

# The Way Health Should Be

How where we live,  
learn, work, and play  
affects our health



Social Determinants of  
Health in Maine

2019



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# INTRODUCTION



Good health is important for all of Maine’s residents; it is a driver of quality of life, our economy, and productivity. However, health, disease, and death are not equally distributed across our population.

Dramatic differences in health exist across the State that are not due to genetics and individual behavior, but are due to social disadvantage. Illness tends to be more concentrated among some groups compared to others, specifically among those with lower incomes, persons of color, and those living in certain geographic areas. These are avoidable health disparities due to inequities in where people live, work, learn, and play, due to age, and due to the systems designed to provide care. These inequities can be found in schooling, child care, employment opportunities, workplace conditions, the built environment, and the natural environment. They can enhance or limit our options to make healthy choices or receive needed care. Often these inequities are based on historical as well as current practices or policies that diminish opportunities for some individuals more than others.

If Maine wants a healthy and productive state population, it is important to examine how living here influences our health and well-being, and to strive for health equity for all.

To achieve **health equity**, we need to reduce the differences in health due to systematic social or economic disadvantage. Health equity is the “attainment of the highest level of health for all people.”<sup>1</sup>

**Health Disparities** are differences in health outcomes by social, demographic, economic, environmental, or geographic attributes that are thought to reflect historic or current disadvantage.<sup>1</sup> Progress toward health equity is measured through monitoring changes in health disparities over time.<sup>1</sup>

**Health Inequities** are differences in health that are avoidable, unfair, and unjust.<sup>1</sup> Many health disparities are also health inequities.<sup>3</sup>

Health inequities can be caused by:

- **Social conditions:** A person or group being treated differently because of their race, sex, class, sexual orientation, or immigration status.
- **Economic conditions:** Unequal access to educational and employment opportunities influence income.
- **Environmental conditions:** Where you live affects your health due to neighborhood conditions, economic opportunities, school quality, access to healthy food, opportunities for physical activity, exposure to violence, exposure to environmental harms, and social support.

Depending on where a person lives and their lived experiences, they will have different opportunities for optimal learning, economic security, health and wellness activities, health services, and social support. These factors are often referred to as **social determinants of health**.<sup>1</sup>

Healthy People 2020 organizes social determinants of health (SDOH) into five key areas:

- Economic Stability
- Education
- Social and Community Context
- Health and Health Care
- Neighborhood and the Built Environment



Healthy People 2020<sup>5</sup>

Social determinants include factors such as poverty, unemployment, poor education, inadequate housing, exposure to violence and discrimination, lack of transportation, and unhealthy and unsafe physical environments. If given a choice, most people want to live and raise their children in communities with safe drinking water, clean air, affordable and safe housing, good schools, high quality health care, job opportunities, and a feeling of connectedness with others. However, many individuals, especially individuals with lower incomes, have limited choices, contributing to health inequities.

There is not one single community characteristic or set of characteristics that leads to health inequities. It is critical to consider factors that influence health across multiple sectors such as the home, community, state systems, and the natural environment. It is also essential to recognize that the impact of many of these factors begins in early childhood and can have lasting effects over the life course.

Social determinants of health can be modified; inequities across these factors can be eliminated through community and policy action.

This report is structured based on the social-ecologic model of health. Four core principles explain the ways the socio-ecological model affects community health.<sup>2</sup>

1. Health status, emotional well-being, and social cohesion are influenced by an individual's environment as well as behavior, genetics or psychology.
2. The same environment affects people differently.
3. Individuals and populations interact in multiple environments that influence each other. These environments might include the workplace, schools, neighborhoods, towns, counties, etc.
4. Leverage points are places within a system where a change can improve health and well-being. Examples of these leverage points include the physical environment, available resources, and social norms.

The order of the chapters in this report reflects environments impacting our health that are closest to us first (i.e., relationships, family, our home). This is followed by discussions of other environments we live in, including schools, neighborhoods, and the natural environment, as well as descriptions of structural and systemic influences on health, such as employment, poverty, and discrimination.



The goal of this report is to highlight the relationships between health and social inequities in education, income, employment, housing, environment (such as air and water quality), access to healthy foods, social support, and access to health care by presenting data on key social determinants in Maine.

Specifically, this report addresses the following questions:

1. **What are social determinants of health?**
2. **How are social determinants related to disease and other health outcomes in Maine?**
3. **How are social determinants of health distributed in Maine's population?**

This report describes disparities using Maine data whenever possible. For more information on data available to describe health inequalities in Maine, please refer to the Maine CDC report, [\*Using Data to Promote Health Equity in Maine, 2016\*](#).<sup>3</sup>

There are many social determinants of health that are not captured in traditional public health data systems or are difficult to adequately capture (e.g., discrimination). However, we hope this report contributes to the conversation of how to improve the health of Mainers by addressing the underlying factors of many diseases or conditions.

<sup>1</sup> Healthy People 2020. Washington, DC: U.S. Department of Health and Human Services, Office of Disease Prevention and Health. Available from: <https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health>

<sup>2</sup> Stokols, D. (1996). Translating Social Ecological Theory into Guidelines for Community Health Promotion. *American Journal of Health Promotion*, 10(4), 282-298. doi:10.4278/0890-1171-10.4.282

<sup>3</sup> Lichter EL, Morian-Lozano E, Teach F, Poirier B, Green-Parsons A, Pizzonia C. Using Data to Promote Health Equity: Maine 2016. Augusta, ME: Maine Center for Disease Control and Prevention; 2016. [https://www.maine.gov/dhhs/mecdc/documents/Health-Equity-Report\\_Final\\_3.20.17.pdf](https://www.maine.gov/dhhs/mecdc/documents/Health-Equity-Report_Final_3.20.17.pdf)



## SOCIAL RELATIONSHIPS AND HEALTH



Health begins at home within our families and communities. Humans need loving, supportive, and protective relationships to thrive. Our relationships shape our health throughout our lives. When our bonds with others break down, so does our health.

These connections can include family, friends, community organizations, religious institutions, or employers.

Our relationships can be *informal*, such as with friends and neighbors, or *formal*, which could include volunteering with community organizations.

When considering social relationships, it is important to consider frequency of contact and involvement, and the quality of these relationships.

Social isolation is the absence of meaningful relationships with others.

Having social relationships means being connected to other individuals and our communities.

# 84%

**of Maine adults feel that they always or usually have the emotional support they need.<sup>1</sup>**

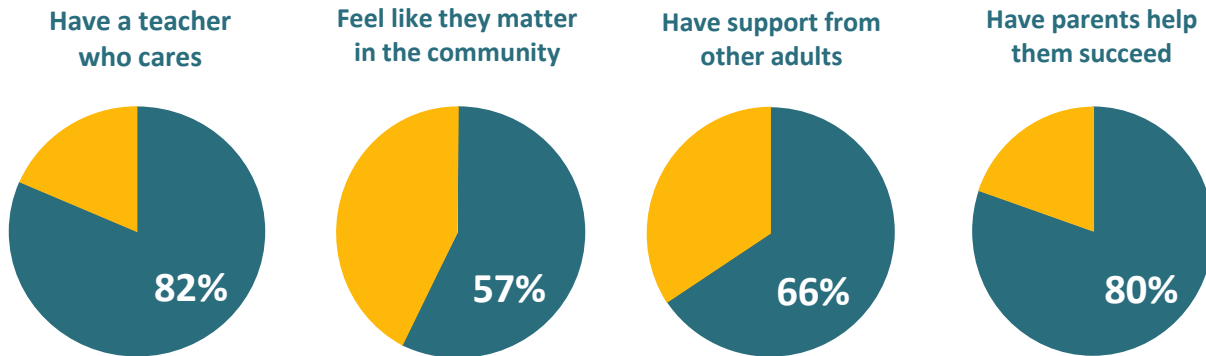
- 98% of Maine adults have dinner with any members of their household at least once a month.<sup>2</sup>
- 96% see or hear from family (non-household) or friends at least once a month.<sup>2</sup>

# 82%

**of Maine high school students have a family that loves and supports them.<sup>3</sup>**

- Over 80% of high school students in Maine have a teacher who cares about them and/or have a parent who helps them succeed.<sup>3</sup>
- Two out of three high school students have support from an adult other than a parent.<sup>3</sup>
- More than half of high school students feel like they matter in their community.<sup>3</sup>

**Most Maine high school students have support within their schools, communities, and homes.**



Maine Integrated Youth Health Survey, 2017

**Connectedness to one’s community can be measured by how frequently we engage with neighbors and the level of support and trust we have in them.**

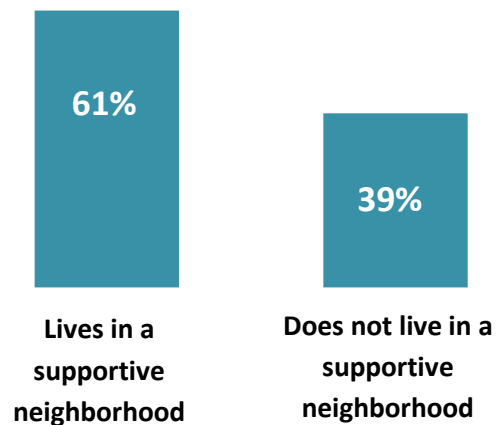
**56%**

**of Maine parents live in a neighborhood where people help each other; watch out for each other’s children; and they know where to go for help in their community.<sup>4</sup>**

- More than 3 in 4 (77%) of Maine adults talk with their neighbors at least once a month.<sup>2</sup>
- 65% of Maine adults have done a favor for a neighbor.<sup>2</sup>

Living in a supportive neighborhood is associated with family resiliency (defined as families working and talking together to solve problems, knowing they have strengths to draw on, and staying hopeful even in difficult times).<sup>4</sup>

**Among Maine families who live in supportive neighborhoods, 61% demonstrate family resiliency compared to 39% of those not living in supportive neighborhoods.<sup>4</sup>**



National Survey of Children’s Health, 2016

The opportunity to live in a supportive neighborhood is often influenced by factors, such as income, employment opportunities, and available housing. It is likely that factors that allow families to live in supportive neighborhoods also promote family resiliency.

**Community connectedness can also be assessed by one’s degree of civic engagement, which can include volunteering and engagement in politics, such as voting.**

**In 2016, Maine’s voter turnout rate of 73% was the**

**2<sup>nd</sup>**

**highest in the U.S.<sup>5</sup>**

In Maine, 31% of adults volunteer in their community. This is higher than the national average of 25%.<sup>6</sup>

**Healthy relationships are important for lifelong physical and mental well-being.**

Relationships with others can impact health by:

- Buffering the effects of stress;
  - Enhancing psychological well-being; and/or
  - Encouraging or discouraging healthy behaviors.<sup>7</sup>
- Those with support from others are more likely to live longer and recover faster from illness.<sup>8,9</sup>

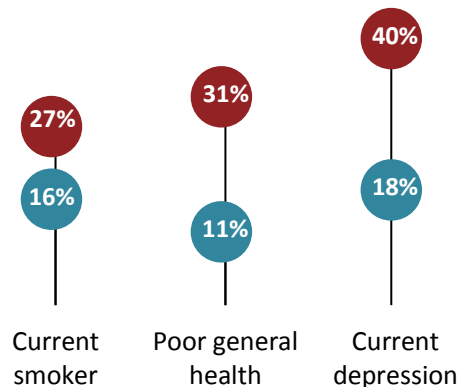
- Individuals who are socially isolated are at greater risk for diseases such as heart disease,<sup>10</sup> and are more likely to engage in unhealthy behaviors, such as smoking and unhealthy eating.<sup>7</sup>
- Positive relationships encourage healthy behavior, and can help lessen the effects of stress on mental and physical health.<sup>7</sup>

**In Maine, adults and youth with positive relationships have better health.**

- Maine adults who have emotional support from others are less likely to smoke compared to those without the support they need.<sup>1</sup>
- Maine adults without emotional support are two times more likely to suffer from depression and almost three times more likely to report that their overall health is fair or poor.<sup>1</sup>

**Maine adults with emotional support are in better health.**

● No Support ● With Emotional Support



Behavioral Risk Factor Surveillance System, 2010

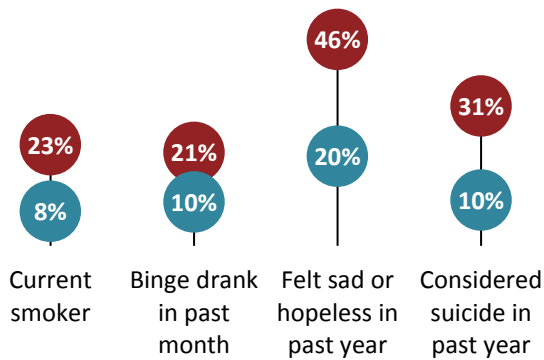
- Maine high school students whose parents talk to them about school are less likely to consider suicide.<sup>11</sup>
- Among students who do not feel that their families are supportive, almost half felt sad or hopeless during the past year.<sup>11</sup>

# 1 in 3

**Maine high school students who report that their parents do not love and support them considered suicide in the past year compared to 1 in 10 who reported their parents did love and support them.<sup>11</sup>**

**Maine high school students who feel like their parents give them love and support are less likely to engage in risk behaviors.<sup>11</sup>**

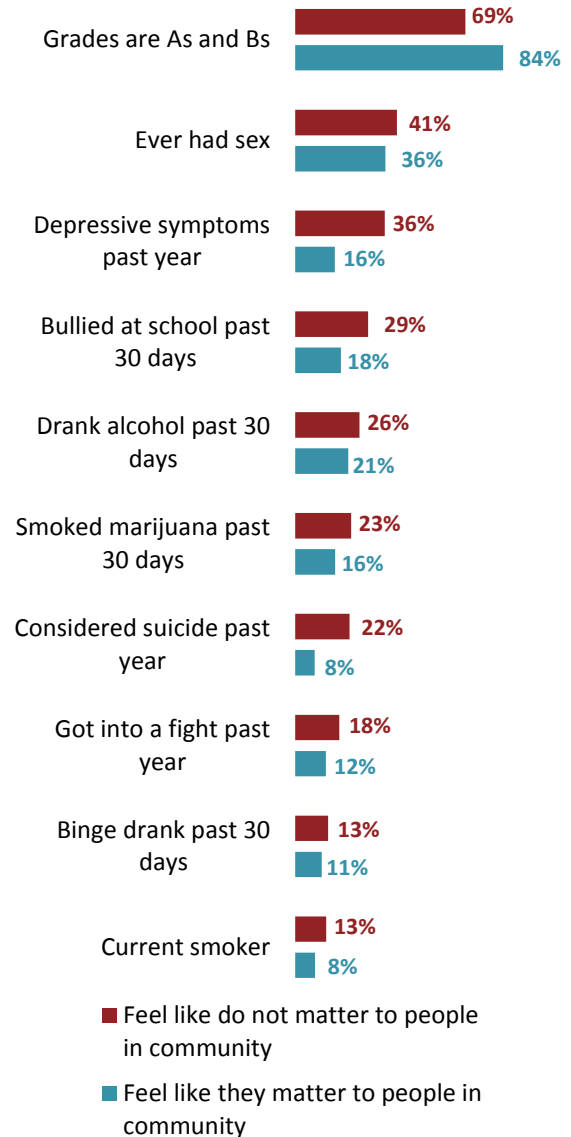
- Family does not give love and support
- Family gives love and support



Maine Integrated Youth Health Survey, 2015

**Maine high school students who feel like they matter to people in their community are less likely to engage in risk behaviors.<sup>11</sup>**

Percent of those who feel they don't matter vs. matter by student characteristics.



Maine Integrated Youth Health Survey, 2015

**Abusive and toxic relationships can cause long-term damage to physical and emotional health.**

Unfortunately, not everyone has a strong support system that fosters health.

Relationships characterized by violence and abuse negatively affect child growth and development and can lead to chronic health conditions.

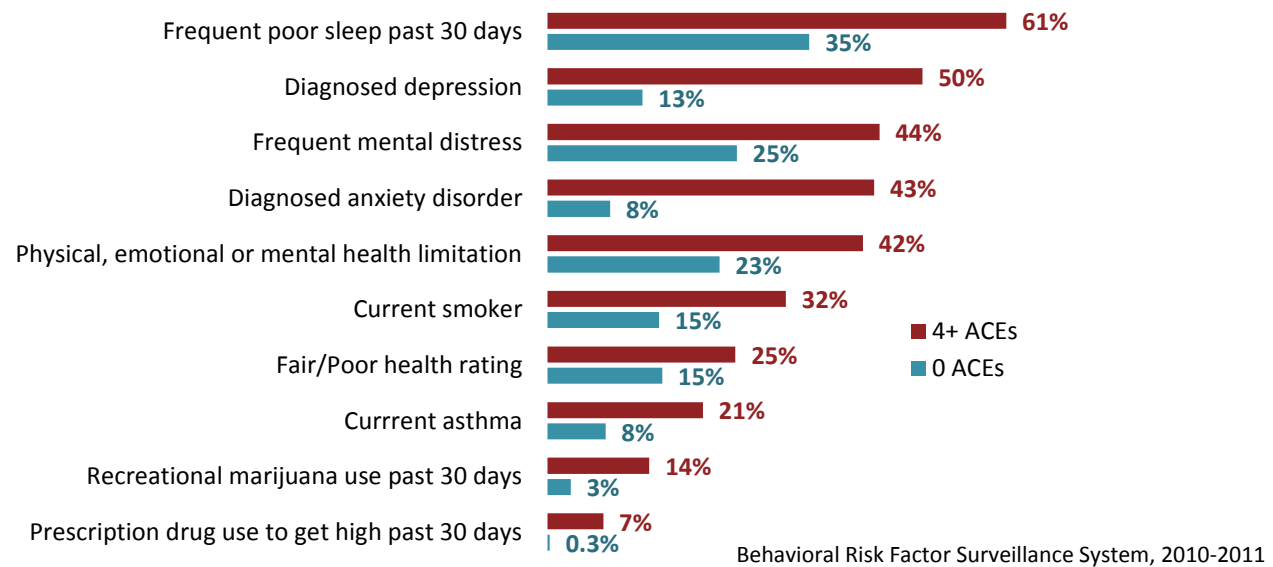
One well-known study called the Adverse Childhood Experiences (ACE) study found that adults who experience multiple traumatic events during childhood such as abuse, parental death, separation or absence, or parental substance use or mental illness, are more likely to have chronic diseases or mental illness as adults.<sup>12</sup>

In Maine, data on adult experiences with ACEs are available from Maine’s Behavioral Risk Factor Surveillance System (BRFSS). Data on children’s experiences with ACEs can be found on the National Survey of Children’s Health and the 2017 Maine Integrated Youth Health Survey.<sup>3,4</sup> It is important to note that the types of ACEs collected on these surveys are different and the cut-offs (i.e., three or more ACEs vs. four or more) vary depending on the data source.

Adults with adverse childhood experiences are more likely to:

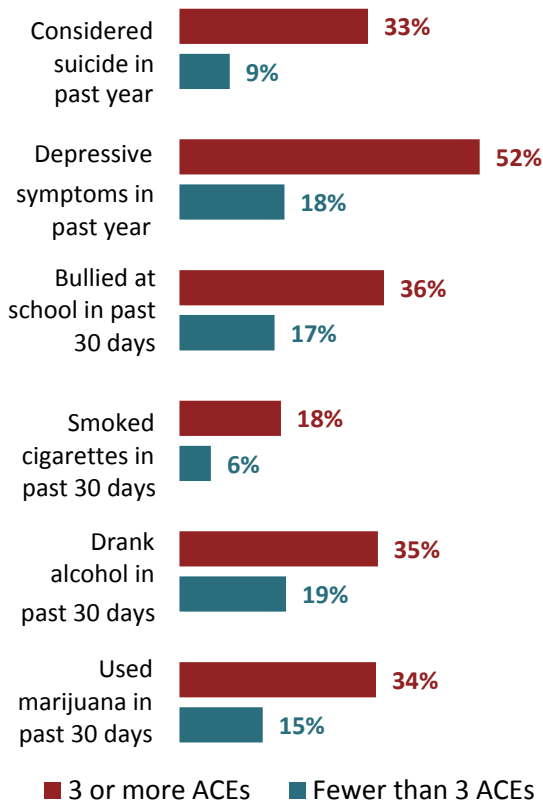
- rate their health as fair or poor;
- have asthma;
- be limited by a physical, emotional, or mental health problem;
- have been diagnosed with anxiety and/or depression;
- have frequent mental distress;
- smoke cigarettes; and/or
- misuse drugs.<sup>13</sup>

**Adults with four or more adverse childhood experiences (ACEs) have worse health.**



- Maine high school students who have three or more adverse childhood experiences are about three times more likely to have considered suicide or have depressive symptoms within the past year compared to adolescents who experienced fewer than three ACEs.<sup>3</sup>
- Maine high school students with three or more ACEs are more likely than those with fewer ACEs to have been bullied, and to smoke, drink alcohol, and use marijuana.<sup>3</sup>

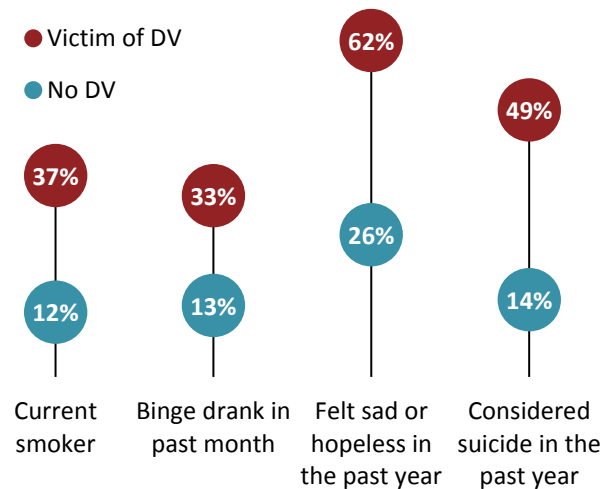
**Adolescents who have experienced more adverse childhood experiences are more likely to have poor mental health and engage in substance use.**



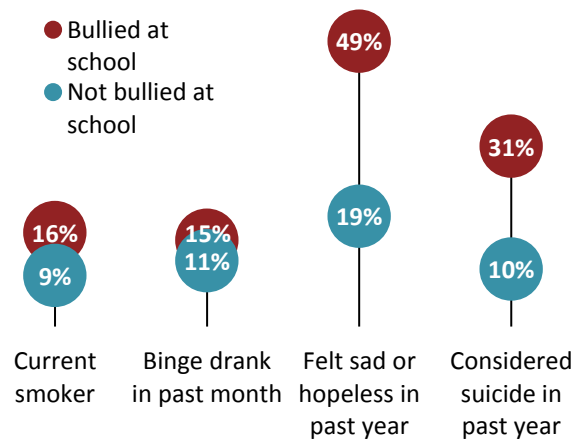
Maine Integrated Youth Health Survey, 2017

Dysfunctional relationships during childhood can include victimization by peers. Maine high school students who experience violence and/or bullying are more likely to smoke cigarettes, binge drink, report depressive symptoms, and consider suicide compared to students without these victimization experiences.<sup>11</sup>

**Maine high school students who have been the victim of dating violence (DV) in the past year are more likely to engage in risk behaviors.**



**Maine high school students who were bullied at school in the past year are more likely to engage in risk behaviors.**

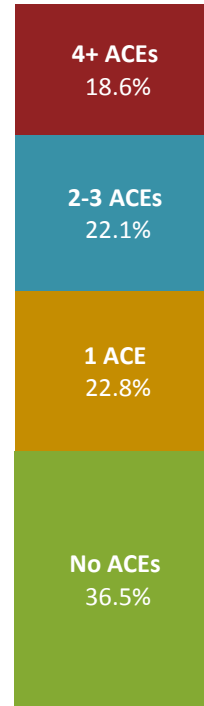


Maine Integrated Youth Health Survey, 2015

**Traumatic and stressful relationships are more common than many believe.**

- In 2015, over 3,300 Maine children were the **victims of maltreatment**.<sup>14</sup> About half (49%) of these children were 5 years old or younger.<sup>14</sup>
- Each year 3,000 Maine high school students (8.5%) **experienced dating violence**; 7% have ever been raped (10% of girls).<sup>3</sup>
- One in four Maine high school students **have been bullied at school**; 18% have been electronically bullied.<sup>3</sup>
- About 1 in 7 Maine women have **ever been frightened for their safety** or the safety of their family due to anger or threats from an intimate partner. About 1 in 5 Maine women have ever been raped.<sup>15</sup>

**More than 60% of Maine adults experienced at least one adverse event during childhood.**



Maine Behavioral Risk Factor Surveillance System, 2010

**Traumatic experiences often co-occur.**

**40%**

**of Maine high school students have had two or more adverse childhood experiences.**<sup>3</sup>

- In Maine, about 1 in 4 children aged 0-17 years have experienced two or more adverse childhood experiences.<sup>4</sup>
- About 40% of adults in Maine have experienced at least two adverse childhood experiences; almost 1 in 5 experienced four or more ACEs.<sup>13</sup>



### Social isolation and harmful social interactions disproportionately impact certain groups in Maine.

Certain populations in Maine experience more harmful interactions with others due to discrimination based on race, sexual orientation, gender identity, or biological sex. Other Mainers have fewer opportunities for positive social relationships due to where they live or their ability to connect with others due to physical limitations, language or cultural barriers, or lack of transportation.

#### Discrimination, bias, and harassment

Discrimination is the unfair or unequal treatment of a person or group of people based on characteristics such as race, age, sex, disability, ethnicity, sexual orientation, religion, or national origin. Racism is discrimination and prejudice toward people based on their race or ethnicity. It can be overt or implicit. Institutionalized racism refers to differential access to goods, services, and opportunities in society. No matter what its form, dealing with racism and discrimination on a daily basis can take its toll on health. For more information on the relationship between discrimination and health, please see Chapter 7.

**Race and ethnicity:** There are no Maine-specific survey data on adult experiences with racism. However, nationally, **about 70% of African Americans have experienced discrimination or been treated unfairly because of their race and ethnicity.** These experiences include being treated suspiciously, treated like they were not smart, and treated unfairly in hiring, pay or promotion.<sup>16</sup> Nationally, persons of color are less likely than Whites to be satisfied with their family life and the quality of life in their communities.<sup>16</sup>

Almost **5,000** Maine high school students have been harassed due to their race; Native American and Hispanic high school students in Maine are more likely to be bullied on school property compared to students of other races.<sup>3</sup>

**Sex and sexual orientation:** Women, Lesbian, Gay, Bisexual, and Transgender individuals are often the target of harassment and sexually violent encounters.

## Over 47,000

**Maine adults experienced harassment due to their sex, sexual orientation, or gender identity within the past six months.**<sup>17</sup>

- Maine women are more likely than men to experience sexual harassment.<sup>17</sup>
- Almost 50% of Maine adults who identify as gay or lesbian have experienced harassment.<sup>17</sup>

Maine high school students who identify as lesbian, gay, or bisexual (LGB) more frequently report bullying compared to heterosexual students, and LGB students less frequently report that they matter in their community.<sup>3</sup>

- **4,000** Maine high school students have been harassed due to their perceived sexual orientation;
- **5,000** have been harassed for gender non-conformity;
- **8,500** have had to endure offensive sexual comments.<sup>3</sup>



**The impact of social isolation**

**Older adults:** The rural nature of Maine can lead to social isolation for many, especially for Maine’s older residents. In 14 out of Maine’s 16 counties, over 55% of the population lives in a rural area. In six Maine counties, over 80% of the population lives in a rural area.<sup>18</sup>

Maine also has one of the oldest populations in the United States. About 17% of Mainers are 65 years or older. In some of Maine’s more rural counties, about 25% of the population is over age 65.<sup>19</sup>

- **More than 1 in 4 adults over age 65 live alone (28%).<sup>19</sup>**
- **Almost 1 in 10 adults over age 65 live in poverty (9%).<sup>19</sup>**

Those living in rural areas usually depend on personal vehicles to get to the services they need. Older people who stop driving find themselves more dependent on family members, friends, or neighbors for transportation.<sup>20</sup> Lack of transportation can also reduce elders’ opportunities for social participation. Among older rural adults, engaging in social interactions can also be limited by loss of physical or cognitive functioning and loss of friends and family due to death and family moving away. This can lead to loneliness, which has been linked to increased morbidity and mortality among adults.<sup>21,22</sup>

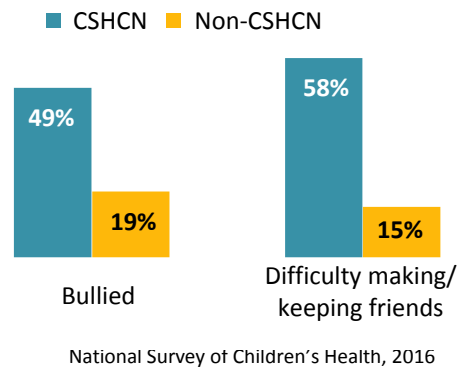
**Individuals with disabilities:** Individuals with disabilities have increased vulnerability to discrimination and abuse. They are also more likely to feel socially isolated.

**58%**

**of children with special health care needs (CSHCN) have difficulty finding and making friends.<sup>4</sup>**

- Children with special health care needs (CSHCN) are more likely than other children to be bullied, picked on, or excluded by other children.<sup>4</sup>

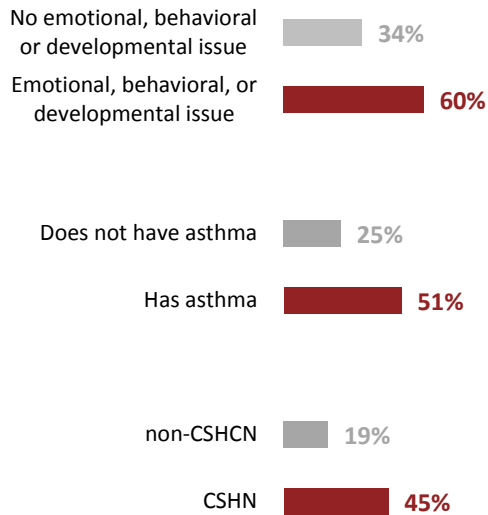
**Children with special health care needs (CSHCN) are more likely to be bullied and have more difficulty making and keeping friends.**



- Maine children who have one or more emotional, behavioral, or developmental issues are three times as likely to experience two or more adverse events during their lives compared to children without one of these issues (60% vs. 19%).<sup>4</sup>

➤ ACES are also more common among children with special health care needs; almost half have experienced two or more ACEs. Sixty percent of children with emotional, behavioral or developmental issues have experienced two or more ACEs and children with asthma are two times more likely than those without asthma to have experienced two or more ACEs.<sup>4</sup>

**Two or more adverse childhood experiences\* are more common among children with physical and emotional health conditions**



\*Percent of children aged 0-17 with two or more adverse childhood experiences. National Survey of Children’s Health, 2016



**New Mainers:** It is also important to consider the isolation felt by immigrants coming to live in Maine. Many New Mainers experience discrimination and may experience social, cultural, and linguistic isolation. In a 2015 needs assessment of the Somali community in Lewiston-Auburn, several of the health needs identified by the community are related to trauma, lack of social support and lack of social capital including stress, high blood pressure, and sadness/ depression.<sup>23</sup> In a similar community assessment in Portland, Maine, high blood pressure and mental health problems were also among the most important health problems identified.<sup>24</sup>



**Summary: Social relationships are vital to Mainers' physical and emotional health.**

The effects of social relationships on health are cumulative and impact health throughout the life course. It is critical to foster relationships with others throughout the lives of all individuals to help promote health.

- Positive interactions between individuals at home, at work, and in our communities promote physical and mental well-being.

- Negative interactions including discrimination and violence can cause stress, which can lead to physical changes in the body and harm emotional and physical health.

It is important to remember that some individuals, such as older adults, persons with disabilities, immigrants, and persons of color, are often exposed to more negative interpersonal interactions and have less access to social relationships that could benefit health. This may be due in part to other social determinants of health such as income, discrimination, and mobility that influence where we live.

Supportive relationships can buffer the harmful effects of stressors such as poverty and abuse. Research demonstrates that the negative health effects of income inequality can be diminished by positive social relationships (i.e., social capital).<sup>25</sup> Starting in early childhood, prevention activities can focus on spreading positive health messages through social networks. Promoting social ties can improve health outcomes and prevent conditions from developing.

