fruits and vegetables a day decreased between 2011 and 2017, from 17.1% to 14.5%.
- The percentage of adults who lived a sedentary lifestyle with no leisure-time physical activity in the past month was higher than the state overall (22.1% vs. 20.6%) in 2016.



See Key Indicators on page 20 as well as companion Health Profiles on our website [www.mainechna.org](http://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 6: Assets and Gaps/Needs (Physical Activity, Nutrition, and Weight)**

ASSETS	GAPS/NEEDS
<ul style="list-style-type: none"> <li>• Let's Go!</li> <li>• Riverwalk/walking trails</li> <li>• MaineGeneral Health Education classes</li> <li>• Inland Wood Trails</li> <li>• Lots of area gyms</li> <li>• Farm to table promotion</li> <li>• Physical activity centers like tennis courts, etc.</li> <li>• Diabetes clinics</li> <li>• Food banks</li> <li>• YMCA</li> <li>• National Diabetes Prevention Program</li> <li>• MaineGeneral Prevention &amp; Healthy Living</li> <li>• Innovative youth-based programs</li> </ul>	<ul style="list-style-type: none"> <li>• More financial resources</li> <li>• Transportation to indoor fitness facilities/markets</li> <li>• Education about foods</li> <li>• Public awareness/encouragement of programs</li> <li>• Affordable high-quality food</li> <li>• Culinary education</li> <li>• Community resources</li> <li>• Local free resources for physical activity</li> <li>• School policies that promote health for all children (more physical movement, teaching children how to cook healthy, tasty and affordable foods, etc.)</li> <li>• Town policies that promote active living</li> <li>• Addressing food deserts in rural areas</li> </ul>

# OLDER ADULT HEALTH/HEALTHY AGING

The World Health Organization's definition of active aging and support services are those that "optimize opportunities for health, participation, and security in order to enhance the quality of life as people age."

Maine's older population is growing in all parts of the state, and it remains the oldest state in the nation as defined by the age of the median population—44.7 in 2017 compared to the national median age of 38. Gains in human longevity create an opportunity for active lives well after age 65. As this population grows in size, there is growing interest in wellness in addition to the infrastructure of health services for the older population.

## QUALITATIVE EVIDENCE

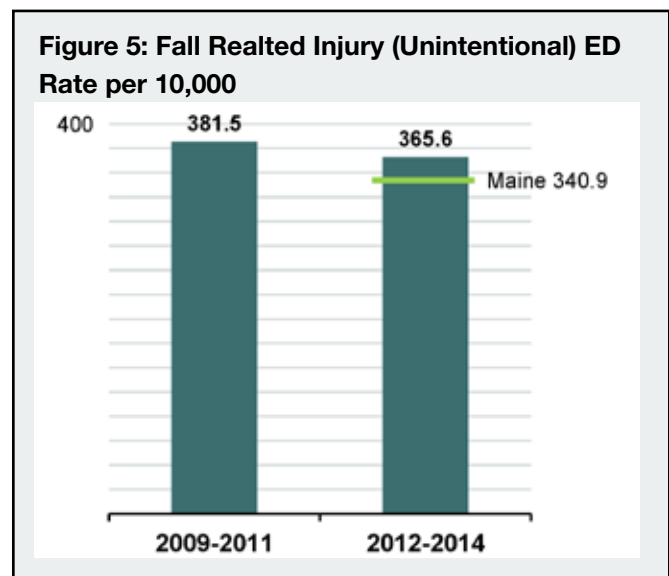
Forum participants and key informants identified a need for education and services to address depression and isolation amongst older adults. Older adults experience loneliness for many reasons; it may come as a result of living alone, limited connections with family, friends, or communities, and/or impediments to living independently. Limited access to transportation was identified as a key barrier to accessing health care for older adults but also hinders their ability to access other needed goods and services (groceries, prescriptions, e.g., physical activity). The rising cost of care and prescriptions was a key theme in discussions around older adults.

The need for affordable and safe housing was another critical issue. While "aging in place" or aging in the home is a popular concept, this may be impossible for some older residents, for financial, medical, or safety reasons. With aging in place as a preferred lifestyle, concerns around isolation become more significant.

