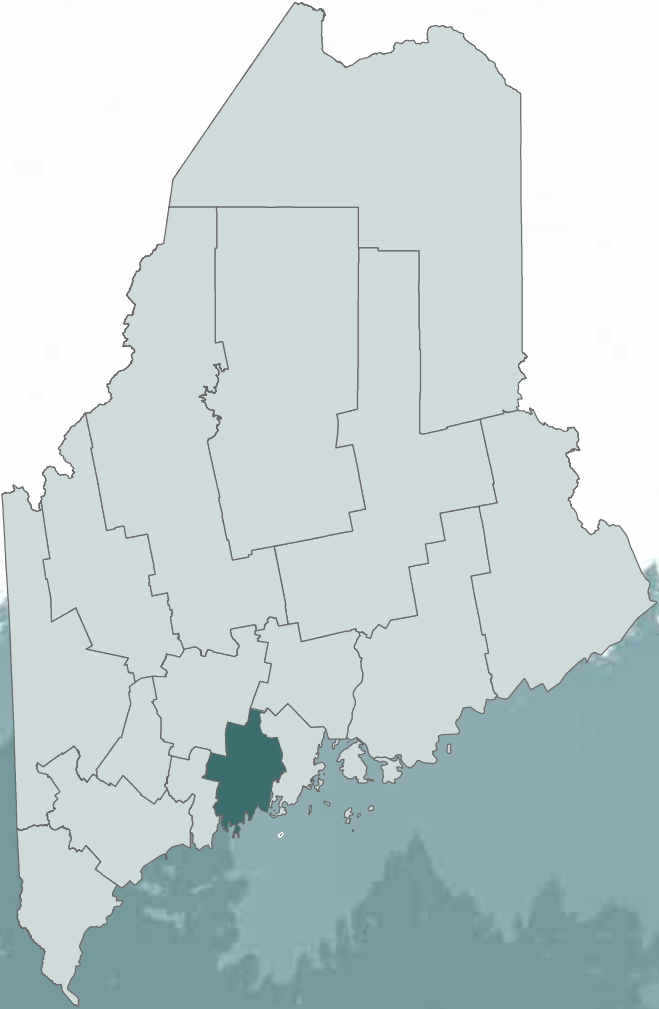


LINCOLN COUNTY

2019 Maine Shared Community Health
Needs Assessment Report



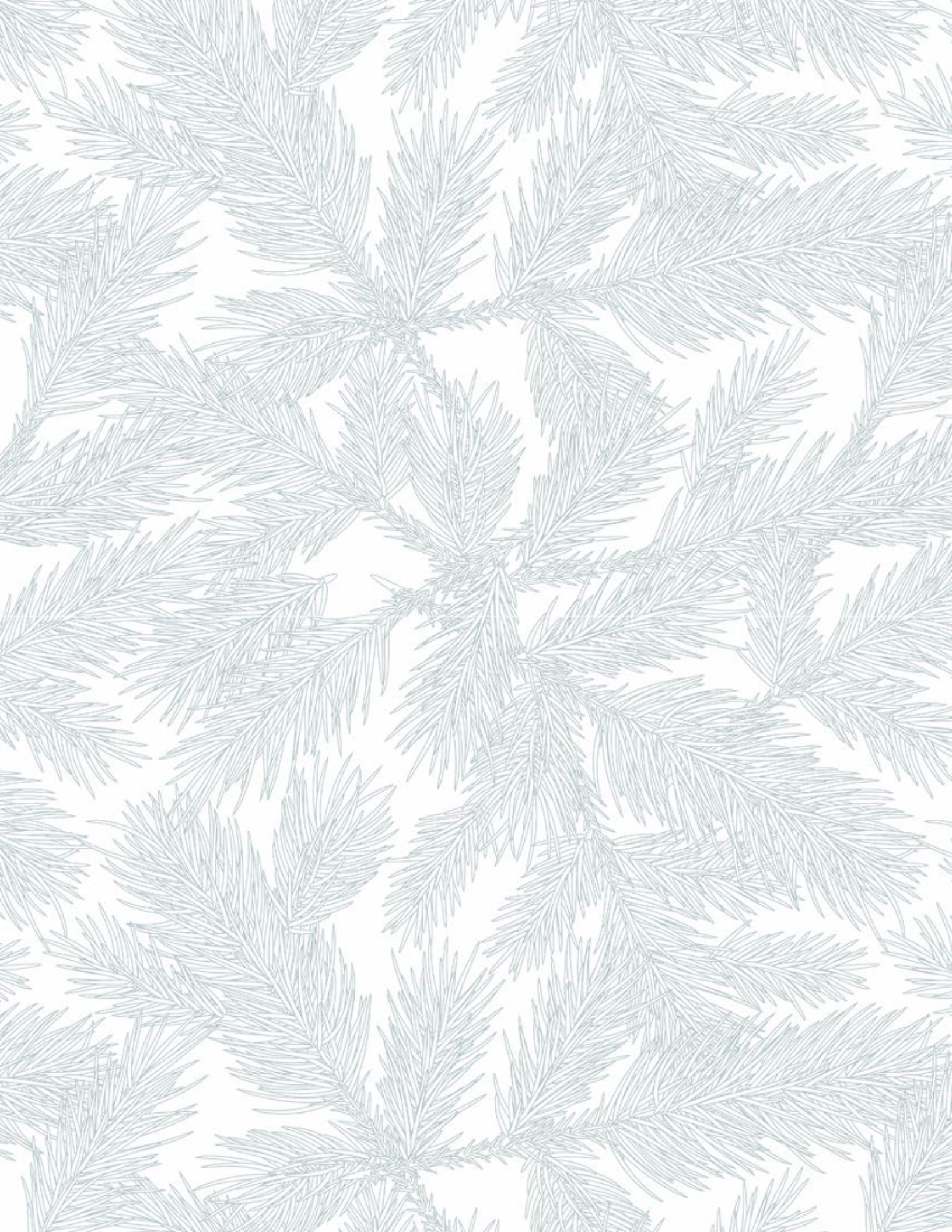


TABLE OF CONTENTS

| | |
|---|----|
| Executive Summary..... | 2 |
| Acknowledgements..... | 3 |
| Health Priorities | 4 |
| Mental Health | 5 |
| Substance Use..... | 7 |
| Access to Care..... | 9 |
| Physical Activity, Nutrition, and Weight..... | 11 |
| Social Determinants of Health | 13 |
| Older Adult Health/Healthy Aging | 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:

- Lincoln County Health Profile
- Midcoast 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 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.