- <sup>1</sup> Maine Behavioral Risk Factor Surveillance System, 2010.
- <sup>2</sup> Current Population Survey, 2011 Civic Engagement Supplement. Accessed via DataFerrett, November 2017.
- <sup>3</sup> Maine Integrated Youth Health Survey, 2017.
- <sup>4</sup> National Survey of Children's Health. NSCH 2016. Data query from the Child and Adolescent Health Measurement Initiative, Data Resource Center for Child and Adolescent Health website. Retrieved from [www.childhealthdata.org](http://www.childhealthdata.org).
- <sup>5</sup> *America Goes to the Polls 2016: A Report on Voter Turnout in the 2016 Election*. <http://www.nonprofitvote.org/documents/2017/03/america-goes-polls-2016.pdf>.
- <sup>6</sup> Corporation for National and Community Service. *Volunteering in America*. <https://www.nationalservice.gov/serve/via>
- <sup>7</sup> Uchino BN. Social support and health: A review of physiological processes potentially underlying links to disease outcomes. *Journal of Behavioral Medicine*, 2006; 29 (4): 277-87.
- <sup>8</sup> Reblin M, Uchino BN. Social support and its implication for health. *Current Opinions in Psychiatry*, 2008 March; 21 (2) 201-2015.
- <sup>9</sup> Berkman LF, Syme SL. Social networks and host resistance and mortality: A nine-year follow-up study of Alameda County residents. *American Journal of Epidemiology*, 109: 186-204.
- <sup>10</sup> Brummet BH, Barefoot JC, Siegler IC, et al. Characteristics of socially isolated patients with coronary artery disease who are at elevated risk for mortality. *Psychosomatic Medicine*, 2001; 62(2): 267-72
- <sup>11</sup> Maine Integrated Youth Health Survey, 2015.
- <sup>12</sup> CDC-Kaiser Adverse Childhood Experiences Study. <https://www.cdc.gov/violenceprevention/acesstudy/about.html>
- <sup>13</sup> Morian-Lozano, E., Lichter, E., Teach, F. (2015). Adverse childhood experiences in Maine: Health and Behavioral Outcomes. <http://www.acesconnection.com/fileSendAction/fcType/0/fcOid/425487684380364700/filePointer/425487684380364903/fodoid/425487684380364882/Maine%20CDC%20ACEs%20Poster.pdf>
- <sup>14</sup> U.S. Department of Health and Human Services, Administration for Children, Youth and Families, Children's Bureau. (2017). *Child Maltreatment 2015*. Available from: <http://www.acf.hhs.gov/programs/cb/research-data-technology/statistics-research/child-maltreatment>.
- <sup>15</sup> Maine Behavioral Risk Factor Surveillance System, 2016.
- <sup>16</sup> Pew Research Center, June 27, 2016. "On Views of Race and Inequality, Blacks and Whites Are Worlds Apart." <http://www.pewsocialtrends.org/2016/06/27/on-views-of-race-and-inequality-blacks-and-whites-are-worlds-apart/>
- <sup>17</sup> Maine Behavioral Risk Factor Surveillance System, 2013.
- <sup>18</sup> US Census Bureau. 2010 Summary File 1, Table P2.
- <sup>19</sup> American Community Survey, 2011-2015
- <sup>20</sup> Freund, K. "Getting From Here to There: Maine's Elder Transportation Challenge." *Maine Policy Review*. 24.2 (2015): 49-55. <http://digitalcommons.library.umaine.edu/mpr/vol24/iss2/10>.
- <sup>21</sup> Holt-Lunstad J, Smith TB, Layton JB (2010) Social relationships and mortality risk: a meta-analytic review. *PLoS Med* 7: e1000316 doi:
- <sup>22</sup> Luo Y, Willen S, Hawkley LC, Waite LJ, Cacioppo JT (2012) Loneliness, health, and mortality in old age: A national longitudinal study. *Soc Sci Med* 74: 907–914.
- <sup>23</sup> Healthy Androscoggin. *A Portrait of Health Needs: Self-reported health needs among New Americans in Lewiston-Auburn*. 2015. [http://www.healthyandroscoggin.org/wp-content/uploads/2012/04/Healthy-Androscoggin-New-American-Report\\_web.pdf](http://www.healthyandroscoggin.org/wp-content/uploads/2012/04/Healthy-Androscoggin-New-American-Report_web.pdf)
- <sup>24</sup> City of Portland Minority Health Program. *Minority Health Assessment Report*. September 2014. <https://www.portlandmaine.gov/DocumentCenter/Home/View/6805>.
- <sup>25</sup> Kawachi I, Kennedy BP, Lochner K, Prothrow-Stith D. Social capital, income inequality, and mortality. *American Journal of Public Health*. 1997;87(9):1491-1498.

## ACCESS TO A HEALTHY AND SAFE PLACE TO LIVE



Homes, neighborhoods, and communities all play a role in having a healthy and safe place to live.

This chapter highlights the relationship between having a healthy and safe place to live and health by giving examples within three different contexts:

- **Our physical environment**, which includes the air we breathe and the water we drink.
- **Our communities** that influence access to healthy food, services, and health care, as well as opportunities for physical activity, education and employment.
- **Our social environment** that allows people to feel safe, secure, and connected.

### Physical Environment

**Having a safe, clean, and non-toxic living environment is critical to maintaining and promoting health.**

Essentials for a safe home include: plumbing facilities necessary for proper sanitation; kitchen facilities adequate for clean drinking water and food; phones needed in case of personal, property, or health emergencies; and heat for surviving Maine's cold winters.

**Thousands of Mainers live in homes lacking complete plumbing or kitchen facilities.**

- Over **4,400** households in Maine lack complete plumbing facilities.
- Almost **6,000** households in Maine lack complete kitchen facilities.
- Over **11,300** households in Maine have no telephone service (cell or household) available.<sup>1</sup>

# 37,000

**low-income Maine households received financial assistance to heat their homes in 2015** from the MaineHousing energy program HEAP (Home Energy Assistance Program).<sup>2</sup> Some Mainers who do not qualify still struggle with heating costs.

## Toxic or carcinogenic substances in homes can impact child development and long-term health.

**Lead exposure** causes long-term behavioral and cognitive problems in children, and high blood pressure and kidney damage in adults.<sup>3</sup>

It can harm fetuses through exposure in pregnant women and children whose parents have job-related lead exposure.<sup>3</sup> Lead-based paint was banned in 1978; homes built before 1978 are likely to contain lead-based paint.<sup>4</sup>

# 358

**Maine children aged 0-36 months are estimated to have an elevated blood lead level each year.<sup>5</sup>**

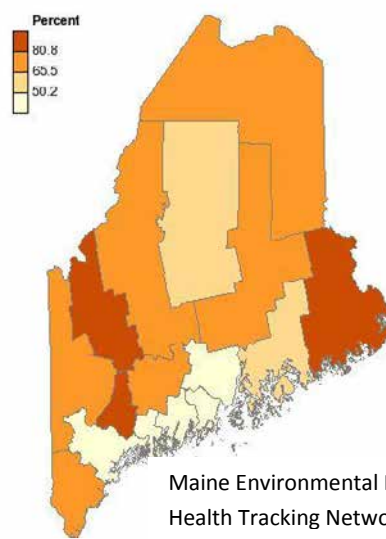
### PROFILE OF CHILDREN WITH LEAD POISONING IN MAINE<sup>6</sup>

- 87% live in housing built before 1950.
- 79% live in housing with identifiable lead paint hazards.
- 73% are enrolled in MaineCare.
- 69% live in rental housing.
- 38% live in housing where a recent renovation has occurred.

Geographic differences in poverty, housing stock age, and the prevalence of blood lead testing contribute to county differences in blood lead levels (lead exposure) in Maine.<sup>6,7,9,10</sup>

- In 2013-2017, Piscataquis, Knox, and Androscoggin counties had the highest percentage of children aged 0-36 months with an elevated blood lead level of greater than or equal to 5 micrograms per deciliter (ug/dL).<sup>5</sup>
- About 30% of housing units were built before 1950 in Androscoggin, Aroostook, Cumberland, Franklin, Knox, Somerset, and Piscataquis counties.<sup>7</sup> In most of these counties (excluding Franklin and Aroostook), the percentage of children 0-36 months with elevated blood lead levels in 2013-2017 was higher than the state average (3.2%).<sup>5</sup>
- However, many children in the highest risk counties are not receiving blood lead tests. Counties with significantly lower blood lead level screening tests among children born in 2014 included: Cumberland, Knox, Lincoln, Piscataquis, Sagadahoc, and Waldo counties.<sup>8</sup>

Percent of Children with a Blood Lead Test Before 36 Months of Age by County, Maine Birth Year 2014



Maine Environmental Public Health Tracking Network

Maine towns with the highest estimated numbers of children 0-3 years with blood lead levels (BLLs) of  $BLLs \geq 5\mu\text{g/dL}$  and poverty rates of families with children, 2013-2017.

High risk area	Average number of children tested for blood lead annually	Average annual estimated number of children with $BLLs \geq 5\mu\text{g/dl}$	Estimated percent of children with $BLLs \geq 5\mu\text{g/dl}$	Percent of families with children living in poverty
Lewiston/Auburn	968	62	6.4%	31.6%
Portland/Westbrook	748	38	5.1%	23.6%
Biddeford/Saco	502	16	3.2%	19.7%
Augusta	210	10	5.0%	32.9%
Bangor	361	10	2.9%	30.2%
Sanford	268	9	3.4%	33.6%
Rest of Maine	8,032	210	2.6%	16.9%
Maine	11,089	358	3.2%	19.3%


Maine Environmental Public Health Tracking Network

Maine’s Lead Poisoning Prevention Program identifies high-risk areas for lead poisoning based on the distribution of elevated blood lead levels. In these communities, the poverty rate is higher than the rest of Maine (see table above).

**Radon** is the second leading risk factor for lung cancer, behind cigarette smoking. Radon is a naturally occurring, colorless and odorless gas that can come from the ground into the air in a person’s home.<sup>9</sup>

**1 in 6** homes in Maine has elevated radon levels (16.9%); yet only about a third of homes have been tested.<sup>10</sup>

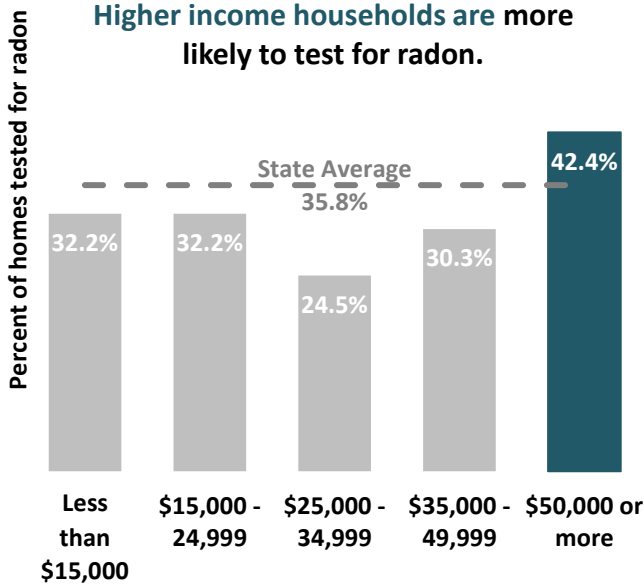
**Protect Your Family from Radon** Radon is a gas that you can’t see, smell, or taste – but it can be dangerous. It’s the second leading cause of lung cancer in the U.S.



Radon is in the ground naturally. But sometimes it gets into homes through cracks in the floors or walls.

U.S. CDC, National Center for Environmental Health, Division of Environmental Hazards and Health Effects

Households in rural areas or with lower incomes are less likely to have their homes tested for radon than households in urban areas or with higher incomes (making \$50,000 or more per year).<sup>13</sup>



Maine Behavioral Risk Factor Surveillance System, 2015

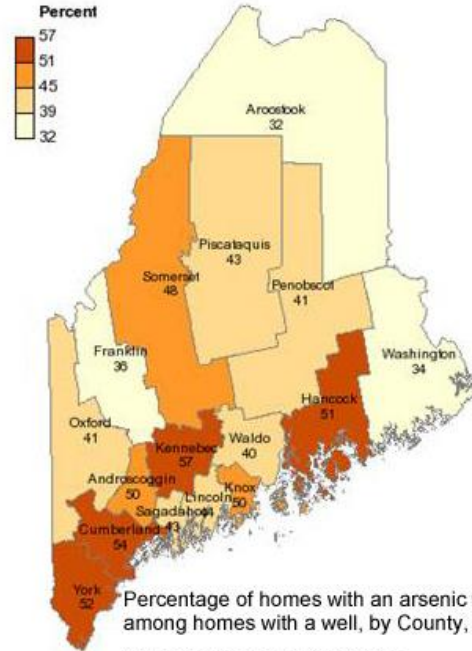
Chronic exposure to **arsenic** is associated with pulmonary, reproductive, immunological, neurological, liver, and cardiovascular effects and an increase in skin, lung, kidney, prostate, and bladder cancers.<sup>11</sup>

There is still a long way to go to prevent chronic exposure of arsenic in well-water in Maine.

**51%**

of Maine wells were tested for arsenic in 2016.<sup>12</sup>

Household well-water testing for arsenic is lowest in Aroostook County and **highest in Kennebec County (32% vs. 57%).**<sup>15</sup>



Percentage of homes with an arsenic water test among homes with a well, by County, Maine

Map source: Maine Tracking Network  
Map data: 2012 and 2014 combined surveys, Maine Behavioral Risk Factor Surveillance System





**Air pollution exposure that causes many poor health effects varies by county.**<sup>17,18,19</sup>

**Ozone** is caused by pollutants coming from cars, power plants, and other chemical sources.

Particulate matter and ozone exposure are associated with breathing difficulty, lung inflammation, chronic obstructive pulmonary disease (COPD), and other long-term health effects with children, persons with asthma, and the elderly at increased risk for complications.<sup>13</sup>

Data on average air pollution days from the [Maine CDC Environmental Health Tracking Network](#) are only available for some Maine counties: Cumberland, Androscoggin, Kennebec, Oxford, Hancock, Penobscot, and Aroostook measure days of particulate matter by county.<sup>14</sup>

In 2013, three counties in Southern Maine had days of over the the 8-hour ozone concentration limit of 0.075 parts per million: Cumberland, Knox, and York counties.<sup>15</sup>

- Though only 3 or 4 days in the year were recorded above the ozone concentration limit, ozone pollution is especially harmful to people with asthma.<sup>16</sup>
- Over 40,000 residents of these counties have asthma and would be susceptible to asthma attacks or breathing difficulties on days with high ozone concentrations.<sup>16</sup>

In 2014, there were no days when air in observed Maine counties was over the ozone concentration limit.<sup>18</sup> Since 2011, no county with available data has recorded days where particulate matter air pollution exceeded the National Ambient Air Quality Standards (NAAQS) limit.<sup>17</sup>



## Our Communities: The Built Environment & Access to Healthy Choices

**Healthy choices are easier to make in some communities.**

Over the past few decades, more Americans have adopted unhealthy diets and are engaging in less physical activity; at the same time, there has been a noticeable increase in chronic disease such as obesity, diabetes, high blood pressure, heart disease, stroke, and some types of cancers.<sup>17</sup>

Living in a safe town or neighborhood with grocery stores, parks, and schools promotes healthy choices such as:

- **Accessing healthy food**, and
- **Recreational activity** like walking to the park or school for exercise.

## There may be fewer places to exercise safely in rural areas.

In Maine's rural communities, there may be few or no walking trails, sidewalks or road shoulders, or parks for recreation. For example, many Maine parents report having fewer places for their kids to exercise and play compared to other parents in the U.S.<sup>18</sup>

- 40% of Maine parents report that their neighborhood does not contain sidewalks or walking paths, compared to 25% in the U.S.<sup>18</sup>
- 30% report that their neighborhoods do not contain a park or playground, compared to 24% in the U.S.<sup>18</sup>
- 58% do not have a recreation center, community center or Boys/Girls club, compared to 50% in the U.S.<sup>18</sup>

America's Health Rankings rated all counties on access to exercise opportunities. Individuals were considered to have access to recreational opportunities if they:

- Resided in a census block within a half mile of a park;
- Resided in an urban census block within one mile of a recreational facility; or
- Resided in a rural census block within three miles of a recreational facility.<sup>19</sup>

In Maine, the smaller rural counties were the least likely to have adequate access to locations for physical activity.

## Many households in Maine lack money and other resources for food.

**Food insecurity** is defined by the USDA as 3 or more food-insecure conditions.<sup>20</sup> Put simply, it is the lack of regular access to adequate food.<sup>21</sup>

According to 2016 household food security data,

## Maine is the 7<sup>th</sup> hungriest state in the U.S.

**One in six** Maine households (**16.4%**) struggles with food insecurity, higher than the national average of 13.0%.<sup>13</sup>



Some Mainers are particularly likely to be food insecure:

- One in five Maine **children** are food insecure;
- One in six Maine **seniors** are at risk of going hungry;
- More than a third (37%) of Maine's food insecure population does not qualify for public assistance.<sup>22</sup>

## Food insecurity has widespread health effects.

Low-income individuals with an unhealthy diet due to cost constraints may experience what is known as the hunger-obesity paradox, where hunger (lack of regular food access) and increased risk of obesity co-occurs.<sup>21</sup> This is likely due to the relatively low cost and high convenience of foods with poor nutritional values.

- A 2002-2010 study found that children ages 6-11 who are food insecure are 81% more likely to be obese than children who are food secure.<sup>23</sup>
- Food insecurity in children leads to nutrient deficiencies, which then lead to learning and development problems. Long-term this can lead to low school achievement, emotional problems, and poor health.<sup>24</sup>

Across the lifespan, food insecurity is shown to increase the risk of poor health outcomes:

- **Children:** asthma, poor general health, depression, poor oral health, suicide ideation, and increased risk of hospitalization.<sup>25</sup>
- **Adults under age 65:** mental health issues and depression, diabetes, hypertension, high cholesterol, poor overall health, poor sleep, and poor oral health.<sup>25</sup>
- **Seniors:** depression, poor health, and limitations on activities of daily living.<sup>25</sup>

## Food insecurity may stem from issues with cost, distance, and transportation to food vendors.

Rural places have fewer transportation options and Mainers living in rural areas travel greater distances to grocery stores, pharmacies, and medical care.

**Cost:** In Maine, many families cannot afford to buy all the food they need.

**More than**  
**200,000**

## Mainers rely on food stamps to feed their families.<sup>26</sup>

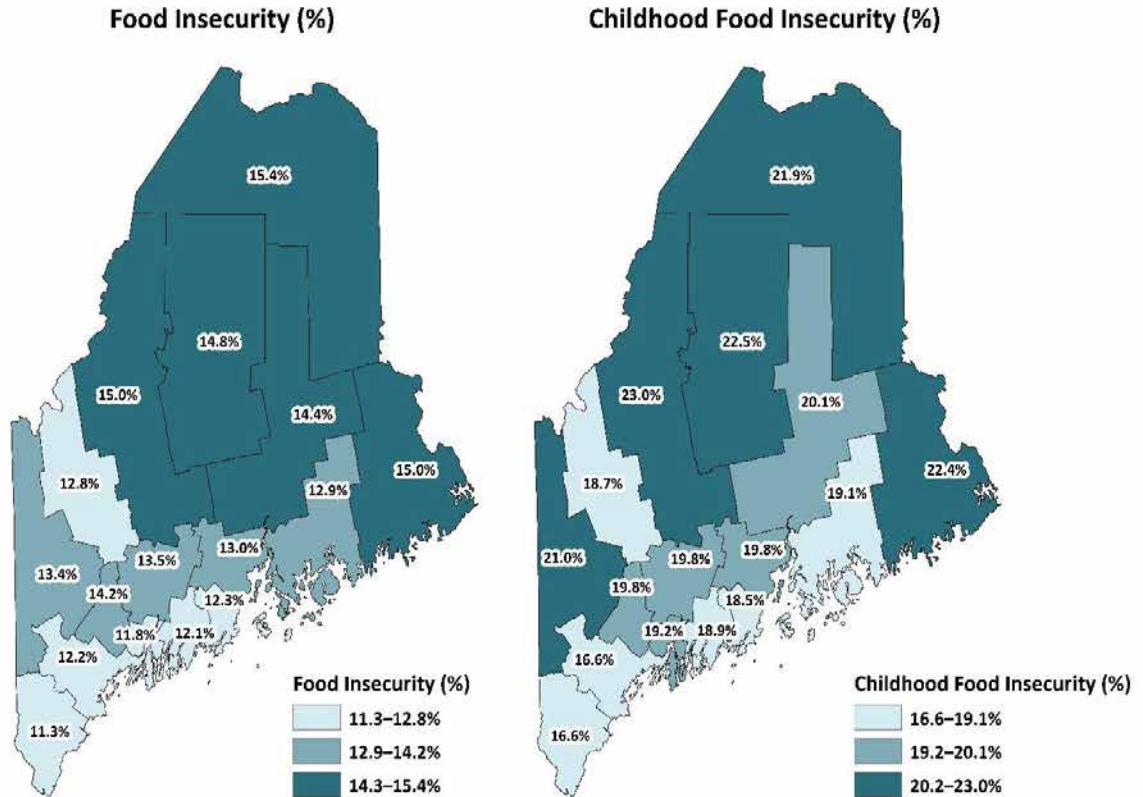
- The average monthly food stamp benefits per participant are \$116, amounting to roughly \$29 per week.<sup>27</sup>
- Many others rely on food pantries and soup kitchens for supplementary assistance.

**Transportation:** Mainers face hurdles finding quality food close to home. A household is considered to have low food access if they do not have a supermarket or grocery store within one mile of a person's home.<sup>28</sup> While that may seem close for some, consider that not all Mainers own a car.

In 2014, 15,879 workers in Maine households did not have a vehicle available, making healthy food difficult to obtain.<sup>29</sup> Working Mainers without a vehicle may also have difficulty getting to places of employment, pharmacies, and doctor's offices—places that offer income, medicine, and medical care.

The maps below display county variation in the percentage of food insecurity for the overall population and the percentage of childhood food insecurity.<sup>30</sup>

Both maps show high rates of food insecurity in Northern Maine counties (Aroostook, Piscataquis, Somerset, Penobscot, and Washington counties); additionally, childhood food insecurity is a concern in Western Maine (Oxford County).



Map the Meal Gap 2019: A Report on County and Congressional District Food Insecurity and County Food Cost in the United States in 2017.

## Safe and Secure Environments

### Neighborhood crime and threats to physical safety can have powerful negative effects on area residents.

People who feel unsafe may avoid exercising outside or walking to school, grocery stores, or other community recreation and gathering areas. Unsafe environments lead to chronic stress, which is associated with health problems such as heart disease, weight gain, memory and concentration impairment, sleep and digestive problems.<sup>31,32</sup> For more information on the impact of chronic stress on health, see Chapter 7 on Discrimination and Health.

A community with low-crime rates is one where neighbors are more likely to connect, enjoy healthier activities and reduced stress, ultimately improving health.<sup>33</sup>

Maine has a lower crime rate than New England and the nation as a whole. Maine's violent crime rate in 2017 was 119 per 100,000 compared to the U.S. rate of 394 per 100,000.<sup>34</sup> Crime rates are highest in Androscoggin, Cumberland, Kennebec, Oxford, Penobscot, and York counties.<sup>34</sup>

- In Maine, there were 1,591 violent crimes and 26,212 property crimes committed in 2017.<sup>34</sup>
- Robbery, burglary, larceny theft, and motor vehicle thefts made up 90% of all 2017 Maine index crimes.<sup>34</sup> Other index crimes include murder, forcible rape, and arson.

- There were 21 homicides in Maine in 2017; 1 in 3 (33%) were committed by a family member or intimate partner.<sup>34</sup>

# 70%

### of Maine parents “definitely agree” that their children live in a safe neighborhood.<sup>18</sup>

The criteria for having a “safe neighborhood” according to the National Survey of Children’s Health are:

- The neighborhood usually or always feels safe;
- The neighborhood is supportive of children;
- The neighborhood contains 3 or more amenities essential to childhood (parks, recreation centers, sidewalks, or libraries); and
- School-age children attend safe schools.<sup>18</sup>

More child-friendly amenities and a positive social environment are needed for more Maine children to feel safe and supported.

### Many people in Maine cannot afford safe housing.

Spending a substantial portion of income on housing has direct impacts on Mainers’ ability to cover costs of essentials such as transportation, food, and health care.

In 2015, the median household income in Maine was \$51,494 and the median purchase price of a home was \$180,300, an amount that puts ownership out of reach for many households.<sup>35</sup>

**More than half (57.2%) of renters and almost one-third of owners (32.5%) spend more than 30 percent of their total income on housing.<sup>1</sup>**



1,192

**Mainers experienced homelessness in 2016.<sup>36</sup>**

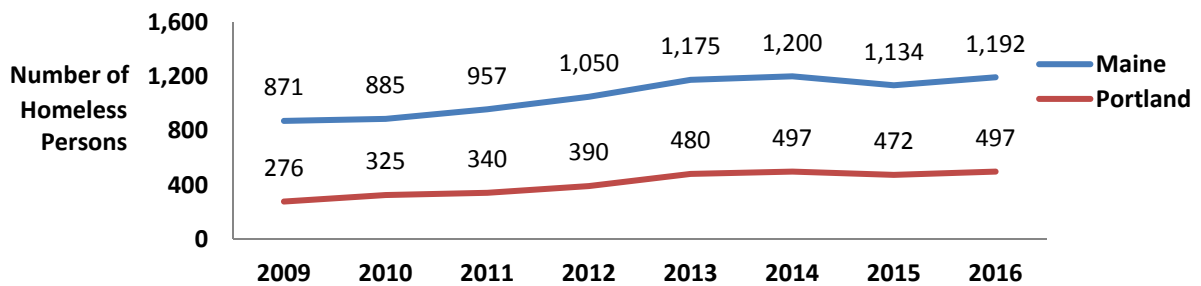
**The number of Mainers without a home is increasing.**

While most Mainers find emergency shelters, 120 Mainers were unsheltered at the time of the 2016 survey, even with 1,347 available beds in Maine.<sup>36</sup>

While some have difficulty affording their home, others have no place to call home at all. A Point-in-Time survey provides counts of sheltered and unsheltered homeless people; it is conducted in the last week in January of each year. Shelters in every county participate in the survey. Rural homelessness may be underestimated since locating and identifying homeless persons in a larger geographic area can be challenging.<sup>36</sup>

Emergency shelters that help temporarily homeless Mainers tend to be more available in urban areas like Portland or Lewiston. Since there are fewer shelters in rural areas, many people using urban shelters are from surrounding communities without these social services.

**The number of homeless Mainers increased between 2009 and 2016.**

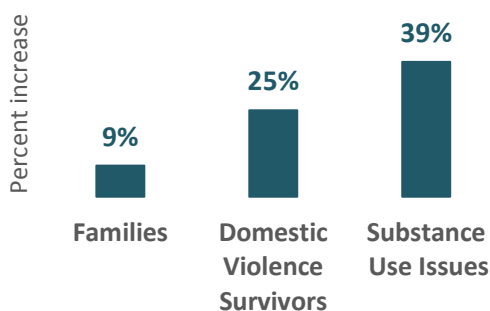


Maine State Housing Authority Point-in-Time Survey, 2009-2016

Nationally, subpopulations at risk for homelessness are:

- **Families**
- **Veterans (92% male)**<sup>38</sup>
- **Youth, particularly LGBT youth.**<sup>39</sup> *An estimated 20 percent of U.S. runaway youth identify themselves as LGBT, a high percentage considering that 10 percent of all youth identify as LGBT.)*

The number of homeless families, domestic violence survivors, and individuals with substance use issues is increasing in Maine.<sup>36</sup>



Maine Point-In-Time Survey, changes from 2015-2016

Some of the increases in substance use and domestic violence among homeless survey respondents may be due to volunteers asking more inclusive questions and making clients feel more comfortable answering the questions.

Co-occurring difficulties (substance use and domestic violence) pose extra challenges to efforts to combat homelessness as they may compromise physical and emotional health.

### Data at Work: A Field Example

There has been an effort to reduce the number of people in Portland homeless shelters who are long-term stayers (staying in a homeless shelter or outdoors for 180 days or more within the past 360 days). By using data collected from multiple local shelters, The Maine Statewide Homeless Council identified 262 long-term stayers.<sup>37</sup> The Council, together with multiple shelters and Portland's Emergency Shelter Assessment Committee helped find housing for these individuals. As a result, housed individuals had a place to store their belongings, cook, and stay warm and community shelters had more beds for the temporarily homeless. This initiative received national recognition for its innovation. Still, there is much work to do to end homelessness and improve the health of those who are currently homeless.

**Summary: A healthy home, safe neighborhood, and connected community are needed for all Mainers to thrive.**

A safe neighborhood and community is the direct result of interactions between individuals, society, and their environment. Having a safe home in a supportive neighborhood promotes health and well-being; those in less healthy communities are at risk of health inequities.

To stay healthy, all Mainers need:

- A safe home meeting basic needs (kitchen, plumbing, and heat);
- A home free of environmental hazards such as lead, radon, and arsenic;
- Air free from pollutants like ozone and particulate matter;
- Access to healthy food and recreational activity; and
- A secure environment where children and adults feel safe and supported.

Partnerships between public health, health care and non-traditional partners such as housing, transportation, law enforcement, business leaders, and community planners are needed to improve conditions within our communities that will have a direct impact on the health of all Mainers for years to come.

Yet, many Mainers are not able to live in healthy and safe environments. This may be due to:

- Low wages that limit housing and food options;
- Policies, both current and historic, that make home ownership difficult;
- Lack of transportation that constrains where people can live and work;
- Distance to or availability of places that sell healthy food and/or provide opportunities for physical activity, especially in Maine's rural areas; and/or
- Lack of awareness of resources for testing and mitigation of environmental toxins in homes.



<sup>1</sup> U.S. Census, American Community Survey 2011-2015.

<sup>2</sup> Program Evaluation Report. Maine Housing. November 2015, page 27.

<http://www.mainehousing.org/docs/default-source/policy-research/Policy/2015-program-evaluation-report.pdf?sfvrsn=4>.

<sup>3</sup> Lead: Information for Workers. Centers for Disease Control and Prevention. April 19, 2017

<https://www.cdc.gov/niosh/topics/lead/health.html>.

<sup>4</sup> Protect Your Family from Exposures to Lead Environmental Protection Agency.

<https://www.epa.gov/lead/protect-your-family-exposures-lead>.

<sup>5</sup> Maine Childhood Lead Poisoning Prevention Unit. Maine Environmental Public Health Tracking Program: Children with a Blood Lead  $\geq 5$  ug/dL by Selected Years, Maine Age: 0-<36 months.

<https://data.mainepublichealth.gov/tracking/home>

<sup>6</sup> Maine Department of Health and Human Services, Maine Center for Disease Control and Prevention. Update on Childhood Lead Poisoning Prevention in Maine, 2018.

<https://www.maine.gov/dhhs/mecdc/environmental-health/eohp/lead/documents/screening-report-2018.pdf>

<sup>7</sup> U.S. Census American Community Survey, 2011-2015. Maine Environmental Public Health Tracking Program. Housing Units Built Before 1950 by County, Maine 2011-2015. <https://data.mainepublichealth.gov/tracking/home>

<sup>8</sup> Maine Childhood Lead Poisoning Prevention Unit. Maine Environmental Public Health Tracking Program: Children with a Blood Lead Test by County, Maine, Selected Years. Age: 0-<36 months.

<https://data.mainepublichealth.gov/tracking/home>

<sup>9</sup> U.S. Centers for Disease Control and Prevention. National Center for Environmental Health, Division of Environmental Hazards and Health Effects. Published January 23, 2017. <https://www.cdc.gov/features/protect-home-radon/infographic.html>

<sup>10</sup> Maine Behavioral Risk Factor Surveillance System, 2015.

<sup>11</sup> Community Water. Centers for Disease Control and Prevention. Published January 10, 2017.

<https://ephracking.cdc.gov/showArsenicYourHealth.action>

<sup>12</sup> Behavioral Risk Factor Surveillance System, 2016. Maine Environmental Public Health Tracking Program: Arsenic Water Testing Among Homes with Private Well Water by County, Maine, 2016.

<https://data.mainepublichealth.gov/tracking/home>

<sup>13</sup> Health Effects of Ozone Pollution. Environmental Protection Agency. <https://www.epa.gov/ozone-pollution/health-effects-ozone-pollution>

<sup>14</sup> U.S. Environmental Protection Agency's Air Quality System database. Maine Environmental Public Health Tracking Network. Annual Average Concentration of Particulate Matter (PM2.5) by County, Maine 2013

<https://data.mainepublichealth.gov/tracking/home>

<sup>15</sup> U.S. Environmental Protection Agency's Air Quality System database. Maine Environmental Public Health Tracking Network. Number of Days with Maximum 8-hour Average Ozone Concentration over 0.075 Parts per Million by County, Maine 2013.

<https://data.mainepublichealth.gov/tracking/home>

<sup>16</sup> Maine Behavioral Risk Factor Surveillance System, 2011-2013.

<sup>17</sup> Diet, Nutrition and the Prevention of Chronic Diseases. The World Health Organization. 2003.

[http://www.who.int/dietphysicalactivity/publications/trs916/en/gsfao\\_introduction.pdf](http://www.who.int/dietphysicalactivity/publications/trs916/en/gsfao_introduction.pdf)

<sup>18</sup> The National Survey of Children's Health. Data Resource Center for Child and Adolescent Health.

<http://childhealthdata.org/learn/NSCH>

<sup>19</sup> University of Wisconsin Population Health Institute. County Health Rankings 2019: Access to Exercise Opportunities, Maine, 2019.

<http://www.countyhealthrankings.org/app/maine/2019/measure/factors/132/description>

<sup>20</sup> Alisha Coleman-Jensen, Matthew P. Rabbitt, Christian A. Gregory, and Anita Singh. 2017. Household Food Security in the United States in 2016, ERR-237, U.S. Department of Agriculture, Economic Research Service.

