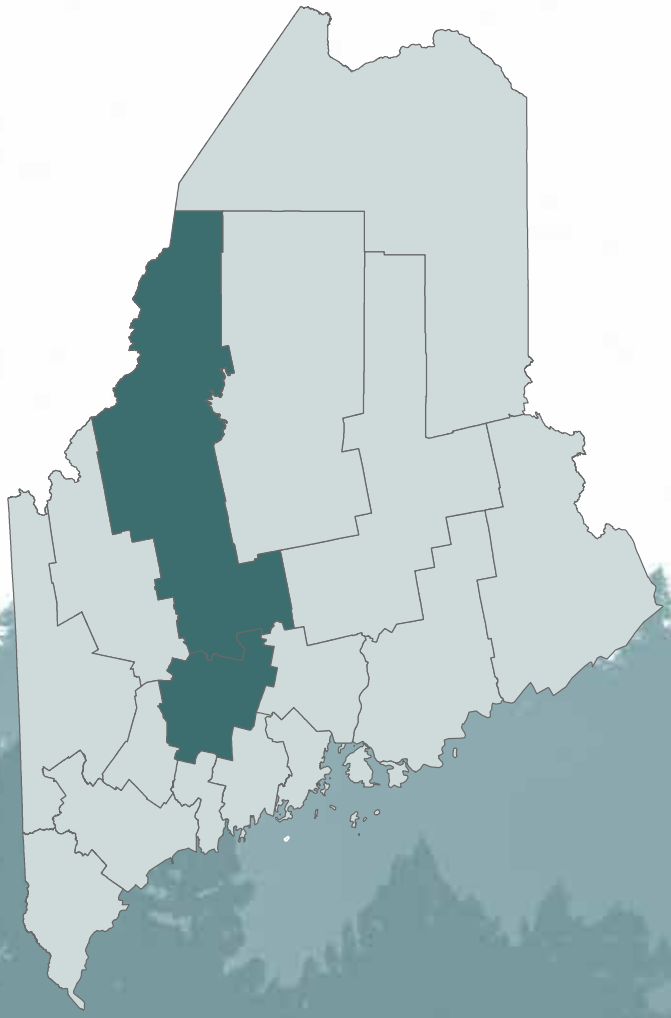
CENTRAL DISTRICT

2019 Maine Shared Community Health Needs Assessment Report



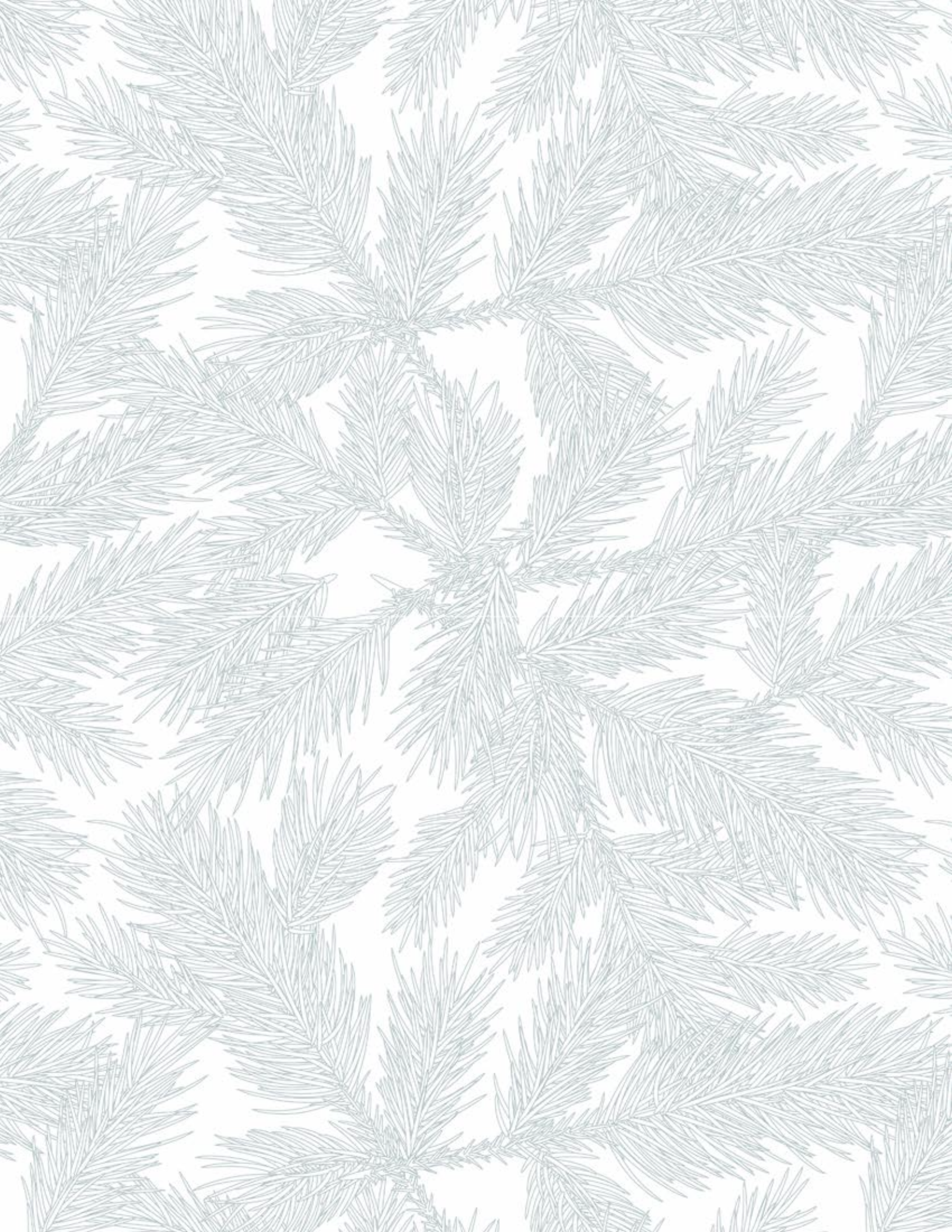


TABLE OF CONTENTS

Key companion documents available at www.mainechna.org:

- Kennebec County Health Profile and CHNA Report
- Somerset County Health Profile and CHNA Report
- Central District Health Profile
- Maine State Health Profile and CHNA Report
- 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 Shared CHNA) is a collaborative effort amongst Central Maine Healthcare (CMHC), MaineGeneral Health (MGH), MaineHealth (MH), Northern Light Health (NLH), and the Maine Center for Disease Control and Prevention (Maine CDC). This unique public-private partnership is intended to assess the health needs of all who call Maine home.

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

Table 1: Population (2012-2016)

	KENNEBEC COUNTY	SOMERSET COUNTY	CENTRAL DISTRICT	MAINE
Population Count	120,953	51,363	172,316	1,329,923
Population 65 years of age or older	17.5%	19.5%	17.9%	18.2%
White	95.9%	96.8%	96.1%	94.8%
Hispanic	1.4%	1.0%	1.3%	1.5%
Two or more races	1.4%	1.8%	1.5%	2.0%

More information on the population characteristics of the Central District can be found in the Community Characteristics section on page 17.

TOP HEALTH PRIORITIES

Forums held in Central District identified health issues through a process outlined in the Methodology section of this report (Appendix C). Table 2 includes a list of only those priorities that were identified in both Kennebec and Somerset Counties.

Table 2: Top Priorities in Central District Counties

KENNEBEC COUNTY PRIORITY AREA	% OF VOTES
Mental Health*	19%
Substance Use*	18%
Social Determinants of Health*	14%
Physical Activity, Nutrition, and Weight*	12%
SOMERSET COUNTY PRIORITY AREA	**% OF VOTES**
Mental Health*	20%
Older Adult Health/Healthy Aging*	16%
Substance Use*	16%
Social Determinants of Health	12%

Also a statewide priority. For a complete list of statewide priorities, see state health profile on our website,* **www.mainechna.org. *See County Priorities on Page 5.*

NEXT STEPS

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

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

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

ACKNOWLEDGEMENTS

Funding for the Maine Shared CHNA is provided by Central Maine Healthcare, MaineGeneral Health, MaineHealth, and Northern Light Health, 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, over 2,000 Mainers gave their time and talent to this effort. Thank you.

HEALTH PRIORITIES

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

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

Table 3: Central District Forum Voting Results

	KENNEBEC COUNTY	SOMERSET COUNTY
PRIORITY AREA	**% OF VOTES**	**% OF VOTES**
Mental Health*	**19%**	**20%**
Substance Use*	**18%**	**16%**
Social Determinants of Health*	**14%**	**12%**
Older Adult Health/ Healthy Aging*	**11%**	**16%**
Physical Activity, Nutrition, and Weight*	**12%**	5%
Access to Care*	**11%**	6%
Food Insecurity	0%	11%
Youth/Adverse Childhood Experiences	0%	9%
Chronic Disease	8%	5%
Oral Health	4%	0%
Intentional Injury	2%	0%
Infectious Disease	1%	0%

**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 conditions, when left unmanaged, may affect an individual's ability to form and maintain relationships with others, cope with challenges, and lead a healthy and productive life. Individuals with serious mental illness (e.g., major depression or schizophrenia) are at a higher risk of developing other medical conditions, including cardiovascular disease, diabetes, stroke, and Alzheimer's disease. While the reason for this link is unclear, research suggests that those with mental illness may experience more barriers to medical care and prevention strategies, and may find it harder to care for themselves.[1]

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

QUALITATIVE EVIDENCE

Depression, isolation, stress, and suicidality were identified as major mental health conditions in the Central District. While forum participants in both counties identified a need for mental health services in general, there were also specific gaps identified.

- In Kennebec County, participants identified inpatient services, counselors and peer-counselors, and psychiatry as specific gaps in the spectrum of care.
- In Somerset County, forum participants identified inpatient services and pediatric services as specific gaps in the spectrum of care.

Mental health was identified as an issue for the population at-large, and for specific segments.

- In Kennebec County, 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.
- In Somerset County, community forum participants identified youth, post-partum women, and individuals with a substance use disorder as populations that were at risk for poor mental health, or as segments who had unique mental health needs. At-risk youth include those whose parents have a substance use disorder.

Youth mental health was identified as a specific priority in both Counties.

- In Kennebec County, many participants discussed the need for increased education for youth, training for providers and educators, and child psychiatrists.
- In Somerset County, there was discussion of the need to focus on the impact of Adverse Childhood Experiences (ACEs), and how community services build resilience and mental wellness for those most at risk. Forum participants also discussed the need for increased education on risk factors and coping skills, provider training, and child psychiatrists. Forum participants also felt that social factors that contribute to increased rates of depression in youth need to be addressed.

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 training and education about how to meet the needs of non-heterosexual individuals.