## QUANTITATIVE EVIDENCE

### In Kennebec County:

- The percent of the population age 65 and older living alone was higher than the state overall (46.1% vs. 45.3%) from 2012–2016.
- The percent of adults age 45 or older with cognitive decline was higher than the state overall (13.2% vs. 10.3%) in 2016.
- The percentage of adults with arthritis increased between 2011–2013 and 2014–2016, from 31.5% to 34.0%.
- Fall-related deaths per 100,000 increased significantly from 2007–2011 and 2012–2016, from 4.7 to 8.5.
- The fall-related injury (unintentional) emergency department rate per 10,000 was significantly higher than the state overall (365.6 vs. 340.9) between 2012–2014.



See Key Indicators on page 20 as well as companion Health Profiles on our website [www.mainechna.org](http://www.mainechna.org). Those documents also include information on data sources and definitions.

## COMMUNITY RESOURCES TO ADDRESS OLDER ADULT HEALTH/HEALTHY AGING

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 (Older Adult Health/Healthy Aging)**

ASSETS	GAPS/NEEDS
<ul style="list-style-type: none"> <li>• Patient-Centered Medical Homes</li> <li>• Hospital Elder Life Program (HELP)</li> <li>• Spectrum Generations – Meals on Wheels, Muskie Center</li> <li>• Kennebec Valley Community Action Program</li> <li>• MaineGeneral Geriatric Specialty practice</li> </ul>	<ul style="list-style-type: none"> <li>• Primary care</li> <li>• Transportation</li> <li>• Fall prevention</li> <li>• Navigators and social support</li> </ul>



# ACCESS TO CARE

Whether an individual has health insurance—and the extent to which it helps to pay for access to healthcare 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. Though the percentage of uninsured individuals in Kennebec County has remained steady over time (from 8.8% in 2009–2011 to 8.5% in 2012–2016), lack of insurance and underinsurance remains a leading barrier to care in the region. Medicaid expansion, which holds the promise of providing health insurance coverage for an additional 70,000 Mainers, was signed into law on January 3, 2019.

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 heterosexual, white, and well-educated. For example, in Maine, more than 20% of American Indian/Alaska Natives and Black/African American adults report they are unable to receive or have delayed medical care due to cost, compared to 10% 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

Many forum participants and key informants identified the social determinants of health—particularly inability to access reliable and affordable forms of transportation and safe and affordable housing—as significant barriers to care. These are discussed in more detail in the “Social Determinants of Health” section of this report on page 9.

Beyond the need for Medicaid expansion, participants discussed the need for comprehensive and affordable health services, specifically primary care, dental

care, behavioral health, and urgent care. In primary care, many hoped to see an increase in the number of primary care providers, including advanced nurse practitioners and physician assistants. In a geographic sense, participants noted that health care options were especially limited outside of Augusta and Waterville.

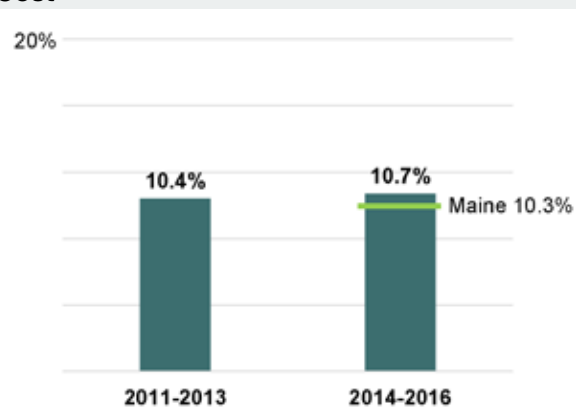
Participants identified a need for more health care navigators and financial assistance programs. Even for those with insurance, deductibles, co-pays, and prescription medications are unaffordable and prevent people from seeking care.

## QUANTITATIVE EVIDENCE

### In Kennebec County:

- The percentage of the population that is uninsured has remained steady over time, from 8.8% in 2009–2011 to 8.5% in 2012–2016.
- The percentage of adults who reported an inability to access healthcare due to cost was slightly higher than the state overall (10.7% vs. 10.3%) from 2014–2016.
- The ratio of psychiatrists to 100,000 was lower than the state overall (7.0 vs. 8.4) in 2017.