<sup>21</sup> The Hunger and Obesity Paradox. Harvard School of Public Health. <https://www.hsph.harvard.edu/obesity-prevention-source/hunger-and-obesity/>

<sup>22</sup> Hunger | Ending Hunger in Maine. Good Shephard Food Bank. <https://www.gsfb.org/hunger-in-maine/>

- <sup>23</sup> Kaur, J., Lamb, M. M., & Ogden, C. L. (2015). The Association between Food Insecurity and Obesity in Children—The National Health and Nutrition Examination Survey. *Journal of the Academy of Nutrition and Dietetics*, 115(5), 751-758. doi:10.1016/j.jand.2015.01.003
- <sup>24</sup> Nutrition and Early Brain Development. The Urban Child Institute. Published March 2011. <http://www.urbanchildinstitute.org/articles/updates/nutrition-and-early-brain-development>.
- <sup>25</sup> Gundersen, C and Ziliak, JP. Food Insecurity And Health Outcomes. *Health Affairs*, 34, no.11 (2015):1830-1839. doi: 10.1377/hlthaff.2015.0645
- <sup>26</sup> Monthly Average Number of Persons Participating in Supplemental Nutrition Assistance Program (SNAP). Kaiser Family Foundation. Published October 19, 2016. <http://kff.org/other/state-indicator/avg-monthly-participation/?currentTimeframe=0&selectedRows=%7B%22nested%22:%7B%22maine%22:%7B%7D%7D%7D&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D>
- <sup>27</sup> Average Supplemental Nutrition Assistance Program (SNAP) Benefits Per Person. Kaiser Family Foundation. Published October 19, 2016. <http://kff.org/other/state-indicator/avg-monthly-food-stamp-benefits/?currentTimeframe=0&selectedRows=%7B%22nested%22:%7B%22maine%22:%7B%7D%7D%7D&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D>
- <sup>28</sup> USDA Food Environment Atlas Data, 2013.
- <sup>29</sup> U.S. Census, American Community Survey, 2014.
- <sup>30</sup> Gunderson C, Dewey A, Kato M, Crumbaugh A, Strayer M. Map the Meal Gap 2019: A Report on County and Congressional District Food Insecurity and County Food Cost in the United States in 2017. Feeding American, 2019. [https://public.tableau.com/profile/feeding.america.research#!/vizhome/2017StateWorkbook-Public\\_15568266651950/CountyDetailDataPublic](https://public.tableau.com/profile/feeding.america.research#!/vizhome/2017StateWorkbook-Public_15568266651950/CountyDetailDataPublic)
- <sup>31</sup> Juster RP, McEwen BS, Lupien SJ. Allostatic load biomarkers of chronic stress and impact on health and cognition. *Neuroscience & Biobehavioral Reviews*. 2010; 35 (1), 2-16.
- <sup>32</sup> Chronic stress puts your health at risk. Mayo Clinic. Published April 2016. <http://www.mayoclinic.org/healthy-lifestyle/stress-management/in-depth/stress/art-20046037>
- <sup>33</sup> Adler NE, Newman K. Socioeconomic Disparities In Health: Pathways And Policies. *Health Affairs*. 2017; 26 (9). <http://content.healthaffairs.org/content/21/2/60.full>
- <sup>34</sup> Crime in Maine 2017. State of Maine Department of Public Safety. 2017. [https://www.maine.gov/dps/cim/crime\\_in\\_maine/2017pdf/Crime%20in%20Maine%202017.pdf](https://www.maine.gov/dps/cim/crime_in_maine/2017pdf/Crime%20in%20Maine%202017.pdf)
- <sup>35</sup> U.S. Census, American Community Survey, 2015.
- <sup>36</sup> 2016 Point in Time Survey. Maine Housing Authority. [http://www.mainehousing.org/docs/default-source/housing-reports/2016-point-in-time-survey---statewide.pdf?sfvrsn=8131a315\\_4](http://www.mainehousing.org/docs/default-source/housing-reports/2016-point-in-time-survey---statewide.pdf?sfvrsn=8131a315_4)
- <sup>37</sup> Maine's Statewide Homeless Council. Maine's Long-Term Stayers Initiative. January 23, 2014. <https://www.mainehomelessplanning.org/wp-content/uploads/2014/02/Long-Term-Stayers-Initiative-Summary-1.29.2014.pdf>
- <sup>38</sup> The 2013 Annual Homeless Assessment Report (AHAR) to Congress. The U.S. Department of Housing and Urban Development, Office of Community Planning and Development. <https://www.hudexchange.info/resources/documents/AHAR-2013-Part1.pdf>
- <sup>39</sup> State of Homelessness Report 2016. EndHomelessness.org. <https://endhomelessness.org/homelessness-in-america/homelessness-statistics/state-of-homelessness-report/>

## SAFE AND SUPPORTIVE SCHOOLS



### Schools educate children and prepare them for adulthood.

Most children and adolescents spend most of their time at school. This environment can have a lasting impact on their chances for success and overall well-being. A student's academic success is influenced not only by individual characteristics and capable teachers, but also by how safe a student feels in the school environment.<sup>1</sup> A safe and supportive school environment can lead to:

- Higher grade point averages;
- Increased academic effort; and
- Higher graduation rates.<sup>1,2,3,4</sup>

A school environment in which a student feels unsafe and unsupported can contribute to lower academic performance and poorer attendance records.<sup>1,2,3,4</sup>

Students who attend safe and supportive schools are less likely to experience mental health issues and misuse substances as a teen or adult.<sup>5,6</sup>

A child who does well in school and graduates from high school is more likely to live a longer, healthier life.<sup>7</sup>

For more information on the connection between education and health, see Chapter 5.

### Supportive school environments meet their students' most basic psychological needs, including students feeling connected, safe, and like they belong.

The school environment is influenced by several factors, including school goals and policies, teaching and discipline methods, and the leadership style of the principal.<sup>1</sup> Parental involvement, not only in their own child's schooling, but in school planning and decision-making also affects school climate.<sup>1</sup>

Feeling connected to their school is extremely important for students, and schools that focus on helping their students feel connected can see improved academic engagement.<sup>2</sup>

**Social isolation of students, an unsafe school environment, and poor classroom management can all threaten school connectedness.**<sup>8</sup> There are a number of methods schools can use to increase connectedness, including:

- mentorship programs;
- smaller class sizes;
- service learning projects; and
- tailoring course content so that it is relevant to the lives of their students.<sup>9</sup>

**Most Maine high school students say they feel safe at school and have a teacher who cares about them.**

Maine high school students are surveyed every other year as part of the Maine Integrated Youth Health Survey (MIYHS). In addition to their health risks and behaviors, students are asked about support, discipline, and safety at school.

**82%**

**of Maine high school students believe that they have at least one teacher who really cares about them.<sup>10</sup>**

**89%**

**of Maine high school students agree that they feel safe at their school.<sup>10</sup>**

Fewer students agree that their school cares about kids or enforces rules fairly.

**49%**

**of Maine high school students report that their schools enforce rules fairly (most of the time or always).<sup>10</sup>**

**57%**

**of Maine high school students believe their school cares about kids and encourages them.<sup>10</sup>**

**Certain student populations feel less supported in school than others.**

**2x**

**Twice as many (1 in 5) Hispanic high school students (19%) report feeling unsafe at school compared to 1 in 10 non-Hispanic students (11%).<sup>10</sup>**

- **Gay, lesbian and bisexual students are twice as likely to report feeling unsafe** at school compared to heterosexual students (20% vs. 9%).<sup>10</sup>
- **1 in 3 transgender students do not feel safe at school**; 1 in 5 transgender students did not go to school at least one day in the past month because they felt unsafe at school or on the way to or from school.<sup>10</sup>

These same patterns appear for other questions on school climate, including how often they feel their school enforces rules fairly, and whether they feel their school cares about kids and encourages them.

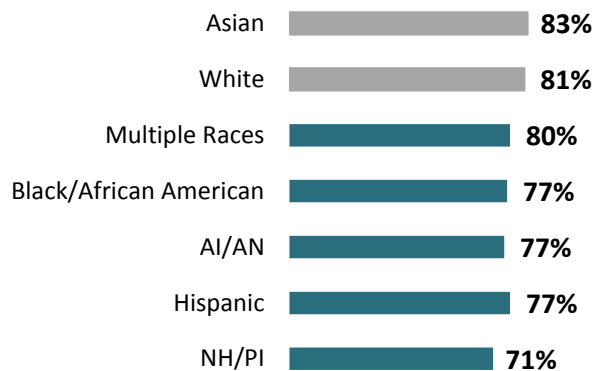
**Bisexual and gay or lesbian students are significantly less likely to agree that a teacher really cares about them than heterosexual students.**



*Percentage of students who agree that a teacher really cares about them.*

Maine Integrated Youth Health Survey, 2017

**Many racial and ethnic minority students are significantly less likely to agree that a teacher really cares about them, compared to White students.**



*Percentage of students who agree that a teacher really cares about them.*

AI/AN: American Indian/Alaska Native; NH/PI: Native Hawaiian/Pacific Islander  
Maine Integrated Youth Health Survey, 2017

### Supportive schools have healthier students.

Research shows that schools with a positive climate have fewer students participating in violence or risky behaviors, including alcohol use.<sup>11</sup>

Students who feel their psychological needs are met are more likely to feel committed to their school, have empathy for others, and be self-directing at school. More specifically, students who feel connected to their school have reduced risk of substance use, violent behavior, depression, anxiety, suicidal thoughts, and pregnancy.<sup>5,6</sup>

Conversely, when students do not feel connected to their school they are more likely to be involved in bullying and fighting, putting them at risk for injury and poor mental health.<sup>12,13</sup>

Maine high school students who report that they have a **teacher who cares, feel safe at school**, and believe their **school cares about kids and encourages them** are **less likely to report:**

- Current cigarette use;
- Current alcohol use;
- Depression;
- Any substance use (based on lifetime use of alcohol, marijuana, prescription drugs without a prescription, cocaine, heroin, methamphetamines, ecstasy, or hallucinogen); and/or
- Suicide Ideation.<sup>10</sup>

These students are also **more likely to report** regular physical activity and good grades.

### These risky and protective behaviors can have lasting impacts on students as they transition into adulthood.

- Ultimately, when students feel connected to their school or psychological needs are met they are more likely to graduate than students who do not feel that connection.<sup>1</sup>
- Teens who misuse drugs or alcohol are more likely to misuse them as adults, which can increase the risk of heart and lung disease, cancer, poor mental health, and early death.<sup>14</sup>
- Teens who experience mental illness have an increased risk of mental illness in adulthood, which is associated with diabetes, cancer, cardiovascular disease, asthma, and obesity.<sup>15</sup>

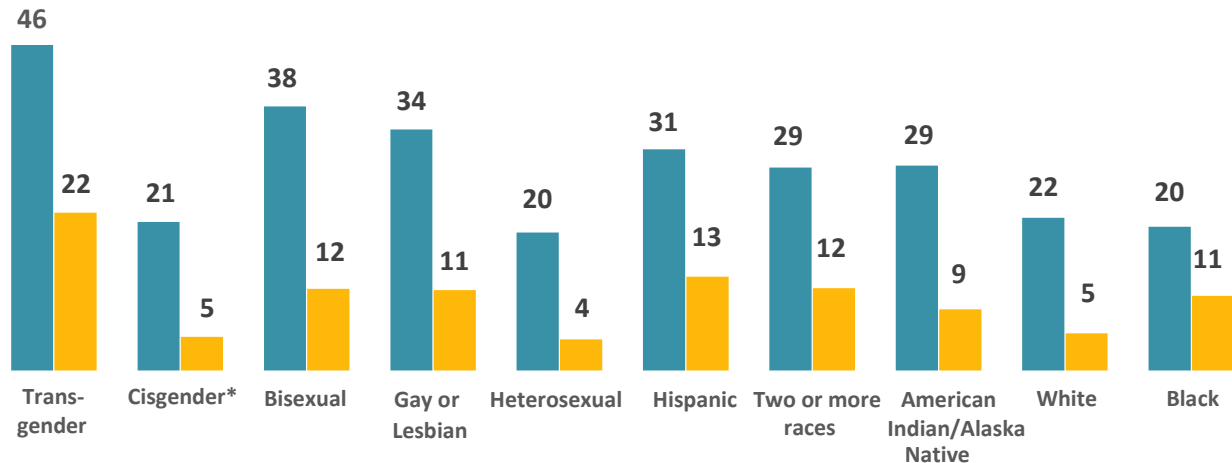
Having a safe school that fosters a connected community and where psychological needs are met leads to better health outcomes in adulthood; students who do not graduate from high school are more likely to have lower income and poorer health outcomes in adulthood than students who graduate.<sup>7</sup>

Refer to the data summary table on Education and Health in Appendix I for more information on the relationship between education and health.

**Bullying is a problem in Maine schools.**

Bullying is defined as repeated “unwanted aggressive behavior by another person or group of people.”<sup>16</sup> An unsafe school environment is more likely to have higher rates of students being bullied.<sup>16</sup>

**Certain student groups are significantly more likely to report bullying at school and missing school in the past month due to feeling unsafe (compared to White, heterosexual, and cisgender\* students).<sup>†</sup>**



\* **Cisgender** refers to people whose personal identity and gender corresponds with their sex assigned at birth.

† Numbers presented are percentages. Maine Integrated Youth Health Survey, 2017

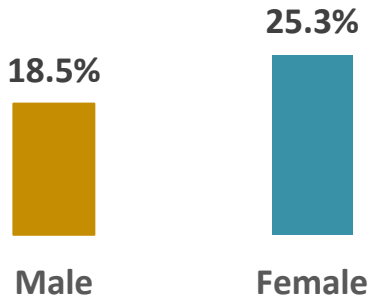
**1 in 5**

**Maine high school students (21.9%) say they have been bullied on school property,** similar to the national average (20%).<sup>10,17</sup>

**Over 3,000**

**Maine high school students (6%) missed at least one day of school in the past 30 days because they did not feel they would be safe at school** or on their way to or from school, the same as the national rate (6%).<sup>10,22</sup>

Compared to **male students**, **female students** are significantly more likely to report being bullied on school property.



Maine Integrated Youth Health Survey, 2017

### Bullying negatively impacts a person's health.

Bullying can lead to short and long-term health consequences for both the victim and the bully.<sup>18,19,20,21</sup>

**Children who are bullied are at increased risk of:**

- Mental health issues;
- Backaches;
- Dizziness;
- Headaches;
- Injury;
- Sleeping difficulties; and
- Stomachaches.<sup>18,19</sup>

**Adults who were bullied as children are more likely to experience:**

- Depression;
- Suicidal thoughts;
- Difficulty forming social relationships;
- Lower socioeconomic status; and
- Lower self-reported quality of life.<sup>20,21</sup>

These effects are found well into adulthood, and persist even when controlled for childhood psychiatric illness and family difficulties.<sup>20,21</sup>

**Bullying is harmful to both the victim and the bully.**

- Both are at increased risk of depression, and those who bully others are more likely to deal with substance use, low academic performance, and violence as an adult.<sup>22</sup>

**Adults in schools can prevent or reduce the impact of bullying to help students.**

# 1 in 3

**Maine high school students (34%) report that adults in their school address conflict, negative language, and bullying in positive ways to help students.<sup>10</sup>**

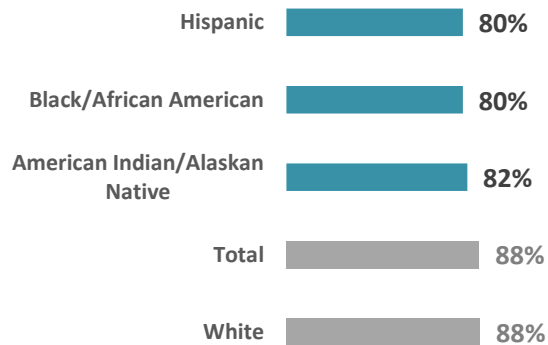
To improve their community and address bullying positively, schools can:

- Reward students for respectful behavior;
- Engage students and parents in school decision-making and planning processes;
- Establish clear expectations and consequences for bullying behaviors; and
- Prioritize classroom management (*Bullying is less likely to occur in well-managed classrooms.*)<sup>23</sup>

## Certain student populations in Maine are doing better in school than others.

High school graduation rates have been increasing both in Maine and the U.S. over the past decade.<sup>24</sup> Maine has one of the highest high school graduation rates in the nation (87.5%, compared 83.2% in the U.S). However, it may be misleading to compare Maine's population (which is 94.9% non-Hispanic White) to states with more racial and ethnic diversity.<sup>24</sup> When compared to the U.S. rate among White students (87.6%), Maine's rate is comparable (87.5%), not higher.

### The graduation rates for Maine's Black/African American, Hispanic, and American Indian/Alaskan Native students all fall below the state rate.<sup>24</sup>



*Percentage of high school students who graduated high school.*

Maine Department of Education, 2014-2015

These racial groups with lower graduation rates are the same groups that were less likely to agree that their schools and teachers were supportive, safe, and cared about them.



## Summary: Safe, supportive schools impact students' health, today and in adulthood.

Supportive schools are key to academic achievement and overall health for Maine students.

- Having a supportive school prepares students for adulthood, whether that is further schooling, employment, or both.
- Students who feel safe and supported at school are more likely to perform well academically and be healthier in adolescence and adulthood.
- Disparities in experiences with bullying and feeling supported at school exist for certain population groups including students of different races, ethnicity, sexual orientation, and gender identity.
- The school environment, including how students feel while at school, impacts high school graduation rates.

The strong link between education and health illustrates how important advances and improvements in safe, supportive schools are to promote good health for all Mainers.



Student experiences in Maine schools have lasting impacts on their health into adulthood. Teachers, parents, administrators, coaches, and community members can foster safe and bias-free learning environments that reduce school bullying and promote learning for all.

- <sup>1</sup> The Role of Supportive School Environments in Promoting Academic Success. Center for the Collaborative Classroom. <https://www.collaborativeclassroom.org/research-articles-and-papers-the-role-of-supportive-school-environments-in-promoting-academic-success>
- <sup>2</sup> McNeely, C, Nonnemaker J, Blume R (2002). Promoting school connectedness: Evidence from the National Longitudinal Study of Adolescent Health. *Journal of School Health*. 72(4):138-146.
- <sup>3</sup> Goodenow C (1993). Classroom belonging among early adolescent students: Relationships to motivation and achievement. *The Journal of Early Adolescence*. 13(1):21-43.
- <sup>4</sup> Wentzel, K. R. (1998). Social relationships and motivation in middle school: The role of parents, teachers, and peers. *Journal of Educational Psychology*, 90, 202-209.
- <sup>5</sup> Lonczak, H. S., Abbott, R. D., Hawkins, J. D., Kosterman, R., & Catalano, R. (2002). The effects of the Seattle Social Development Project: Behavior, pregnancy, birth, and sexually transmitted disease outcomes by age 21. *Archives of Pediatric Adolescent Health*, 156, 438–447.
- <sup>6</sup> Samdal, O., Nutbeam, D., Wold, B., & Kannas, L. (1998). Achieving health and educational goals through schools. *Health Education Research*, 13(3), 383–397.
- <sup>7</sup> Lleras-Muney, Adriana. Review of Economic Studies. 2005. The Relationship Between Education and Adult Mortality in the United States. Vol. 72: 189-221.
- <sup>8</sup> Bishop, J.H., Bishop, M., Bishop, M., Gelbwasser, L., Green, S., Peterson, E., Rubinsztaj, A., & Zuckerman, A. (2004). Why we harass nerds and freaks: A formal theory of student culture and norms. *Journal of School Health*, 74, 7. 235-251.
- <sup>9</sup> National Research Council and the Institute of Medicine. Engaging Schools: Fostering High School Students' Motivation to Learn. Washington, DC: National Academies Press; 2004.
- <sup>10</sup> Maine Integrated Youth Health Survey, 2017
- <sup>11</sup> Denny et al (2011), Do schools influence student risk-taking behaviors and emotional health symptoms? *Journal of Adolescent Health*, 48(3):259-67. doi: 10.1016/j.jadohealth.2010.06.020.
- <sup>12</sup> Schapps, E. (2003). The role of supportive school environments in promoting academic success. Sacramento, CA: California Department of Education Press.
- <sup>13</sup> Wilson, D., & Elliott, D. (2003, June). The interface of school climate and school connectedness: An exploratory review and study. Paper presented at the Wingspread Conference on School Connectedness: Strengthening Health and Educational Outcomes for Teens, Racine, Wisconsin.
- <sup>14</sup> National Institute on Drug Abuse. Health Consequences of Drug Abuse. <https://www.drugabuse.gov/related-topics/health-consequences-drug-misuse>.
- <sup>15</sup> U.S. Centers for Disease Control and Prevention. Mental Health Basics. <https://www.cdc.gov/mentalhealth/basics.htm>
- <sup>16</sup> National Institute of Child Health and Human Development. Bullying. <https://www.nichd.nih.gov/health/topics/bullying/Pages/default.aspx>
- <sup>17</sup> Youth Risk Behavior Surveillance System, 2015.
- <sup>18</sup> Smokowski, P. R., & Kopasz, K. H. (2005). Bullying in school: An overview of types, effects, family characteristics, and intervention strategies. *Children and Schools*, 27, 101–109.
- <sup>19</sup> Children's National Health System. The Clinic for Health Problems Related to Bullying. <https://childrensnational.org/departments/bullying-related-health-risks>
- <sup>20</sup> Takizawa, R, Maughan B, Arseneault L (2014). Adult Health Outcomes of Childhood Bullying Victimization: Evidence From a Five-Decade Longitudinal British Birth Cohort. *The American Journal of Psychiatry*. 171(7):777-784.
- <sup>21</sup> Wolke D, Copeland W, Angold A, Costello EJ (2013). Impact of Bullying in Childhood on Adult Health, Wealth, Crime, and Social Outcomes. *Psychological Science*. 24(10):1958-1970.
- <sup>22</sup> Eunice Kennedy Shriver National Institute of Child Health and Human Development. Taking a stand against bullying. <http://www.nichd.nih.gov/news/resources/spotlight/Pages/092110-taking-stand-against-bullying.aspx>
- <sup>23</sup> U.S. Department of Health and Human Services. Build a Safe Environment. Stopbullying.gov. <https://www.stopbullying.gov/prevention/at-school/build-safe-environment/index.html>

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<sup>24</sup> National Center for Education Statistics. Public high school 4-year adjusted cohort graduation rate (ACGR), by race/ethnicity and selected demographics for the United States, the 50 states, and the District of Columbia: School year 2014-15.  
[https://nces.ed.gov/ipeds/data/ipeds\\_datacenter/ipeds\\_datacenter.asp?table=ACGR\\_RE\\_and\\_characteristics\\_2014-15.asp](https://nces.ed.gov/ipeds/data/ipeds_datacenter/ipeds_datacenter.asp?table=ACGR_RE_and_characteristics_2014-15.asp)

# HEALTH INSURANCE AND HEALTH CARE USE



## Health depends on the ability to get care when you need it.

When a person receives health care, they are accessing services to prevent health conditions or manage illness or injury. However, accessing these services is not always easy.

Barriers to getting health care may include:

- Cost;
- Inadequate or no health insurance;
- Lack of services available;
- Unreliable transportation; and/or
- Lack of care that meets the cultural and linguistic needs of patients.<sup>1</sup>

Barriers to accessing health services lead to unmet health needs, delays in receiving preventive care or treatment, preventable hospitalizations, and financial burdens.<sup>1</sup>

## A Snapshot of Health Care in Maine

**87%**

of Mainers had a usual primary care provider.<sup>2</sup> Having a primary care provider can reduce emergency department visits.<sup>3,4</sup>

**64%**

of Maine adults saw a dentist in the past year; (U.S. rate: 66%).<sup>5</sup>

**13%**

of Maine adults aged 18-64 do not have a usual place of medical care; this is lower than the national rate of 17%.<sup>6</sup>

**31%**

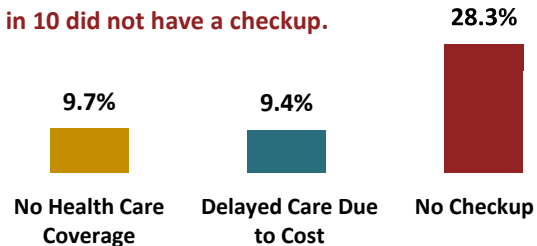
of Maine adults have not seen or talked to a doctor in the past 12 months (U.S. rate: 34%).<sup>2</sup>

Among Maine adults in the past year,

1 in 10 lacked health insurance.

1 in 10 delayed care due to cost.

3 in 10 did not have a checkup.



Behavioral Risk Factor Surveillance System, 2015

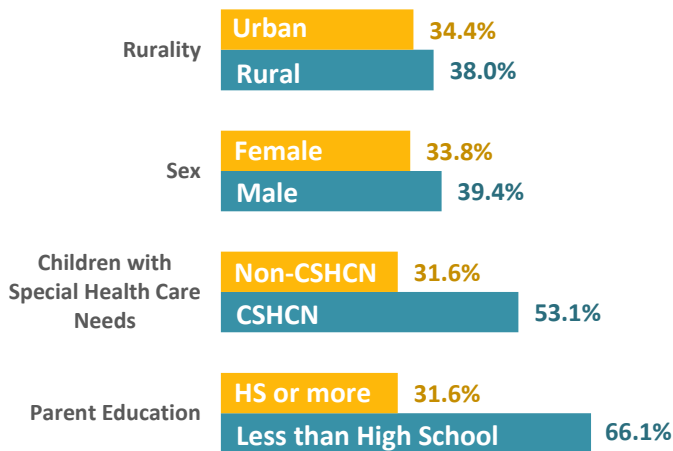
Having a medical home is also important for children to ensure coordinated quality care.

According to the American Academy of Pediatrics, there are seven components to a medical home: accessible, family-centered, continuous, comprehensive, coordinated, compassionate, and culturally effective.<sup>7</sup>

**37%**

**of Maine children lack a medical home.<sup>8</sup>**

**Some children are more likely to lack a medical home than others, simply based on where they live or who they are.**



*Percentage of Maine children who lack a medical home. National Survey of Children's Health, 2011/2012*

Children with special health care needs are more likely than children without special health care needs to not receive care. Children of parents without a high school degree are less likely to get the care they need in a medical home than children of parents with a high school education or more.<sup>8</sup>

**Accessing care is more difficult and costly without health insurance.**

**In 2015, about one in 10 Mainers did not have any type of health insurance (9.7%);<sup>2</sup> this means that an estimated**

**126,000**

**Mainers were without health insurance coverage.<sup>2</sup>**

Although this is a significant decrease since 2013 (12.2% in 2013), it remains a concern.<sup>2,9</sup> However, with voter-approved Medicaid expansion, more than 40,000 additional Mainers now have insurance through MaineCare.<sup>44</sup>

**Mainers who do not have health insurance are less likely to have a regular doctor or delay care when they need it because of cost compared to adults who are privately or publicly insured.<sup>2</sup>**

- Health insurance reduces the out-of-pocket costs of health care for planned or unanticipated medical expenses, such as primary care visits or hospitalizations. The high cost of health care deters uninsured individuals from seeking health care.
- Uninsured individuals also may have difficulty finding doctors, dentists, or mental health professionals since many health professionals are reluctant to accept patients without insurance.
- Staying healthy may be more difficult for the uninsured since lack of insurance can increase chronic stress, which can worsen or even lead to chronic health conditions.<sup>10</sup>

## Mainers are covered by different public and private insurance programs.

- **Public insurance** refers to individual or family health care insurance coverage that is part of a public assistance program such as Medicare, Medicaid, or CHIP (Children’s Health Insurance Program).
- **Private insurance** can be employer-based or individually purchased.
- A person who does not have private or public insurance is **uninsured** and pays out-of-pocket for all medical expenses.

**Medicare** is a federal health insurance program established in 1965 for adults ages 65 years and older. There are no eligibility requirements based on income, medical history, or health status. Those with permanent disabilities are also covered by Medicare.<sup>11,12</sup>

**MaineCare** is the state Medicaid program that provides insurance to residents who meet certain eligibility requirements:

- Low-income children ages 0-18 years;
- Low-income young adults ages 19-20 years;
- Low-income parents with children ages 18 and younger at home;
- Low-income pregnant women;
- Disabled adults and seniors 65 years and older with Medicare;
- Adults living in nursing home;
- People who are medically needy; and/or
- Those with certain health conditions (breast cancer, cervical cancer, and HIV).<sup>11,13</sup>

## Percentage of Insurance Coverage by Type, Maine Residents, 2015

Insurance Type	Percentage	Number
<b>Medicare*</b>	16%	204,700
<b>Medicaid</b>	20%	258,000
<b>Other Public Insurance†</b>	2%	21,000
<b>Private</b>		
<b>Employer-Based</b>	47%	603,900
<b>Individual</b>	7%	93,700

U.S. Census Bureau, American Community Survey, 2015 via Kaiser Family Foundation website

\*This number includes those with other types of insurance where Medicare is the primary payer, but does not include Maine residents with both Medicare and Medicaid (who are included in the Medicaid numbers), or those over 65 who are still working with employer-sponsored insurance.

†This number includes those receiving benefits through the VA or military.

The **Children’s Health Insurance Program (CHIP)** was established in 1997 to cover children in families with incomes too high to qualify for Medicaid, but who cannot afford private coverage. In Maine, CHIP covers children in families earning up to 213% of the Federal Poverty Level.<sup>15</sup>

- Almost one-third (33.8%) of Maine’s Medicaid population were children ages 1-18 (87,400).<sup>14</sup> This includes the 22,310 Maine children who were ever enrolled in CHIP in 2015 (FY2015).<sup>15</sup>

Changes in health insurance legislation over time will influence health insurance access, costs, and use. In 2011, the Affordable Care Act (ACA) mandated that group insurance could be purchased by individuals or individuals working for small companies. This act expanded coverage for over 60,000 Mainers from 2013 to 2015 and ensured the coverage of certain preventive services such as cancer, HIV, and chronic disease screenings; flu shots; and nutrition counseling.<sup>16</sup> In 2017, Maine voters approved Medicaid expansion, which was enacted in January 2019.

**The cost of health insurance and health care can be burdensome.**

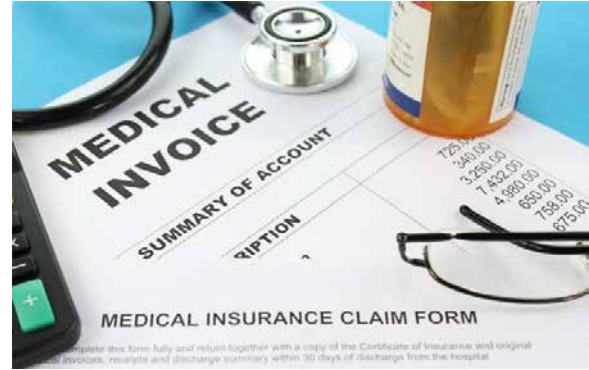
Health insurance has many types of associated costs: monthly premiums, deductibles, and co-pays. Even among those with health care insurance, a catastrophic event can push an individual or family into poverty.

**Cost of average premium in Maine in 2018:**

- For **employer-based health insurance**, the employer contribution was \$5,405 per year and the employee contribution was **\$1,461 per year**.<sup>17</sup>
- For **individual market health insurance**, the average monthly premium individual market was \$588 totaling **\$7,056 per year**.<sup>18</sup>

For those without any health care insurance, the emergency department or hospital may be the only option for medical care.<sup>19</sup> Receiving care at an emergency department costs more for the uninsured patient; there is no cost-sharing.

Studies show **the provider or hospital may also charge uninsured patients up to 10 times more for the same service than insured patients**.<sup>20,21</sup>



**1 in 4**

**Maine adults had a health care bill they were paying off over time in 2014 (22.5%); 35.6% of uninsured Maine adults had a health care bill they were paying off over time.**<sup>5</sup>

Though the ACA removed some of the Medicare Part B deductibles and coinsurance and a wellness exam is covered, Medicare beneficiaries in 2013 paid on average 17.2% of their income on their out-of-pocket health costs, often thousands of dollars per year.<sup>22</sup>

Additionally, not all providers accept Medicaid insurance.

**1 in 5**

**Maine office-based physicians do not accept Medicaid (20.2%), significantly lower than the national average (31.1%)**<sup>23</sup>

**Health Insurance Costs**

- **Monthly premium**—the fixed monthly payment an individual pays toward having insurance coverage. Often, an employer and employee each pay a percentage of the premium. There is no monthly premium with public assistance programs such as Medicare or Medicaid.
- **Deductible**—the amount a person pays before insurance contributes to the medical cost.
- **Co-pay or co-insurance**—the set amount (co-pay) or portion (co-insurance) that a person pays for a health good or service.

**Uninsured Mainers are less likely to receive care due to cost.**

The prohibitive cost of health care may result in not receiving needed prescriptions and preventive medical or dental care, especially for those who are uninsured.