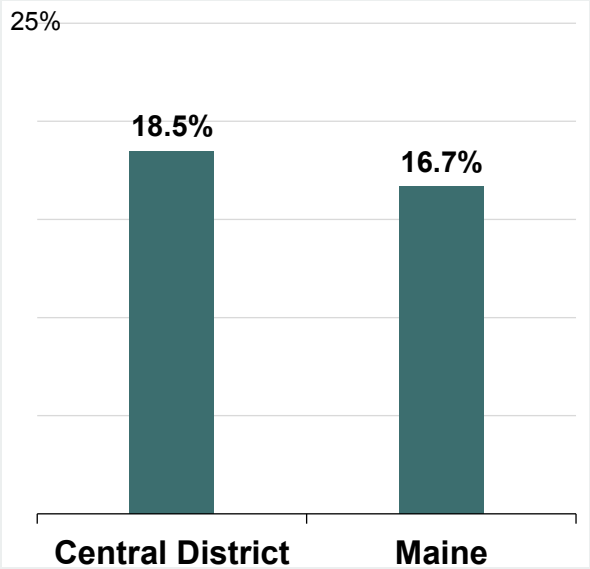
Participants in both counties identified stigma, or the disapproval or discrimination against a person based on a particular circumstance (e.g., mental health condition), as a major barrier to care. Stigma prevents individuals from receiving the help they need, as individuals with a mental health condition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

QUANTITATIVE EVIDENCE

In the Central District:

- The percentage of adults who reported having lost 14 or more days due to poor mental health was higher than the state overall in 2014-2016 (18.5% vs. 16.7%).
- 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 Somerset County, the percentage of high school students who reported that they had been sad/hopeless for more than two weeks in a row increased significantly between 2011 and 2017, from 24.3% to 29.8%. This was significantly higher than the state overall (26.9%).
- In Kennebec County, the percentage of high school students who reported having seriously considered suicide increased between 2011 and 2017, from 12.2% to 14.6%.
- In Somerset County, the percentage of high school students who reported having seriously considered suicide increased between 2011 and 2017, from 14.2% to 17.0%.

Figure 1: Lost 14+ Days Due to Poor Mental Health, 2014-2016



See Key Indicators on page 21 as well as the Central District Health Profile and individual county data reports 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. The assets and gaps/needs in bold font were identified in both Kennebec and Somerset County forums.

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

KENNEBEC COUNTY	
ASSETS	**GAPS/NEEDS**
• **Kennebec Behavioral Health** • Maine General Behavioral Health • Private counselors • Quarry Road (Recreation Area) • Integrated mental health providers with primary care physicians • Training programs at community colleges • Faith-based organizations and other community organizations • **Northern Light Acadia Hospital - Bangor** • Emergency department services • Tele-psychiatry • LGBTQ services	• **Child psychologists** • **Not enough services/types of care/providers** • Ability to pay • Medicaid expansion • **Lack of inpatient/crisis beds** • **Decrease stigma overall,** especially towards LGBTQ youth and older adults • Lack of primary care physicians training • More education around stigma/services • Food banks and shelters • Isolation • Peer group counseling/community services • Caregivers support
SOMERSET COUNTY	
ASSETS	**GAPS/NEEDS**
• **Kennebec Behavioral Health** • **Northern Light Acadia Hospital - Bangor** • Assistance Plus • Screening at physician office for caregivers • 211 Maine • Somerset Public Health • Kennebec Valley Community Action Program	• **Child psychiatry** • Address mental health bias • **Not enough providers** • **Stigma** • No reimbursement • **Lack of beds** • Community understanding of mental health • Transportation • Recreational trails/green space • First responders

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.[3] Tobacco, alcohol, marijuana, and nonmedical use of prescription pain relievers (e.g. OxyContin, Vicodin) are the leading substance use health issues for adults.[4] 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.[5] 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.[6] 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 major substance use issue in the Central District. In both forums, participants identified a need for more comprehensive, accessible, and affordable services to help those in need, including outpatient services, faith-based programs, short and long term inpatient services, and harm reduction (e.g., needle exchange) services.

- In Kennebec County, forum participants also identified a need for recovery services and more options for treatment in the primary care setting.
- In Somerset County, forum participants were also concerned about youth living with adults who have untreated substance use disorders, and ensuring timely and effective treatment for parents.

In both counties, tobacco, alcohol, and marijuana were also issues of concern.

- In Somerset County, participants were also concerned about the increased use of e-cigarettes (or "vaping") amongst youth.

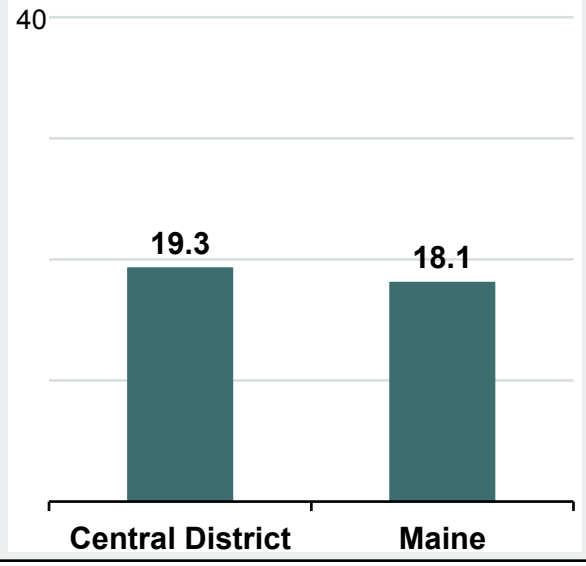
Statewide key informants identified a number of priority health issues for those struggling with substance use issues and those in treatment/recovery: education and outreach around how to access healthcare and treatment options, routine basic health care (primary care, dental care), and care that addresses 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 improved access to confidential services.