**Figure 6: Unable to Access Healthcare Due to Cost**



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

**Table 8: Assets and Gaps/Needs (Access to Care)**

ASSETS	GAPS/NEEDS
<ul style="list-style-type: none"> <li>• 211 Maine</li> <li>• Kennebec Valley Community Action Program</li> <li>• High quality of care</li> <li>• YMCA</li> <li>• Boys and Girls Club</li> <li>• Alford Center</li> <li>• Care Managers</li> <li>• Quick Care/Walk in clinics</li> <li>• MaineGeneral</li> <li>• Downtown clinics</li> <li>• High school trainers associated with local hospitals</li> <li>• Express Care</li> <li>• MaineGeneral Prevention &amp; Healthy Living Centralized Hub.</li> <li>• MaineGeneral Community Health Workers</li> <li>• Minor emergency care centers in Augusta</li> <li>• Local libraries</li> <li>• Salvation Army</li> <li>• Shopping and Cooking program</li> </ul>	<ul style="list-style-type: none"> <li>• Health care navigators</li> <li>• Financial assistance programs</li> <li>• MaineCare expansion</li> <li>• Lack of insurance</li> <li>• Primary care physicians who can diagnose and treat without excessive use of specialists</li> <li>• Empowering RNs and PAs to provide primary care</li> <li>• More doctors, especially Primary Care providers</li> <li>• Culturally appropriate care for LGBTQ older adults and those who are transgender</li> <li>• Minor emergency care centers outside of Augusta and Waterville</li> <li>• Coordinated social services</li> </ul>

# COMMUNITY CHARACTERISTICS

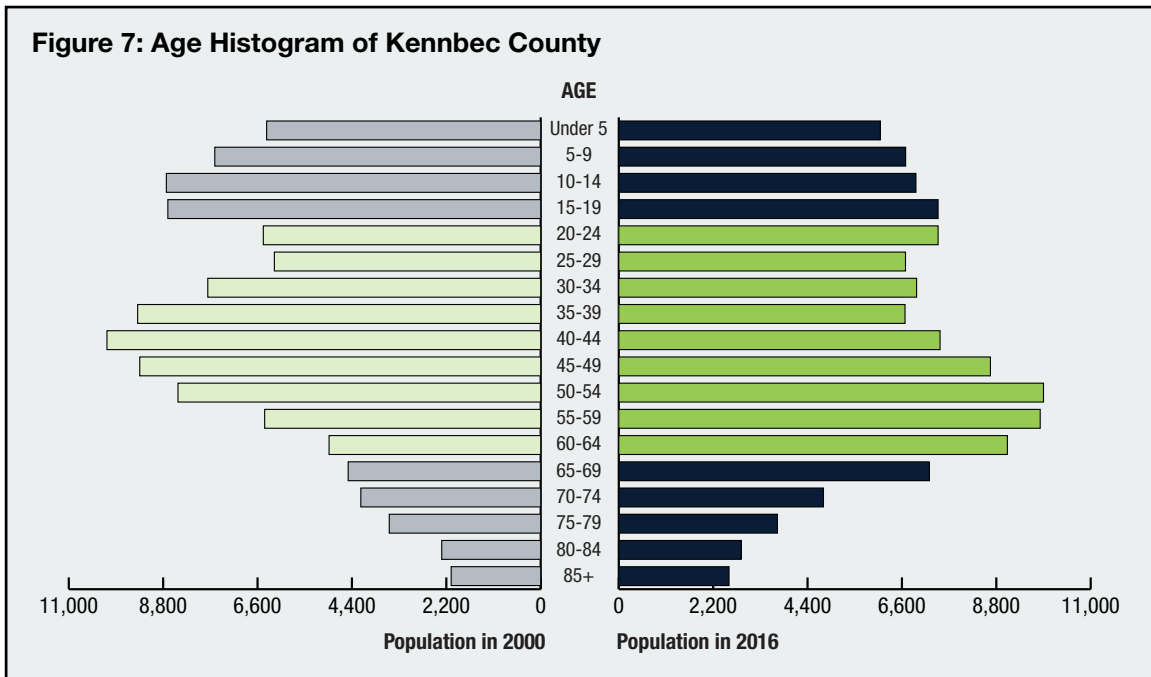
## AGE DISTRIBUTION

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>9</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>10</sup>

The following is a summary of findings related to community characteristics for Kennebec 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](http://www.mainechna.org) and click on "Health Profiles."