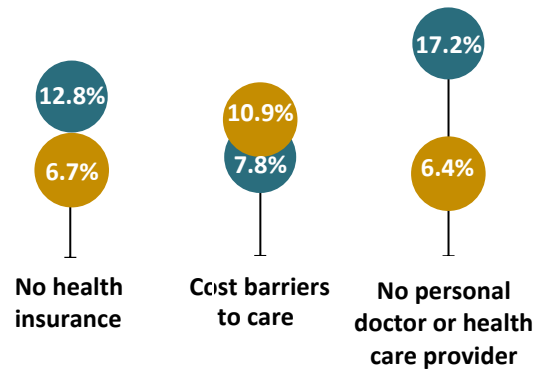
- More than five times as many uninsured Mainers **delay needed medical care due to cost** compared to insured Mainers (40.0% vs. 7.7%).<sup>24</sup>
- More than twice as many uninsured Mainers **did not see a dentist due to cost** compared to insured Mainers (61.0% vs. 28.1%).<sup>24</sup>
- More than three times as many uninsured Mainers report **not picking up a prescription due to cost** compared to insured Mainers (23.1% vs. 6.5%).<sup>24</sup>
- More than twice as many Mainers without health insurance also **do not have dental insurance** compared to insured Mainers (91.8% vs. 40.1%).<sup>24</sup>
- Only 6 in 10 Mainers without health insurance **saw a primary care doctor in the past year** compared to 9 in 10 insured Mainers (61.5% vs. 91.1%).<sup>24</sup>
- Only about one in three uninsured Mainers **saw a dentist in the past year** compared to two out of three insured Mainers (31.5% vs. 67.5%).<sup>24</sup>

**Some Mainers are less likely to have health insurance and access to health care.**

**Men and young adults are less likely to have health insurance and seek care.**

- Men in Maine are less likely than women to have a usual primary care provider (82.8% vs. 93.6%).<sup>2</sup> Men in Maine are also slightly less likely than Maine women to see a dentist (60.6% vs. 66.5%).<sup>5</sup>

**Men are less likely to have health insurance or a personal doctor, while women are more likely to experience cost barriers to care.**

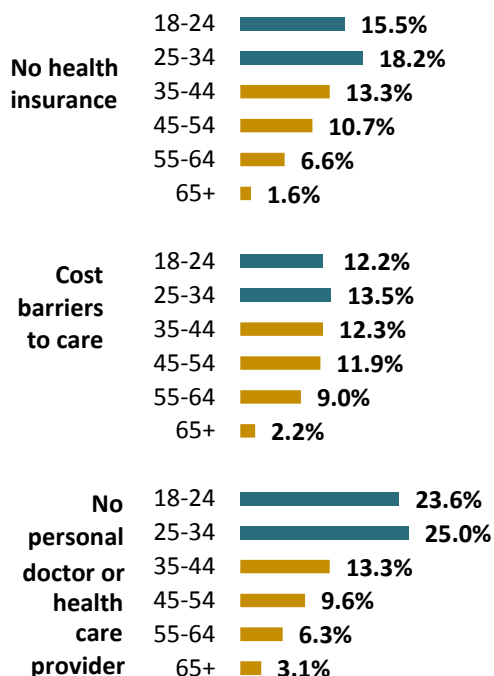


Behavioral Risk Factor Surveillance System, 2015

- Almost **twice as many men have no health insurance** compared to women.<sup>2</sup> Low-income pregnant women and mothers can qualify for Medicaid coverage, which may be driving this disparity; more Maine women are covered by Medicaid than men (52.0% vs. 48.0%).<sup>25</sup> Furthermore, 1 in 3 uninsured men earn less than \$25,000 per year, making insurance and health services difficult to afford.<sup>2</sup>



**Young adults have more difficulty obtaining health insurance, affording care, and having a personal doctor.**



Behavioral Risk Factor Surveillance System, 2015

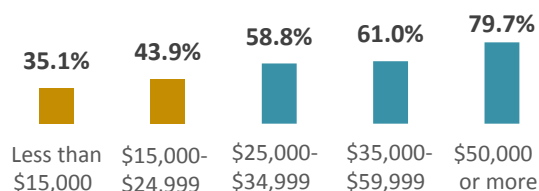
- Adults over the age of 26 years are not eligible for coverage on their parent's insurance.<sup>26</sup>
- Younger Mainers are less likely to have any health insurance, with 15.5% of adults ages 18-24 years and 18.2% of adults ages 25-34 years without any health insurance.<sup>2</sup>
- With Medicaid expansion in 2019, the rates of uninsured young adults may change. More than 1 in 4 new enrollees (11,500) are adults ages 19-29 years without children.<sup>44</sup>
- About 1 in 4 adults ages 18-35 years does not have a personal doctor or health care provider.<sup>2</sup>

**Employment, income, and education affect the likelihood of having health insurance and accessing health services.**

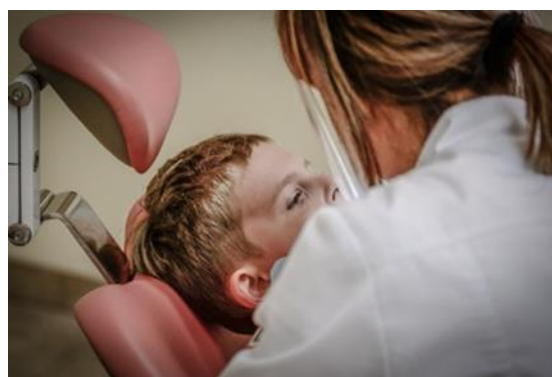
**Employment**—Employment and private health insurance are strongly linked. In Maine, 91% of the population with private health insurance have employer-based insurance; less than 10% of individuals with private health insurance obtain it outside of employment.<sup>27</sup> Of those employed in 2014, 96% had some insurance.<sup>5</sup>

**Income**—Mainers working jobs without employer-sponsored health insurance may have incomes higher than Medicaid eligibility requirements, but not high enough to afford insurance in an individual plan.<sup>28</sup> Those with the lowest income levels are least likely to have a primary care provider and are less likely to have seen a dentist in the past year.<sup>2,5</sup>

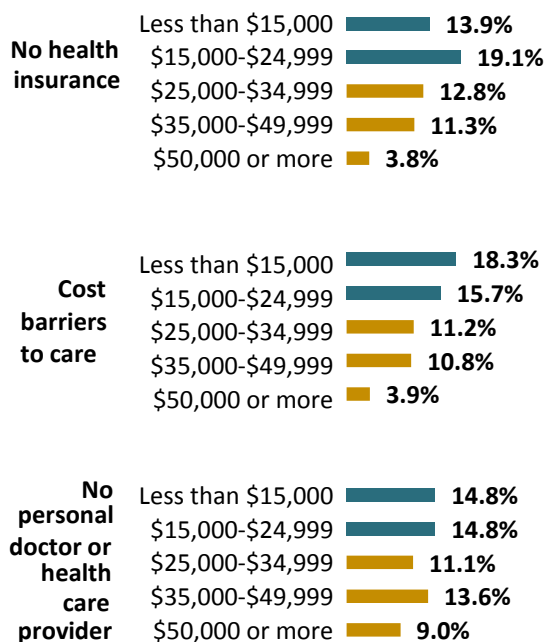
**Less than half of Mainers making \$25,000 or less per year have seen a dentist in the past year.**



Behavioral Risk Factor Surveillance System, 2016



**Maine adults in lower income households\* are less likely to have health insurance, a personal doctor, and afford care they need.**



\*Lower income household = earning less than \$25,000 annually; Behavioral Risk Factor Surveillance System, 2015

More than half of Maine adults who lack health insurance make less than \$25,000 per year (56.7%).<sup>2</sup>

Almost **one in five (19%)** Maine adults making **\$15,000-\$24,999** have no health insurance.<sup>2</sup>

The percentage of uninsured adults making \$15,000-\$24,999 is higher than adults making less than \$15,000 because many in the lower bracket are insured by MaineCare.<sup>2,13</sup>

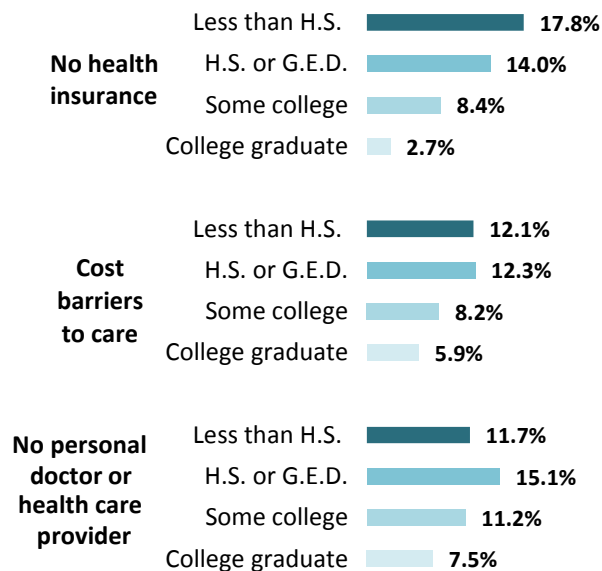
Though Maine adults making less than \$15,000 annually are more likely to have health insurance coverage, cost barriers to care remain an issue: **18.3% report cost barriers to care.**<sup>2</sup>

Maine households of all income levels struggle with health care costs. As income level decreases, cost barriers to care increase.<sup>2</sup> Even among households with incomes more than \$50,000 per year, 9% lack health insurance and 4% have cost barriers to care.<sup>2</sup>

**Education**—Adults who have a high school degree or less may have reduced opportunities for jobs that offer health insurance and are more likely to make less than \$25,000 per year, making individual health premiums difficult to afford.<sup>2</sup>

Adults with a high school degree or less are less likely than those with a college degree to have a usual source of care.<sup>2</sup>

**The prevalence of no health insurance is six times higher among Mainers with less than a high school degree than adults with a college degree.**



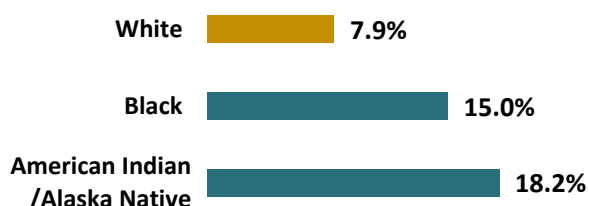
Behavioral Risk Factor Surveillance System, 2015

Disparities exist for access to care and health insurance by race, ethnicity, and sexual orientation.

**Race and Ethnicity**

- Nationally, Hispanic, Black, and American Indian/Alaska Natives are significantly more likely to be uninsured than Whites (13-21% vs 9%).<sup>29</sup>

**American Indian/Alaska Native and Black Maine residents are more likely than White Maine residents to be uninsured.**<sup>30</sup>



U.S. Census, American Community Survey, 2016

- Nationally, Hispanic, non-Hispanic Black, and non-Hispanic Asian nonelderly adults (ages 18-64 years) are less likely to have a usual place to go for care than non-Hispanic White nonelderly adults (73.0%, 81.4%, 81.4% vs. 85.6%, respectively).<sup>31</sup>
- Nationally, non-Hispanic Blacks, Hispanics, and American Indian/Alaska Natives have poor oral health compared to other racial and ethnic groups.<sup>32</sup>

**62%**

**of male Black high school students in Maine report going to a dentist in the past year compared to 79% of White male students.**<sup>33</sup>



**Sexual Orientation**

No Maine-specific data on adult health insurance or health care use, including dental care, by sexual orientation are available due to the small number of respondents in state surveys.

- Nationally, gay or lesbian adults are less likely to be uninsured than heterosexual adults (9.1% vs. 10.4%), but bisexual adults are the most likely to be uninsured among sexual orientation groups (14.8%).<sup>34</sup>
- Bisexual adults are least likely to have a usual place for medical care (76.2%) compared to gay or lesbian or heterosexual adults (87.5% and 85.4%).<sup>34</sup>

**Bisexual adults in the U.S. are more likely to be uninsured than heterosexual, gay or lesbian adults.**



National Center for Health Statistics, National Health Interview Study, 2015

**Where you live influences your ability to find and receive care.**

In rural areas of Maine, there are often shortages of medical and dental providers, including medical specialists. This can be a barrier to accessing and receiving needed health care.

In Maine, there are 183.7 primary care doctors for every 100,000 people, while there are only 50.0 dentists for every 100,000 people.<sup>35</sup>

Fortunately, the rates of primary care physicians and dentists per 100,000 people have been increasing over time.<sup>35</sup>

Maine has 68 areas in the state designated as **Primary Care Health Professional Shortage Areas**. A primary care provider shortage area is defined as an area in which the population to provider ratio is at least 3,500 to 1.

- There are 75 Dental Shortage Areas and 52 Mental Health Shortage Areas; about 300,000 Mainers reside in these areas.<sup>36</sup>
- About 92,000 Mainers reside in areas where only about 46% of the need is being met.<sup>36</sup>

In Appendix III, maps display the geographic areas where there are not enough primary care physicians, dentists, and mental health providers for the population living in those areas.<sup>37</sup>

- Mainers living in counties along the Maine coast and in northern Maine are significantly less likely to have health insurance than other areas of Maine.<sup>38</sup>
- **Mental health shortages and primary care shortages exist in many regions of Northern, Eastern, and Western Maine.**<sup>37</sup>
- **Dental health shortages exist throughout Maine.**<sup>37</sup>



**The rate of primary care doctors and dentists has increased over the past decade, though many Mainers living in certain areas do not have a health care provider in their area.**

	2006	2008	2010	2012	2014	2016
<b>Primary care doctors per 100,000 people</b>	120.1	125.3	127.7	130.0	130.2	183.7
<b>Dentist per 100,000 people</b>	48.5	48.5	48.3	49.7	50.3	50.0
<b>Preventable hospitalizations per 100,000 people*</b>	66.1	66.0	62.5	59.3	55.1	47.5

\*Number of discharges for ambulatory care-sensitive conditions per 1,000 Medicare enrollees America’s Health Rankings, 2016 & ADA Health Policy Institute<sup>32</sup>

## Having health insurance and access to care promotes overall health.

Having health care insurance and being able to see a medical doctor or dentist influences health outcomes. Receiving preventive care (e.g., immunizations, cancer screenings, prenatal care) and care to manage chronic conditions (e.g., high cholesterol, high blood pressure, and diabetes) are essential to reducing sickness and premature death.

For Mainers who lack health insurance or access to care, undiagnosed or untreated conditions can lead to further sickness and increased costs. For example, uninsured Maine adults are less likely to be diagnosed with high blood pressure, potentially due to cost or another barrier to care.<sup>2</sup> This lack of diagnosis can lead to more serious heart issues.

Prenatal care, cancer screenings and flu vaccinations are just a few examples of disparities in health care use for Maine residents.

**Early and adequate prenatal care** (based on the *Kotelchuck Adequacy of Prenatal Care Utilization Index*)

- **Race**—Black, Native American, and Hispanic women are significantly less likely to receive early and adequate prenatal care than women in Maine overall.<sup>39</sup>
- **Education**—The likelihood of receiving early and adequate prenatal care increases as maternal education increases: women with less than a high school degree in Maine are far less likely to receive prenatal care than women with a bachelor’s degree or higher (75.5% vs. 90.1%)<sup>40</sup>

- **Where you live**—Women who reside in Waldo and Somerset counties are significantly less likely to get early and adequate prenatal care than pregnant women in Maine overall (79.5% and 75.5% vs. 86.4%).<sup>40</sup>

## Cancer

Cancer screening is an opportunity to improve health for all. Screenings can detect cancer early and improve the chances of survival. Improvements in screening rates for all population groups could lead to improved cancer health outcomes for Maine adults.

Maine has a high rate of cancer incidence and mortality compared to the U.S., even when adjusted for Maine’s older population.<sup>41</sup> It is especially important that Mainers stay up-to-date on cervical, breast, and colorectal cancer screenings based on the United States Preventive Services Task Force screening recommendations.<sup>42</sup>

# 81%

of Maine women ages 50-74 years **received a mammogram** in the past two years.<sup>5</sup>

# 82%

of women 21-65 years **received a Pap test** within the past three years in 2016.<sup>5</sup>

# 73%

of Maine adults ages 50-75 **had a colonoscopy** in the past decade; three out of four Mainers (75.5%) ages 50-75 years are up-to-date with colorectal cancer screening.<sup>5</sup>

**Accessing cancer screenings among Maine adults varies by age, income, education, and disability status.**

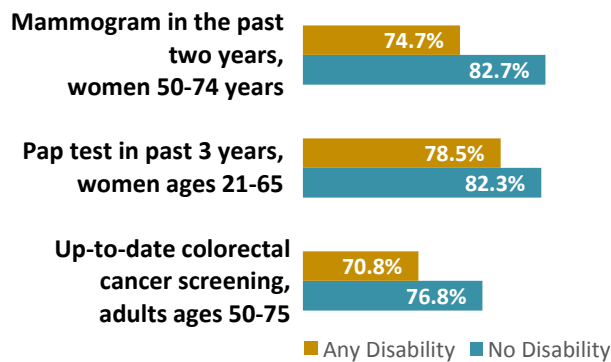
**Age**—Older adults are more likely to have breast or colorectal cancer screenings than younger adults in Maine.<sup>5</sup>

**Education**—Mainers who received more education are the most likely to have cancer screenings. Each increase in educational attainment results in an increased likelihood of Mainers receiving a Pap test, mammogram, or being up-to-date with colorectal screening.<sup>5</sup>

**Income**—Mainers in higher income groups are more likely to have cancer screenings than adults in lower income groups. Mainers with a household income of \$50,000 or more are significantly more likely to have cancer screenings than any other income group.<sup>5</sup>

**Disability—**

**Adults with any disability** are less likely to receive a cancer screening compared to **adults with no disability**.



**Flu vaccination**

Flu vaccinations are an important preventive health measure as influenza easily spreads to other community members. The elderly and asthmatics are especially at risk for complications.<sup>43</sup>

**44%**

**of Mainers received a flu vaccination in the past year via shot or nasal spray in 2013.<sup>9</sup>**

**Age & Sex**—Women were more likely than men to receive the shot and the likelihood of receiving an annual flu vaccine increases with age.<sup>9</sup> In 2013, adults ages 65-74 years were more likely to get a flu vaccine than adults ages 18-24 years (62.5% vs. 25.3%).<sup>9</sup>

**Education & Income**—Mainers with a college degree were significantly more likely than those with less education to receive a flu shot (e.g., 51.6% of adults with a college degree vs. 38.9% of adults with less than a high school diploma).<sup>9</sup> Mainers earning \$50,000 or more per year were much more likely to receive a flu shot than Mainers earning less than \$15,000 (47.7% vs. 37.4%).<sup>9</sup>

**Insurance**—Medicare beneficiaries and Mainers with other insurance (TRICARE, VA, Military, or other) were the most likely to receive a flu shot (59.7% and 55.3%), while MaineCare beneficiaries and the uninsured were the least likely to receive a flu shot (38.4% and 20.4%).<sup>9</sup>

**Sexual Orientation**—Bisexual adults in Maine were significantly less likely to get a flu shot than heterosexual adults (30.8% vs. 41.8%), likely because nationally bisexual adults are less likely to have a usual place of medical care.<sup>9,34</sup>

**Summary: Access to care is an important contributor to maintaining healthy lives.**

Quality, affordable health care is important for the preventing and managing chronic and acute disease. However, many Mainers are not able to access care due to lack of insurance, cost of care, and/or availability of care in their area.

Health insurance allows individuals to get needed health care without significant financial burden. Those without health insurance are less likely to receive preventive care, more likely to be diagnosed later, and have poorer health outcomes.

In some areas of Maine there are critical shortages of health care providers, especially medical specialists, mental health providers, and dental providers. In Maine's rural areas, long distances to available providers can discourage or delay health seeking behavior.

Specific groups of Mainers are more likely than others to lack needed health care. These include those:

- with lower incomes;
- without full-time employment;
- living in rural areas;
- lesbian, gay, and bisexual adults; and
- persons of color.

Populations experiencing disparities in health insurance, access, and cost, experience inequities in health care outcomes.

By increasing enrollment in health insurance, developing innovative methods to ensure access to health care in Maine's rural areas, and reducing disparities in health care access, Maine can improve the health and economic security of our population.

<sup>1</sup> Office of Disease Prevention and Health Promotion. Healthy People 2020 Topics and Objectives: Access to Health Care. <https://www.healthypeople.gov/2020/topics-objectives/topic/Access-to-Health-Services>

<sup>2</sup> U.S. Centers for Disease Control and Prevention. Behavioral Risk Factor Surveillance System, 2015

<sup>3</sup> Weinick, R. M., Burns, R. M., & Mehrotra, A. (2010). Many Emergency Department Visits Could Be Managed At Urgent Care Centers And Retail Clinics. *Health Affairs*, 29(9), 1630-1636. doi:10.1377/hlthaff.2009.0748

<sup>4</sup> Pourat, N., Davis, A. C., Chen, X., Vrungos, S., & Kominski, G. F. (2015). In California, Primary Care Continuity Was Associated With Reduced Emergency Department Use And Fewer Hospitalizations. *Health Affairs*, 34(7), 1113-1120. doi:10.1377/hlthaff.2014.1165

<sup>5</sup> U.S. Centers for Disease Control Prevention, Behavioral Risk Factor Surveillance System, 2016.

<sup>6</sup> U.S. Centers for Disease Control Prevention, National Center for Health Statistics, National Health Interview Survey, 2014. Data Brief 245: State Variation in Health Care Service Utilization: United States, 2014. [https://www.cdc.gov/nchs/data/databriefs/db245\\_table.pdf#1](https://www.cdc.gov/nchs/data/databriefs/db245_table.pdf#1)

<sup>7</sup> American Academy of Pediatrics. AAP Agenda for children – Strategic Plan, Medical Home. <https://www.aap.org/en-us/about-the-aap/aap-facts/AAP-Agenda-for-Children-Strategic-Plan/pages/aap-agenda-for-children-strategic-plan-medical-home.aspx>

<sup>8</sup> National Survey of Children's Health. NSCH 2011/12. Data query from the Child and Adolescent Health Measurement Initiative, Data Resource Center for Child and Adolescent Health website. <https://www.childhealthdata.org/browse/survey>

<sup>9</sup> U.S. Centers for Disease Control Prevention, Behavioral Risk Factor Surveillance System, 2013.

<sup>10</sup> Schneiderman, N., Ironson, G., & Siegel, S. D. (2005). STRESS AND HEALTH: Psychological, Behavioral, and Biological Determinants. *Annual Review of Clinical Psychology*, 1, 607–628. <http://doi.org/10.1146/annurev.clinpsy.1.102803.144141>

<sup>11</sup> Henry J. Kaiser Family Foundation. Kaiser Family Foundation estimates based on the Census Bureau's March Current Population Survey (CPS: Annual Social and Economic Supplements), 2015. Health Insurance Coverage of the Total Population. (2018, November 28). <https://www.kff.org/other/state-indicator/total->

[population/?dataView=1&currentTimeframe=3D0&currentTimeframe=0&sortModel=%7B%22colld%22:%22Location%22,%22sort%22:%22asc%22%7D](https://www.kff.org/other/state-indicator/total-population/?dataView=1&currentTimeframe=3D0&currentTimeframe=0&sortModel=%7B%22colld%22:%22Location%22,%22sort%22:%22asc%22%7D)

<sup>12</sup> Henry J. Kaiser Family Foundation. (2015, March 24). Medicare Timeline. <http://kff.org/medicare/timeline/medicare-timeline/>

<sup>13</sup> Consumers for Affordable Health Care & Equal Justice Partners. MaineCare Eligibility Guide. Augusta, ME. [https://www.mejp.org/sites/default/files/MaineCare-Eligibility-Guide-June2018\\_0.pdf](https://www.mejp.org/sites/default/files/MaineCare-Eligibility-Guide-June2018_0.pdf)

<sup>14</sup> Henry J. Kaiser Family Foundation. Kaiser Family Foundation estimates based on the Census Bureau's March Current Population Survey (CPS: Annual Social and Economic Supplements), 2015. Health Insurance Coverage of Children 0-18. (2018, November 28). <https://www.kff.org/other/state-indicator/children-0-18/?dataView=1&currentTimeframe=2&selectedRows=%7B%22states%22:%7B%22maine%22:%7B%7D%7D%7D&sortModel=%7B%22colld%22:%22Location%22,%22sort%22:%22asc%22%7D>

<sup>15</sup> Henry J. Kaiser Family Foundation. (2017, July 18). Total Number of Children Ever Enrolled in CHIP Annually. Retrieved July 19, 2017, from <http://www.kff.org/other/state-indicator/annual-chip-enrollment/?currentTimeframe=1&sortModel=%7B%22colld%22%3A%22Location%22%2C%22sort%22%3A%22asc%22%7D>

<sup>16</sup> Henry J. Kaiser Family Foundation. (2017, June 16). What's at Stake with ACA Repeal? <http://www.kff.org/interactive/whats-at-stake-with-aca-repeal/>

<sup>17</sup> Henry J. Kaiser Family Foundation. (2019, October 29). Agency for Healthcare Research and Quality, Center for Financing, Access and Cost Trends. Medical Expenditure Panel Survey (MEPS)- Insurance Component, 2013-2016. Average Single Premium per Enrolled Employee For Employer-Based Health Insurance. <https://www.kff.org/other/state-indicator/single-coverage/?currentTimeframe=0&sortModel=%7B%22colld%22:%22Location%22,%22sort%22:%22asc%22%7D>

<sup>18</sup> Henry J. Kaiser Family Foundation. (2019, October 29). Marketplace Average Benchmark Premiums. <https://www.kff.org/health-reform/state-indicator/marketplace-average-benchmark-premiums/?currentTimeframe=0&sortModel=%7B%22colld%22:%22Location%22,%22sort%22:%22asc%22%7D>



- <sup>19</sup> American College of Emergency Physicians. EMTALA. <https://www.acep.org/life-as-a-physician/ethics--legal/emtala/emtala-fact-sheet/#sm.00001tawurwgvieokr8yw5ekg7uwb>
- <sup>20</sup> Nonurgent Care in the Emergency Department—Bane or Boon? (2010). *Virtual Mentor*, 12(6), 476-482. doi:10.1001/virtualmentor.2010.12.6.pfor1-1006
- <sup>21</sup> Bai, G., & Anderson, G. F. (2015). Extreme Markup: The Fifty US Hospitals With The Highest Charge-To-Cost Ratios. *Health Affairs*, 34(6), 922-928. doi:10.1377/hlthaff.2014.1414
- <sup>22</sup> Noel-Miller, Claire. AARP Public Policy Institute. *Medicare Beneficiaries' Out-of-Pocket Spending for Health Care*. November 2018. <https://www.aarp.org/content/dam/aarp/ppi/2017/11/medicare-beneficiaries-out-of-pocket-spending-for-health-care.pdf>
- <sup>23</sup> Hing E, Decker SL, Jamoom E. Acceptance of new patients with public and private insurance by office-based physicians: United States, 2013. NCHS data brief, no 195. Hyattsville, MD: National Center for Health Statistics. 2015. <https://www.cdc.gov/nchs/data/databriefs/db195.pdf>
- <sup>24</sup> U.S. Centers for Disease Control Prevention, Behavioral Risk Factor Surveillance System, 2014.
- <sup>25</sup> Henry J. Kaiser Family Foundation (2017, April 13). Kaiser Family Foundation estimates based on the Census Bureau's March Current Population Survey (CPS: Annual Social and Economic Supplements), 2014-2017. Distribution of Nonelderly Adults with Medicaid by Gender. <http://www.kff.org/medicaid/state-indicator/distribution-by-gender-4/?currentTimeframe=0&sortModel=%7B%22colld%22%3A%22Location%22%2C%22sort%22%3A%22asc%22%7D>
- <sup>26</sup> U.S. Centers for Medicare & Medicaid Services. Health Insurance Coverage For Children and Young Adults Under 26. <https://www.healthcare.gov/young-adults/children-under-26/>
- <sup>27</sup> Henry J. Kaiser Family Foundation. Kaiser Family Foundation estimates based on the Census Bureau's March Current Population Survey (CPS: Annual Social and Economic Supplements), 2014-2017. Health Insurance Coverage of the Total Population. <https://www.kff.org/other/state-indicator/total-population/?currentTimeframe=0&sortModel=%7B%22colld%22%3A%22Location%22%2C%22sort%22%3A%22asc%22%7D>
- <sup>28</sup> Garfield, R., & Damico, A. (2016, October 19). The Coverage Gap: Uninsured Poor Adults in States that Do Not Expand Medicaid. Retrieved July 19, 2017, from <http://www.kff.org/uninsured/issue-brief/the-coverage-gap-uninsured-poor-adults-in-states-that-do-not-expand-medicaid/>
- <sup>29</sup> Samantha Artiga, Julia Foutz, Elizabeth Cornachione, and Rachel Garfield. (2016, June 16). Key Facts on Health and Health Care by Race and Ethnicity - Section 4: Health Coverage. <http://www.kff.org/report-section/key-facts-on-health-and-health-care-by-race-and-ethnicity-section-4-health-coverage/>
- <sup>30</sup> U.S. Census Bureau, American Community Survey, 2016.
- <sup>31</sup> Martinez ME, Ward BW, Adams PF. Health care access and utilization among adults aged 18–64, by race and Hispanic origin: United States, 2013 and 2014. NCHS data brief, no 208. Hyattsville, MD: National Center for Health Statistics. 2015. <https://www.cdc.gov/nchs/data/databriefs/db208.htm>
- <sup>32</sup> Division of Oral Health, National Center for Chronic Disease Prevention and Health Promotion. (2017, February 14). Disparities in Oral Health. [https://www.cdc.gov/oralhealth/oral\\_health\\_disparities/index.htm](https://www.cdc.gov/oralhealth/oral_health_disparities/index.htm)
- <sup>33</sup> Maine Integrated Youth Health Survey, 2017.
- <sup>34</sup> U.S. Centers for Disease Control and Prevention, National Center for Health Statistics. National Health Interview Survey: Sexual Orientation Information Statistics. [https://www.cdc.gov/nchs/nhis/sexual\\_orientation/statistics.htm](https://www.cdc.gov/nchs/nhis/sexual_orientation/statistics.htm)
- <sup>35</sup> United Health Foundation. America's Health Rankings Annual Report, 2016. <http://www.americashealthrankings.org/explore/2016-annual-report/measure/PCP/state/ME>
- <sup>36</sup> The Kaiser Family Foundation State Health Facts. Data Source: Bureau of Health Workforce, Health Resources and Services Administration (HRSA), U.S. Department of Health & Human Services, Designated Health Professional Shortage Areas Statistics: Designated HPSA Quarterly Summary, as of December 31, 2016.
- <sup>37</sup> HPSA and MUAP Rural Health and Primary Care - Office of Health Equity: DLRS DHHS Maine. <http://www.maine.gov/dhhs/mecdc/dlrs/rhpc/hpsa.shtm>
- <sup>38</sup> U.S. Census Bureau, American Community Survey, 2012-2016.

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<sup>39</sup> Birth certificate datasets, 2004-2012. Data, Research, and Vital Statistics, Maine Center for Disease Control and Prevention.

<sup>40</sup> Birth certificate datasets, 2010-2012. Data, Research, and Vital Statistics, Maine Center for Disease Control and Prevention.

<sup>41</sup> The Maine 2016 Annual Report of Cancer. Augusta, ME: Maine Center for Disease Control and Prevention; 2017. [https://www.maine.gov/dhhs/mecdc/public-health-systems/data-research/vital-records/mcr/reports/documents/Maine-2016-Annual-Report-of-Cancer\\_06292017.pdf](https://www.maine.gov/dhhs/mecdc/public-health-systems/data-research/vital-records/mcr/reports/documents/Maine-2016-Annual-Report-of-Cancer_06292017.pdf)

<sup>42</sup> U.S. Preventive Services Task Force. Published Recommendations: <https://www.uspreventiveservicestaskforce.org/BrowseRe/c/Index>

<sup>43</sup> National Center for Immunization and Respiratory Diseases (NCIRD). U.S. Centers for Disease Control and Prevention. *Influenza (Flu)*. [https://www.cdc.gov/flu/about/disease/high\\_risk.htm](https://www.cdc.gov/flu/about/disease/high_risk.htm)

<sup>44</sup> Maine DHHS Medicaid Expansion Tracker as of October 25, 2019: <https://www.maine.gov/dhhs/expansion.shtml>

## EDUCATION AND OCCUPATION



**Mainers with access to quality education and job opportunities have better health.**

Education can help develop an individual's problem-solving skills, ability to find and interpret information, and opens the door to job opportunities with higher income.<sup>1</sup>

Employed individuals are more likely to have health insurance, and adults with higher income may have opportunities to choose where they live, work, and play. Educational attainment is also linked with greater social support, and less chronic stress.<sup>1</sup> The link between education, employment, and good health is clear, though the high cost of higher education places it out of reach for many Mainers.