QUANTITATIVE EVIDENCE

In the Central District:

- Overdose deaths per 100,000 were higher compared to the state overall in 2012-2016 (19.3 vs. 18.1).

Figure 2: Overdose Deaths per 100,000, 2012-2016



- In Kennebec County, overdose emergency medical service responses per 10,000 were significantly higher than the state overall (131.7 vs. 93.0) from 2016–2017.
- Past 30-day-marijuana use amongst middle school students was higher compared to the state overall in 2017 (4.3% vs. 3.6%).
- The percentage of adults who currently smoke was higher compared to the state overall in 2016 (21.5% vs. 19.8%).
- In Somerset County, past-30-day cigarette smoking among high school students significantly decreased between 2011 and 2017, from 17.1% to 9.8%, but the percentage was higher than the state overall (8.8%).

See Key Indicators on page 21 as well as the Central District Health Profile and individual county data reports 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. The assets and gaps/needs in bold font were identified in both Kennebec and Somerset County forums.

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

KENNEBEC COUNTY	
ASSETS	**GAPS/NEEDS**
• Central District Partners for Recovery Human Resources and Services Administration (HRSA) Grant • **MaineGeneral Needle exchanges** • **MaineGeneral Opiate Steering committee** • Opioid prescribing laws • Capital Area Healthy Community Coalition • Healthy Northern Kennebec – Drug-free community • Intensive Outpatient Programs • Medical staff have X-waiver trained for the treatment opioid use disorder • Operation Hope • **Waterville Police** • Medication-Assisted Treatment (MAT)/Addiction treatment in primary care • Medication take-back programs • Media awareness • Drug-Free Communities programs • **Access to methadone, Suboxone, Narcan** • Northern Light Acadia Hospital • Alcoholics Anonymous, Narcotics Anonymous, Private counselors • Hub and Spoke model • **MaineGeneral Emergency Department (ED) induction program** • Blue Sky Counseling	• Working in silos • Data surveillance • **Funding** • Intensive Outpatient Program (IOP) treatment • Primary care treatment • X-waiver training to allow buprenorphine to be prescribed for use in Medication-Assisted Treatment for addiction • Rapid access to treatment • **Recovery services/Recovery Coaches** • Faith-based programs • More short/long term inpatient beds • Education in schools • Wide availability of Naloxone (Narcan) • **Stigma** • Community awareness and support • Treatment centers • Expanded needle exchange hours • Education for doctors/schools/youth • Community-based services • Facilities that will help the uninsured • **More providers** • Addressing the social determinants of health

COMMUNITY RESOURCES TO ADDRESS SUBSTANCE USE (CONTINUED)

Table 5: Assets and Gaps/Needs (Substance Use) in Central District (continued)

SOMERSET COUNTY	
ASSETS	**GAPS/NEEDS**
• Primary care provider efforts for substance use disorder prevention • Kennebec Behavioral Health • **MaineGeneral Behavioral Health/Addiction Medicine** • **First Responders** • Behavioral health agents • **Access to Narcan**	• **Stigma reduction** • Opiate bias trainings • Education on marijuana • **More trained workers** • **Money** • More training for law enforcement • **Recover programs and treatment funding** • **Every primary care provider providing opiate and behavioral health treatment** • More creativity in prevention efforts • More access to measures to treat addiction

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.[7]

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

QUALITATIVE EVIDENCE

A dominant theme from community forums in the Central District was the tremendous impact that the underlying social determinants, particularly housing, transportation, and food insecurity, have on the population.

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.

Forum 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, low-income families, and older adults. Supplemental Nutrition Assistance Program (SNAP) benefits were an asset; however, access to stores and markets can be challenged by lack of transportation.

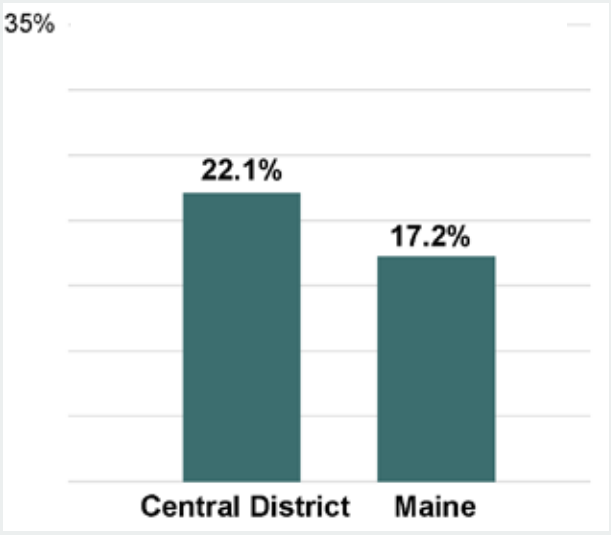
- In Kennebec County, participants suggested universal free school lunch programs as a way to address this issue among school-aged youth.
- In Somerset County, discussion centered on the need to consider policy solutions to address food insecurity in addition to the existing resources of SNAP, food kitchens and meals on wheels.

QUANTITATIVE EVIDENCE

In the Central District:

- The percentage of children living in poverty was higher than the state overall in 2012-2016 (22.1% vs. 17.2%).
- In Kennebec County, 14.7% of households lack enough food to maintain healthy, active lifestyles for all household members (vs. 15.1% for the state overall).