DEMOGRAPHICS

Lincoln County is one of four counties in the Midcoast Public Health District. The population of Lincoln County is 34,165 and 25.6% of the population is over the age of 65. It is 1 of 2 counties where 24-25% of the population is over 65 – the highest percentages in the state. The population is predominantly white (97.0%); 1.5% are Asian, and 1.0% are Hispanic. The median household income is \$53,515. The high school graduation rate (88.0%) is higher than the state overall, as is the percent of the population with an associates' degree or higher (39.8%).

TOP HEALTH PRIORITIES

Forums held in Lincoln 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: Lincoln County Health Priorities

| PRIORITY AREA | % OF VOTES |
|---|------------|
| Mental Health* | 20% |
| Substance Use* | 17% |
| Access to Care* | 14% |
| Physical Activity, Nutrition, and Weight* | 14% |
| Social Determinants of Health* | 13% |
| Older Adult Health/Healthy Aging* | 11% |

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

NEXT STEPS

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

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

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

ACKNOWLEDGEMENTS

Funding for the Maine Shared CHNA is provided by Central Maine Healthcare, 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 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 eight priorities which arose from group break-out sessions at forums held in Lincoln County. The priorities shaded are the six 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: Lincoln County Forum Voting Results

| PRIORITY AREA | % OF VOTES |
|--|-------------------|
| Mental Health* | 20% |
| Substance Use* | 17% |
| Access to Care* | 14% |
| Physical Activity, Nutrition, and Weight* | 14% |
| Social Determinants of Health* | 13% |
| Older Adult Health/Healthy Aging* | 11% |
| Chronic Disease | 7% |
| Infectious Disease | 5% |

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

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

QUALITATIVE EVIDENCE

Participants cited depression/isolation, stress, and suicidality as major mental health conditions. While many community forum participants said there was a need for behavioral health services in general, specific gaps in the spectrum of care identified were education, screening, psychiatry, and inpatient/crisis services.

Though poor mental health can affect anyone at any age, many community forum participants identified youth as a particularly vulnerable population. Discussion included the need for more education and coping strategies, both for youth and parent/guardians; and more school counselors. Schools and primary care are two opportunities for mental health screening and earlier intervention. Risk factors for youth mental health included stress and bullying.

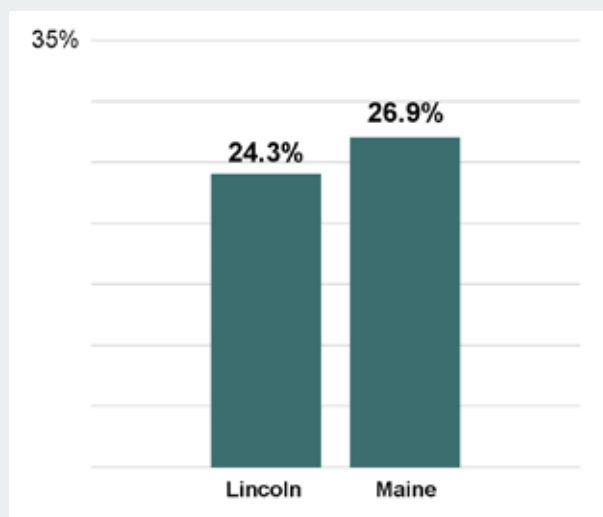
Key informants identified stigma, or the disapproval or discrimination against a person based on a particular circumstance (e.g., mental health condition) as a major barrier to seeking behavioral health care. Stigma prevents individuals from receiving the help they need, as individuals with a mental health disorder may not seek care in fear of shame and discrimination.

QUANTITATIVE EVIDENCE

In Lincoln County:

- The percentage of adults who have ever been diagnosed with anxiety increased between 2011-2013 and 2014-2016, from 13.8% to 17.3%.
- The percentage of middle school students who reported being sad or hopeless for two weeks in a row was higher than the state overall (23.7% vs. 21.6%) in 2017.
- The ratio of psychiatrists to 100,000 population was 0.0, compared to 8.4 for the state overall, and only one of two counties in Maine, in 2017.

Figure 1: Sad/Hopless for 2+ Weeks in a Row, 2017 (High School)



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

COMMUNITY RESOURCES TO ADDRESS MENTAL HEALTH

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

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

| ASSETS | GAPS/NEEDS |
|--|--|
| <ul style="list-style-type: none"> • School Counselors/Social Workers • Sweetser • Independent mental health clinicians • Integrated Maine Behavioral Healthcare’s Behavioral Health Clinicians: located in designated Lincoln Medical Partner Practices; providing individual and group support/counseling • Adverse Childhood Experiences Screenings in Lincoln Medical Partners designated Practices • Mindfulness training • Trauma Informed Practice • Midcoast Maine Community Action Head Start Program • Healthy Kids! • Mid Coast Hospital’s Addiction Resource Center • Lincoln Academy School-Based Health Center • LincolnHealth • Lincoln Medical Partner’s Boothbay Region School-Based Health Center | <ul style="list-style-type: none"> • Parent/Family Education and Support • Anti-bullying campaigns • Education about resources • More social workers in schools/communities • More clinicians and psychiatrists, especially for children • Inpatient services/facilities • Caregiver support • Peer finding • Faster access |

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 causes of substance use disorders 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 disorders 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 disorder 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 disorder treatment providers do not accept insurance and require cash payments.

QUALITATIVE EVIDENCE

Community forum participants discussed the need for more comprehensive, accessible, and affordable services to help those in need of substance use disorder treatment. Most of the discussion centered on opioid use disorders: the need for earlier education and prevention efforts, a stronger network of treatment services, and strong support services for those in recovery. For those in recovery, key informants identified a number of priority issues: education and outreach

around how to access healthcare and treatment options, routine basic healthcare (primary care, dental care), and care that addresses co-occurring mental health and substance use disorder issues. Another key theme was the need to provide better access to many of the resources that make up the social determinants of health: affordable, safe, and supportive housing; employment and job opportunities; transportation, and nutritious foods.