Education and occupation are core components of **socioeconomic status (SES)**, a measure of a person's social class or economic advantages in society.<sup>2</sup> Low SES is associated with worse health at every age; the lower one's education, income, and occupational status, the worse their outcomes tend to be.<sup>3</sup> There is no level at which SES ceases to impact health—small differences in SES are still associated with better or worse health.<sup>3,4</sup>

**Education levels in Maine have been rising over time.**

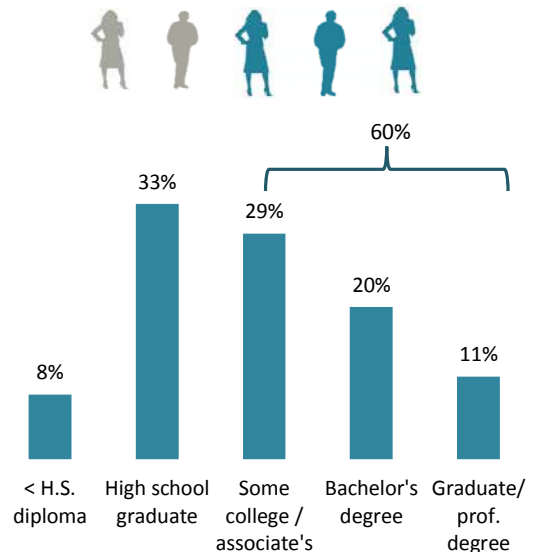
# 92%

**of all Mainers over age 25 had a high school diploma in 2015, up from 85.2% in 2000.<sup>5,6</sup>**

# 60%

**of Maine adults reported at least some college education in 2015, an increase from 50.8% in 2000.<sup>5,6</sup>**

**Three in five Mainers age 25+ have had at least some college.**



U.S. Census American Community Survey, 2015

**Educational attainment is improving, but not for everyone.**

While overall education levels in Maine are improving, there are persistent disparities in educational attainment by geography, race, and ethnicity.<sup>5</sup>

- **Where you live:** In Cumberland County the percentage of adults with a bachelor’s degree or higher is nearly three times that of Somerset County (43.0% vs. 15.4%).<sup>5</sup>
- **Race:** More White adults over age 25 in Maine have at least a high school diploma compared to Native American adults in Maine (92% vs. 84%).<sup>5</sup>

There are many explanations for why disparities in education persist. **Rural/urban differences** may reflect socioeconomic disadvantages of rural areas, such as high poverty, which can limit a student’s ability to apply for and enroll in college and earn a degree.<sup>7</sup> Students in rural areas may also have limited access to career counseling and college preparatory programs.<sup>7</sup>

Differences in educational attainment by race may be explained in part by income, but also by **race-based stressors** such as historical, institutional, overt, and implicit discrimination; violence, bullying, and harassment at school; and fewer successful minority role models in positions of power.<sup>8,9,10</sup>

Additionally, some racial disparities in Maine may be impacted by **national origin**, especially among first and second-generation immigrants or refugees who make up a significant portion of minority groups in Maine. Parental education, cultural beliefs and behaviors related to education and success vary based on country of origin.<sup>11</sup>

**Lower educational attainment is associated with lower income and higher rates of unemployment.<sup>12,13</sup>**

**30%**

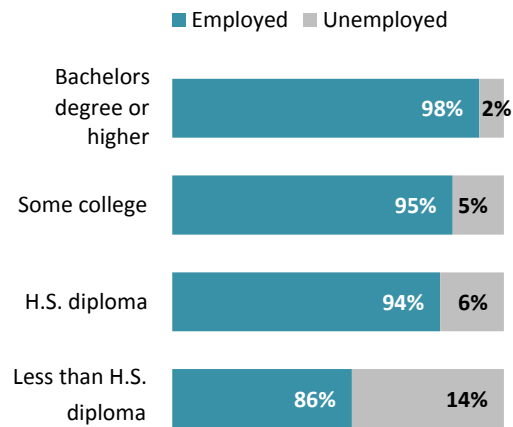
**of Maine adults with less than a high school education live in poverty.**

This poverty rate is seven times higher than adults with a college degree or more.<sup>12</sup>

**1 in 6**

**Maine adults with less than a high school education are unemployed**

**(14%),** compared to 2% of those with a bachelor’s degree or higher.<sup>13</sup>



U.S. Census American Community Survey, 2015

**The employment trend is positive, but benefits are spread unequally.**

In 2015, the state’s overall unemployment rate was 4.4%, the lowest unemployment rate reported since 2002.<sup>14</sup> Maine’s unemployment rate is typically lower than the U.S. rate.<sup>15</sup>

Within Maine, unemployment rates are highest in Washington and Somerset counties (6.6%) and are lowest in Cumberland and Sagadahoc counties (3.4% and 3.5%).<sup>16</sup>

While economic recovery has meant more people are working, **not all Maine workers have experienced the same opportunities in the labor market:**

- **Black adults in Maine** have nearly double the unemployment rate of White adults (17.5% vs 6.6%).<sup>17</sup> After controlling for worker skills and cognitive abilities, researchers have theorized that hiring discrimination is the most likely cause of racial disparities in unemployment.<sup>18</sup>
- **Men in Maine** have a significantly higher unemployment rate than women (7.2% vs. 5.6%).<sup>17</sup>
- **Younger workers** have a significantly higher unemployment rate compared to older workers in Maine (11.7% among adults ages 20-24 years vs. 4.7% among adults ages 55-59 years).<sup>17</sup>
- Nationally, **underemployed workers** represent 9% of the labor force. Under-employment includes workers who are unemployed, discouraged, and employed part-time for economic reasons. Disparities by education and race are seen in both unemployment and underemployment.<sup>19</sup>

**Occupation by Industry in Maine, 2011-2015**

	#	%
Educational services, health care and social assistance	178,206	27.5%
Retail trade	87,062	13.4%
Manufacturing	60,551	9.3%
Arts, entertainment recreation, accommodation and food services	57,726	8.9%
Professional, scientific, management and administrative, and waste management services	55,953	8.6%
Construction	44,905	6.9%
Finance, insurance, real estate, rental and leasing	39,970	6.2%
Other services, except public administration	28,833	4.4%
Public administration	28,223	4.4%
Transportation, warehousing, and utilities	24,363	3.8%
Agriculture, forestry, fishing, hunting, and mining	16,539	2.5%
Wholesale trade	14,886	2.3%
Information	11,470	1.8%

*Note: Professional groupings are determined by the survey.  
U.S. Census American Community Survey*

Some industries are growing faster and have more security than others, and those benefits are not dispersed equally.

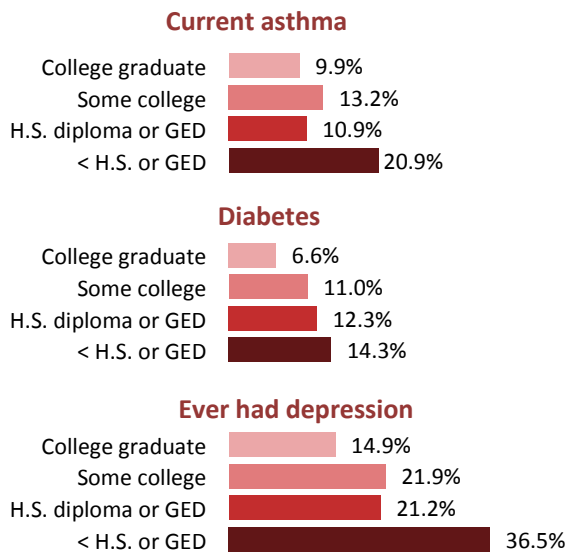
- **Female-dominated service industries** such as educational services, health care and social assistance (75% female) exhibit the **strongest growth** in Maine.<sup>20</sup>
- **Male-dominated labor-intensive industries** like construction (93% male) and manufacturing (77% male) are **most likely to be affected during economic downturns**.<sup>19</sup>

**Higher educational attainment is correlated with better health.**

Research indicates a strong causal relationship between education and life expectancy.<sup>21</sup> There are many theories about why this relationship exists. We know that in part, health behaviors, like smoking, differ by education level.<sup>4,22</sup> We also know that education allows individuals to develop valuable social and cognitive skills they will need to succeed, such as problem solving and teamwork.<sup>23</sup> Even after controlling for race and income, education remains a protective factor for health among U.S. adults.<sup>4</sup>

Maine adults with higher education levels tend to have lower rates of chronic diseases such as diabetes, chronic heart disease, and asthma compared to those with lower education.<sup>22</sup> For instance, almost twice as many Maine adults with a high school diploma compared to adults with a college degree had diagnosed diabetes, current asthma, or ever had depression.<sup>22</sup>

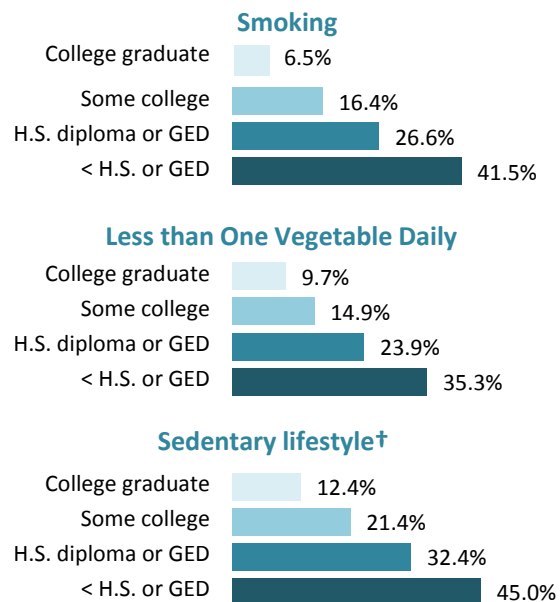
**Maine adults with less education are more likely to suffer from chronic disease.**



Behavioral Risk Factor Surveillance System, 2016

Maine adults with more education are more likely to engage in health promoting activities (physical activity, regular checkups, dental visits, etc.) and less likely to engage in unhealthy behaviors (smoking, eating a diet low in fruits and vegetables) than adults with less education.<sup>22,24</sup> Most alcohol and drug use indicators do not show significant differences by education.<sup>22</sup>

**Unhealthy behaviors decrease with increased education.**



Behavioral Risk Factor Surveillance System, 2015, 2016  
 † Percentage of adults who did not participate in any physical activities or exercises during the past month, other than during their regular job.

Disparities may have their roots in limited access to resources that promote health. Those with higher education are more likely to live in neighborhoods with green spaces, commercial exercise facilities, and access to farmer’s markets and supermarkets.<sup>23</sup> Those resources provide opportunities to engage in safe physical activity and access healthy foods. Chapter 2 has more information on how access to a healthy neighborhood impacts health.

## Education is important for maternal and child health.

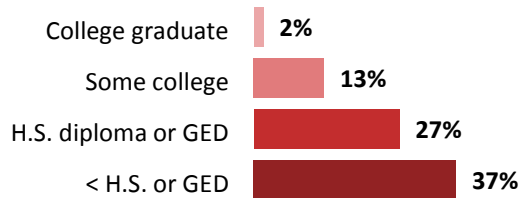
Parental education level (especially a mother’s) is a strong predictor of a child’s health. As education increases, risk factors linked to poor birth outcomes, such as smoking, low birthweight, and unintended pregnancy, are less prevalent.<sup>25,26</sup> One explanation for this is that education provides women with knowledge of appropriate health practices to help them make informed decisions about their reproductive health. In addition, as noted previously, higher education is associated with more options for employment and higher income.<sup>1</sup> These determinants impact maternal nutrition, access to care, healthy and safe housing, and lower stress levels, which have been shown to influence birth outcomes and parenting.<sup>27,28</sup>

- Babies born to mothers with some college education are less likely to be born with a low birthweight (less than 2,500 grams) than babies born to mothers with a high school diploma (6.8% vs. 8.7%).<sup>25</sup>
- Maine mothers with a college degree are more likely to report they received the recommended level of prenatal care (>80% of expected prenatal visits) compared to those with less education (85.1% vs. 60.8%).<sup>25</sup>
- Babies born to mothers with a college degree have a lower infant mortality rate compared to mothers with a high school diploma (5.0 vs 7.8 per 1,000 births) and compared to mothers with less than a high school diploma (9.2 per 1,000 births).<sup>29</sup>

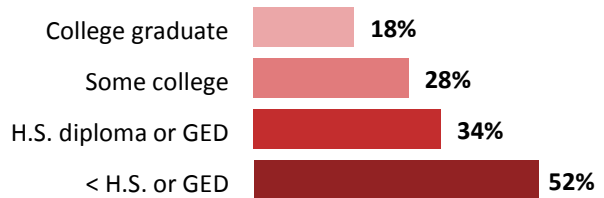


**Increased education is linked to lower rates of smoking during pregnancy and unintended pregnancy among new mothers.**<sup>25,26</sup>

### Smoking during pregnancy



### Unintended pregnancy\*



\*Unintended pregnancy among new mothers  
Maine Pregnancy Risk Assessment Monitoring System, 2012-2015; Smoking data from Maine Birth Certificate data, 2016.

**Employment can be a path to health.**

Employment status and occupation type impact a person’s health, and vice versa. Steady work in a safe occupation can promote financial stability and physical safety. Conversely, unemployed adults are more likely to experience financial hardship, poor physical and mental health, and reduced access to health care.<sup>30,31</sup>

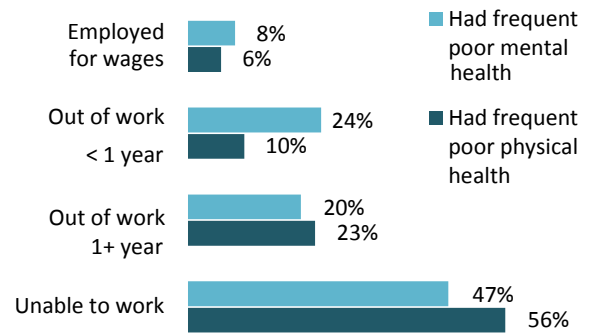
- Adults in the U.S. workforce spend nearly a quarter of their lifetime and up to half of their waking hours at work or commuting.<sup>32</sup>
- Workplaces provide income, and many provide health benefits, such as health and dental insurance, as well as a sense of purpose and productivity.
- Occupational safety issues expose workers to work-related injuries, illnesses, and death. Workplace safety is a unique opportunity to impact the health of many U.S. adults.<sup>33</sup>

Job safety ranges by occupation. Compared to all Americans, Mainers are more likely to injure themselves or get sick from work, but less likely to die from work-related causes.<sup>34</sup>

According to the Bureau of Labor Statistics, in 2015, **Maine had the highest rate of nonfatal occupational injury and illness** (4.8 cases per 100 full-time workers) compared to all other states measured. The national rate was 3.0 cases per 100 full-time workers. Maine had a low fatal injury rate compared to the national average (2.5 vs 3.4 per 100,000 full-time workers).<sup>33</sup>

Less is known about how underemployment affects health. Some studies suggest that underemployed workers report lower levels of health and well-being compared to fully employed workers.<sup>34</sup>

**Adults who are employed are less likely than adults out of work or unable to work to have frequent poor physical or mental health.**



*Frequent poor health is defined as reporting 14 or more days of poor physical or mental health in the past month. Behavioral Risk Factor Surveillance System, 2015*

Longer periods of unemployment are followed by worse health outcomes. A 2013 study found that individuals unemployed for more than a year reported worse physical and mental health compared to individuals unemployed for less than a year.<sup>31</sup>







### Summary: Education and employment matter for health and health equity.

Education and employment are powerful determinants of health; education and employment drive income, allowing access to higher-paying jobs, healthier environments, foods, health insurance, better health care, and decreased stress. Conversely, poor health is related to job loss or limited options for employment. Providing access to quality education and employment can lead to better health outcomes.

- Adults with more education are less likely to have asthma, diabetes, or be depressed than adults with less education.
- Mainers who are employed have better mental and physical health than those that are not fully employed.
- Child and adolescent health are linked to increased maternal education

Health disparities exist due to unequal access to educational or employment opportunities in Maine. This may be due to lack of opportunities in rural areas and/or historic disadvantage. For instance, Native American adults and adults living in rural counties are less likely to have a college degree.

Improving access to affordable opportunities for education and employment for those with lower access is a key foundation to improving the health and productivity of the state population.

Maine need high quality education that will prepare them for positions that are stable and pay a living wage. Maine workers need full-time employment opportunities that pay a living wage and offer benefits, including health insurance, disability, paid leave, and retirement. Maine's economy needs healthy workers to grow, innovate, and thrive.

<sup>1</sup> Understanding the Relationship Between Education and Health: A Review of the Evidence and an Examination of Community Perspectives. Agency for Healthcare Research and Quality, Rockville, MD. 2015.

<http://www.ahrq.gov/professionals/education/curriculum-tools/population-health/zimmerman.html>

<sup>2</sup> Schneider M.J. *Introduction to Public Health*. American Public Health Association Press. 2011.

<sup>3</sup> Glymour M, Mauricio MA, Kawachi I. Socioeconomic status and health. *Social Epidemiology*. 2014; 2: 217-63.

<sup>4</sup> Nancy AE, Boyce T, Margaret CA, et al. Socioeconomic Status and Health: The challenge of the Gradient. *American Psychologist*. 1994; 49: 15-24.

<sup>5</sup> 2015: American Community Survey 1-Year Estimates; Educational Attainment (S1501). Census.gov. [https://factfinder.census.gov/bkmk/table/1.0/en/ACS/15\\_1YR/S1501/0400000US23|0400000US23.05000](https://factfinder.census.gov/bkmk/table/1.0/en/ACS/15_1YR/S1501/0400000US23|0400000US23.05000).

<sup>6</sup> 2000: Profile of Selected Social Characteristics: 2000; Census 2000 Summary File 3 (SF 3) - Sample Data. Census.gov. [https://factfinder.census.gov/bkmk/table/1.0/en/DEC/00\\_SF3/DP2/0400000US23](https://factfinder.census.gov/bkmk/table/1.0/en/DEC/00_SF3/DP2/0400000US23)

<sup>7</sup> Byun S, Meece JL, Irvin M J. Rural-Nonrural Disparities in Postsecondary Educational Attainment Revisited. *American Educational Research Journal*, 2012; 49(3):10.3102/0002831211416344.

<sup>8</sup> Peguero AA. Violence, Schools, and Dropping Out. *Journal of Interpersonal Violence*. 2011; 26 (18): 3753 – 3772.

<sup>9</sup> Cameron SV, Heckman JJ. The Dynamics of Educational Attainment for Black, Hispanic, and White Males. *Journal of Political Economy*. 2001; 109 (3): 455-499.

<sup>10</sup> Dorainne LJ, Evanston IL, Heissel JA, et al. Psychological and biological responses to race-based social stress as pathways to disparities in educational outcomes. *The American Psychologist*. 2016; 71 (6): 455-473.

<sup>11</sup> Feliciano C. Does Selective Migration Matter? Explaining Ethnic Disparities in Educational Attainment among Immigrants' Children. *The International Migration Review*. 2005; 39 (4): 841-871.

<sup>12</sup> 2015 American Community Survey 1-year estimates; Poverty Status in the Past 12 months of Individuals by Educational Attainment (Table C17003). Census.gov.

[https://factfinder.census.gov/faces/tableservices/jsf/page\\_s/productview.xhtml?pid=ACS\\_15\\_1YR\\_C17003&prodType=table](https://factfinder.census.gov/faces/tableservices/jsf/page_s/productview.xhtml?pid=ACS_15_1YR_C17003&prodType=table)

<sup>13</sup> 2015 American Community Survey 1-Year Estimates; Educational Attainment by Employment Status for the Population 25 to 65 Years (B23006). Census.gov. [https://factfinder.census.gov/faces/tableservices/jsf/page\\_s/productview.xhtml?pid=ACS\\_15\\_1YR\\_B23006&prodType=table](https://factfinder.census.gov/faces/tableservices/jsf/page_s/productview.xhtml?pid=ACS_15_1YR_B23006&prodType=table)

<sup>14</sup> Employment status of the civilian noninstitutional population, 1976 to 2015 annual averages. Bureau of Labor Statistics. <https://www.bls.gov/lau/staadata.txt>

<sup>15</sup> Maine Department of Labor, Center for Workforce Research & Information. <https://www.maine.gov/labor/cwri/laus.html>

<sup>16</sup> Bureau of Labor Statistics. Labor Force Data by County, 2015 Annual Averages. <https://www.bls.gov/lau/laucnty15.txt>

<sup>17</sup> 2011-2015 American Community Survey 5-Year Estimates; Educational Attainment (S2307). Census.gov. [https://factfinder.census.gov/faces/tableservices/jsf/page\\_s/productview.xhtml?pid=ACS\\_15\\_5YR\\_S2307&prodType=table](https://factfinder.census.gov/faces/tableservices/jsf/page_s/productview.xhtml?pid=ACS_15_5YR_S2307&prodType=table)

<sup>18</sup> Fryer, R., Pager, D., & Spenkuch, J. (2013). Racial Disparities in Job Finding and Offered Wages. *The Journal of Law & Economics*, 56(3), 633-689. doi:10.1086/673323

<sup>19</sup> The State of Working America: Underemployment by Race and Ethnicity. StateofWorkingInAmerica.org. <http://www.stateofworkingamerica.org/charts/underemployment-by-race-and-ethnicity/>

<sup>20</sup> Macroeconomic forecasts. Maine Office of Policy and Management. <http://www.maine.gov/economist/forecasts/>

<sup>21</sup> Lleras-Muney, A. The Relationship Between Education and Adult Mortality in the United States. *Review of Economic Studies*. 2005; 72: 189-221.

<sup>22</sup> Behavioral Risk Factor Surveillance System, 2016.

<sup>23</sup> Health Disparities of Vermonters. Vermont Department of Health. Published 2010 <http://www.astho.org/Programs/Health-Equity/Vermont-Health-Equity-Report/>

<sup>24</sup> Maine Behavioral Risk Factor Surveillance System, 2015.

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<sup>25</sup> Maine Data, Research and Vital Statistics. Birth certificates, 2016.

<sup>26</sup> Maine Pregnancy Risk Assessment Monitoring System (PRAMS), 2012-2015. Maine Data, Research, and Vital Statistics, Maine Center for Disease Control and Prevention.

<sup>27</sup> Blumenshine P, Egerter A, Braclay CJ, Cubbin C, Braveman PA. Socioeconomic disparities in adverse birth outcomes: A systematic review. *American Journal of Preventive Medicine*. 2010; 39(3): 263-272.

<sup>28</sup> Jackson AP, Brooks-Gunn J, Huang C, Glassman M. Single mothers in low-wage jobs: Financial strain, parenting, and preschoolers' outcomes. *Child Development*. 2003; 71: 1409-1423.

<sup>29</sup> Maine Data, Research and Vital Statistics. Linked birth/infant death certificate datasets and birth certificate datasets, 2011-2015.

<sup>30</sup> McGee RE, Thompson NJ. Unemployment and Depression Among Emerging Adults in 12 States, Behavioral Risk Factor Surveillance System, 2010. Prevalence of Chronic Disease, 2015;12:140451. DOI: <http://dx.doi.org/10.5888/pcd12.140451>.

<sup>31</sup> Athar HM, Chang M, et al. Unemployment-United States, 2006-2010. *Morbidity and Mortality Weekly Report*. 2013; 62 (03): 27-32.

<sup>32</sup> U.S. Department of Health and Human Services. Office of Disease Prevention and Health Promotion. Occupational Safety and Health. Healthy People.gov. Published 2010. <https://www.healthypeople.gov/2020/topics-objectives/topic/occupational-safety-and-health>

<sup>33</sup> Employer-Reported Workplace Injuries and Illnesses-2015. Bureau of Labor Statistics. <https://www.bls.gov/news.release/pdf/osh.pdf>

<sup>34</sup> Friedland DS1, Price RH. Underemployment: consequences for the health and well-being of workers. *American Journal of Community Psychology*. 2003; 32(1-2):33-45.

## INCOME AND HEALTH



**Income is a powerful determinant of health and many Mainers do not earn enough to meet their basic needs.**

Income directly impacts a family's ability to pay for health care, food and shelter. Not having enough money influences healthy behaviors directly through cost barriers to goods and services and indirectly through quality and location of housing or stress.

# \$53,079

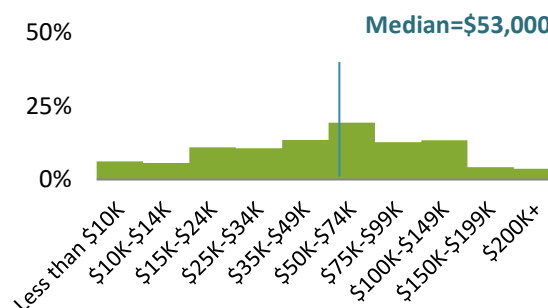
was the median household income in Maine in 2016 (U.S.: \$57,617).<sup>1</sup>

# \$63,967

was the estimated required income for a household of two adults and two children in Maine to meet their basic needs (living wage).<sup>2</sup>

**Half of Maine's households earn less than \$53,000 per year.**

Household income distribution, Maine, 2016



note: K=1,000

Maine's median household income is the lowest in New England; Aroostook County, Maine has the lowest income of any county in New England.<sup>3</sup>

# 1 in 8

**Mainers currently live in poverty (13.5%).<sup>4</sup>**

- 1 in 6 Maine families with children under age 18 live in poverty (15.7%).<sup>5</sup>

# 1 in 2

**single mothers with children under age five live in poverty in Maine (49.4%).<sup>5</sup>**

Federal poverty levels are determined by the U.S. Department of Health and Human Services (DHHS). **The Federal Poverty thresholds are used to determine eligibility for federal subsidies and aid.** Thresholds are determined in part by the number of people in the household. For example, an individual earning \$12,060 and a family of five earning \$28,780 both meet the 100% poverty threshold.<sup>5</sup>

2017 Federal Poverty Guidelines				
Family Size	100%	150%	185%	200%
1	\$12,060	\$18,090	\$22,311	\$24,120
2	\$16,240	\$24,360	\$30,044	\$32,480
3	\$20,420	\$30,630	\$37,777	\$40,840
4	\$24,600	\$36,900	\$45,510	\$49,200
5	\$28,780	\$43,170	\$53,243	\$57,560
6	\$32,960	\$49,440	\$60,976	\$65,920
7	\$37,140	\$55,710	\$68,709	\$74,280

U.S. DHHS Poverty Guidelines, January 2017.

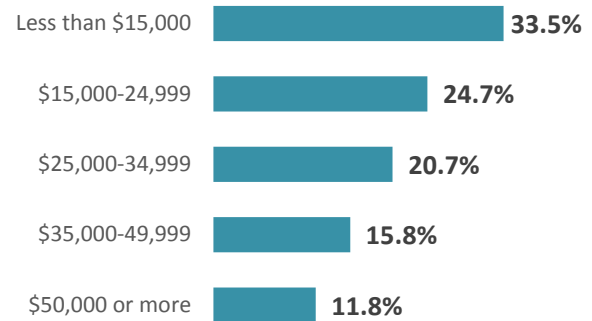
### Income is related to access to healthy and fresh food.

A healthy diet rich in fresh fruits and vegetables is essential for proper child development and for the prevention of obesity, diabetes, high blood pressure and high cholesterol in adulthood.<sup>6</sup> Fresh, healthy foods are often more expensive than nutrient-poor processed foods, which make them less affordable for many households.<sup>6</sup>

Due higher costs, Mainers with low income may be less likely than Mainers with higher income to consume fruits and vegetables on a regular basis. This could contribute to the prevalence of obesity among lower income Mainers.<sup>7</sup>

Mainers making less than \$15,000 per year are less likely to consume fruits or vegetables daily compared to Mainers making \$50,000 per year (less than one fruit per day: 45.0% vs. 29.7%; less than one vegetable per day: 33.5% vs. 11.8%).<sup>7</sup>

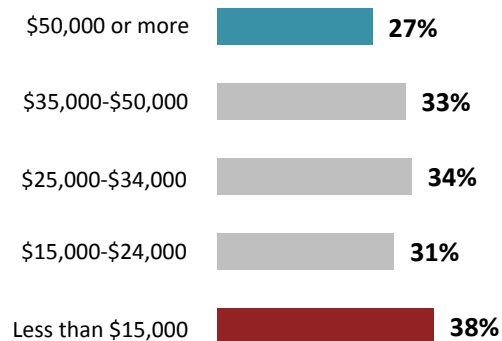
### Mainers are more likely to consume vegetables daily as income increases.



Percentage of adults who report consuming less than one vegetable per day, on average.

Maine Behavioral Risk Factor Surveillance System, 2015

### Mainers making less than \$15,000 per year are more likely to be obese compared to those making more than \$50,000 per year.



Maine Behavioral Risk Factor Surveillance System, 2015

Healthy foods may also be harder to find in some towns and neighborhoods without grocery stores.<sup>8</sup> The USDA defines food deserts as low-income communities without ready access to healthy and affordable food.<sup>9</sup> For more information on food insecurity and its impact on health, please see Chapter 2.

### Income determines where you live.

#### A healthy and safe home is out of reach for many Mainers.

The price of housing and a person's income often determines where they live. In poorer neighborhoods, health-promoting benefits like recreational areas for physical activity, safe streets, and quality grocery stores are not available or are of worse quality compared to wealthier neighborhoods (for more information, see Chapter 2).<sup>10</sup>

- About 5% of children in Maine live in census tracts with poverty rates of 30% or more.<sup>11</sup>

The high cost of housing also impacts individuals' resources to influence their health. Households that must allocate more than 30% of their income to housing expenses are less likely to have resources for food, clothing, medical care and other needs.

- One in three homeowners in Maine spend 30% or more of their household income on their housing; almost half (47.5%) of renters spend 30% or more of their household income on rent and utilities.<sup>12</sup>

- More than half of children (57%) live in a low-income household where 30% of monthly income is spent on household expenses.<sup>13</sup>

More than

# 31,000

low-income households in Maine use federal rental assistance.<sup>14</sup>

### Access to health care is dependent on income.

Mainers with low incomes may not be able to afford reliable and adequate health insurance or quality health care. Some low-income Mainers are insured through MaineCare; though others who are ineligible for assistance due to income or other eligibility requirements may not be able to afford any health insurance (for more information, see Chapter 4).<sup>15</sup>

**Many Mainers forgo needed care due to cost.**

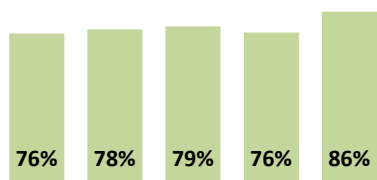
# 1 in 6

**Mainers with household incomes of \$15,000 or less report cost barriers to health care.**

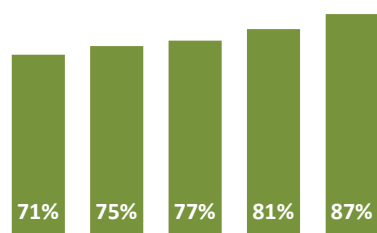
(1 in 25 with household income above \$50,000 report such barriers.)<sup>7</sup>

**Mainers with less income are less likely than those with higher incomes to have preventive health screenings.**

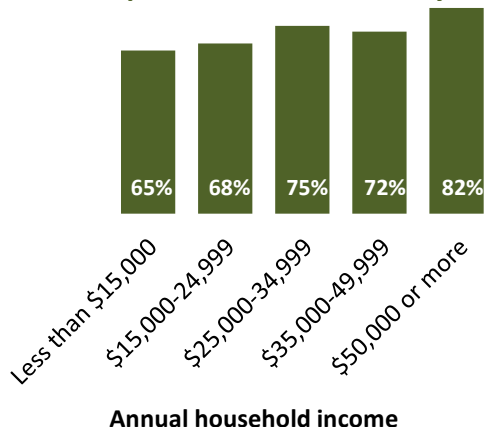
**Cholesterol checked in past 5 years, adults 18+ years\***



**Mammogram in past 2 years, women 50-74 years**



**Colorectal cancer screening up to date, adults 50-75 years**



Behavioral Risk Factor Surveillance System, 2016  
 \*Behavioral Risk Factor Surveillance System, 2015

As annual household income decreases, so does the likelihood of:

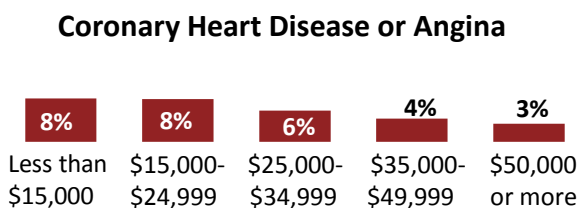
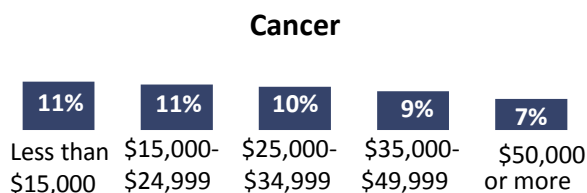
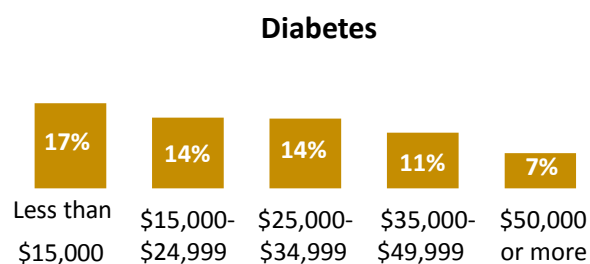
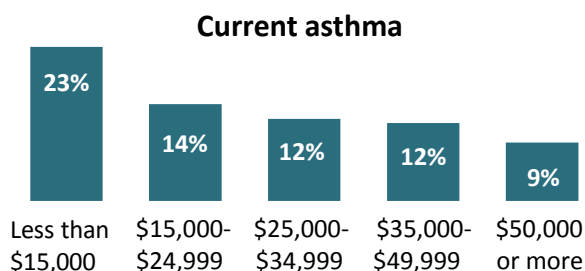
- having a primary care provider;
- having a dental provider; or
- being able to afford medication or screenings to prevent and manage certain conditions.<sup>7,16</sup>



**Lower income is related to worse physical and mental health.**

Poverty, which is associated with inadequate housing, lack of access to healthy foods, lack of resources or space for physical activity, and lack of preventive health care, can lead to chronic disease. Mainers making less than \$25,000 are more likely to have current asthma, and to have ever been diagnosed with heart disease, diabetes, or cancer.<sup>16</sup>

**Mainers with lower incomes have higher rates of chronic disease than Mainers with higher incomes.**



Behavioral Risk Factor Surveillance System, 2016

Struggling to make ends meet can cause stress, anxiety, and feelings of hopelessness. Depression is more common among adults with lower incomes compared to adults with higher incomes.<sup>16</sup>

**Income < \$15,000**  
**1 in 2**  
have been diagnosed with depression (45.4%)

**vs.**

**Income \$50,000 +**  
**1 in 10**  
have been diagnosed with depression (13.4%)

Behavioral Risk Factor Surveillance System, 2016.



**Some Mainers disproportionately have lower incomes.**

Some population groups are less likely than others to earn higher incomes due to systems that perpetuate inequities, such as residential segregation, employment and educational discrimination, and income inequality. Women, racial and ethnic minorities, and those living in rural, isolated communities, are among those facing economic barriers to health.