Figure 3: Children Living in Poverty, 2012-2016



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

See Key Indicators on page 21 as well as the Central District Health Profile and individual county data reports 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. The assets and gaps/needs in bold font were identified in both Kennebec and Somerset County forums.

Table 6: Assets and Gaps/Needs (Social Determinants of Health) in the Central District

KENNEBEC COUNTY	
ASSETS	**GAPS/NEEDS**
• Primary care social workers • **Food Banks/soup kitchens** • Career centers • Waterville General Assistance/Action Team • Youth Empowerment Supports at mid-Maine Homeless shelter • Hospitals and clinics • Low-cost/free services from community organizations • More folks with higher education • More awareness of Adverse Childhood Experiences • Healthy Northern Kennebec • **Kennebec Valley Community Action Program** • Safe Families • Supplemental Nutrition Assistance Program Education (SNAP-Ed) • **Supplemental Nutrition Assistance Program (SNAP)** • Women, Infants, and Children (WIC)	• **Transportation** • Extended hours of availability for services/publicity of services • **Low paying jobs** • Lack of funding for poverty services • **Decreased access to healthy food** • Stigma • Universal free school lunch • Living minimum wage • Homelessness • Community groups and resources • Lack of housing • Lack of capacity of nonprofits/volunteers

COMMUNITY RESOURCES TO ADDRESS SOCIAL DETERMINANTS OF HEALTH (CONTINUED)

Table 6: Assets and Gaps/Needs (Social Determinants of Health) in the Central District (continued)

SOMERSET COUNTY	
ASSETS	**GAPS/NEEDS**
• 211 Maine • **Kennebec Valley Community Action Program** • YMCA • **Local food pantries** • United Way food drives • Boys and Girls Club of Somerset County • Soup kitchens • Community gardens • Child and Adult Care food program • United Way of Mid-Maine food project • Meals on Wheels • Food bags at primary care practices • **Supplemental Nutrition Assistance Program (SNAP)** • School programs	• School staff training • Nutrition education • Gap in child protective services/Department of Health and Human Services workers • Lack of understanding • **Gap in transportation to resources** • **Need jobs with livable wages** • Parent education in schools • Resource gap • Stigma surrounding being able to afford food • **Gap in food access** • Books

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 quality of life as people age."[10] Maine's older population is growing in all parts of the state, and it remains the oldest state in the nation as defined by 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 an older population.[11]

QUALITATIVE EVIDENCE

In both counties, forum participants and key informants identified several health and social service needs specific to older adults. Social isolation and loneliness was a key theme in both Kennebec and Somerset.

- In Kennebec, forum participants suggested a need for education and services to address the issue of isolation.
- In Somerset County, participants discussed the need for socialization to protect against cognitive decline.

Limited access to transportation is a key barrier to accessing health services, but also hinders older adults' ability to access other goods, services, and activities. These transportation barriers to contribute to social isolation, especially for those living alone.

The need for affordable and safe housing was another critical issue identified in both counties. 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. In Somerset County, forum participants also identified a need for heating and fuel assistance.

Additional key themes related to older adult health in Somerset County:

- Caregiver support for those caring for older adults
- Rising cost of care and prescriptions
- Need for strong coordination of health and support services and palliative care

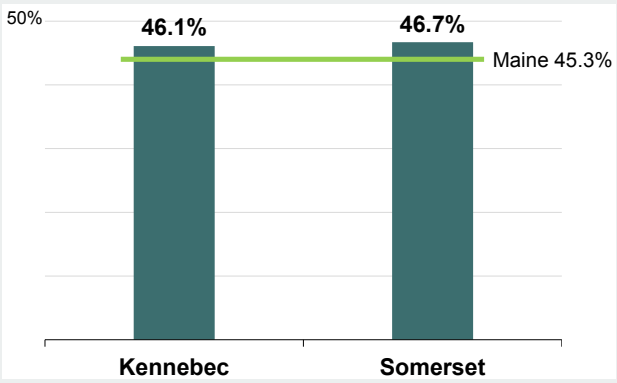
QUANTITATIVE EVIDENCE

In Central District:

- In Kennebec County, the percentage of adults age 65 or older living alone was higher than the state overall (46.1% vs. 45.3%) in 2012-2016.
- In Somerset County, the percentage of adults age 65 or older living alone was higher than the state overall (46.7% vs. 45.3%) in 2012-2016.

See Key Indicators on page 21 as well as the Central District Health Profile and individual county data reports on our website **www.mainechna.org**. Those documents also include information on data sources and definitions.

Figure 4: Adults 65+ Living Alone, 2012-2016



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. The assets and gaps/needs in bold font were identified in both Kennebec and Somerset County forums.

Table 7: Assets and Gaps/Needs (Older Adult Health/Healthy Aging) in Central District

KENNEBEC COUNTY	
ASSETS	**GAPS/NEEDS**
• **Patient-centered medical homes** • Hospital Elder Life Program (HELP) • **Spectrum Generations – Meals on Wheels, Muskie Center** • Kennebec Valley Community Action Program • MaineGeneral Geriatric Specialty practice	• **Primary care** • **Transportation** • **Fall prevention** • **Navigators and social support**
SOMERSET COUNTY	
ASSETS	**GAPS/NEEDS**
• Area Agency on Aging • 211 Maine • **Spectrum Generations** • Care managers • **Primary care support** • YMCA • American Association of Retired Persons (AARP) • Local resources for older adults	• **Transportation in rural areas** • **Safety concerns related to aging adults** • Support for community volunteers • Healthcare worker shortage • Not enough geriatricians • **Follow up support** • Health literacy • Home adaption • Polypharmacy • Housing/home maintenance • **Structural support for caregivers** • **Primary care support**

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.[12] 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.[13]

- 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.