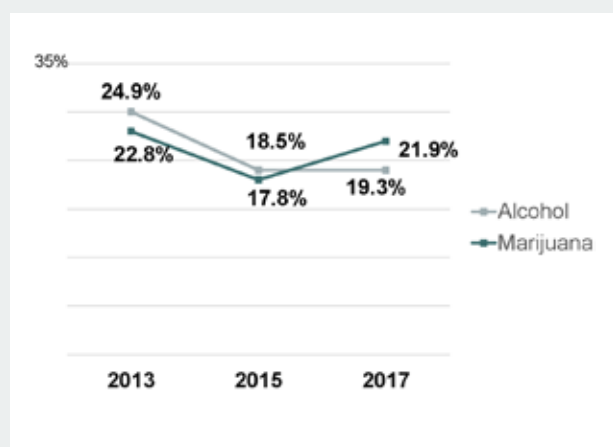
Some community forum participants identified marijuana use as an emerging issue. There is a lack of clarity on health effects, recent laws governing adult use marijuana, Maine's Medical Marijuana Program, and the short-term and long-term impacts on both individuals and communities.

QUANTITATIVE EVIDENCE

In Lincoln County:

- Overdose deaths per 100,000 population more than doubled between 2007-2011 and 2012-2016, from 8.4 to 19.2.
- Drug-induced deaths per 100,000 population increased between 2007-2011 and 2012-2016, from 9.3 to 19.5, and was higher than the state overall (18.9).

Figure 2: Past-30-Day Alcohol and Marijuana Use (High School)



- Past-30-day marijuana use amongst adults increased between 2012-2015 and 2013-2016, from 9.2% to 10.6%.

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

COMMUNITY RESOURCES TO ADDRESS SUBSTANCE USE

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

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

| ASSETS | GAPS/NEEDS |
|--|---|
| <ul style="list-style-type: none"> • Lincoln County Recovery Collaborative • Boothbay Region Community Resource Council • Mid Coast Hospital's Addiction Resource Center • Support groups • Lincoln Medical Partners providing Integrated Medication-Assisted Treatment (IMAT) Services • Local Law Enforcement • LincolnHealth • YMCA, free membership program • Healthy Lincoln County • Faith-based groups • Alcoholics Anonymous (AA) and Narcotics Anonymous (NA) • LincolnHealth Emergency Department's Rapid Induction Services | <ul style="list-style-type: none"> • Transitional housing • Programs and jobs for those in recovery • Effective prevention services • More qualified Substance Use Disorder (SUD) educators • Access to care • Prescription costs • Transportation • Group programs in northern area of the county • Combined Resources • Parenting - Boothbay Region School System • Medicaid expansion • Increased funding for treatment beds, etc. |

ACCESS TO CARE

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

Barriers to accessing care include the availability and affordability of care. Low-income individuals, people of color, those with less than a high school diploma, and lesbian, gay, bisexual, transgender, and queer/questioning (LGBTQ) populations face even greater disparities in health insurance coverage compared to those who are heterosexual, white, and well-educated. For example, in Maine, over 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. One can find more information on health disparities by race, ethnicity, education, sex, and sexual orientation in the Health Equity Data Sheets, available at www.mainechna.org.

QUALITATIVE EVIDENCE

Many community forum participants and key informants identified the social determinants of health—particularly inability to access reliable and affordable forms of transportation—as significant barriers to care. The “Social Determinants of Health” section of this report discusses these in more detail.

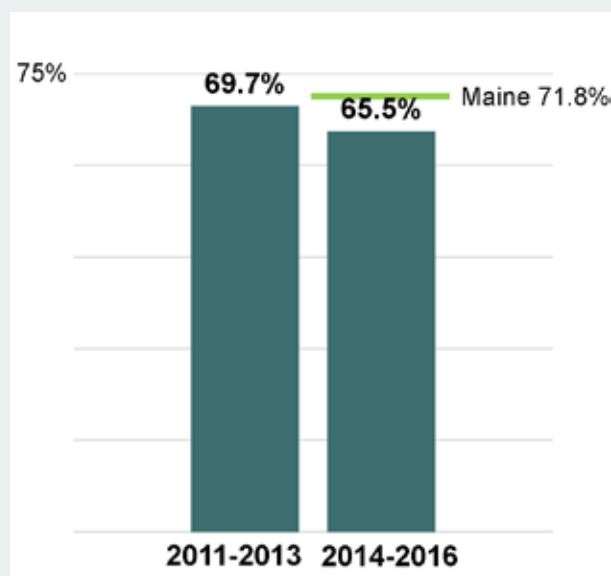
Beyond the need for Medicaid expansion, participants discussed the need for local, comprehensive, and affordable health services, dental care, cancer treatment (e.g., chemotherapy, radiation), behavioral health services, and specialty care for older adults. Many felt that workforce shortages contributed to the issue of healthcare access.

QUANTITATIVE EVIDENCE

In Lincoln County:

- The percentage of the population that is uninsured was higher than the state overall (11.4% vs. 9.5%) in 2012-2016.
- The percentage of the population with a usual primary care provider decreased between 2011-2013 and 2014-2016, from 93.4% to 89.0%.
- The percentage of the population with a primary care visit to any primary care provider in the past year was significantly lower than the state overall (65.5% vs. 71.8%) in 2014-2016.
- The ratio of psychiatrists to 100,000 population was lower than the state overall (0.0 vs. 8.4) in 2017.
- The ratio of practicing dentists to 100,000 population was lower than the state overall (20.8 vs. 32.1) in 2017.