**Income & Sex**

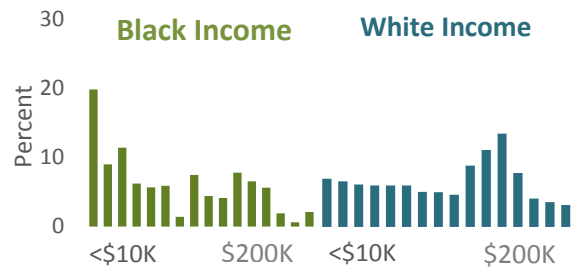
- Past-year median individual earnings for men in Maine are nearly \$10,000 higher than women (\$35,747 vs. \$26,046).<sup>17</sup>
- Among female-headed households with no husband present, 29% live in poverty.<sup>18</sup>

**52%**

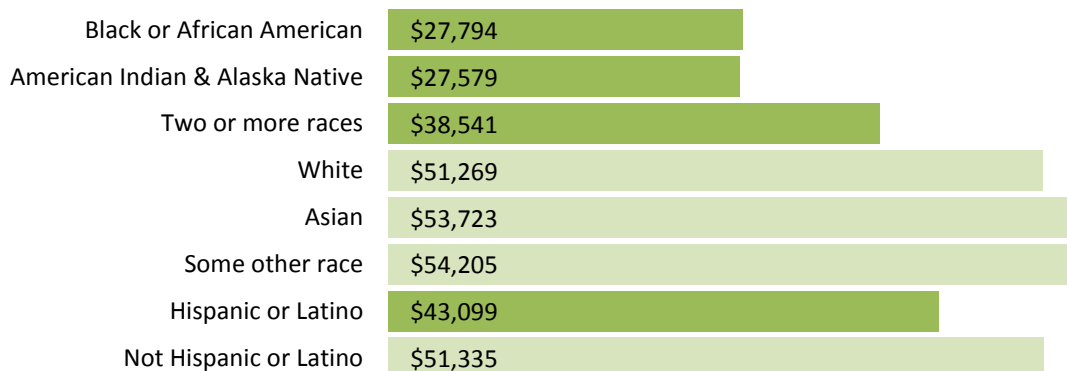
**of Black households in Maine earn less than \$30,000 compared to less than a third of White households.**<sup>18</sup>

**Income & Race**

- White households in Maine have double the median income of Black households (\$51,269 vs. \$27,794).<sup>18</sup>
- The percentage of Black Mainers experiencing poverty is over three times higher than White Mainers (42.9% vs. 12.7%).<sup>18</sup>
- More than 1 in 3 Native Americans live in poverty.<sup>18</sup>



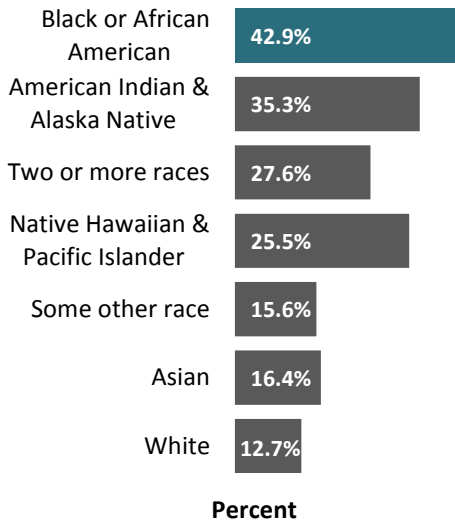
**Some racial and ethnic groups have lower median household incomes in Maine than other races.**



**Median Household Income, Maine**

U.S. Census Bureau, American Community Survey, 2012-2016

**Nearly half of Black Mainers live in poverty.**



U.S. Census Bureau, American Community Survey, 2012-2016

**The long-term consequences of poverty**

Growing up in poverty can have lasting negative effects on mental and physical health. Children who grow up in poverty are more likely to be poor in adulthood, and the correlation is strongest for African Americans. Growing up with housing and food instability can expose children to environmental toxins, poor diet, and family-related stress, all of which adversely impact health. Nationally, 2.5% of children live in chronic poverty. It is estimated that without government assistance programs, this number would be as high as 11.4%.<sup>24</sup>

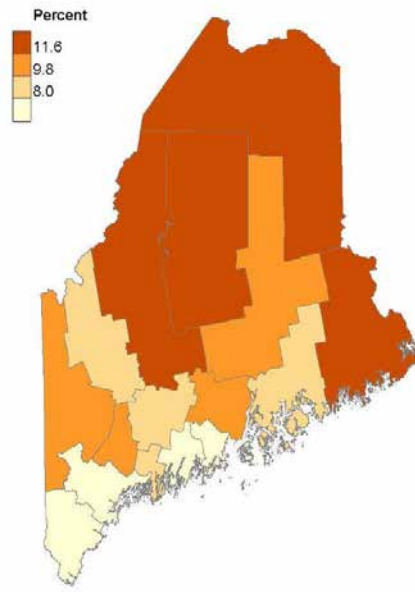
**Income & Where you Live**

Due to fewer opportunities for employment and lower salaries, the poverty rates in Maine’s more rural counties are higher than in the more populated southern counties. In Aroostook, Piscataquis, Somerset and Washington counties, about 13% of families live in poverty; In York County, 6% of families live in poverty and 8% of Cumberland County families live in poverty.<sup>19</sup>

**Income & Education**

The percentage of **Mainers with less than a high school diploma living in poverty is five times higher** than Mainers with a bachelor’s degree or higher (27.3% vs. 4.2%).<sup>18</sup>

**Percent of Families Below Poverty Level by County, Maine 2011-2015**



Maine Environmental Public Health Tracking Network

### For those eligible, there is assistance.

There are several programs that help Maine families in poverty. The Supplemental Nutrition Assistance Program (SNAP), WIC, MaineCare (Maine's Medicaid program) and TANF (Temporary Assistance for Needy Families) are programs designed to help people in poverty. Some programs are temporary. Families can become ineligible for benefits even while they remain in poverty.

- MaineCare provided health insurance for more than **121,300 children** under age 18 (45.1%).<sup>20</sup>
- **19,700 Maine children** ages 5 years and younger received SNAP benefits in 2018.<sup>21</sup>
- **7,000 Maine children** under 19 years received TANF assistance in 2018, including 2,600 children under age 5.<sup>22</sup>

These programs have a significant impact on children and families by alleviating the stress of poverty.<sup>23</sup>

### Summary: Income is one of the strongest predictors of health.

Higher income is associated with longer life, less disease, and greater well-being. Income is a driving force behind health disparities for many vulnerable populations. Income is tied to many of the social determinants of health discussed in this report.

- Those with lower incomes are less able to afford health care and health insurance.
- Adults and families with lower incomes are less able to afford healthy food, live in areas with opportunities for physical activity, and live in safe neighborhoods in healthy homes.
- Adults, children, and families with low income have difficulty affording adequate transportation.
- Families with lower incomes may be limited in the educational choices they have for their children.
- Early experiences with poverty affect children's opportunities and therefore can affect the trajectory of their lives.

Increasing economic self-sufficiency strengthens families and improves communities, which positively impacts the health of the population in Maine.<sup>23</sup> In turn, by impacting health, we strengthen the economy by reducing health care costs.

*"Better economic conditions for American families mean longer lives and better health, and better health means lower health care costs."* -The Urban Institute

<sup>1</sup> Guzman GG. *Household Income: 2016*. American Community Survey Brief. 2017. United States Census Bureau.  
<https://census.gov/content/dam/Census/library/publications/2017/acs/acsbr16-02.pdf>

<sup>2</sup> Glasmeier AK. *Living Wage Calculator*. Massachusetts Institute of Technology.  
<http://livingwage.mit.edu/pages/about>

<sup>3</sup> U.S. Census Bureau, American Community Survey, 2011-2013. Data queried from statisticalatlas.com.  
<https://statisticalatlas.com/division/New-England/Household-Income#figure/county/median-household-income>.

<sup>4</sup> U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates.

<sup>5</sup> Poverty Guidelines, U.S. DHHS, Office of the Assistant Secretary for Planning and Evaluation.  
<https://aspe.hhs.gov/poverty-guidelines>

<sup>6</sup> Jetter KM, Cassady DL. The Availability and Cost of Healthier Food Alternatives *American Journal of Preventive Medicine*, Volume 30, Issue 1, 2006, Pages 38-44, ISSN 0749-3797,  
<http://www.sciencedirect.com/science/article/pii/S0749379705003351>

<sup>7</sup> Behavioral Risk Factor Surveillance System, 2015.

<sup>8</sup> Rao M, Afshin A, Singh G, et al. Do healthier foods and diet patterns cost more than less healthy options? A systematic review and meta-analysis *BMJ Open* 2013;3:e004277.

<sup>9</sup> American Nutrition Association. USDA Defines Food Deserts. *Nutrition Digest*. 38: 2. Aug 2016.  
<http://americannutritionassociation.org/newsletter/usda-defines-food-deserts>

<sup>10</sup> Franzini L, Taylor W, Schuster M, et al. Neighborhood characteristics favorable to outdoor physical activity: Disparities by socioeconomic and racial/ethnic composition. *Health & Place*. March 2010;16(2):267-274.

<sup>11</sup> Population Reference Bureau analysis of data from the U.S. Census Bureau, 2000 Decennial Census Summary File 1 and Summary File 3, 2011–2015 American Community Survey 5-year data. Retrieved from the Annie E. Casey Foundation Kids Count Data Center.  
<http://datacenter.kidscount.org/data/tables/6795-children-living-in-high-poverty-areas?loc=1&loct=2#detailed/2/2-52/false/1572,1485,1376,1201,1074/any/13891,13892>

<sup>12</sup> Population Reference Bureau. U.S. Census Bureau, American Community Survey, Geographic Comparison Tables, 2011-2014.  
<http://www.prb.org/DataFinder/Topic/Rankings.aspx?ind=203>

<sup>13</sup> Population Reference Bureau, analysis of data from the U.S. Census Bureau, Census 2000 Supplementary Survey, 2001 Supplementary Survey, 2002 through 2016 American Community Survey. Data retrieved from Annie E. Casey Foundation Kids Count Data Center.  
<http://datacenter.kidscount.org/data/tables/71-children-in-low-income-households-with-a-high-housing-cost-burden?loc=1&loct=2#detailed/2/2-52/false/870,573,869,36,868/any/376,377>

<sup>14</sup> Center on Budget and Policy Priorities. *Maine: Fact Sheet: Federal Rental Assistance*. 2017.  
<https://www.cbpp.org/sites/default/files/atoms/files/4-13-11hou-ME.pdf>

<sup>15</sup> Consumers for Affordable Health Care & Equal Justice Partners. *MaineCare Eligibility Guide*. Augusta, ME.  
[https://www.mejp.org/sites/default/files/MaineCare-Eligibility-Guide-June2018\\_0.pdf](https://www.mejp.org/sites/default/files/MaineCare-Eligibility-Guide-June2018_0.pdf)

<sup>16</sup> Behavioral Risk Factor Surveillance Survey, 2016.

<sup>17</sup> U.S. Census Bureau, 2016 American Community Survey 1-Year Estimates.

<sup>18</sup> U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates.

<sup>19</sup> U.S. Census Bureau, American Community Survey, 2011-2015. Retrieved from the Maine Tracking Network.

<sup>20</sup> Maine Department of Health and Human Services, Office of MaineCare Services. Children participating in MaineCare in Maine. Retrieved from Annie E. Casey Kids Count Data Center.  
<https://datacenter.kidscount.org/data/tables/1586-children-participating-in-mainecare?loc=21&loct=2#detailed/2/any/false/37,871,870,573,869,36,868,867,133,38/any/11727,3379>

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<sup>21</sup> Maine Department of Health and Human Services, Office of Family Independence. Children 5 years and younger receiving SNAP benefits in Maine. Retrieved from Annie E. Casey Kids Count Data Center. <https://datacenter.kidscount.org/data/tables/7321-children-5-years-and-younger-receiving-snap-benefits?loc=21&loct=2#detailed/2/any/false/37,871,870,573,869,36,868,867,133/any/14386,14387>

<sup>22</sup> Maine Department of Health and Human Services, Office of Family Independence. TANF 2003-2018 in Maine Retrieved from Annie E. Casey Kids Count Data Center. <https://datacenter.kidscount.org/data/tables/1564-tanf-2003-2018?loc=21&loct=2#detailed/2/any/false/37,871,870,573,869,36,868,867,133,38/any/12826,3335>

<sup>23</sup> Woolf SH, Aron L, Dubay L, Simon SM, Zimmerman E, Luk KX. *How are income and wealth linked to health and longevity?* Urban Institute. April 2015. Accessed May 2018. <https://www.urban.org/sites/default/files/publication/49116/2000178-How-are-Income-and-Wealth-Linked-to-Health-and-Longevity.pdf>

<sup>24</sup> Kimberlin, S. 2013. "Examining the Impact of Government Benefits on Chronic and Transient Poverty in the United States, 1998–2008." Working Paper presented at the Association for Public Policy Analysis and Management.

## DISCRIMINATION AND HEALTH



### Discrimination is widespread in U.S. culture.

Discrimination is the unfair or unequal treatment of a person or group of people based on characteristics such as race, age, sex, disability, ethnicity, sexual orientation, religion, or national origin.

# 69%

of U.S. adults have experienced any discrimination, and

# 61%

of U.S. adults experience day-to-day discrimination.<sup>1</sup>

*Day-to-day discrimination reflects survey respondents reporting they were treated with less courtesy or respect, received poorer service than others, and were threatened or harassed.*

Almost half of U.S. adults have experienced major forms of discrimination including:

- Police unfairly stopping, searching, questioning, physically threatening, or abusing them;
- Neighbors making life difficult for them or their family;
- Teachers or advisors discouraging continuing education;
- Unfair treatment when receiving health care.<sup>1</sup>

Regardless of whether discrimination is deliberate or intentional, once perceived, discrimination impacts health and well-being.

### Some groups are more likely to experience discrimination.

Discrimination can take many forms, but certain populations in Maine may experience more discrimination from others because of their race, religion, sexual orientation, gender identity, socioeconomic status, or biological sex.

Some subgroups of the population occupy more than one socially disadvantaged status, meaning they are discriminated against based on more than one identity trait. For example, a Black woman may be discriminated against due to her race and/or sex.<sup>2</sup>

While some data in this section come from national surveys, we have no reason to believe discrimination and the effects of discrimination occur at different rates in Maine than in the U.S.

**Racism** is one of the most pervasive forms of discrimination.

Racism is discrimination and prejudice toward people based on their race or ethnicity.

- **Institutionalized racism** describes limited access to societal goods, services, and opportunities due to race.<sup>3</sup> It reflects social, economic, and political systems that perpetuate racial discrimination.

**51%**

of Black Americans have personally experienced **people using racial slurs against them.**<sup>4</sup>

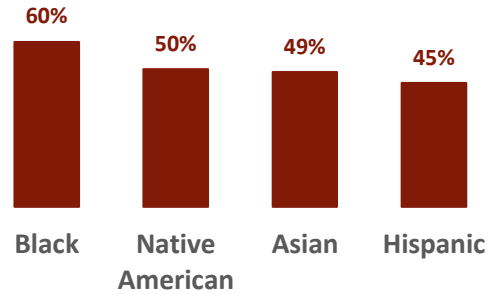
**60%**

of Black Americans or a family member have been **unfairly stopped or treated by the police because of their race** (compared to 6% of White Americans).<sup>4</sup>

**39%**

of U.S. Black men have been **stopped, searched, questioned, physically threatened or abused by the police** (compared to 15% of U.S. White men).<sup>1</sup>

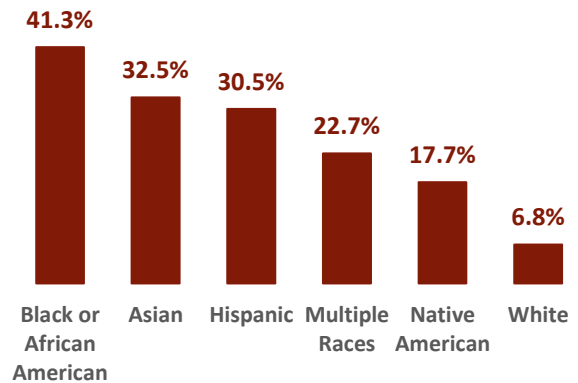
**Almost half** of Black, Native American, Asian, and Hispanic U.S. adults say their life is “at least a little harder because of discrimination.”<sup>1</sup>



Stress in America™ Survey, 2015

- Additionally, almost 10 percent of Black and Native American U.S. adults say their life is **a lot harder** because of discrimination.<sup>1</sup>

**More than 1 in 3** Black or African American, Asian, and Hispanic students in Maine have experienced racial discrimination at or near school.<sup>5</sup>



Maine Integrated Youth Health Survey, 2017  
*Has anyone ever made offensive racial comments or attacked you based on your race or ethnicity at school or on your way to or from school?*

Most lesbian, gay, bisexual, and transgender youth and adults have experienced discrimination.

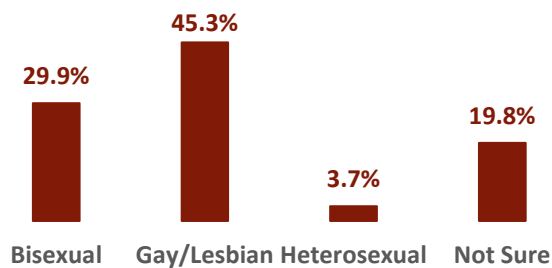
**57%**

of U.S. lesbian, gay, bisexual, transgender, and queer (LGBTQ) adults **report slurs about their sexual orientation and gender identity.**<sup>4</sup>

**Over half** of LGBTQ adults report they or an LGBTQ friend or family member has been:

- **Non-sexually harassed (57%);**
- **Sexually harassed (51%);**
- **Experienced violence (51%).**<sup>4</sup>

**1 in 2** gay or lesbian high school students in Maine have been verbally harassed or physically attacked due to their sexual orientation.<sup>5</sup>



Maine Integrated Youth Health Survey, 2017  
*Has anyone ever made offensive comments or attacked you because of your perceived sexual orientation at school or on your way to or from school?*

**31%**

**of U.S. transgender adults report mistreatment in a public place in the past year.**<sup>6</sup>

*Mistreatment includes being denied equal treatment or service, verbally harassed, or physically attacked.*

- Due to mistreatment, 20% of transgender adults do not use or go to public places.<sup>6</sup>

**62%**

of Maine transgender adults who had encounters with police **experienced verbal or physical assault or were referred to as the wrong gender.**<sup>7</sup>

**59%**

of Maine transgender adults **feel uncomfortable asking police for help.**<sup>7</sup>

**3x**

Three times as many Maine transgender high school students were **threatened or injured with a weapon** in the past year as cisgender students (30.0% vs. 9.4%).<sup>5</sup>



**Women** are often the target of discrimination.

**3x**

Three times as many U.S. **women** have been discriminated against because of their sex than U.S. men (30% vs. 8%).<sup>4</sup>

**31%**

of U.S. women **have faced** discrimination when applying for jobs due to their sex.<sup>4</sup>

**37%**

of U.S. women report they or a female family member **have been sexually harassed** because they are **women**.<sup>4</sup>

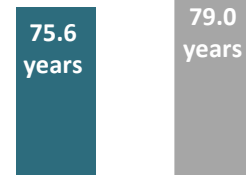
### Discrimination affects health.

#### Overall Health and Life Expectancy

Adults who experienced discrimination are less likely to report good health than adults who have not experienced discrimination (31% vs. 45%).<sup>1</sup>

Although we don't have data on life expectancy by race in Maine, nationally Black Americans have a shorter life expectancy than White Americans.<sup>8</sup>

In the U.S., the life expectancy for **Black/African Americans** is **4.6 years lower** than the life expectancy for **White Americans**.



Life Expectancy for Both Sexes (years)

U.S. CDC/NCHS, National Vital Statistics System, Public-Use Mortality Files, 2014

**Black/African American males** have the lowest life expectancy among all racial groups by sex (72.0 years).<sup>8</sup>

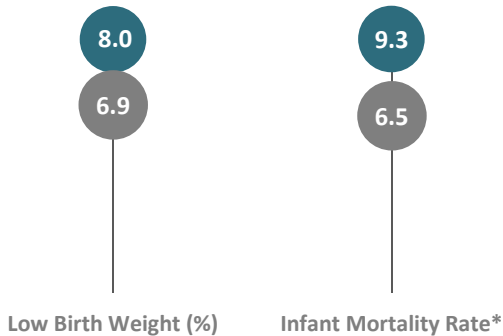
#### Maternal and Child Health

More than half of U.S. Black women with preterm deliveries and low-birthweight infants report experiencing racial discrimination (50% and 61%, respectively).<sup>9</sup> Such discrimination may contribute to the disparities in maternal and child health outcomes by race.<sup>10</sup>



Nationally, **Black infants** are **two times more likely to die** before they reach one year of age compared to White infants.<sup>9</sup>

In Maine, rates of low birth weight and infant mortality are higher among **Black children** compared to **White children**.<sup>11,12</sup>



Birth Certificates and Linked Birth and Death Certificates, 2012-2016  
 \*Infant mortality rate is number of deaths per 1,000 live births.

Even as maternal education and income rises, racial disparities persist. Babies born to college-educated middle-class Black women are more likely to die in their first year of life than babies born to poorly educated, low-income White women.<sup>13</sup>

**Mental Health**

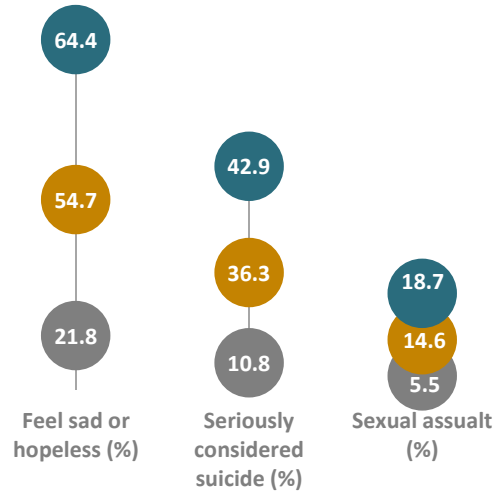
**33%**

of Native American adults in Maine experience lifetime depression, compared to 23% of Maine White adults.<sup>14</sup>

**71%**

of transgender high school students in Maine felt depressed in the past year, compared to 26% of cisgender students.<sup>5</sup>

Mental health issues and sexual assault are more common among **bisexual and homosexual (gay or lesbian)** students than heterosexual Maine high school students.



Maine Integrated Youth Health Survey, 2017

**1 in 2**

transgender high school students in Maine seriously considered suicide in the past 12 months (54%), compared to 14% of cisgender students.<sup>5</sup>

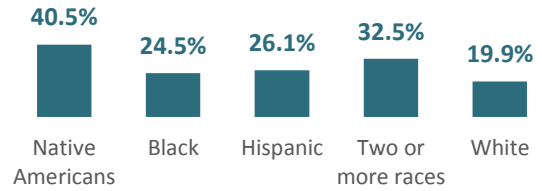


**Chronic Conditions**

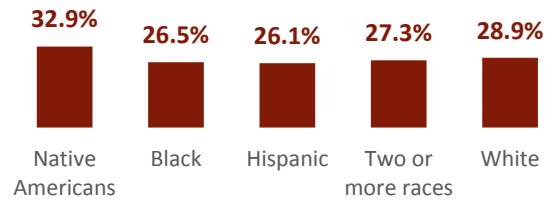
National and state data show certain conditions are disproportionately higher among some racial and ethnic groups.<sup>5,8,14</sup>

- **Black Americans** disproportionately die from chronic conditions such as heart disease and diabetes and have a higher death rate and higher cancer mortality rates compared to White Americans.<sup>15,16,17</sup>
- Black adults in Maine are more likely to smoke, but less likely to report diabetes than White adults.<sup>8,14</sup> Maine survey data on Black adults come from a small number of survey respondents and include immigrants who tend to have better health.<sup>18</sup>
- In Maine, **Hispanic adults** are more likely than non-Hispanic adults to have asthma (13.3% vs. 11.7%).<sup>14</sup>
- The 2010 Wabanaki Health Needs Assessment found that, compared to the general Maine population, **tribal members** have higher rates of diabetes, high blood pressure, heart attacks, depression, anxiety, obesity, and smoking, contributing to a shorter life expectancy and worse overall health.<sup>19</sup>
- In Maine, **Native American adults** are twice as likely to smoke and more likely to be obese than White adults.<sup>14</sup>

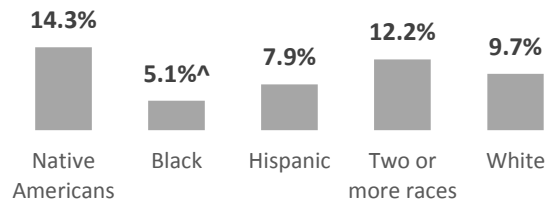
**Smoking among Maine Adults**



**Obesity among Maine Adults**



**Diabetes among Maine Adults**



Behavioral Risk Factor Surveillance System, 2011-2016.  
 ^ Interpret with caution; number based on less than 50 respondents.

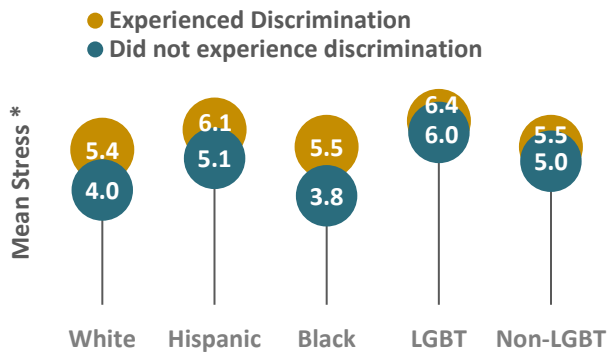
## How does discrimination impact health?

Though there are many ways discrimination impacts health, three mechanisms include **stress, decreased opportunities, and inadequate care.**

### Discrimination can create or worsen stress.

Discrimination impacts stress levels and high stress affects a person’s health.

### Those who experienced discrimination are more likely to report higher stress levels.<sup>1</sup>



Stress in America™ Survey, 2015

\***Mean Stress:** Average stress in past month on scale of 10-point scale with 1 representing ‘no stress’ and 10 representing ‘a great deal of stress.’

Stress can lead to unhealthy behavior, such as unhealthy eating, sleeping poorly, skipping exercise or physical activity, and canceling social plans.<sup>1</sup> Research has also shown that stress causes physiologic changes to the body.<sup>20</sup> These include changes to brain structure, immune functioning, and cellular and chemical reactions in the brain that increase susceptibility to disease.<sup>20</sup>

- Adults who report excellent or good health have lower stress levels than adults with fair or poor health (4.6 vs. 5.9 on a 10-point scale).<sup>1</sup>

### Certain racial groups are more likely to experience stress and its effects.

Black Americans are more likely than White Americans to have a **higher allostatic load**, a biological indicator of stress exposure.<sup>21</sup>

Higher allostatic load provides support for Geronimus’ weathering hypothesis—the theory that **health disparities experienced by Black Americans at a younger age are a result of the cumulative effect of social, economic, and political adversity.**<sup>22</sup>

Stress and allostatic load are considered risk factors for many health conditions including obesity, diabetes, depression, coronary vascular disease, cognitive impairment, and inflammatory and autoimmune disorders.<sup>23</sup>

- U.S. Hispanic, Black, Asian, and American Indian/Alaska Native adults are most likely of all racial groups to report **stress about money, work, family responsibilities, and personal health concerns.**<sup>1</sup>

The impact of these daily stressors on health is discussed in the chapters on income, employment, education, relationships, and access to health care.

### Emotional support can help people cope with stress.

Among those who experience discrimination, those with emotional support are more likely to report that they are better able to cope with the stress of discrimination than those without emotional support (65% vs. 37%).<sup>1</sup>

For more information on emotional support, refer to Chapter 1 of this report.

## Discrimination decreases employment, education, and housing opportunities.

The concept of **embodiment** asserts that our lived experiences, including economic and social deprivation, experiences with violence and stress, and discrimination, have an impact on our bodies and our health.<sup>24</sup> The life course perspective asserts that these experiences are cumulative and intergenerational. When one generation experiences stress, poverty, and discrimination, it impacts not only the health of the next generation, but the opportunities that generation has for better health.<sup>25</sup>

There is a history in the United States of denying opportunities to racial and ethnic minorities. Even though job discrimination was outlawed as part of the Civil Rights Act in 1964, discrimination in the labor market persists.<sup>26</sup> African Americans have less access to stable jobs with good wages and benefits. Due to discrimination in lending practices (i.e., redlining), many racial and ethnic minorities are less able to purchase a home or own their own business, or they are only able to purchase homes within areas with poor housing stock, and less opportunity. There are explicit examples throughout history of discrimination against African Americans, including slavery, Jim Crow laws, redlining, school segregation, and mass incarceration, and discriminatory practices still exist.<sup>26</sup>

A 2015 national study of neighborhood income composition by race and income over a 20-year period (1990-2009) found **that residential segregation still exists** due to racial discrimination in the housing market, accumulated wealth, and preference to live near people of the same race or ethnicity.<sup>27</sup>

The study's main finding was that Black families live in poorer neighborhoods, even when adjusting for their income.<sup>27</sup>

Many transgender adults (28%) in Maine report experiencing housing discrimination such as being evicted or denied a home or apartment because they are transgender.<sup>6</sup>

Regardless of why segregation or housing discrimination exists, living in a poor neighborhood or disadvantaged community has long-term effects on education, employment, and income that ultimately impact quality of life and health of these population groups.<sup>27</sup>

Among Native Americans in Maine and the U.S., there has been a disparity in wealth and power between tribal members and Whites that started in colonial times. Ongoing systemic injustices and discrimination against Native Americans have contributed to their health disparities.<sup>19</sup>

### Redlining in America

The Home Owners' Loan Corporation, a federal program established during the Great Depression, ranked neighborhoods according to mortgage investment risk. The rankings were based on the racial and socioeconomic makeup of each neighborhood. Areas with significant minority and foreign-born populations were colored red on the maps, hence the term "redlining."<sup>28</sup> Banks adopted the rankings and denied mortgages to individuals in these areas. This practice led to increases in Black-White gap in home ownership and the consequences are still felt today.<sup>27,28</sup>

The impact of historical and current discriminatory practices is reflected in current data on employment status, educational attainment, and poverty levels by race in Maine.<sup>28</sup>

Disparities in **education**, **unemployment**, and **poverty** are largest between White and other racial groups in Maine.

- The percentage of Native American, Black, and multi-racial Maine adults who are unemployed is two times higher than White adults.<sup>29</sup>

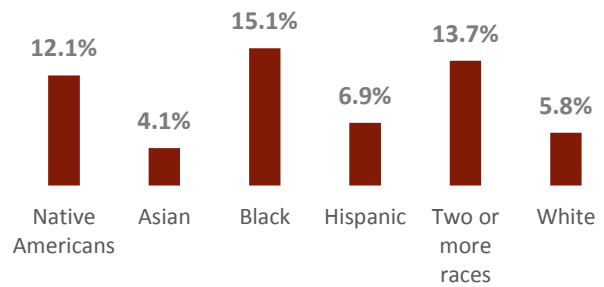
More than  
**40%**  
of Black Mainers live in poverty;<sup>9</sup>

**1 in 3**

Native American adults in Maine live in poverty compared to 1 in 10 White adults.<sup>29</sup>

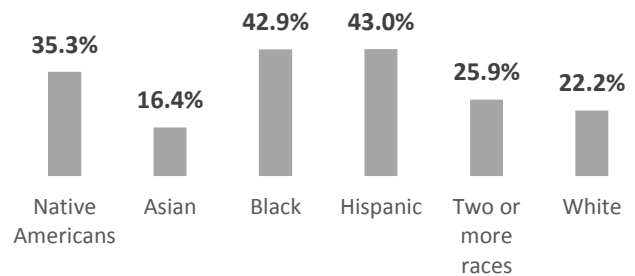
- White adults in Maine are more likely to have graduated from high school compared to other racial and ethnic groups.<sup>29</sup>

### Unemployed Adults\* in Maine



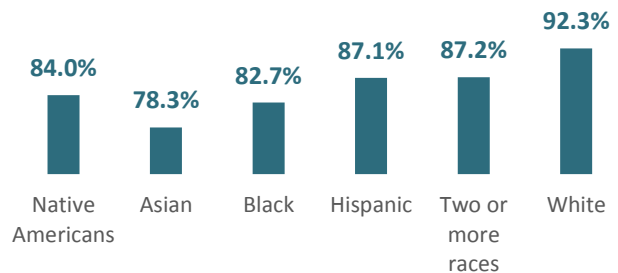
U.S. Census, American Community Survey, 2012-2016 \*Adults 16 years and older.