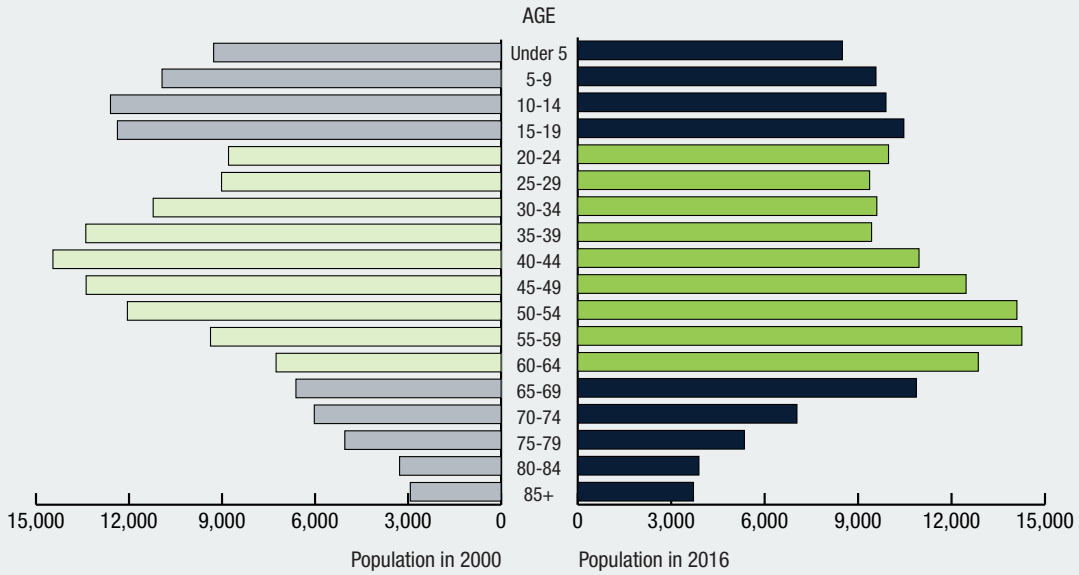
The following is a summary of findings related to community characteristics for Central District counties. Conclusions were drawn from quantitative data and qualitative information collected through forums and key informant interviews.

The following companion reports are available at **www.mainechna.org**.

- Kennebec County Health Profile and CHNA Report
- Somerset County Health Profile and CHNA Report
- Central District Health Profile
- Maine State Health Profile and CHNA Report
- Health Equity Data Summaries

- In Somerset County, 19.5% of the population is 65 years of age or older.

Figure 5: Age Histogram of Central District



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.[14] 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.[15,16] Cultural differences such as, but not limited to, the expectations of who is involved in medical decisions can also impact access to health care and to health information. These disparities show the disproportionate and often avoidable inequities that exist within communities and reinforce the importance of understanding the demographic makeup of a community to identify populations more likely to experience adverse health outcomes.

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

	PERCENT/NUMBER
American Indian/Alaskan Native	0.5% / 685
Asian	0.7% / 1,006
Black/African American	0.8% / 1,134
Hispanic	1.3% / 1,730
Some other race	0.3% / 476
Two or more races	1.5% / 1,658
White	96.1% / 115,938

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

SOCIOECONOMIC STATUS

Socioeconomic status (SES) is measured by such things as income, poverty, employment, education, and neighborhood characteristics. Individuals with low SES are more likely to have chronic health issues, die prematurely, and have overall poor health. Low-income status is highly correlated to a lower than average life expectancy.[17] 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.[18]

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 Central District counties to the state of Maine overall.

Table 9: Socioeconomic Status in Kennebec and Somerset Counties

	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%
	SOMERSET/MAINE
Median household income	$40,484 / $50,826
Unemployment rate*	5.7% / 3.8%
Individuals living in poverty	18.0% / 13.5%
Children living in poverty	26.2% / 17.2%
65+ living alone	46.7% / 45.3%

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

SPECIAL POPULATIONS

Through community engagement activities, several populations in the Central District 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 both Kennebec and Somerset counties. Key issues identified included lack of transportation, inability to pay for needed healthcare services/high cost of medications, and depression/isolation. To support long term aging in place, the community discussed the need for additional supports and a stronger continuum of services for aging adults that included older adult health/social service planning, supports for safe living at home, and palliative care.

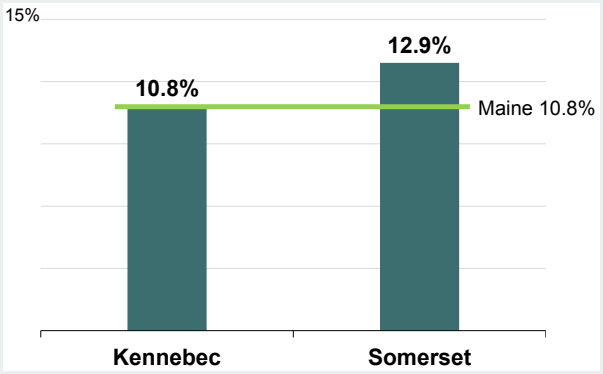
Youth

Youth were identified as a priority population in both Kennebec and Somerset Counties. Specific issues of concern were youth mental health conditions (specifically depression and stress), substance misuse (specifically opioids, marijuana, and tobacco), lack of education and promotion around nutrition and physical activity, and access to oral health care. Related to both physical activity and mental health, community members discussed the need to address screen time. 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 are more likely to of feel sad or hopeless, consider suicide, be bullied on school property, and be a victim of sexual assault, as compared to youth who identify as heterosexual. A statewide analysis of Behavioral Risk Factor Surveillance Survey confirms that among adults, those who identify as bisexual, gay or lesbian, or other sexual orientation have higher rates of depression diagnosis over the lifetime than 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.