- In Kennebec County, 17.5% of the population is 65 years or older. The predominant age range is from 50-64. This is important to note because this has implications for the future workforce.



## 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>11</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>12,13</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.

**In Kennebec County:**

- The population is predominantly White (95.9%); 1.4% of the population is Hispanic, and 1.4% of the population is two or more races.

**Table 9: Race/Ethnicity in Kennebec County 2012-2016**

	PERCENT/NUMBER
American Indian/Alaskan Native	0.6% / 685
Asian	0.8% / 1,006
Black/African American	0.9% / 1,134
Hispanic	1.4% / 1,730
Some other race	0.4% / 476
Two or more races	1.4% / 1,658
White	95.9% / 115,938

**Additionally, in Kennebec County:**

- The estimated high school graduation rate was lower than the state overall in 2017 (84.0% vs. 86.9%).
- The percent of the population over 25 with an associates’ degree or higher was lower than the state overall in 2017 (35.7% vs. 37.3%).

**Table 10: Socioeconomic Status**

	KENNEBEC/MAINE
Median household income	\$48,570 / \$50,826
Unemployment rate	3.7% / 3.8%
Individuals living in poverty	14.6% / 13.5%
Children living in poverty	20.3% / 17.2%
65+ living alone	46.1% / 45.3%

**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.<sup>14</sup> 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.<sup>15</sup> 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 10 includes a number of data points comparing Kennebec County to the state overall.

**SPECIAL POPULATIONS**

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

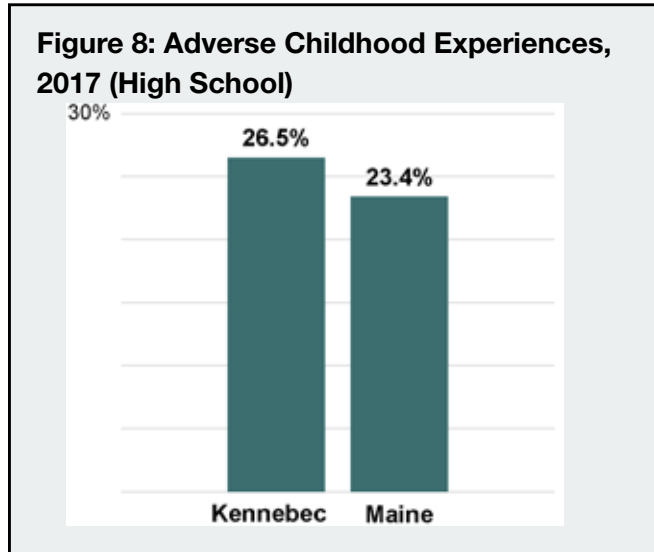
**Older Adults**

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 forums, issues around older adult health and healthy aging were priorities in Kennebec County—specifically barriers to access to care for older adults, including lack of transportation, inability to pay for needed healthcare services/high cost of medications, and depression/isolation.

**Youth**

Youth were identified as a priority population in community forums. Specific issues of concern were youth mental health issues (specifically depression and stress), substance use (specifically opioids, marijuana, and tobacco), 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 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.



## LGBTQ

LGBTQ individuals, specifically youth, were identified as a population with significant and specialized health needs. Forum participants and interviewees discussed the need for more comprehensive and affordable mental health care for LGBTQ and non-binary adults and youth, as there is a lack of providers who have the cultural competency to treat these populations and address their health needs. Key informant interviewees identified differences between the health status of LGBTQ and non-LGBTQ youth; LGBTQ youth are more likely to be depressed, experience violence, use tobacco and other substances, and self-harm. Data from the Maine Integrated Youth Health Survey analysis shows that youth who identify as bisexual, gay or lesbian, or other sexual orientation experience higher rates of feeling sad or hopeless, considering suicide, being bullied on school property, and sexual assault, as compared to youth who identify as heterosexual. A statewide analysis of Behavioral Risk Surveillance Survey confirms,

among adults, higher rates of depression diagnosis over the lifetime when comparing those who identify as bisexual, gay or lesbian, or other sexual orientation to those who identify as heterosexual. Besides the need for more mental health services, there is also a need for inclusive health insurance, specifically for transgender and non-binary people; better services for individuals in rural areas of the state; LGBTQ-inclusive sexual education in schools; and surgical resources specifically for transgender youth.