Figure 3: Population With A Primary Care Visit to any Primary Care Provider in the Past Year



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

COMMUNITY RESOURCES TO ADDRESS ACCESS TO CARE

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

Table 5: Assets and Gaps/Needs (Access to Care)

| ASSETS | GAPS/NEEDS |
|--|--|
| <ul style="list-style-type: none"> • YMCAs • Boothbay Region Community Resource Council • Joint Economic Development Committee - • Lincoln County Dental • LincolnHealth and Lincoln Medical Partners • Mid Coast Hospital's Addiction Resource Center • MaineHealth CarePartners • MaineHealth Accountable Care Organization (MHACO) Health Guides • Volunteer transportation services | <ul style="list-style-type: none"> • Transportation-to all services, long-distance and locally • Cancer support services • Workforce shortage • Local chemo-radiation treatment • Dentists • Local specialty medical services for older adults |

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 regular physical activity reduce the risk for many chronic conditions and are 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

Many community forum participants identified obesity as an issue for youth, adults, and older adults. Forum participants and key informants, including school nurses, suggested several reasons for the increase in obesity including eating habits (unhealthy and not enough food), sedentary lifestyles at home and work, limited time for physical activity in school, lack of health education, and too much screen time.

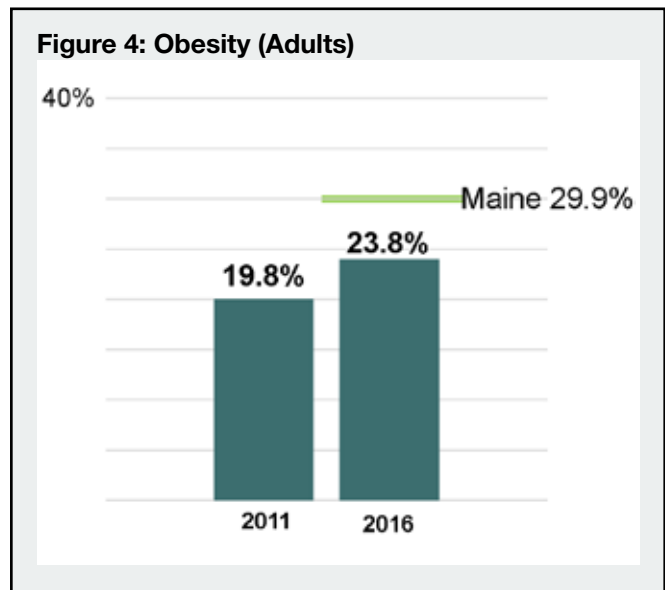
Participants identified many local community programs working to combat some of these issues, but felt there were opportunities to increase awareness and access to these resources. Other suggestions to address issues in this area were early identification, education for youth and adults, gardening, and making healthy food more affordable.

QUANTITATIVE EVIDENCE

In Lincoln County:

- The percentage of adults who are obese increased between 2011 and 2016, from 19.8% to 23.8%.
- The percentage of high school students who met physical activity recommendations decreased between 2013 and 2017, from 24.8% to 21.5%.
- The percentage of adults who reported having less than one serving of vegetables a day increased between 2013 and 2015, from 10.9%* to 16.5%.

**Due to small numbers, results should be interpreted with caution.*



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

COMMUNITY RESOURCES TO ADDRESS PHYSICAL ACTIVITY, NUTRITION, AND WEIGHT

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

Table 6: Assets and Gaps/Needs (Physical Activity, Nutrition, and Weight)

| ASSETS | GAPS/NEEDS |
|---|--|
| <ul style="list-style-type: none"> • Central Lincoln County (CLC) and Boothbay YMCAs Diabetes Prevention Programs and other programming • FARMS at the Y Program - CLC YMCA • Spectrum Generation programs • Let's Go! • Supplemental Nutrition Assistance Program Education (SNAP-Ed) • LincolnHealth Dietitians • Food Pantries • Twin Village Food Bank • Local Farms • Backpack program • Hidden Valley Nature Center • Boothbay Region Community Resource Council programs • LincolnHealth's Coulombe Center • Wiscasset Community Center • Nature trails and preserves • School Activities • LincolnHealth annual community-wide winter physical activity challenge • A Matter of Balance Program • Lincoln County Gleaners • Local school programs | <ul style="list-style-type: none"> • More connections with food service and families to promote healthy meals • Adult education on physical activity/nutrition • Affordable healthy food options • Sidewalks • Farming/gardening • Early identification services |

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

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

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 issues, hypertension, and obesity.⁹

QUALITATIVE EVIDENCE

A dominant theme from key informant interviews and community forums was the tremendous impact that the underlying social determinants, particularly housing, transportation, and food insecurity, have on residents in Lincoln County. Access to affordable and reliable forms of transportation is problematic; many older adults and individuals without access to a personal vehicle have difficulty accessing health

services, employment, and needed goods and services due to transportation issues. Participants also identified a need for more affordable housing. For older adults, social isolation was discussed to contributing to poor health, and is linked to challenges in accessing transportation, particularly in rural areas.

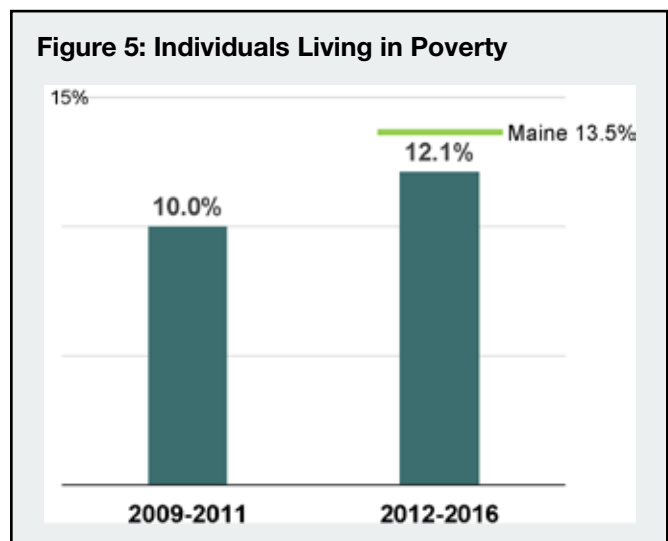
Forum participants felt that while there are many resources to address food insecurity, such as food pantries, community suppers, and the Healthy Lincoln County Summer Meals program, there are challenges in getting services and support out to people in need.