Figure 6: Gay, Lesbian, and Bisexual (High School, 2017)



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) which provides selected data analyzed by sex, race, ethnicity, sexual orientation, education, and income. These data are at the state level, as much of the county level data would be suppressed due to small numbers and privacy concerns, and the previous analyses have shown that health disparities found at the state level are generally similar in individual counties.

KEY INDICATORS

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

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

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

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

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

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

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

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.

	BENCHMARK	CENTRAL DISTRICT					
INDICATOR	**MAINE**	**DISTRICT**	**+/–**	**KENNEBEC**	**+/–**	**SOMERSET**	**+/–**
SOCIAL, COMMUNITY AND PHYSICAL ENVIRONMENT							
Children living in poverty	2012-2016 **17.2%**	2012-2016 **22.1%**	N/A	2012-2016 **20.3%**	N/A	2012-2016 **26.2%**	N/A
Median household income	2012-2016 **$50,826**	–	N/A	2012-2016 **$48,570**	N/A	2012-2016 **$40,484**	N/A
Estimated high school student graduation rate	2017 **86.9%**	2017 **84.8%**	N/A	2017 **84.0%**	N/A	2017 **86.4%**	N/A
Food insecurity	2014-2015 **15.1%**	–	N/A	2014-2015 **14.7%**	N/A	2014-2015 **16.2%**	N/A
HEALTH OUTCOMES							
14 or more days lost due to poor physical health	2014-2016 **19.6%**	2014-2016 **19.9%**	○	2014-2016 **21.5%**	○	2014-2016 **19.0%**	○
14 or more days lost due to poor mental health	2014-2016 **16.7%**	2014-2016 **18.5%**	○	2014-2016 **18.6%**	○	2014-2016 **20.6%**	○
Years of potential life lost per 100,000 population	2014-2016 **6,529.2**	–	N/A	2014-2016 **7,151.2**	○	2014-2016 **7,889.5**	!
All cancer deaths per 100,000 population	2012-2016 **173.8**	2012-2016 **184.9**	!	2012-2016 **181.7**	○	2012-2016 **192.7**	!
Cardiovascular disease deaths per 100,000 population	2012-2016 **195.8**	2012-2016 **230.4**	!	2012-2016 **219.3**	!	2012-2016 **256.7**	!
Diabetes	2014-2016 **10.0%**	2014-2016 **10.7%**	○	2014-2016 **10.2%**	○	2014-2016 **11.7%**	○
Chronic obstructive pulmonary disease (COPD)	2014-2016 **7.8%**	2014-2016 **8.0%**	○	2014-2016 **6.2%**	○	2014-2016 **12.4%**	!
Obesity (adults)	2016 **29.9%**	2016 **29.9%**	○	2016 **27.0%**	○	2016 **36.5%**	○
Obesity (high school students)	2017 **15.0%**	2017 **16.9%**	○	2017 **16.4%**	○	2017 **18.0%**	○
Obesity (middle school students)	2017 **15.3%**	2017 **19.8%**	!	2017 **17.9%**	○	2017 **22.7%**	!
Infant deaths per 1,000 live births	2012-2016 **6.5**	2012-2016 **8.1**	○	2012-2016 **7.1**	○	2012-2016 **7.7***	○
Cognitive decline	2016 **10.3%**	2016 **12.4%**	○	2016 **13.2*%**	○	2016 **10.8%**	○
Lyme disease new cases per 100,000 population	2013-2017 **96.5**	2013-2017 **113.7**	N/A	2013-2017 **132.8**	N/A	2013-2017 **68.5**	N/A