## Low-Income/Rural

Nationally, an ever-evolving economic structure has placed extra strain on individuals and families living in 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 Kennebec County and key informants identified low-income individuals, families, and youth as populations that were particularly vulnerable to poor health.

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 each county. They are a broad sampling of health topics, including health behaviors, outcomes, living conditions, and health care quality and access. See the Kennebec 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 Kennebec County data to state and national data, based on 95% confidence interval (see description above).

- ★ means Kennbec County is doing **significantly better** than the state or national average.
- ! means Kennbec 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.

	KENNEBEC COUNTY DATA			BENCHMARKS			
KEY INDICATOR	POINT 1	POINT 2	CHANGE	MAINE	+/-	U.S.	+/-
<b>SOCIAL, COMMUNITY &amp; PHYSICAL ENVIRONMENT</b>							
Children living in poverty	2007-2011 15.6%	2012-2016 20.3%	N/A	2012-2016 17.2%	N/A	2016 21.1%	N/A
Median household income	2007-2011 \$46,904	2012-2016 \$48,570	N/A	2012-2016 \$50,826	N/A	2016 \$57,617	N/A
Estimated high school student graduation rate	2014 85.5%	2017 84.0%	N/A	2017 86.9%	N/A	—	N/A
Food insecurity	2012-2013 14.9%	2014-2015 14.7%	N/A	2014-2015 15.1%	N/A	2015 13.4%	N/A
<b>HEALTH OUTCOMES</b>							
14 or more days lost due to poor physical health	2011-2013 24.2%	2014-2016 21.5%	○	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 18.6%	○	2014-2016 16.7%	○	2016 11.2%	N/A
Years of potential life lost per 100,000 population	2010-2012 6,905.5	2014-2016 7,151.2	○	2014-2016 6,529.2	○	2014-2016 6,658.0	N/A
All cancer deaths per 100,000 population	2007-2011 199.0	2012-2016 181.7	○	2012-2016 173.8	○	2011-2015 163.5	!
Cardiovascular disease deaths per 100,000 population	2007-2011 219.6	2012-2016 219.3	○	2012-2016 195.8	!	2016 218.2	○
Diabetes	2011-2013 9.5%	2014-2016 10.2%	○	2014-2016 10.0%	○	2016 10.5%	○
Chronic obstructive pulmonary disease (COPD)	2011-2013 7.7%	2014-2016 6.2%	○	2014-2016 7.8%	○	2016 6.3%	○
Obesity (adults)	2011 29.1%	2016 27.0%	○	2016 29.9%	○	2016 29.6%	○
Obesity (high school students)	2011 14.8%	2017 16.4%	○	2017 15.0%	○	—	N/A
Obesity (middle school students)	2015 15.3%	2017 17.9%	○	2017 15.3%	○	—	N/A
Infant deaths per 1,000 live births	2007-2011 5.4	2012-2016 7.1	○	2012-2016 6.5	○	2012-2016 5.9	○
Cognitive decline	2012 14.3*%	2016 13.2*%	○	2016 10.3%	○	2016 10.6%	○
Lyme disease new cases per 100,000 population	2008-2012 34.1	2013-2017 132.8	N/A	2013-2017 96.5	N/A	2016 11.3	N/A
Chlamydia new cases per 100,000 population	2008-2012 255.5	2013-2017 305.0	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 381.5	2012-2014 365.6	★	2012-2014 340.9	!	—	N/A
Suicide deaths per 100,000 population	2007-2011 13.1	2012-2016 16.9	○	2012-2016 15.9	○	2016 13.5	!
Overdose deaths per 100,000 population	2007-2011 11.7	2012-2016 20.7	!	2012-2016 18.1	○	2016 19.8	○