At the root of these issues is poverty; those in poverty are often deprived of access to health, community, and social resources, which perpetuates physical and mental health issues.¹⁰ Many conditions that contribute to poverty, such as under-employment, lack of job training, and lack of education, were identified as issues in Lincoln County. Finding employment opportunities for those in recovery from a substance use disorder was discussed as a particular need to support health and recovery.

QUANTITATIVE EVIDENCE

In Lincoln County:

- The unemployment rate was the same as the state overall (3.8%) in 2015–2017.



- The percentage of individuals living in poverty increased between 2009-2011 and 2012-2016, from 10.0% to 12.1%.
- The percentage of children living in poverty was higher than the state overall (18.5% vs. 17.2%) in 2012–2016.

- In Lincoln County, 13.4% 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 20 as well as companion Health Profiles on our website www.mainechna.org. Those documents also include information on data sources and definitions.

COMMUNITY RESOURCES TO ADDRESS SOCIAL DETERMINANTS OF HEALTH

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

Table 7: Assets and Gaps/Needs (Social Determinants of Health)

| ASSETS | GAPS/NEEDS |
|--|--|
| <ul style="list-style-type: none"> • YMCA • Boothbay Region Community Resource Council • Low unemployment rate • Many jobs available • Food pantries • Community suppers • Healthy Kids! • Healthy Lincoln County’s Summer Meals and other programs • Central Maine Community College’s Nursing Program, partnering with LincolnHealth • LincolnHealth’s Certified Nursing Assistant Program, administered by Central Lincoln County Adult Education • Spectrum Generation’s Meals on Wheels Program • Variety of local scholarship programs | <ul style="list-style-type: none"> • Workforce • Housing • Job training • Forum on how social determinants affects all aspects of well-being • Transportation • Financial wellness • Risk and protective factors • 40 developmental assets |

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.” 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 the older population.

QUALITATIVE EVIDENCE

Forum participants and key informants identified a need for many services and programs to improve quality of life for older adults, including opportunities for exercise and activities, and accessible and affordable transportation.

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. Forum participants identified depression and isolation as two critical issues for this population. Older adults experience loneliness for many reasons; it may result from living alone, limited connections with family, friends, or communities, and impediments to living independently. With aging in place as a preferred lifestyle, concerns around isolation become more significant.

Participants also felt there needed to be more support for caregivers, and more educational opportunities for children of aging parents. Caregiver burden, the stress felt by those who provide care to individuals with a variety of conditions, is a chronic stressor that places both the caregiver and the one who requires care at risk for negative health outcomes.¹¹

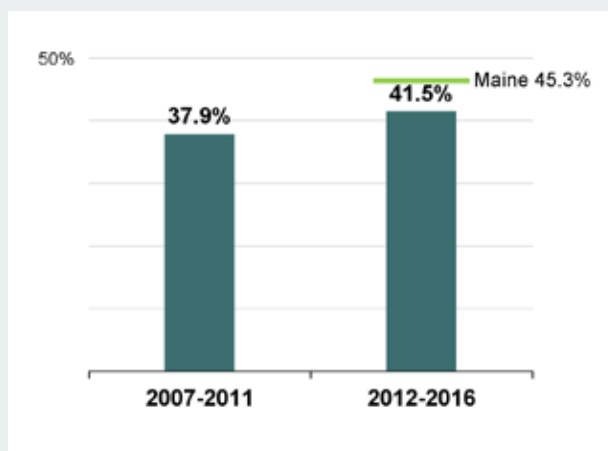
QUANTITATIVE EVIDENCE

In Lincoln County:

- The percentage of the population 65+ living alone increased between 2007-2011 and 2012-2016, from 37.9% to 41.5%.
- The percentage of adults who provided at least 20 hours of caregiving a week to a friend or family member with a health problem or disability was higher than the state overall (5.5% vs. 4.4%) in 2015.
- Fall-related deaths (unintentional) per 100,000 increased between 2007-2011 and 2012-2016, from 4.8* to 6.6.

**Due to small numbers, interpret with caution.*

Figure 6: Individuals 65+ Living Alone



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

COMMUNITY RESOURCES TO ADDRESS 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 8: Assets and Gaps/Needs (Older Adult Health/Healthy Aging)

| ASSETS | GAPS/NEEDS |
|--|--|
| <ul style="list-style-type: none"> • Spectrum Generations Meals on Wheels • Lunch and Learn programs at Central Lincoln County YMCA • ElderCare Network • Electronic monitoring • Central Lincoln County and Boothbay Harbor YMCAs • Livestrong at the YMCA • LincolnHealth Support Groups, i.e. Chronic Obstructive Pulmonary Disease and Alzheimer's • LincolnHealth's Elder Care Services • MaineHealth Care at Home (home health) • Senior Buddies • Silver Sneakers at the Y • Trails and outdoor recreation • LincolnHealth/MaineHealth chronic care management programs • MaineHealth's Alzheimer's Disease Partnership Program | <ul style="list-style-type: none"> • Education for children of aging parents • Transportation • Caregiver support • More living and transitioning programs • Telemedicine • Support groups • Grocery delivery • Expand times for public transport • Volunteer frequency |