### Mainers Living In Poverty



U.S. Census, American Community Survey, 2012-2016

### Maine Adults age 25 and older with a High School Diploma or higher



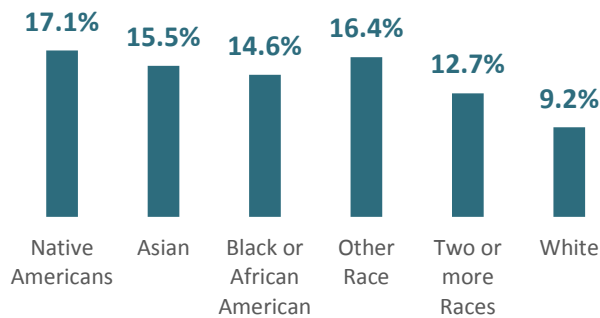
U.S. Census, American Community Survey, 2012-2016

**Discrimination leads to inadequate health care through economic and social barriers to care.**

Racism within the U.S. health care system is due to social, political and economic drivers that allow for privilege based on race. The U.S. health care system is an employer-based system. Employment, education, income, and housing affect a person’s likelihood of health insurance, health care affordability, and ultimately influence health outcomes.

- Some groups have difficulty affording health insurance or health care due to lower income and employment.
- Prejudice and bias could influence the provider-patient relationship and serve as a barrier to care.

**Some racial groups are more likely than others to be uninsured.**



U.S. Census, American Community Survey, 2012-2016.

- Native Americans (American Indian/Alaska Native), are almost two times as likely to be uninsured compared to Whites.<sup>29</sup>
- Native Americans and Black or African Americans are twice as likely as White Mainers to be unable to see a doctor when they needed it due to cost (20.3% & 22.4% vs. 10.7%).<sup>14</sup>

**Provider bias and patient mistrust may lead people to not seek care when they need it.**

Certain providers may treat some patients differently than other patients.

- Almost half (43%) of transgender adults in Maine who saw a provider in the past year reported a negative experience such as being refused treatment, verbal harassment, or physical or sexual assault.<sup>6</sup>
- Extensive literature documents differences in health care and quality of care among racial and ethnic minorities.<sup>30,31</sup>
- Many racial groups avoid seeking medical care for themselves or a family member because they are concerned they will be discriminated against or treated poorly because of their race.

While only 3% of White Americans report not seeking a doctor due to fear of discrimination or mistreatment, this issue affects:

- 22% of Black Americans;
- 17% of Latinos; and
- 15% of Native Americans.<sup>4</sup>
- Nationally, significantly more Native Americans report experiencing discrimination while receiving health care than all U.S. adults (28% vs. 13%).<sup>2</sup>
- Though interpretation services are now required by law at most health care practices, some patients do not receive the care they need due to lack of a trained interpreter.<sup>32</sup>

Certain patients may be skeptical of medical treatments or recommendations based on historical injustices.

Historical trauma is multigenerational trauma experienced by a specific cultural group. It applies to: African Americans in this country who have experienced years of racial segregation, lack of civil rights, and ongoing experiences with violence and discrimination; Native Americans who have experienced years of dislocation, genocide, and prejudice; as well as New Mainers who are coming to the U.S. often from areas marked by poverty, dislocation, and war. These experiences contribute to mistrust of systems, including health care.<sup>33</sup>

Certain groups are less likely to access health care in Maine.

- Native American and Black women are less likely to get adequate prenatal care than White women in Maine (79.1% and 73.0% vs. 87.1%).<sup>34</sup>
- In Maine, Hispanic high schoolers are significantly less likely to see a dentist than non-Hispanic students.<sup>5</sup>



### Summary: Discrimination affects the health of many Mainers.

Discrimination unfairly harms individuals and groups. It occurs in everyday interactions between individuals and exists within our institutions, policies, and structural practices.

Experiences with discrimination can adversely harm physical and emotional health, and limit opportunities for educational, employment, financial, political, and social advancement.

Groups that are frequently exposed to discrimination include, but are not limited to women, LGBTQ individuals, persons with disabilities, immigrants, and persons of color. These groups also tend to have worse health outcomes.

It is critical that the link between discrimination and health remain central to discussions on how to improve the health of Maine's population.

To start addressing discrimination in Maine, it is necessary to:

- Improve our understanding of discrimination experiences of marginalized populations;
- Begin dismantling policies and structures contributing to social inequalities and discrimination; and
- Contribute to supports and capacities within diverse communities.



- <sup>1</sup> American Psychological Association (2016). Stress in America: The impact of discrimination. Stress in America™ Survey. <http://www.apa.org/news/press/releases/stress/2015/impact-of-discrimination.pdf>
- <sup>2</sup> Lewis, T. T., Cogburn, C. D., & Williams, D. R. (2015). Self-Reported Experiences of Discrimination and Health: Scientific Advances, Ongoing Controversies, and Emerging Issues. *Annual Review of Clinical Psychology*, 11(1), 407-440. doi:10.1146/annurev-clinpsy-032814-112728
- <sup>3</sup> Jones, C. P., MD, MPH, PhD. (2000). Levels of racism: A theoretic framework and a gardeners tale. *American Journal of Public Health*, 90(8), 1212-1215. doi:10.2105/ajph.90.8.1212
- <sup>4</sup> Discrimination in America: Final Summary (Rep.). (2018, January). <https://cdn1.sph.harvard.edu/wp-content/uploads/sites/94/2018/01/NPR-RWJF-HSPH-Discrimination-Final-Summary.pdf>
- <sup>5</sup> Maine Integrated Youth Health Survey, 2017.
- <sup>6</sup> James, S. E., Herman, J. L., Rankin, S., Keisling, M., Mottet, L., & Anafi, M. (2016). The Report of the 2015 U.S. Transgender Survey. Washington, DC: National Center for Transgender Equality. <https://transequality.org/sites/default/files/docs/usts/USTS-Full-Report-Dec17.pdf>
- <sup>7</sup> Hoey, Dennis. Survey suggests transgender Maine residents face discrimination. Portland Press Herald, June 15, 2017. <https://www.pressherald.com/2017/06/15/survey-suggests-transgender-maine-residents-face-discrimination/>
- <sup>8</sup> National Center for Health Statistics. Health, United States, 2015: With Special Feature on Racial and Ethnic Health Disparities. Hyattsville, MD. 2016. <https://www.cdc.gov/nchs/data/abus/abus15.pdf>
- <sup>9</sup> Mustillo, S., Krieger, N., Gunderson, E. P., Sidney, S., McCreath, H., & Kiefe, C. I. (2004). Self-Reported Experiences of Racial Discrimination and Black-White Differences in Preterm and Low-Birthweight Deliveries: The CARDIA Study. *American Journal of Public Health*, 94(12), 2125-2131. doi:10.2105/ajph.94.12.2125
- <sup>10</sup> Alhusen, J. L., Bower, K. M., Epstein, E., & Sharps, P. (2016). Racial Discrimination and Adverse Birth Outcomes: An Integrative Review. *Journal of Midwifery & Womens Health*, 61(6), 707-720. doi:10.1111/jmwh.12490
- <sup>11</sup> United States Department of Health and Human Services (US DHHS), Centers of Disease Control and Prevention" "(CDC), National Center for Health Statistics (NCHS), Division of Vital Statistics (DVS). Linked Birth / Infant Death Records" "2007-2016, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative" "Program, on CDC WONDER On-line Database. Accessed at <http://wonder.cdc.gov/lbd-current.html> on Apr 30, 2019
- <sup>12</sup> Maine Data, Research, and Vital Statistics, Maine CDC Vital Records, 2012-2016.
- <sup>13</sup> Lu MC, Kotelchuck M, Hogan V, Jones L, Wright K, Halfon N. Closing the Black-White Gap in Birth Outcomes: A Life-course Approach. *Ethnicity & disease*. 2010;20(1 0 2):S2-62-76.
- <sup>14</sup> Maine Behavioral Risk Factor Surveillance System, 2011-2016.
- <sup>15</sup> Cunningham TJ, Croft JB, Liu Y, Lu H, Eke PI, Giles WH. Vital Signs: Racial Disparities in Age-Specific Mortality Among Blacks or African Americans — United States, 1999–2015. *MMWR Morb Mortal Wkly Rep* 2017;66:444–456. DOI: <http://dx.doi.org/10.15585/mmwr.mm6617e1>
- <sup>16</sup> Van Dyke M, Greer S, Odom E, et al. Heart Disease Death Rates Among Blacks and Whites Aged ≥35 Years — United States, 1968–2015. *MMWR Surveill Summ* 2018;67(No. SS-5):1–11. DOI: <http://dx.doi.org/10.15585/mmwr.ss6705a1>
- <sup>17</sup> U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2014 Incidence and Mortality Web-based Report. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2017. <https://gis.cdc.gov/grasp/USCS/DataViz.html>
- <sup>18</sup> Hamilton TG and Hummer RI (2011). Immigration and the health of U.S. black adults: Does country of origin matter? *Social Science Medicine*, 73(10), 1551-1560.
- <sup>19</sup> University of Nebraska Medical Center. The Penobscot Nation Health Needs Assessment Summary Report. 2012. <http://www.maine.gov/dhhs/mecdc/healthequity/documents/Final%20Penobscot%20Community%20Profile2.pdf>
- <sup>20</sup> Mariotti A. The effects of chronic stress on health: new insights into the molecular mechanisms of brain-body communication. *Future Sci OA*. 2015;1(3):FSO23.

<sup>21</sup> Duru, KO, Harawa, NT, Kermah, D, Norris KC. Allostatic Load Burden and Racial Disparities in Mortality. *Journal of the National Medical Association*. 2012; 104(1-2): 89-95.

Doi: [https://doi.org/10.1016/S0027-9684\(15\)30120-6](https://doi.org/10.1016/S0027-9684(15)30120-6)

<sup>22</sup> Geronimus AT, Hicken MT, Pearson JA, Seashols SJ, Brown KL, Cruz TD. Do US Black Women Experience Stress-Related Accelerated Biological Aging?: A Novel Theory and First Population-Based Test of Black-White Differences in Telomere Length. *Human nature (Hawthorne, NY)*. 2010;21(1):19-38. doi:10.1007/s12110-010-9078-0.

<sup>23</sup> Djuric, Z., Bird, C., Furumoto-Dawson, A., Rauscher, G., Ruffin, M., Stowe, R., Tucker, K., & Masi, C. (2008). Biomarkers of psychological stress in health disparities research. *Open Biomark Journal*, January 1: 7-19.

<sup>24</sup> Krieger N. Embodiment: A conceptual glossary for epidemiology. *Journal of Epidemiology and Community Health*. 2005; 59: 350-355.

<sup>25</sup> Halfon N, Larson K, Lu M, Tullis E, Russ S. Lifecourse health development: Past, present and future. *Maternal and Child Health Journal*.2014. 18(2): 344-365.

<sup>26</sup> Hanks A, Solomon D, Weller CE. Systematic Inequality: How America's structural racism helped create the black-white wealth gap. Center for American Progress. February 2018. Accessed June 2018. <https://www.americanprogress.org/issues/race/reports/2018/02/21/447051/systematic-inequality/>

<sup>27</sup> Reardon, S. F., Fox, L., & Townsend, J. (2015). Neighborhood Income Composition by Household Race and Income, 1990–2009. *The Annals of the American Academy of Political and Social Science*, 660(1), 78-97. doi:10.1177/0002716215576104

<sup>28</sup> Miller, Greg. Newly Released Maps Show How Housing Discrimination Happened. National Geographic, October 17, 2016. Accessed June 2018. <https://news.nationalgeographic.com/2016/10/housing-discrimination-redlining-maps/>

<sup>29</sup> U.S. Census, American Community Survey, 2012-2016.

<sup>30</sup> Fiscella, K., & Sanders, M. R. (2016). Racial and Ethnic Disparities in the Quality of Health Care. *Annual Review of Public Health*, 37(1), 375-394. doi:10.1146/annurev-publhealth-032315-021439

<sup>31</sup> Hoffman, K. M., Trawalter, S., Axt, J. R., & Oliver, M. N. (2016). Racial bias in pain assessment and treatment recommendations, and false beliefs about biological differences between blacks and whites. *Proceedings of the National Academy of Sciences*, 113(16), 4296-4301. doi:10.1073/pnas.1516047113

<sup>32</sup> Jacobs, B., Ryan, A. M., Henrichs, K. S., & Weiss, B. D. (2018). Medical Interpreters in Outpatient Practice. *The Annals of Family Medicine*, 16(1), 70-76. doi:10.1370/afm.2154

<sup>33</sup> T Evans-Campbell. Historical Trauma in American Indian/Native Alaska Communities: A Multilevel Framework for Exploring Impacts on individuals, Families, and Communities. *Journal of Interpersonal Violence*. 2008. 23(3): 316-338. doi: 10.1177/0886260507312290

<sup>34</sup> Maine Data, Research, and Vital Statistics, Maine CDC. Birth Certificates. 2004-2012.

## CONCLUSION

This report demonstrates that social determinants of health – our relationships, neighborhoods, schools, environment, and institutions – can have a dramatic effect on the health and well-being of Maine’s residents. Furthermore, there are inequities in opportunities to achieve optimal health. These inequities are the result of social and economic factors such as discrimination, racism, public policies, historical trauma, intergenerational poverty, and differential access.

As the divide between the poorest and wealthiest in our country increases, it is urgent that the systems and conditions that perpetuate health inequities are recognized and strategies to address these inequities are developed. Although some of these strategies may be focused on state-level policies and initiatives, community-based efforts are also needed to alter the social, environmental, and economic conditions that drive health.

Public health programs can link people to needed health care and provide services to underserved populations, such as immunizations. They can also inform and educate Mainers on factors that influence health, and provide resources, data, and training to empower communities and individuals to improve their health. Maine’s public health agency can play a key role in advancing awareness and understanding of the influence of social determinants of health to help drive a community health perspective.



Considering the breadth of social determinants of health, public health alone cannot address all the influences on the health of Maine people.

Based on the findings of this report, we outline steps that communities, state agencies, and organizations can take to promote health equity and reduce health disparities. Our list of recommendations is not exhaustive. There are many evidence-based strategies to reduce health inequities. A brief list of resources is presented at the end of this chapter.

### #1: Improve our understanding of inequities in Maine.

- Use data to highlight inequities of marginalized populations.
- Ensure that data collection systems adequately capture quantitative and qualitative data on social determinants of health, including experiences of discrimination.
- Improve collection of race and ethnicity data across institutions that provide health data.
- Work more closely with Maine tribes to ensure that data about Native Americans

accurately reflect the health of tribal members.

- Conduct needs assessments of specific population groups to better understand their strengths and health needs.
- Use alternative methods (e.g., focus groups) to learn about Mainers' experiences with discrimination within the systems they interact with in the state.
- Share and present data on health inequities to draw attention to gaps in Mainers' ability to access and receive needed health care.

## #2: Engage in diverse partnerships across disciplines and within communities.

- Increase collaboration across sectors (i.e., education, finance, health, transportation, housing) to address health equity.
- Increase community capacity to address health equity by:
  - Providing data and information at a local level;
  - Providing trainings on community engagement and facilitation; and
  - Investing in local community organizations.
- Engage in meaningful outreach with diverse populations. This includes ensuring that events are culturally appropriate and open to all community members.
- Ensure there are individuals in high level of leadership at the state and local levels who can facilitate multi-sector collaboration and develop strategies to achieve health equity.

- Ensure that community leaders, providers, and State staff are trained in understanding and identifying social determinants of health, health equity, and how to conduct multi-sector work.
- Shift prevention and intervention dialogues from changing individual behavior alone to changing the conditions of the social, economic, and physical environment.



## #3: Increase supports for all Mainers, especially those at highest risk for social isolation, stress, and trauma.

- Acknowledge the impact of cumulative stressful experiences and environments on long-term health and well-being.
- Invest early in children, which includes supporting programs that promote early childhood development and positive parenting.
- Ensure that schools, social service providers, and health care professionals understand how to take a trauma-informed approach to care.

- Train school personnel on how to ask students about depression, suicidal thoughts, and prior adverse childhood experiences.
- Ensure that there are policies within schools and workplaces that do not tolerate harassment and violence towards others.
- Increase and promote opportunities for community engagement of all types.
- Ensure adequate transportation and opportunities for seniors to interact with their communities.
- Recognize that persons with disabilities are faced with not only physical or mental challenges, but social challenges as well that can impact their health.
- Ensure community supports are available, accessible, and appropriate to individuals from all cultures, including New Mainers.



#### **#4: Make Maine’s environment and its communities a healthy and safe place to live.**

- Increase the number of safe and affordable housing units across the state.

- Ensure that homes, including public housing units, are free from lead, radon, and environmental tobacco smoke, and have their wells tested on a regular basis.
- Educate Mainers on the impact of the physical environment on health and the resources available for testing and treating environmental toxins in homes and communities.
- Ensure that community members are involved in community planning and development initiatives.
- Expand the number of farmer’s markets in rural areas of the state and develop programs to improve the affordability of healthy foods.
- Provide access to safe places to exercise and play. This includes having sidewalks, trails, parks, and bike paths.
- Increase access to transportation options in both rural and urban areas of Maine.

#### **#5: Ensure that schools provide an optimal education for all Mainers.**

- Ensure policies related to bullying are in place and enforced.
- Develop opportunities for adolescents and young adults to be mentored by adults in the community.
- Recognize that some students may need increased support in schools and ensure culturally appropriate resources and accommodations are in place for those who need it.

- Promote school-based physical and mental health services to ensure greater access to care for children and adolescents.
- Increase availability of adult education programs.

## #6: Ensure equal access to quality care and health insurance.

- Increase the percentage of children and adults in Maine who have affordable health insurance.
- Increase the number of primary care, dental care, and mental health providers in the state, especially in Maine's rural areas.
- Increase the number of medical residencies, including dental residencies, located in rural areas.
- Increase the availability of specialty care throughout the state.
- Increase the number of health care providers who accept all forms of health insurance.
- Ensure health care providers and facilities provide culturally competent care based on the National Standards for Culturally and Linguistically Appropriate Services (CLAS) standards.<sup>1</sup>
- Increase the diversity of Maine's health care workforce.
- Improve transportation options for those in rural and urban areas to get to care when they need it.

- Explore new methods to expand health care access in our rural state, such as telemedicine.
- Increase the number of patients who receive care within a medical home model.



## #7: Focus efforts on improving the health of Mainers with lower incomes.

- Promote access to a living wage for all Mainers through initiatives such as job training, improved access to educational opportunities, and increased minimum wage.
- Promote enrollment in Maine's technical high schools to encourage the development of job skills.
- Expand access to higher education for traditional and non-traditional students.
- Increase access to programs such as food stamps, SNAP, and WIC to help Mainers with low incomes afford healthy foods.
- Determine barriers to care for the lowest income Mainers and work to eliminate those barriers.

- Promote job growth in areas of Maine where there are the fewest opportunities.

### #8: Reduce discrimination in Maine.

- Educate providers on the historical forces and trauma that have led to and continue to perpetuate racism and distrust.
- Increase the diversity of Maine's workforce.
- Identify and change policies and practices that may be discriminatory or result in discriminatory behavior, in collaboration with communities.
- Engage historically marginalized populations in the development of policies to ensure they do not perpetuate historical trauma.
- Conduct trainings on implicit bias to raise awareness of everyday discrimination.
- Develop effective systems to serve diverse populations who may need specialized services, such as interpretation.
- Make sure that educational, employment, health care, and social opportunities are accessible to all Mainers.
- Monitor experiences of discrimination within our institutions and strengthen accountability to reduce these experiences.
- Empower individuals to know and demand their right to non-discriminatory treatment.

Many of these recommendations are challenging and require multi-sector collaboration. Our hope is that by bringing attention to social determinants of health using state and local data, Maine organizations can start conversations and foster partnerships necessary to create a healthier population.

#### Maine's Shared Community Health Needs Assessment (CHNA)

Maine's 2018 Shared Community Health Needs Assessment (CHNA), a collaboration between the Maine Center for Disease Control and Prevention and Maine's major health care systems, is a needs assessment designed to identify and address health behaviors and outcomes at the community level.

The Shared CHNA process has prioritized health equity by ensuring that data are available by geographic area, as well as by social determinants of health including income, employment and education.

Local forums were hosted across the State to learn about the health priorities of each county, as well as the new Mainer population and other minority population groups.

**In 15 out of 16 Maine counties, social determinants of health were identified as a top health priority.**

[Public interactive data on the Shared CHNA website](#) can be used inform other organizations and agencies with the information needed to address some of the recommendations included in this report.

## Resources on reducing health disparities and increasing health equity

- **A Time of Opportunity: Local Solutions to Reduce Health Inequities in Health and Safety.** Prevention Institute, 2010.

Available at:

<https://www.preventioninstitute.org/publications/a-time-of-opportunity-local-solutions-to-reduce-inequities-in-health-and-safety>

- **Communities in Action: Pathways to Health Equity.** National Academies of Sciences, Engineering, and Medicine. 2017.

Available at:

<http://nationalacademies.org/hmd/report/2017/communities-in-action-pathways-to-health-equity.aspx>

- **Applying Social Determinant of Health Indicator Data for Advancing Health Equity: A Guide for Local Health Department Epidemiologists and Public Health Professionals.** Bay Area Regional Health Inequities Initiative, 2015.

Available at:

<http://barhii.org/resources/sdoh-indicator-guide/>

- **Promoting Health Equity: A Resource to Help Communities Address Social Determinants of Health.** U.S. CDC, 2008.

Available at:

<https://www.cdc.gov/nccdphp/dch/programs/healthycommunitiesprogram/tools/pdf/sdoh-workbook.pdf>

- **A Practitioner's Guide for Advancing Health Equity: Community Strategies for Preventing Chronic Disease.** U.S. CDC, 2018.

Available at:

<https://www.cdc.gov/nccdphp/dnpao/state-local-programs/health-equity-guide/index.htm>

- **Climate Change, Health, and Equity: A Guide for Local Health Departments.** American Public Health Association, 2018.

Available at:

[https://www.apha.org/-/media/files/pdf/topics/climate/climate\\_health\\_equity.ashx?la=en&hash=14D2F64530F1505EAE7AB16A9F9827250EAD6C79](https://www.apha.org/-/media/files/pdf/topics/climate/climate_health_equity.ashx?la=en&hash=14D2F64530F1505EAE7AB16A9F9827250EAD6C79)



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<sup>1</sup> U.S. Department of Health and Human Services, Office of Minority Health. *National Standards for Culturally and Linguistically Appropriate Services (CLAS) in Health and Health Care*.  
<https://www.thinkculturalhealth.hhs.gov/assets/pdfs/EnhancedNationalCLASstandards.pdf>

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# APPENDIX I: HEALTH PROFILES

## Education and Health in Maine

This table shows the percentage or rate of each indicator among different educational attainment groups in Maine. For example, 59.6% of adults with less than a high school diploma have an annual income of less than \$25,000 per year.

Education Level	Less than high school diploma	High school diploma or GED	Some college	Bachelor's degree or higher	Maine Overall	Indicator by Education
Indicator, Year	Estimate 95% CI	Estimate 95% CI	Estimate 95% CI	Estimate 95% CI	Estimate 95% CI	
<b>Overall proportion of adults by education level, 2016<sup>1</sup></b>	<b>8.7</b> 7.5 – 9.8	<b>33.4</b> 31.9 – 34.8	<b>31.2</b> 29.7 – 32.6	<b>26.8</b> 25.6 – 28.0	<b>NA</b> –	
Income less than \$25,000 per year, adults, 2016 <sup>1</sup>	<b>59.6</b> 52.2 – 67.0	<b>36.2</b> 33.6 – 38.9	<b>23.4</b> 20.9 – 25.9	<b>9.7</b> 8.2 – 11.2	<b>26.8</b> 25.4 – 28.3	
High school degree or less, adults, 2016 <sup>1</sup>	<b>NA</b> –	<b>NA</b> –	<b>NA</b> –	<b>NA</b> –	<b>42.0</b> 40.5 – 43.6	
Unemployment rate, adults, 2016 <sup>2</sup>	<b>9.4</b> 6.5 – 12.3	<b>5.9</b> 4.7 – 7.1	<b>2.5</b> 1.8 – 3.2	<b>1.4</b> 1.0 – 1.8	<b>3.4</b> 3.0 – 3.8	
Uninsured, adults ≥25 years, 2016 <sup>2</sup>	<b>15.6</b> 12.8 – 18.4 <sup>†</sup>	<b>12.7</b> 11.7 – 13.7 <sup>†</sup>	<b>7.8</b> 7.0 – 8.6 <sup>†</sup>	<b>3.6</b> 2.8 – 4.4 <sup>†</sup>	<b>8.0</b> 7.5 – 8.5 <sup>†</sup>	
Health rating: fair to poor, adults, 2016 <sup>1</sup>	<b>36.1</b> 29.5 – 42.6	<b>18.7</b> 16.8 – 20.6	<b>16.0</b> 14.1 – 18.0	<b>7.5</b> 6.4 – 8.7	<b>16.4</b> 15.3 – 17.5	
Obesity, adults, 2016 <sup>1</sup>	<b>35.7</b> 29.0 – 42.4	<b>33.3</b> 30.8 – 35.8	<b>31.8</b> 29.1 – 34.5	<b>21.9</b> 19.9 – 23.8	<b>29.9</b> 28.5 – 31.3	
Current smoking, adults, 2016 <sup>1</sup>	<b>44.8</b> 37.7 – 51.9	<b>24.5</b> 22.2 – 26.9	<b>19.5</b> 17.1 – 21.8	<b>6.5</b> 5.3 – 7.8	<b>19.8</b> 18.4 – 21.1	
Sedentary lifestyle, adults, 2016 <sup>1</sup>	<b>35.9</b> 29.6 – 42.2	<b>26.5</b> 24.2 – 28.7	<b>19.6</b> 17.5 – 21.7	<b>9.5</b> 8.2 – 10.8	<b>20.6</b> 19.4 – 21.8	
Past 30-day misuse of prescription drugs, adults, 2011-2016 <sup>1</sup>	<b>1.2<sup>^</sup></b> 0.2 – 2.2	<b>1.3</b> 0.9 – 1.7	<b>0.7<sup>^</sup></b> 0.5 – 1.0	<b>0.4<sup>^</sup></b> 0.2 – 0.6	<b>0.9</b> 0.7 – 1.1	
Coronary heart disease deaths per 100,000 (age-adjusted rate), 2016 <sup>4</sup>	<b>NA</b> –	<b>NA</b> –	<b>NA</b> –	<b>NA</b> –	<b>79.7</b> 75.7 – 83.9	
High blood pressure, adults, 2015 <sup>1</sup>	<b>43.9</b> 37.3 – 50.5	<b>36.9</b> 34.5 – 39.3	<b>33.4</b> 31.0 – 35.8	<b>27.7</b> 25.9 – 29.6	<b>34.1</b> 32.8 – 35.5	
Diabetes, adults, 2016 <sup>1</sup>	<b>14.3</b> 10.0 – 18.6	<b>12.3</b> 10.8 – 13.9	<b>11.0</b> 9.5 – 12.5	<b>6.6</b> 5.6 – 7.6	<b>10.6</b> 9.7 – 11.4	
Current asthma, adults, 2016 <sup>1</sup>	<b>20.9</b> 15.1 – 26.8	<b>10.9</b> 9.3 – 12.6	<b>13.2</b> 11.2 – 15.1	<b>9.9</b> 8.5 – 11.3	<b>12.2</b> 11.2 – 13.2	
Diagnosed depression (lifetime), adults, 2016 <sup>1</sup>	<b>36.5</b> 29.5 – 43.4	<b>21.2</b> 18.9 – 23.5	<b>21.9</b> 19.6 – 24.3	<b>14.9</b> 13.2 – 16.6	<b>21.1</b> 19.8 – 22.4	

# Education and Health in Maine

This table shows the percentage or rate of each indicator among different educational attainment groups in Maine. For example, 59.6% of adults with less than a high school diploma have an annual income of less than \$25,000 per year.

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Indicator, Year	Estimate 95% CI	Estimate 95% CI	Estimate 95% CI	Estimate 95% CI	Estimate 95% CI	
Poverty status, 2016 <sup>2</sup>	<b>25.7</b> 23.2 – 28.2 <sup>†</sup>	<b>14.9</b> 13.7 – 16.1 <sup>†</sup>	<b>8.8</b> 7.8 – 9.8 <sup>†</sup>	<b>4.1</b> 3.4 – 4.8 <sup>†</sup>	<b>12.5</b> 11.7 – 13.3 <sup>†</sup>	
Infant deaths per 1,000 births by maternal education, 2011-2015 <sup>4</sup>	<b>9.21</b> 6.93 – 12.01	<b>7.81</b> 6.63 – 9.15	<b>6.47</b> 5.35 – 7.56	<b>4.96</b> 4.08 – 5.99	<b>6.75</b> 6.13 – 7.41	
Unintended pregnancy by maternal education, 2012-2015 <sup>5</sup>	<b>51.8</b> 43.4 – 60.1	<b>34.1</b> 30.5 – 38.0	<b>28.2</b> 24.7 – 32.0	<b>18.3</b> 15.9 – 20.9	<b>28.1</b> 26.3 – 30.0	
Smoked during pregnancy, 2016 <sup>6</sup>	<b>36.8</b> 32.7 – 40.9	<b>26.5</b> 24.8 – 28.2	<b>12.8</b> 11.7 – 14.0	<b>1.8</b> 1.4 – 2.2	<b>14.5</b> 13.8 – 15.1	
Dental visit in past year, adults, 2016 <sup>1</sup>	<b>33.0</b> 26.4 – 39.6	<b>54.1</b> 51.5 – 56.8	<b>65.3</b> 62.6 – 68.0	<b>81.8</b> 79.9 – 83.7	<b>63.3</b> 61.7 – 64.8	
Influenza vaccination the past year, adults, 2016 <sup>1</sup>	<b>35.8</b> 29.3 – 42.4	<b>37.4</b> 34.8 – 40.0	<b>39.5</b> 36.7 – 42.2	<b>50.8</b> 48.5 – 53.2	<b>41.6</b> 40.1 – 43.1	
Cholesterol checked every 5 years, adults, 2015 <sup>1</sup>	<b>74.0</b> 66.7 – 81.3	<b>77.8</b> 75.3 – 80.3	<b>81.3</b> 78.8 – 83.8	<b>87.8</b> 86.0 – 89.5	<b>81.2</b> 79.8 – 82.6	
Cervical cancer screening up-to-date, women ages 21-65 years, 2016 <sup>1</sup>	<b>DSU</b> –	<b>78.9</b> 74.1 – 83.7	<b>82.3</b> 77.7 – 86.9	<b>85.1</b> 82.1 – 88.0	<b>81.6</b> 79.2 – 83.9	
Colorectal cancer screening up-to-date, adults ages 50-75 years, 2016 <sup>1</sup>	<b>69.9</b> 61.8 – 78.0	<b>71.6</b> 68.4 – 74.7	<b>77.3</b> 74.3 – 80.2	<b>79.2</b> 76.7 – 81.6	<b>75.5</b> 73.8 – 77.1	
Currently receiving outpatient mental health treatment, adults, 2016 <sup>1</sup>	<b>21.6</b> 15.7 – 27.4	<b>19.5</b> 17.1 – 21.8	<b>19.7</b> 17.4 – 22.0	<b>16.0</b> 14.2 – 17.7	<b>18.8</b> 17.5 – 20.0	

All estimates are percentages unless otherwise noted.

<sup>1</sup> BRFSS, Behavioral Risk Factor Surveillance System.

<sup>2</sup> U.S. Census Bureau, American Community Survey.

<sup>3</sup> Maine Mortality Database; Data, Research, and Vital Statistics Program, Maine CDC.

<sup>4</sup> Linked birth/infant death certificate datasets and birth certificate datasets.

<sup>5</sup> PRAMS, Pregnancy Risk Assessment Monitoring System.

<sup>6</sup> Maine Natality Database; Data, Research, and Vital Statistics Program, Maine CDC.

^ Interpret with caution; unweighted numerator less than 50.

NA: Not available.

DSU: Data is suppressed if total respondents less than 50 or 95% confidence interval half-widths are less than 10.

† Indicates 90% margin of error was used.

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## Income and Health in Maine

This table shows the percentage or rate of each indicator among different income groups in Maine.

For example, 62.6% of adults who earn less than \$15,000 per year have a high school degree or less.