KEY INDICATOR	KENNEBEC COUNTY DATA			BENCHMARKS			
	POINT 1	POINT 2	CHANGE	MAINE	+/-	U.S.	+/-
<b>HEALTH CARE ACCESS AND QUALITY</b>							
Uninsured	2009-2011 8.8%	2012-2016 8.5%	N/A	2012-2016 9.5%	N/A	2016 8.6%	N/A
Ratio of primary care physicians to 100,000 population	—	2017 73.2	N/A	2017 67.3	N/A	—	N/A
Ratio of psychiatrists to 100,000 population	—	2017 7.0	N/A	2017 8.4	N/A	—	N/A
Ratio of practicing dentists to 100,000 population	—	2017 39.0	N/A	2017 32.1	N/A	—	N/A
Ambulatory care-sensitive condition hospitalizations per 10,000 population	—	2016 70.4	N/A	2016 74.6	N/A	—	N/A
Two-year-olds up-to-date with recommended immunizations	2014 80.1%	2017 83.3%	N/A	2017 73.7%	N/A	—	N/A
<b>HEALTH BEHAVIORS</b>							
Sedentary lifestyle – no leisure-time physical activity in past month (adults)	2011 22.8%	2016 22.1%	○	2016 20.6%	○	2016 23.2%	N/A
Chronic heavy drinking (adults)	2011-2013 5.3%	2014-2016 7.9%	○	2014-2016 7.6%	○	2016 5.9%	N/A
Past-30-day alcohol use (high school students)	2011 23.7%	2017 21.2%	○	2017 22.5%	○	—	N/A
Past-30-day alcohol use (middle school students)	2011 6.3%	2017 3.8%	○	2017 3.7%	○	—	N/A
Past-30-day marijuana use (high school students)	2011 19.4%	2017 19.3%	○	2017 19.3%	○	—	N/A
Past-30-day marijuana use (middle school students)	2011 5.3%	2017 3.8%	○	2017 3.6%	○	—	N/A
Past-30-day misuse of prescription drugs (high school students)	2011 5.8%	2017 5.2%	○	2017 5.9%	○	—	N/A
Past-30-day misuse of prescription drugs (middle school students)	2011 3.1%	2017 1.5%	★	2017 1.5%	○	—	N/A
Current (every day or some days) smoking (adults)	2011-2012 23.2%	2016 20.3%	○	2016 19.8%	○	2016 17.0%	N/A
Past-30-day cigarette smoking (high school students)	2011 14.5%	2017 8.9%	★	2017 8.8%	○	—	N/A
Past-30-day cigarette smoking (middle school students)	2011 4.3%	2017 2.1%	★	2017 1.9%	○	—	N/A

### Leading Causes of Death

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

RANK	STATE OF MAINE	KENNEBEC 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	Alzheimer's disease



# APPENDIX A: REFERENCES

- 1 National Institute of Mental Health. (n.d.). Chronic illness & mental health. Retrieved from <https://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 National Alliance on Mental Health. (n.d.). LGBTQ. Retrieved from <https://www.nami.org/find-support/lgbtq>
- 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](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 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>
- 9 Lyons, L. (2013, March 11). Age, religiosity, and rural America. Retrieved from <http://www.gallup.com/poll/7960/age-religiosity-rural-america.aspx>
- 10 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>
- 11 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
- 12 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.
- 13 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.
- 14 Chetty, R., Stepner, M., Abraham, S. et al. (2016). The association between income and life expectancy in the United States, 2001-2014. *Journal of the American Medical Association*, 315(16), 1750-1766.
- 15 Zimmerman, B., Woolf, S.H., & Haley, A. (2015). Population health: Behavioral and social science insights – Understanding the relationship between education and health. Retrieved from <https://www.ahrq.gov/professionals/education/curriculum-tools/population-health/zimmerman.html>, September 2015