COMMUNITY CHARACTERISTICS

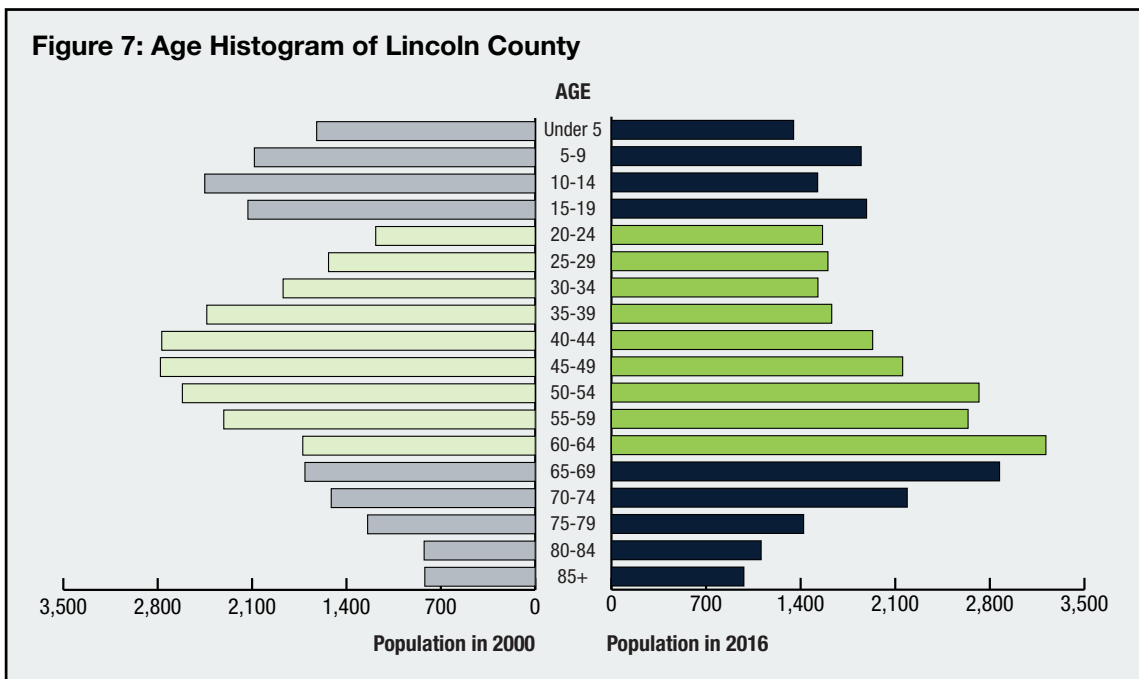
AGE DISTRIBUTION

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

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

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

- The population over the age of 65 in Lincoln County is 25.6%. It is one of two counties in which 24-25% of the population is over the age of 65.



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 U.S. 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.

In Lincoln County:

- The population is predominantly White (97.0%); 1.5% are Asian, and 1.0% are Hispanic.

Due to challenges in accurately counting the number of immigrants, refugees, asylum seekers, and migrant workers, it is highly likely the reported numbers of foreign-born are under-represented. Among those who may not be counted, but whose circumstances may warrant this status, including American-born children of these groups, and secondary migrants.

Table 9: Race/Ethnicity in Lincoln County 2012-2016

| | PERCENT/NUMBER |
|--------------------------------|----------------|
| American Indian/Alaskan Native | 0.5% / 159 |
| Asian | 1.5% / 517 |
| Black/African American | 0.1% / 51 |
| Hispanic | 1.0% / 352 |
| Some other race | 0.1% / 20 |
| Two or more races | 0.8% / 265 |
| White | 97.0% / 33,153 |

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.¹⁹ 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 Lincoln County to the state overall.

Additionally, in Lincoln County:

- The estimated high school graduation rate was higher than the state overall (88.0% vs. 86.9%) in 2017.
- The percent of the population over 25 with an associates' degree or higher was higher than the state overall in 2017 (39.8% vs. 37.3%) in 2012-2016.

Table 10: Socioeconomic Status

| | LINCOLN/MAINE |
|-------------------------------|---------------------|
| Median household income | \$53,515 / \$50,826 |
| Unemployment rate | 3.8% / 3.8% |
| Individuals living in poverty | 12.1% / 13.5% |
| Children living in poverty | 18.5% / 17.2% |
| 65+ living alone | 41.5% / 45.3% |

SPECIAL POPULATIONS

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

Older Adults

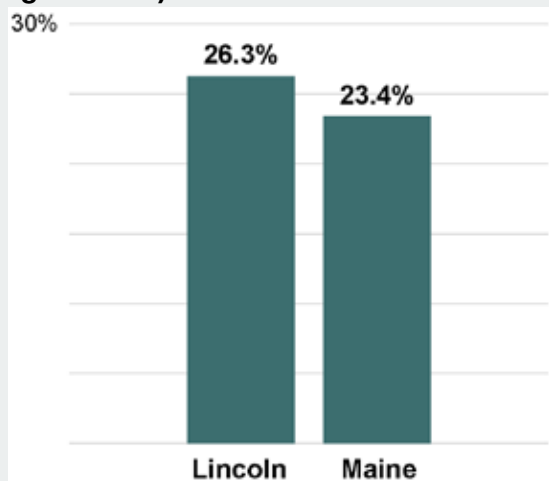
Maine is the oldest state in the nation by median age. Older adults are more likely to develop chronic illnesses and related disabilities, such as heart disease, hypertension, diabetes, depression, anxiety, Alzheimer’s disease, Parkinson’s disease, and dementia. They also lose the ability to live independently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

Youth

Community forums identified youth as a priority population. Specific issues of concern were youth mental health issues (specifically depression and stress), substance use, 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 disorder services, without parent permission. LGBTQ youth specifically were also identified as an at-risk population. Many of their concerns mirror those of their straight or cisgender peers, but LGBTQ youth face consistently worse health outcomes including mental health, suicidal ideation, and substance use disorder, often as a result of bullying or discrimination. Lincoln County LGBTQ youth identified as priorities mental health and improved sexual education that teaches students about non-cisgender and non-heterosexual people and relationships as priorities. Most of these priorities were also identified by students who participated in forums held for high school students.

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.

Figure 8: Adverse Child Experiences, 2017 (High School)