	BENCHMARK	CENTRAL DISTRICT					
INDICATOR	**MAINE**	**DISTRICT**	**+/–**	**KENNEBEC**	**+/–**	**SOMERSET**	**+/–**
HEALTH OUTCOMES (CONTINUED)							
Chlamydia new cases per 100,000 population	2013-2017 **293.4**	2013-2017 **300.9**	N/A	2013-2017 **305.0**	N/A	2013-2017 **291.2**	N/A
Fall-related injury (unintentional) emergency department rate per 10,000 population	2012-2014 **340.9**	2012-2014 **390.2**	!	2012-2014 **365.6**	!	2012-2014 **448.8**	!
Suicide deaths per 100,000 population	2012-2016 **15.9**	2012-2016 **17.4**	○	2012-2016 **16.9**	○	2012-2016 **18.2**	○
Overdose deaths per 100,000 population	2012-2016 **18.1**	2012-2016 **19.3**	○	2012-2016 **20.7**	○	2012-2016 **15.9**	○
HEALTH CARE ACCESS AND QUALITY							
Uninsured	2012-2016 **9.5%**	2012-2016 **9.3%**	N/A	2012-2016 **8.5%**	N/A	2012-2016 **11.3%**	N/A
Ratio of primary care physicians to 100,000 population	2017 **67.3**	2017 **63.8**	N/A	2017 **73.2**	N/A	2017 **41.9**	N/A
Ratio of psychiatrists to 100,000 population	2017 **8.4**	2017 **5.5**	N/A	2017 **7.0**	N/A	2017 **1.9**	N/A
Ratio of practicing dentists to 100,000 population	2017 **32.1**	2017 **30.3**	N/A	2017 **39.0**	N/A	2017 **10.0**	N/A
Ambulatory care-sensitive condition hospitalizations per 10,000 population	2016 **74.6**	2016 **78.4**	N/A	2016 **70.4**	N/A	2016 **97.8**	N/A
Two-year-olds up-to-date with recommended immunizations	2017 **73.7%**	2017 **81.4%**	N/A	2017 **83.3%**	N/A	2017 **73.9%**	N/A
HEALTH BEHAVIORS							
Sedentary lifestyle – no leisure-time physical activity in past month (adults)	2016 **20.6%**	2016 **22.4%**	○	2016 **22.1%**	○	2016 **23.0%**	○
Chronic heavy drinking (adults)	2014-2016 **7.6%**	2014-2016 **7.4%**	○	2014-2016 **7.9%**	○	2014-2016 **6.2%**	○
Past-30-day alcohol use (high school students)	2017 **22.5%**	2017 **20.6%**	○	2017 **21.2%**	○	2017 **19.6%**	○
Past-30-day alcohol use (middle school students)	2017 **3.7%**	2017 **3.9%**	○	2017 **3.8%**	○	2017 **4.3%**	○
Past-30-day marijuana use (high school students)	2017 **19.3%**	2017 **19.3%**	○	2017 **19.3%**	○	2017 **19.2%**	○
Past-30-day marijuana use (middle school students)	2017 **3.6%**	2017 **4.3%**	○	2017 **3.8%**	○	2017 **5.3%**	○

	BENCHMARK	CENTRAL DISTRICT					
INDICATOR	**MAINE**	**DISTRICT**	**+/–**	**KENNEBEC**	**+/–**	**SOMERSET**	**+/–**
HEALTH BEHAVIORS (CONTINUED)							
Past-30-day misuse of prescription drugs (high school students)	2017 **5.9%**	2017 **4.9%**	○	2017 **5.2%**	○	2017 **4.4%**	★
Past-30-day misuse of prescription drugs (middle school students)	2017 **1.5%**	2017 **1.8%**	○	2017 **1.5%**	○	2017 **2.5%**	○
Current (every day or some days) smoking (adults)	2016 **19.8%**	2016 **21.5%**	○	2016 **20.3%**	○	2016 **24.1%**	○
Past-30-day cigarette smoking (high school students)	2017 **8.8%**	2017 **9.1%**	○	2017 **8.9%**	○	2017 **9.8%**	○
Past-30-day cigarette smoking (middle school students)	2017 **1.9%**	2017 **2.1%**	○	2017 **2.1%**	○	2017 **2.3%**	○

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

4 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

5 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

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

7 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

8 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

9 Food Research and Action Center, Hunger and Health

10 World Health Organization. Ageing and lifecourse. Retrieved from https://www.who.int/ageing/healthy-ageing/en/

11 University of Pittsburgh: Stern Center for Evidence-Based Policy. Addressing the health needs of an aging America. Retrieved from https://www.healthpolicyinstitute.pitt.edu/sites/default/files/SternCtrAddressingNeeds.pdf

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

13 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

14 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

15 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.

16 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.

17 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.

18 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.

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 7: Maine Shared CHNA Governance Structure, 2018–2019

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

APPENDIX C: METHODOLOGY

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

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

Data Analysis

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

Outreach and Engagement

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

Final Reports

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

DATA ANALYSIS

The Metrics Committee identified 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?
- Does it describe an emerging health issue?
- Does it measure something “actionable” or “impactful”?
- Does the indicator measure an issue that is known to have high health and social costs?

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

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

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

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

Data Health Profiles include:

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

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

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 the 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 local committees for Kennebec and Somerset Counties coordinated their efforts across the District.

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. Central District committee members noted that both the Kennebec and Somerset forums had participants from both counties. 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. Priorities that fell within the 70% combined voting total received an in-depth analysis within the Maine Shared CHNA county report.

Central District Forums

Three community forums were held in the Central District.

Table 10: Community engagement activites in Central District, 2018

KENNEBEC COUNTY			
TYPE OF ENGAGEMENT	**LOCATION & DATE**	**FACILITATOR**	**ATTENDEES**
Community Forum	Waterville 10/18/2018	JSI	80
Community Forum	Augusta 12/06/2018	Local Facilitators	18
SOMERSET COUNTY			
TYPE OF ENGAGEMENT	**LOCATION & DATE**	**FACILITATOR**	**ATTENDEES**
Community Forum	Skowhegan 10/17/2018	JSI	54

Key informant interviews

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

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

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

- We are interested in learning more about the priority health needs for this population (reference population(s) of expertise of interviewee). How would you characterize the health needs for this population? How are they different than for the general population?
- From where you sit and the work you do, what do you feel are the most important health needs to address? Why?
- What do you see as the major resource gaps with respect to health and wellness for this population?
- Are you currently working on anything that contributes to community health and wellness for this population? Are there any areas of health you would like to work on in partnership with others?
- Are there any particular assets or resources to address the needs of this population that can be leveraged?

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

For full lists of individuals representing broad interests of the community who were consulted during the engagement process, please see Kennebec and Somerset Needs Assessment Reports at **www.mainechna.org.**

Data collection

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

FINAL REPORTS

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

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