# 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.

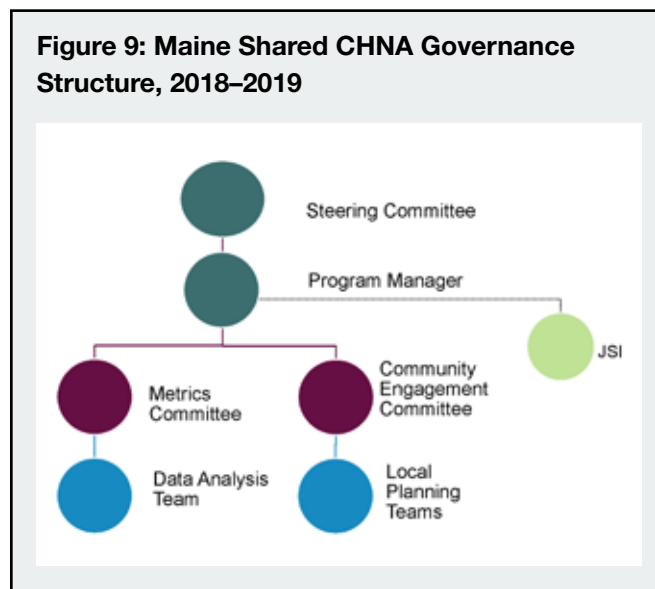
The Maine Shared CHNA is intended to coordinate state and county needs assessments to meet the needs of hospitals, to support state and local public health accreditation efforts, and to provide valuable population health assessment data for a wide variety of organizations across Maine. Our vision is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

**Figure 9: Maine Shared CHNA Governance Structure, 2018–2019**



Health Centers, academia, non-profits, and others with experience in epidemiology.

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 Kennebec County Health Profile at [www.mainechna.org](http://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.

## 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 (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
  - 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.

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.

### **Kennebec County Forums**

Two community engagement activities were held in Kennebec County.

**Table 11: Community engagement activities in Kennebec County, 2018**

<b>TYPE OF ENGAGEMENT</b>	<b>LOCATION &amp; DATE</b>	<b>FACILITATOR</b>	<b>ATTENDEES</b>
Community Forum	Waterville 10/18/2018	JSI	80
Community Forum	Augusta 12/06/2018	Local Facilitators	18

*\*\*In addition, a community forum was held in Skowhegan on October 17, 2018, with 46 participants. Some Kennebec County residents attended the Skowhegan Forum and some Somerset County residents attended the Waterville Forum. Please see the Somerset County Report and the Central District Report report for the Skowhegan community forum results.*

# COMMUNITY ENGAGEMENT

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

- Alcom LLC
- Anthem, Inc.
- Backyard Farms
- Bath Iron Works/General Dynamics
- Central Public Health District
- City of Waterville
- Cives Steel Company
- CM Almy
- Colby College
- Community Member
- Cross Benefit Solutions
- Daniel Hanley Center for Health Leadership
- Family Violence Project
- Friends of Quarry Road
- G&E Roofing Company, Inc.
- Healthy Communities of the Capital Area
- Healthy Northern Kennebec
- HealthReach Community Health Centers
- HUB International New England, LLC
- Huhtamaki
- Jennifer Kierstead Consulting, Inc.
- Kennebec Behavioral Health
- Kennebec Valley Community Action Program
- Maine CDC
- MaineGeneral Health
- MaineGeneral Medical Center
- MaineGeneral Prevention & Healthy Living Drug Overdose Prevention Program
- MaineGeneral Workplace Health
- Maine Oral Health Coalition
- Maine Public Health Association
- Maine Veterans' Homes
- Mastering Worksite Wellness
- MaineGeneral Employee Assistance Program

- Mid Maine Homeless Shelter & Services
- Northern Light Acadia Hospital
- Northern Light Health
- Northern Light Inland Hospital
- Peachey Builders
- Retired community member
- Sappi North America
- Sharon Lee, Writer
- Spectrum Generations
- Steve Miller, Writer
- Summit Natural Gas of Maine
- The Maine Children's Home for Little Wanderers
- United Way of Mid-Maine
- University of Maine system
- Winslow Baptist Church
- Winslow Township School District

## 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 had either lived experience in or worked for an organization that focused on provided services or advocacy for the identified population. No Tribal representatives were able to be interviewed. In the future, we hope to include this important group in the CHNA process. The populations identified 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:

- 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

### **Community Engagement Continued**

- Nautilus Public Health
- Northern Light Maine Coast Hospital
- Office of Aging and Disability Services
- Penquis Community Action Agency
- 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.