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

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

| | LINCOLN COUNTY DATA | | | BENCHMARKS | | | |
|---|-----------------------|-----------------------|--------|-----------------------|-----|----------------------|-----|
| KEY INDICATOR | POINT 1 | POINT 2 | CHANGE | MAINE | +/- | U.S. | +/- |
| SOCIAL, COMMUNITY & PHYSICAL ENVIRONMENT | | | | | | | |
| Children living in poverty | — | 2012-2016 18.5% | N/A | 2012-2016 17.2% | N/A | 2016 21.1% | N/A |
| Median household income | 2007-2011 \$48,862 | 2012-2016 \$53,515 | N/A | 2012-2016 \$50,826 | N/A | 2016 \$57,617 | N/A |
| Estimated high school student graduation rate | 2014 88.9% | 2017 88.0% | N/A | 2017 86.9% | N/A | — | N/A |
| Food insecurity | 2012-2013 13.2% | 2014-2015 13.4% | N/A | 2014-2015 15.1% | N/A | 2015 13.4% | N/A |
| HEALTH OUTCOMES | | | | | | | |
| 14 or more days lost due to poor physical health | 2011-2013 17.4% | 2014-2016 17.3% | ○ | 2014-2016 19.6% | ○ | 2016 11.4% | N/A |
| 14 or more days lost due to poor mental health | 2011-2013 14.7% | 2014-2016 11.8% | ○ | 2014-2016 16.7% | ★ | 2016 11.2% | N/A |
| Years of potential life lost per 100,000 population | 2010-2012 6,156.8 | 2014-2016 6,887.6 | ○ | 2014-2016 6,529.2 | ○ | 2014-2016 6,658.0 | N/A |
| All cancer deaths per 100,000 population | 2007-2011 171.8 | 2012-2016 164.4 | ○ | 2012-2016 173.8 | ○ | 2011-2015 163.5 | ○ |
| Cardiovascular disease deaths per 100,000 population | 2007-2011 203.9 | 2012-2016 187.0 | ○ | 2012-2016 195.8 | ○ | 2016 218.2 | ★ |
| Diabetes | 2011-2013 9.1% | 2014-2016 8.6% | ○ | 2014-2016 10.0% | ○ | 2016 10.5% | ○ |
| Chronic obstructive pulmonary disease (COPD) | 2011-2013 7.0% | 2014-2016 6.6% | ○ | 2014-2016 7.8% | ○ | 2016 6.3% | ○ |
| Obesity (adults) | 2011 19.8% | 2016 23.8% | ○ | 2016 29.9% | ○ | 2016 29.6% | ★ |
| Obesity (high school students) | — | 2017 13.5% | N/A | 2017 15.0% | ○ | — | N/A |
| Obesity (middle school students) | 2015 13.6% | 2017 18.7% | ○ | 2017 15.3% | ○ | — | N/A |
| Infant deaths per 1,000 live births | 2007-2011 4.1* | 2012-2016 6.6* | N/A | 2012-2016 6.5 | ○ | 2012-2016 5.9 | ○ |
| Cognitive decline | 2012 19.5*% | 2016 8.2*% | ★ | 2016 10.3% | ○ | 2016 10.6% | ○ |
| Lyme disease new cases per 100,000 population | 2008-2012 35.4 | 2013-2017 193.4 | N/A | 2013-2017 96.5 | N/A | 2016 11.3 | N/A |
| Chlamydia new cases per 100,000 population | 2008-2012 139.3 | 2013-2017 189.9 | 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 401.7 | 2012-2014 294.4 | ★ | 2012-2014 340.9 | ★ | — | N/A |
| Suicide deaths per 100,000 population | 2007-2011 18.9 | 2012-2016 16.8 | ○ | 2012-2016 15.9 | ○ | 2016 13.5 | ○ |
| Overdose deaths per 100,000 population | 2007-2011 8.4 | 2012-2016 19.2 | ○ | 2012-2016 18.1 | ○ | 2016 19.8 | ○ |

| KEY INDICATOR | LINCOLN COUNTY DATA | | | BENCHMARKS | | | |
|--|---------------------|--------------------|--------|-------------------|-----|---------------|-----|
| | POINT 1 | POINT 2 | CHANGE | MAINE | +/- | U.S. | +/- |
| HEALTH CARE ACCESS AND QUALITY | | | | | | | |
| Uninsured | 2009-2011 11.4% | 2012-2016 11.4% | N/A | 2012-2016 9.5% | N/A | 2016 8.6% | N/A |
| Ratio of primary care physicians to 100,000 population | — | 2017 60.2 | N/A | 2017 67.3 | N/A | — | N/A |
| Ratio of psychiatrists to 100,000 population | — | 2017 0.0 | N/A | 2017 8.4 | N/A | — | N/A |
| Ratio of practicing dentists to 100,000 population | — | 2017 20.8 | N/A | 2017 32.1 | N/A | — | N/A |
| Ambulatory care-sensitive condition hospitalizations per 10,000 population | — | 2016 86.8 | N/A | 2016 74.6 | N/A | — | N/A |
| Two-year-olds up-to-date with recommended immunizations | 2014 63.5% | 2017 73.1% | N/A | 2017 73.7% | N/A | — | N/A |
| HEALTH BEHAVIORS | | | | | | | |
| Sedentary lifestyle – no leisure-time physical activity in past month (adults) | 2011 26.4% | 2016 17.2% | ○ | 2016 20.6% | ○ | 2016 23.2% | N/A |
| Chronic heavy drinking (adults) | 2011-2013 8.4% | 2014-2016 9.0% | ○ | 2014-2016 7.6% | ○ | 2016 5.9% | N/A |
| Past-30-day alcohol use (high school students) | — | 2017 19.3% | N/A | 2017 22.5% | ○ | — | N/A |
| Past-30-day alcohol use (middle school students) | 2011 6.9% | 2017 3.4% | ○ | 2017 3.7% | ○ | — | N/A |
| Past-30-day marijuana use (high school students) | — | 2017 21.9% | N/A | 2017 19.3% | ○ | — | N/A |
| Past-30-day marijuana use (middle school students) | 2011 2.6% | 2017 2.9% | ○ | 2017 3.6% | ○ | — | N/A |
| Past-30-day misuse of prescription drugs (high school students) | — | 2017 5.3% | N/A | 2017 5.9% | ○ | — | N/A |
| Past-30-day misuse of prescription drugs (middle school students) | 2011 2.4% | — | N/A | 2017 1.5% | N/A | — | N/A |
| Current (every day or some days) smoking (adults) | 2011-2012 18.6% | 2016 19.9% | ○ | 2016 19.8% | ○ | 2016 17.0% | N/A |
| Past-30-day cigarette smoking (high school students) | — | 2017 9.6% | N/A | 2017 8.8% | ○ | — | N/A |
| Past-30-day cigarette smoking (middle school students) | 2011 3.4% | 2017 1.8% | ○ | 2017 1.9% | ○ | — | N/A |

Leading Causes of Death

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

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

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 Health Poverty Action. (2018, January 10). Key facts: Poverty and poor health. Retrieved from <https://www.healthpovertyaction.org/news-events/key-facts-poverty-and-poor-health/>
- 11 Slaboda, J., Fail, R., Norman, G., & Meier, D.E. A study of family caregiver burden and the imperative of practice change to address family caregivers' unmet needs. (2018, January 11). Retrieved from <https://www.healthaffairs.org/doi/10.1377/hblog20180105.914873/full>
- 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
- 19 Zimmerman, Population Health

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.

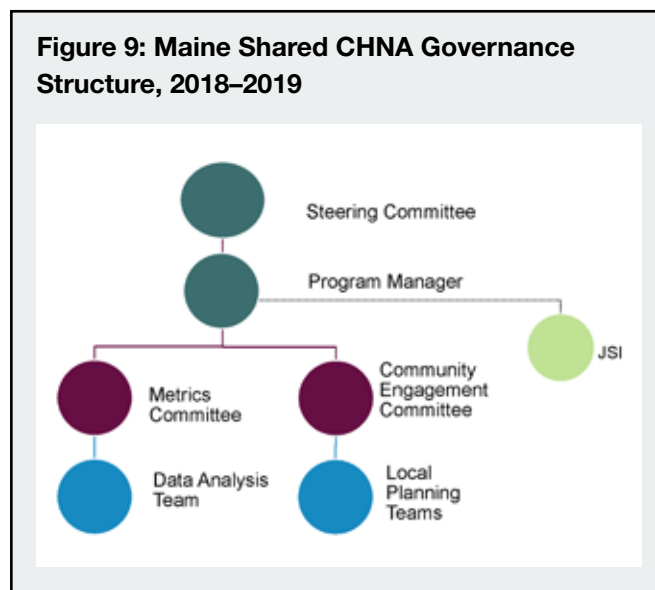
The Maine Shared CHNA is intended to coordinate state and county needs assessments to meet the needs of hospitals, to support state and local public health accreditation efforts, and to provide valuable population health assessment data for a wide variety of organizations across Maine. Our vision is 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 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 Health Centers, academia, non-profits, and others with experience in epidemiology.

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



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

APPENDIX C: METHODOLOGY

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

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

Data Analysis

- **County Health Profiles** were released in September 2018. Two hundred indicators were selected to describe health outcomes, health behaviors, healthcare access and quality, and the social, community, and physical environments that affect health and wellness. See Lincoln County Health Profile on 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 the spring of 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?
- Does it describe an emerging health issue?
- Does it measure something “actionable” or “impactful”?
- Does the indicator measure an issue that is known to have high health and social costs?

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

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

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

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

OUTREACH AND ENGAGEMENT

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

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

Data Health Profiles include:

- 1 State Health Profile
- 16 County Health Profiles
- 5 Public Health District Profiles (One for each of the geographically-based multi-county district.)
- 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.

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.

Lincoln County Forums

Five community engagement activities were held in Lincoln County.

Table 10: Community engagement activities in Lincoln County, 2018

| TYPE OF ENGAGEMENT | LOCATION & DATE | FACILITATOR | ATTENDEES |
|--------------------|-------------------------|--------------------------|-----------|
| Community Forum | Newcastle 11/13/2018 | JSI | 84 |
| Community Forum | Newcastle 11/30/2018 | Local Planning Committee | 392 |
| Community Forum | Damariscotta 12/05/2018 | Local Planning Committee | 15 |
| Community Forum | Newcastle 11/13/2018 | Local Planning Committee | 5 |
| Community Forum | Wiscasset 12/13/2018 | Local Planning Committee | 8 |

COMMUNITY ENGAGEMENT

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

- AOS 93 teacher
- AOS 93, School Nurse
- AOS 93, School Nutrition Director
- Boothbay Region Community Resource Council
- Boothbay Region Health Center
- Boothbay Region Resource Center, Navigator
- Boothbay Region YMCA
- Central Lincoln County Adult & Community Education
- Central Lincoln County YMCA
- Coastal Kids Preschool
- Community Member
- Eldercare Network of Lincoln County
- Family physician
- HC Food Systems and Nutrition Consulting
- Healthy Kids
- Healthy Lincoln County
- Healthy Lincoln County/MCD Public Health
- Home Care for Maine
- Lincoln Academy School Health Center
- Lincoln County Dental
- Lincoln County FISH Transportation
- Lincoln County Government
- Lincoln County Sheriff's Office
- Lincoln health miles
- LincolnHealth
- LincolnHealth Administration
- LincolnHealth Coulombe Center
- LincolnHealth Education and Community Health
- LGBTQ students
- Mackey
- Maine Behavioral Healthcare
- Maine CDC
- MaineHealth Care at Home

- Maine Public Health Association
- Maine Department of Transportation
- MaineHealth
- MaineHeath Care Partners
- MedAccess
- Midcoast Conservancy
- Midcoast Lyme Disease Support & Education
- Midcoast Maine Community Action-Head Start
- Midcoast Public Health District
- Mobius, Inc.
- New Hope for Women
- Restoration Resources
- Retired Community Member
- Retired Compeer Director -Mental Health Advocate
- Sexual Assault Support Services of Midcoast Maine
- Spectrum Generations
- The Community Center
- The Lincoln Home
- Town of Bristol
- Trustee
- Twin Villages Foodbank Farm
- United Way of Mid Coast Maine
- Waldoboro Select Board
- Students

Key informant interviews

The Steering Committee identified several 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. 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 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

Community Engagement Continued:

- Maine Alliance to Prevent Substance Abuse
- Maine Chapter Multiple Sclerosis Society
- Maine Council on Aging
- Maine Migrant Health
- Maine Seacoast Mission
- Millinocket Chamber of Commerce
- National Alliance on Mental Illness
- Nautilus Public Health
- Northern Light Maine Coast Hospital
- Office of Aging and Disability Services
- Penquis 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

Final CHNA reports for the state, each county, and districts were released in the spring of 2019. These were used to develop health improvement plans to address the identified health priorities and evaluate previous actions taken. In the upcoming years policy makers, non-profits, businesses, academics, and other community partners may also use these reports to inform their strategic planning, policy making, or grant writing purposes.

For more information, contact: info@mainechna.org