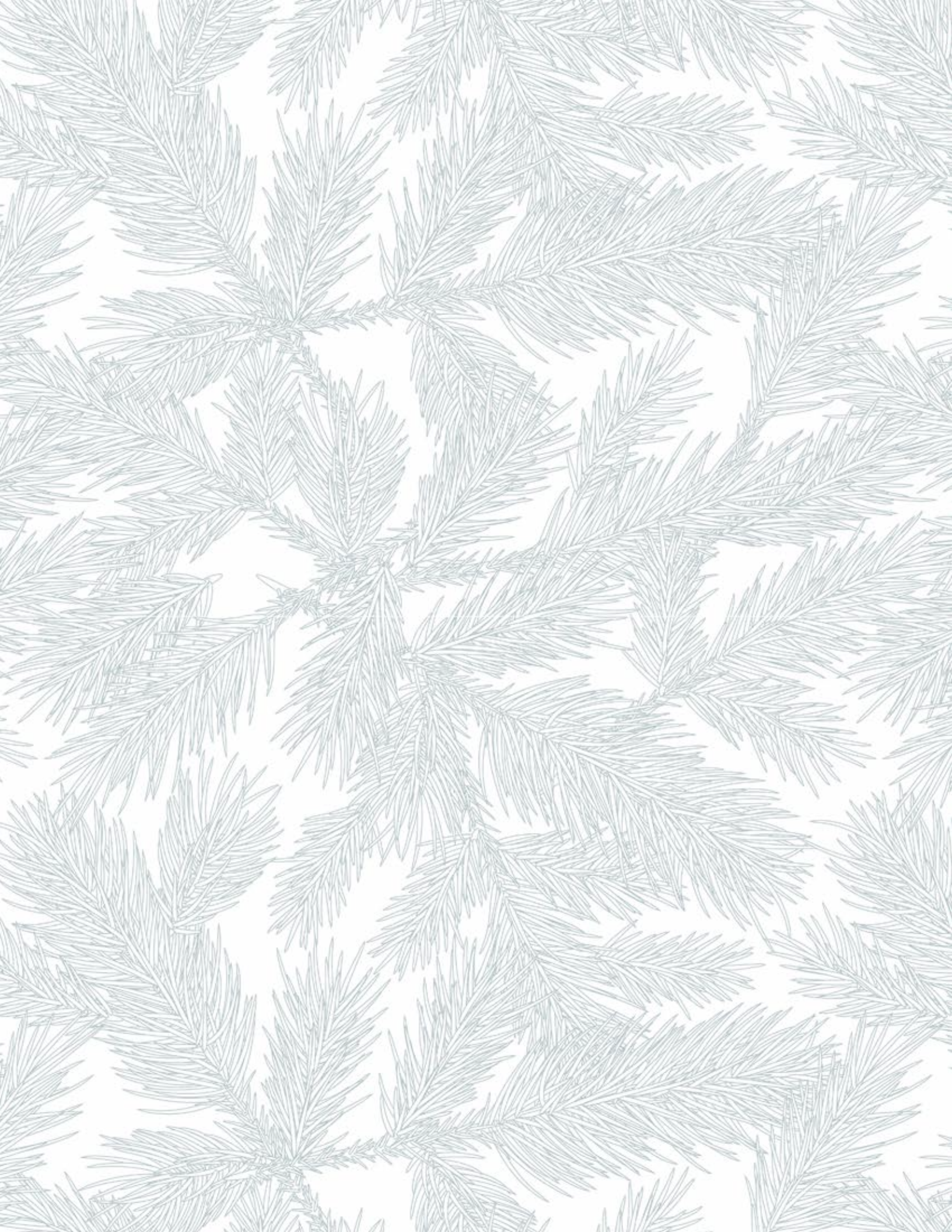
## **FINAL REPORTS**

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](mailto:info@mainechna.org).







**Northern Light Health**

43 Whiting Hill  
Brewer, ME 04412

[northernlighthhealth.org](http://northernlighthhealth.org)