Income Level	Less than \$15,000	\$15,000-24,999	\$25,000-34,999	\$35,000-49,999	\$50,000 or more	Maine Overall	Indicator by Income
Indicator, Year	Estimate 95% CI	Estimate 95% CI	Estimate 95% CI	Estimate 95% CI	Estimate 95% CI	Estimate 95% CI	
Proportion of adults by income level, 2016 <sup>1</sup>	<b>9.4</b> 8.5 – 10.4	<b>17.4</b> 16.1 – 18.6	<b>11.5</b> 10.5 – 12.6	<b>15.4</b> 14.3 – 16.5	<b>46.3</b> 44.7 – 47.9	<b>NA</b> –	
Income less than \$25,000 per year, adults, 2016 <sup>1</sup>	<b>NA</b> –	<b>NA</b> –	<b>NA</b> –	<b>NA</b> –	<b>NA</b> –	<b>26.8</b> 25.4 – 28.3	
High school degree or less, adults, 2016 <sup>1</sup>	<b>62.6</b> 57.5 – 67.6	<b>62.5</b> 58.7 – 66.2	<b>49.7</b> 44.8 – 54.6	<b>45.9</b> 41.9 – 50.0	<b>24.3</b> 22.1 – 26.4	<b>42.0</b> 40.5 – 43.6	
Unemployment rate, adults, 2016 <sup>1</sup>	<b>25.6</b> 17.9 – 33.3	<b>14.8</b> 10.2 – 19.4	<b>8.1</b> 4.1 – 12.1	<b>4.9</b> 2.2 – 7.7	<b>2.0</b> 1.1 – 2.9	<b>6.7</b> 5.6 – 7.8	
Uninsured, all ages, 2016 <sup>2</sup>	<b>11.5</b> 10.1 – 12.9 <sup>+</sup>		<b>11.3</b> 10.0 – 12.6 <sup>+</sup>		<b>NA</b> –	<b>8.0</b> 7.5 – 8.5 <sup>+</sup>	
Health rating: fair to poor, adults, 2016 <sup>1</sup>	<b>38.4</b> 33.4 – 43.4	<b>26.9</b> 23.5 – 30.2	<b>18.4</b> 14.7 – 22.2	<b>13.0</b> 10.3 – 15.7	<b>8.0</b> 6.8 – 9.3	<b>16.4</b> 15.3 – 17.5	
Obesity, adults, 2016 <sup>1</sup>	<b>38.1</b> 33.1 – 43.1	<b>31.1</b> 27.4 – 34.8	<b>34.2</b> 29.4 – 39.0	<b>33.1</b> 29.2 – 36.9	<b>27.3</b> 25.2 – 29.3	<b>29.9</b> 28.5 – 31.3	
Current smoking, adults, 2016 <sup>1</sup>	<b>38.6</b> 33.4 – 43.8	<b>31.2</b> 27.2 – 35.1	<b>21.9</b> 17.6 – 26.2	<b>22.1</b> 18.4 – 25.8	<b>11.1</b> 9.5 – 12.8	<b>19.8</b> 18.4 – 21.1	
Sedentary lifestyle, adults, 2016 <sup>1</sup>	<b>38.1</b> 33.1 – 43.1	<b>29.3</b> 25.8 – 32.8	<b>27.2</b> 23.1 – 31.2	<b>22.9</b> 19.5 – 26.3	<b>11.0</b> 9.6 – 26.3	<b>20.6</b> 19.4 – 21.8	
Past 30-day misuse of prescription drugs, adults, 2011-2016 <sup>1</sup>	<b>1.8</b> <sup>^</sup> 0.9 – 2.6	<b>1.0</b> <sup>^</sup> 0.5 – 1.5	<b>1.1</b> <sup>^</sup> 0.6 – 1.6	<b>0.5</b> <sup>^</sup> 0.2 – 0.8	<b>0.6</b> <sup>^</sup> 0.4 – 0.8	<b>0.9</b> 0.7 – 1.1	
Coronary heart disease deaths per 100,000 (age-adjusted) 2016 <sup>3</sup>	<b>NA</b> –	<b>NA</b> –	<b>NA</b> –	<b>NA</b> –	<b>NA</b> –	<b>79.7</b> 75.7 - 83.9	
High blood pressure, adults, 2015 <sup>1</sup>	<b>43.7</b> 38.3 – 49.0	<b>39.5</b> 35.9 – 43.1	<b>36.6</b> 32.4 – 40.9	<b>33.0</b> 29.5 – 36.5	<b>30.0</b> 28.0 – 32.0	<b>34.1</b> 32.8 – 35.5	
Diabetes, adults, 2013 <sup>1</sup>	<b>16.5</b> 13.1 – 19.8	<b>13.7</b> 11.5 – 16.0	<b>13.5</b> 10.3 – 16.7	<b>10.8</b> 8.6 – 13.1	<b>6.8</b> 5.8 – 7.8	<b>10.6</b> 9.7 – 11.4	
Current asthma, adults, 2016 <sup>1</sup>	<b>22.9</b> 18.5 – 27.4	<b>14.4</b> 11.6 – 17.2	<b>12.2</b> 9.0 – 15.3	<b>11.6</b> 9.1 – 14.2	<b>8.7</b> 7.5 – 10.0	<b>12.2</b> 11.2 – 13.2	
Diagnosed depression (lifetime), adults, 2016 <sup>1</sup>	<b>45.4</b> 40.2 – 50.6	<b>27.8</b> 24.1 – 31.6	<b>25.3</b> 20.4 – 30.2	<b>19.3</b> 16.2 – 22.4	<b>13.4</b> 11.8 – 15.0	<b>21.1</b> 19.8 – 22.4	



# Income and Health in Maine

This table shows the percentage or rate of each indicator among different income groups in Maine.

For example, 62.6% of adults who earn less than \$15,000 per year have a high school degree or less.

Income Level	Less than \$15,000	\$15,000-24,999	\$25,000-34,999	\$35,000-49,999	\$50,000 or more	Maine Overall	Indicator by Income
Indicator, Year	Estimate 95% CI	Estimate 95% CI	Estimate 95% CI	Estimate 95% CI	Estimate 95% CI	Estimate 95% CI	
Unintended pregnancy, 2012-2015 <sup>4</sup>	<b>47.1</b> 42.8 – 51.5	<b>32.0</b> 27.3 – 37.1	<b>24.3*</b> 20.8 – 28.2			<b>28.1</b> 26.3 – 30.0	
Three or more chronic conditions, adults, 2016 <sup>1</sup>	<b>33.1</b> 28.4 – 37.7	<b>24.0</b> 20.9 – 27.1	<b>17.8</b> 15.6 – 20.0		<b>12.5*</b> 10.4 – 14.6	<b>16.5</b> 15.5 – 17.5	
Cost barriers to care, adults, 2016 <sup>1</sup>	<b>20.9</b> 16.3 – 25.6	<b>18.0</b> 14.8 – 21.2	<b>12.5</b> 9.0 – 16.1	<b>8.5</b> 6.2 – 10.8	<b>6.0</b> 4.7 – 6.3	<b>10.8</b> 9.7 – 11.8	
Current depression, adults, 2016 <sup>1</sup>	<b>26.1</b> 21.3 – 31.0	<b>13.5</b> 10.5 – 16.6	<b>6.3</b> 4.8 – 7.7		<b>4.9*</b> 3.3 – 6.6	<b>8.1</b> 7.2 – 9.0	
Currently receiving outpatient mental health treatment, adults, 2016 <sup>1</sup>	<b>37.7</b> 32.4 – 43.1	<b>21.3</b> 18.0 – 24.5	<b>20.1</b> 17.4 – 22.7		<b>13.8*</b> 10.9 – 16.7	<b>18.8</b> 17.5 – 20.0	
Influenza vaccination in the past year, adults, 2016 <sup>1</sup>	<b>33.1</b> 28.6 – 37.7	<b>39.9</b> 36.1 – 43.7	<b>41.7</b> 38.7 – 44.8		<b>43.4*</b> 39.6 – 47.2	<b>43.6</b> 40.1 – 43.1	
Consume less than 1 vegetable per day, adults, 2015 <sup>1</sup>	<b>33.5</b> 27.9 – 39.1	<b>24.7</b> 21.2 – 28.2	<b>20.7</b> 16.8 – 24.5	<b>15.8</b> 12.6 – 19.0	<b>11.8</b> 10.1 – 13.4	<b>18.3</b> 17.0 – 19.5	
Cholesterol checked in past 5 years, adults, 2015 <sup>1</sup>	<b>75.8</b> 70.2 – 81.4	<b>77.9</b> 74.0 – 81.7	<b>79.3</b> 74.6 – 83.9	<b>76.3</b> 72.3 – 80.3	<b>86.7</b> 84.8 – 88.6	<b>81.2</b> 79.8 – 82.6	
High cholesterol, adults, 2015 <sup>1</sup>	<b>51.1</b> 45.3 – 56.9	<b>43.5</b> 39.5 – 47.4	<b>41.9</b> 37.1 – 46.7	<b>34.9</b> 31.2 – 38.6	<b>34.7</b> 32.6 – 36.8	<b>38.5</b> 37.0 – 39.9	
Breast cancer screening up-to-date, women 50-74 years, 2016 <sup>1</sup>	<b>71.4</b> 64.5 – 78.2	<b>74.8</b> 69.4 – 80.3	<b>76.9</b> 70.5 – 83.3	<b>81.4</b> 76.1 – 86.7	<b>87.4</b> 84.9 – 89.8	<b>80.8</b> 78.9 – 82.7	
Colorectal cancer screening up-to-date, adults 50-75 years, 2016 <sup>1</sup>	<b>64.7</b> 56.8 – 66.1	<b>67.5</b> 63.6 – 70.7	<b>74.5</b> 65.7 – 74.0	<b>72.3</b> 72.0 – 78.9	<b>81.6</b> 75.7 – 80.0	<b>75.5</b> 73.8 – 77.1	

All estimates are percentages unless otherwise noted.

<sup>1</sup> BRFSS, Behavioral Risk Factor Surveillance System.

<sup>2</sup> U.S. Census Bureau, American Community Survey.

<sup>3</sup> Maine Mortality Database; Data, Research, and Vital Statistics Program, Maine CDC.

<sup>4</sup> PRAMS, Pregnancy Risk Assessment Monitoring System.

^ Interpret with caution; unweighted numerator less than 50.

NA: Not available.

† Indicates 90% margin of error was used.

~ Use caution in interpreting PRAMS estimates with an unweighted numerator less than 30.

\* Different income groups used. Unintended pregnancy data is presented for women with an annual income less than \$15,000, \$15,001-\$26,000, \$26,001-\$52,000. Three or more chronic conditions, currently receiving outpatient mental health treatment, and influenza vaccination in the past year is presented for annual income less than \$15,000, \$15,000-\$24,999, \$25,000-\$49,999; \$50,000-\$74,999.
















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## Sex and Health in Maine

This table shows the percentage or rate of each indicator among males and females in Maine.

For example, 29.5% of female adults have an annual income of less than \$25,000 per year.

Sex	Female	Male	Maine Overall	Indicator by Sex
Indicator, Year	Estimate 95% CI	Estimate 95% CI	Estimate 95% CI	
<b>Overall proportion of adults by sex, 2016<sup>1</sup></b>	<b>51.6</b> 50.0 – 53.1	<b>48.4</b> 46.9 – 50.0	<b>NA</b> –	
Income less than \$25,000 per year, adults, 2016 <sup>1</sup>	<b>29.5</b> 27.5 – 31.5	<b>24.0</b> 22.0 – 26.1	<b>26.8</b> 25.4 – 28.3	
High school degree or less, adults, 2016 <sup>1</sup>	<b>39.1</b> 37.0 – 41.2	<b>45.2</b> 42.9 – 47.5	<b>42.0</b> 40.5 – 43.6	
Unemployment rate, adults, 2016 <sup>2</sup>	<b>3.0</b> 2.5 – 3.5	<b>4.8</b> 4.1 – 5.5	<b>3.9</b> 3.5 – 4.3	
Uninsured, all ages, 2016 <sup>2</sup>	<b>6.8</b> 6.2 – 7.4 <sup>†</sup>	<b>9.4</b> 8.7 – 10.1 <sup>†</sup>	<b>8.0</b> 7.5 – 8.5 <sup>†</sup>	
Health rating: fair to poor, adults, 2016 <sup>1</sup>	<b>16.0</b> 14.6 – 17.5	<b>16.7</b> 15.0 – 18.5	<b>16.4</b> 15.3 – 17.5	
Obesity, adults, 2016 <sup>1</sup>	<b>29.5</b> 27.6 – 31.4	<b>30.3</b> 28.2 – 32.4	<b>29.9</b> 28.5 – 31.3	
Current smoking, adults, 2016 <sup>1</sup>	<b>18.1</b> 16.3 – 19.8	<b>21.6</b> 19.6 – 23.6	<b>19.8</b> 18.4 – 21.1	
Sedentary lifestyle, adults, 2016 <sup>1</sup>	<b>22.4</b> 20.8 – 24.1	<b>18.7</b> 17.0 – 20.3	<b>20.6</b> 19.4 – 21.8	
Past 30-day misuse of prescription drugs, adults, 2011-2016 <sup>1</sup>	<b>0.7</b> 0.5 – 0.9	<b>1.0</b> 0.7 – 1.3	<b>0.9</b> 0.7 – 1.1	
Coronary heart disease deaths per 100,000 (age-adjusted), 2016 <sup>3</sup>	<b>50.7</b> 46.7 – 55.1	<b>115.5</b> 108.1 – 123.3	<b>79.7</b> 75.7 – 83.9	
High blood pressure adults, 2015 <sup>1</sup>	<b>31.2</b> 29.5 – 32.8	<b>37.3</b> 35.2 – 39.4	<b>34.1</b> 32.8 – 35.5	
Diabetes, adults, 2016 <sup>1</sup>	<b>9.7</b> 8.6 – 10.7	<b>11.5</b> 10.2 – 12.8	<b>10.6</b> 9.7 – 11.4	
Current asthma, adults, 2016 <sup>1</sup>	<b>14.8</b> 13.3 – 16.3	<b>9.4</b> 8.0 – 10.9	<b>12.2</b> 11.2 – 13.2	
Diagnosed depression (lifetime), adults, 2016 <sup>1</sup>	<b>25.9</b> 23.9 – 27.8	<b>16.0</b> 14.2 – 17.9	<b>21.1</b> 19.8 – 22.4	

## Sex and Health in Maine

This table shows the percentage or rate of each indicator among males and females in Maine.

For example, 29.5% of female adults have an annual income of less than \$25,000 per year.

Sex	Female	Male	Maine Overall	Indicator by Sex
Indicator, Year	Estimate 95% CI	Estimate 95% CI	Estimate 95% CI	
Poverty status, 2016 <sup>2</sup>	<b>13.6</b> 12.7 – 14.5 <sup>†</sup>	<b>11.3</b> 10.4 – 12.2 <sup>†</sup>	<b>12.5</b> 11.4 – 13.3 <sup>†</sup>	
Dentist visits in the past year, adults, 2016 <sup>1</sup>	<b>66.1</b> 64.1 – 68.1	<b>60.3</b> 58.0 – 62.3	<b>63.3</b> 61.7 – 64.8	
Usual primary care provider, adults, 2016 <sup>1</sup>	<b>92.2</b> 90.9 – 93.4	<b>82.9</b> 81.0 – 84.8	<b>87.7</b> 86.6 – 88.8	
Cholesterol checked in past 5 years, adults, 2015 <sup>1</sup>	<b>84.0</b> 82.1 – 85.8	<b>78.2</b> 76.1 – 80.4	<b>81.2</b> 79.8 – 82.6	
Past 30-day cigarette smoking, high school students, 2017 <sup>4</sup>	<b>7.3</b> 6.6 – 8.0	<b>9.8</b> 9.1 – 10.5	<b>8.8</b> 8.2 – 9.4	
Sad/hopeless for 2 weeks in a row, high school students, 2017 <sup>4</sup>	<b>35.5</b> 34.2 – 36.7	<b>18.5</b> 17.7 – 19.3	<b>26.9</b> 26.0 – 27.8	
Sexual assault, high school students, 2017 <sup>4</sup>	<b>10.3</b> 9.4 – 11.2	<b>4.2</b> 3.7 – 4.8	<b>7.2</b> 6.7 – 7.8	
Poisoning deaths (unintentional and undetermined intent) per 100,000 (age-adjusted), 2016 <sup>3</sup>	<b>16.6</b> 13.4 – 20.3	<b>38.8</b> 33.9 – 44.3	<b>27.6</b> 24.6 – 30.8	
Suicide deaths per 100,000 (age-adjusted), 2016 <sup>3</sup>	<b>7.9</b> 5.8 – 10.5	<b>24.3</b> 20.6 – 28.4	<b>15.9</b> 13.8 – 18.2	
All cancer deaths per 100,000 (age-adjusted), 2016 <sup>3</sup>	<b>145.4</b> 138.0 – 153.2	<b>200.4</b> 190.8 – 210.4	<b>169.0</b> 163.1 – 175.2	
Current outpatient mental health treatment, adults, 2016 <sup>1</sup>	<b>24.3</b> 22.4 – 26.2	<b>12.7</b> 11.2 – 14.3	<b>18.8</b> 17.5 – 20.0	

All estimates are percentages unless otherwise noted.

<sup>1</sup> BRFSS, Behavioral Risk Factor Surveillance System.

<sup>2</sup> U.S. Census Bureau, American Community Survey.

<sup>3</sup> Maine Mortality Database; Data, Research, and Vital Statistics Program, Maine CDC.

<sup>4</sup> MIYHS, Maine Integrated Youth Health Survey.

^ Interpret with caution; unweighted numerator less than 50.

NA: Not available.

DSU: Data is suppressed if total respondents less than 50 or 95% confidence interval half-widths are less than 10.

† Indicates 90% margin of error was used.

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## Race and Health in Maine

The table below shows the percentage or rate of health or social determinants of health indicators (rows) by varying racial groups in Maine (columns).

RACE	N	Percent	95% LCL	95% UCL	Indicator by Race
<b>Overall proportion of population by race, 2016<sup>1</sup></b>					
American Indian or Alaska Native	7,893	0.6	0.0 <sup>†</sup>	1.6 <sup>†</sup>	
Asian	17,499	1.3	1.2 <sup>†</sup>	1.4 <sup>†</sup>	
Black or African American	19,963	1.5	1.4 <sup>†</sup>	1.6 <sup>†</sup>	
Native Hawaiian & Other Pacific Islander	214	0.0	0.0 <sup>†</sup>	0.1 <sup>†</sup>	
Other Race	2,450	0.2	0.0 <sup>†</sup>	1.2 <sup>†</sup>	
Two or More Races	26,340	2.0	1.8 <sup>†</sup>	2.2 <sup>†</sup>	
White	1,257,120	94.4	93.4 <sup>†</sup>	95.4 <sup>†</sup>	
<b>Income less than \$25,000 per year, adults, 2011-2016<sup>2</sup></b>					
American Indian or Alaska Native	6,643	57.3	51.8	62.8	
Asian	1,332 <sup>^</sup>	31.0 <sup>^</sup>	21.2	40.9	
Black or African American	4,461	59.3	50.7	67.8	
Native Hawaiian & Other Pacific Islander	DSU	DSU	-	-	
Other Race	DSU	DSU	-	-	
Two or More Races	5,769	48.2	42.4	54.0	
White	257,535	28.4	27.8	28.9	
<b>High school degree or less, adults, 2011-2016<sup>2</sup></b>					
American Indian or Alaska Native	8,461	63.5	58.6	68.4	
Asian	1,628 <sup>^</sup>	30.9 <sup>^</sup>	21.5	40.3	
Black or African American	4,836	58.1	49.9	66.3	
Native Hawaiian & Other Pacific Islander	DSU	DSU	-	-	
Other Race	DSU	DSU	-	-	
Two or More Races	7,000	50.6	45.1	56.1	
White	439,134	43.4	42.8	44.0	
<b>Unemployment rate, adults, 2012-2016<sup>1</sup></b>					
American Indian or Alaska Native	NA	12.1	9.9 <sup>†</sup>	14.3 <sup>†</sup>	
Asian	NA	4.1	2.8 <sup>†</sup>	5.4 <sup>†</sup>	
Black or African American	NA	15.1	12.5 <sup>†</sup>	17.7 <sup>†</sup>	
Native Hawaiian & Other Pacific Islander	NA	5.2	0.0 <sup>†</sup>	12.6 <sup>†</sup>	
Other Race	NA	8.2	3.1 <sup>†</sup>	13.3 <sup>†</sup>	
Two or More Races	NA	13.7	11.0 <sup>†</sup>	16.4 <sup>†</sup>	
White	NA	5.8	5.6 <sup>†</sup>	6.0 <sup>†</sup>	
<b>Health rating: fair to poor, adults, 2011-2016<sup>2</sup></b>					
American Indian or Alaska Native	4,031	30.3	25.3	35.2	
Asian	319 <sup>^</sup>	6.2 <sup>^</sup>	2.5	9.8	
Black or African American	1,114 <sup>^</sup>	13.5 <sup>^</sup>	7.9	19.2	
Native Hawaiian & Other Pacific Islander	DSU	DSU	-	-	
Other Race	DSU	DSU	-	-	
Two or More Races	3,626	26.3	21.2	31.3	
White	155,795	15.4	15.0	15.8	

## Race and Health in Maine

The table below shows the percentage or rate of health or social determinants of health indicators (rows) by varying racial groups in Maine (columns).

RACE	N	Percent	95% LCL	95% UCL	Indicator by Race
<b>Uninsured, all ages, 2012-2016<sup>1</sup></b>					
American Indian or Alaska Native	1,349	17.1	14.9 <sup>†</sup>	19.3 <sup>†</sup>	
Asian	2,268	15.5	12.1 <sup>†</sup>	18.9 <sup>†</sup>	
Black or African American	2,324	14.6	11.7 <sup>†</sup>	17.5 <sup>†</sup>	
Native Hawaiian & Other Pacific Islander	33	15.9	3.0 <sup>†</sup>	28.8 <sup>†</sup>	
Other Race	512	16.4	10.4 <sup>†</sup>	22.4 <sup>†</sup>	
Two or More Races	3,360	12.7	11.1 <sup>†</sup>	14.3 <sup>†</sup>	
White	114,877	9.2	9.0 <sup>†</sup>	9.4 <sup>†</sup>	
<b>Obesity, adults, 2011-2016<sup>2</sup></b>					
American Indian or Alaska Native	4,723	37.0	31.8	42.1	
Asian	738 <sup>^</sup>	14.6 <sup>^</sup>	8.3	21.0	
Black or African American	2,095	26.5	18.6	34.5	
Native Hawaiian & Other Pacific Islander	DSU	DSU	-	-	
Other Race	DSU	DSU	-	-	
Two or More Races	3,614	27.3	22.4	32.1	
White	280,263	28.9	28.4	29.4	
<b>Current smoking, adults, 2011-2016<sup>2</sup></b>					
American Indian or Alaska Native	5,224	40.5	35.3	45.8	
Asian	662 <sup>^</sup>	13.4 <sup>^</sup>	7.6	19.1	
Black or African American	1,942	24.5	16.4	32.6	
Native Hawaiian & Other Pacific Islander	DSU	DSU	-	-	
Other Race	DSU	DSU	-	-	
Two or More Races	4,359	32.5	27.2	37.7	
White	197,442	19.9	19.4	20.4	
<b>Sedentary lifestyle, adults, 2011-2016<sup>2</sup></b>					
American Indian or Alaska Native	3,773	29.5	24.7	34.3	
Asian	1,074 <sup>^</sup>	21.4 <sup>^</sup>	13.0	29.8	
Black or African American	1,951	25.1	16.6	33.7	
Native Hawaiian & Other Pacific Islander	DSU	DSU	-	-	
Other Race	DSU	DSU	-	-	
Two or More Races	2,823	20.9	16.9	24.9	
White	215,677	21.9	21.4	22.4	
<b>Past 30-day misuse of prescription drugs, adults, 2011-2016<sup>2</sup></b>					
American Indian or Alaska Native	205 <sup>^</sup>	1.7 <sup>^</sup>	0.0	3.6	
Asian	8 <sup>^</sup>	0.2 <sup>^</sup>	0.0	0.6	
Black or African American	413 <sup>^</sup>	6.4 <sup>^</sup>	0.0	15.5	
Native Hawaiian & Other Pacific Islander	DSU	DSU	-	-	
Other Race	DSU	DSU	-	-	
Two or More Races	38 <sup>^</sup>	0.4 <sup>^</sup>	0.0	1.1	
White	6,790	0.8	0.6	1.0	

## Race and Health in Maine

The table below shows the percentage or rate of health or social determinants of health indicators (rows) by varying racial groups in Maine (columns).

RACE	N	Percent	95% LCL	95% UCL	Indicator by Race
<b>Coronary heart disease deaths per 100,000 (age-adjusted), 2007-2016<sup>3</sup></b>					
American Indian or Alaska Native	7	137.4	103.2	178.1	
Asian	2	31.6	18.9	48.6	
Black or African American	4	48.8	33.0	68.7	
Native Hawaiian & Other Pacific Islander	0	63.2 <sup>†</sup>	1.6	267.5	
Other Race	NA	NA	-	-	
Two or More Races	1	16.4 <sup>†</sup>	8.7	27.3	
White	1,609	91.1	89.7	92.6	
<b>High blood pressure, adults, 2011, 2013 &amp; 2015<sup>2</sup></b>					
American Indian or Alaska Native	3,918	30.6	23.9	37.4	
Asian	370 <sup>^</sup>	8.0 <sup>^</sup>	3.1	13.0	
Black or African American	DSU	DSU	-	-	
Native Hawaiian & Other Pacific Islander	DSU	DSU	-	-	
Other Race	DSU	DSU	-	-	
Two or More Races	3,896	31.6	24.6	38.6	
White	339,386	33.5	32.8	34.2	
<b>Diabetes, adults, 2011-2016<sup>2</sup></b>					
American Indian or Alaska Native	1,908	14.3	10.5	18.0	
Asian	187 <sup>^</sup>	3.6 <sup>^</sup>	1.3	5.8	
Black or African American	429 <sup>^</sup>	5.1 <sup>^</sup>	2.4	7.8	
Native Hawaiian & Other Pacific Islander	DSU	DSU	-	-	
Other Race	DSU	DSU	-	-	
Two or More Races	1,687	12.2	8.7	15.6	
White	98,701	9.7	9.4	10.0	
<b>Current asthma, adults, 2011-2016<sup>2</sup></b>					
American Indian or Alaska Native	2,205	16.5	12.7	20.4	
Asian	624 <sup>^</sup>	11.8 <sup>^</sup>	5.3	18.4	
Black or African American	719 <sup>^</sup>	8.6 <sup>^</sup>	4.8	12.4	
Native Hawaiian & Other Pacific Islander	DSU	DSU	-	-	
Other Race	DSU	DSU	-	-	
Two or More Races	2,660	18.9	14.3	23.4	
White	116,319	11.5	11.2	11.9	
<b>Diagnosed depression (lifetime), adults, 2011-2016<sup>2</sup></b>					
American Indian or Alaska Native	4,376	33.0	28.2	37.8	
Asian	752 <sup>^</sup>	14.4 <sup>^</sup>	8.1	20.7	
Black or African American	1,442 <sup>^</sup>	17.2 <sup>^</sup>	10.7	23.8	
Native Hawaiian & Other Pacific Islander	DSU	DSU	-	-	
Other Race	DSU	DSU	-	-	
Two or More Races	4,772	34.6	29.2	40.0	
White	232,586	23.0	22.5	23.5	

## Race and Health in Maine

The table below shows the percentage or rate of health or social determinants of health indicators (rows) by varying racial groups in Maine (columns).

RACE	N	Percent	95% LCL	95% UCL	Indicator by Race
<b>Poverty status, 2012-2016<sup>1</sup></b>					
American Indian or Alaska Native	2,610	33.5	25.3 <sup>†</sup>	41.7 <sup>†</sup>	
Asian	2,997	18.1	11.0 <sup>†</sup>	25.2 <sup>†</sup>	
Black or African American	8,101	43.7	32.6 <sup>†</sup>	54.8 <sup>†</sup>	
Native Hawaiian & Other Pacific Islander	DSU	DSU	-	-	
Other Race	363	15.9	5.4 <sup>†</sup>	26.4 <sup>†</sup>	
Two or More Races	6,078	24.6	18.9 <sup>†</sup>	30.3 <sup>†</sup>	
White	141,516	11.5	10.8 <sup>†</sup>	12.2 <sup>†</sup>	
<b>Low birth weight, live births, 2012-2016<sup>4</sup></b>					
American Indian or Alaska Native	11	8.2	6.2	10.6	
Asian	17	8.1	6.5	10.0	
Black or African American	41	9.3	8.0	10.6	
Native Hawaiian & Other Pacific Islander	DSP	DSP	-	-	
Other Race	2	4.2 <sup>‡</sup>	0.5	15.2	
Two or More Races	NA	NA	-	-	
White	820	6.9	6.7	7.1	
<b>Infant mortality rate per 1,000 births, 2011-2015<sup>5</sup></b>					
American Indian or Alaska Native	3	4.96 <sup>‡</sup>	1.26	13.50	
Asian or Pacific Islander	9	8.84 <sup>‡</sup>	4.31	16.78	
Black or African American	19	9.42	5.84	14.44	
Other Race	0	0.0 <sup>‡</sup>	0.00	0.00	
Two or More Races	NA	NA	-	-	
White	347	6.43	5.78	7.13	
<b>Unable to receive or delay medical care due to cost, adults, 2011-2016<sup>2</sup></b>					
American Indian or Alaska Native	2,713	20.3	16.0	24.5	
Asian	620 <sup>^</sup>	11.8 <sup>^</sup>	5.0	18.6	
Black or African American	1,866 <sup>^</sup>	22.4 <sup>^</sup>	14.6	30.2	
Native Hawaiian & Other Pacific Islander	DSU	DSU	-	-	
Other Race	DSU	DSU	-	-	
Two or More Races	2,261	16.4	12.2	20.6	
White	104,702	10.3	10.0	10.7	
<b>Met physical activity recommendations, high school students, 2017<sup>6</sup></b>					
American Indian or Alaska Native	159	19.8	17.2	22.4	
Asian	140	13.0	10.5	15.6	
Black or African American	173	18.9	16.5	21.2	
Native Hawaiian & Other Pacific Islander	30	20.1	13.6	26.7	
Other Race	NA	NA	-	-	
Two or More Races	253	20.2	18.2	22.1	
White	9,488	20.6	19.8	21.3	

## Race and Health in Maine

The table below shows the percentage or rate of health or social determinants of health indicators (rows) by varying racial groups in Maine (columns).

RACE	N	Percent	95% LCL	95% UCL	Indicator by Race
<b>Secondhand smoke exposure, high school students, 2017<sup>6</sup></b>					
American Indian or Alaska Native	375	42.6	39.3	46.0	
Asian	234	20.0	16.4	23.6	
Black or African American	287	27.2	22.7	31.7	
Native Hawaiian & Other Pacific Islander	83	51.0	42.8	59.2	
Other Race	NA	NA	-	-	
Two or More Races	508	37.4	35.0	39.8	
White	15,160	30.9	29.3	32.6	
<b>All cancer deaths per 100,000 (age-adjusted), 2007-2016<sup>3</sup></b>					
American Indian or Alaska Native	14	201.5	164.6	245.1	
Asian	7	71.3	54.4	92.2	
Black or African American	11	139.8	112.6	171.8	
Native Hawaiian & Other Pacific Islander	0	21.9 <sup>†</sup>	0.6	221.3	
Other Race	NA	NA	-	-	
Two or More Races	4	42.5	29.8	59.1	
White	3,163	180.4	178.4	182.5	
<b>Suicide deaths per 100,000 (age-adjusted), 2007-2016<sup>3</sup></b>					
American Indian or Alaska Native	1	22.9 <sup>†</sup>	12.0	39.0	
Asian	1	7.8 <sup>†</sup>	4.0	14.3	
Black or African American	1	9.3 <sup>†</sup>	5.1	16.2	
Native Hawaiian & Other Pacific Islander	0	36.9 <sup>†</sup>	0.9	181.7	
Other Race	NA	NA	-	-	
Two or More Races	0	5.5 <sup>†</sup>	2.0	11.8	
White	207	15.2	14.5	15.8	
<b>Poisoning (unintentional and undetermined intent) deaths per 100,000 (age-adjusted), 2007-2016<sup>3</sup></b>					
American Indian or Alaska Native	3	30.3 <sup>†</sup>	19.8	44.9	
Asian	0	1.2 <sup>†</sup>	0.1	5.4	
Black or African American	1	10.3 <sup>†</sup>	5.4	18.1	
Native Hawaiian & Other Pacific Islander	0	0.0 <sup>†</sup>	0.0	102.8	
Other Race	NA	NA	-	-	
Two or More Races	1	7.2 <sup>†</sup>	3.4	13.4	
White	178	14.3 <sup>†</sup>	13.8	15.2	



**All estimates are percentages unless otherwise noted.**

<sup>1</sup> U.S. Census Bureau, American Community Survey.

<sup>2</sup> BRFSS, Behavioral Risk Factor Surveillance System.

<sup>3</sup> Maine Mortality Database; Data, Research, and Vital Statistics Program, Maine

<sup>4</sup> Maine Natality Database; Data, Research, and Vital Statistics Program, Maine CDC.

<sup>5</sup> Linked birth/infant death certificate datasets and birth certificate datasets.

<sup>6</sup> MIYHS, Maine Integrated Youth Health Survey.

N: Weighted numerator.

^ Interpret with caution; unweighted numerator less than 50.

\* Unreliable rates; total numerator 20 or less.

DSU: Data is suppressed if total respondents less than 50 or 95% confidence interval half-widths are less than 10.

NA: Not available.

† Indicates 90% margin of error was used.

Arrows indicate that confidence intervals exceed the value that can be displayed on the chart for rates.

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## Ethnicity and Health in Maine

This table shows the percentage or rate of each indicator among different ethnicity groups in Maine.

For example, 36.2% of Hispanic adults have an annual income of less than \$25,000 per year.

Ethnicity	Hispanic	Non-Hispanic	Maine Overall	Indicator by Ethnicity
Indicator, Year	Estimate 95% CI	Estimate 95% CI	Estimate 95% CI	
<b>Overall proportion of adults by ethnicity, 2011-2016<sup>1</sup></b>	<b>1.2</b> 1.0 – 1.3	<b>98.8</b> 98.7 – 99.0	<b>NA</b> –	
Income less than \$25,000 per year, adults, 2011-2016 <sup>1</sup>	<b>36.2</b> 29.9 – 42.6	<b>29.1</b> 28.5 – 29.6	<b>29.3</b> 28.7 – 29.8	
High school degree or less, adults, 2011-2016 <sup>1</sup>	<b>49.6</b> 43.2 – 55.9	<b>43.6</b> 43.0 – 44.2	<b>43.8</b> 43.2 – 44.4	
Unemployment rate, adults, 2011-2016 <sup>1</sup>	<b>16.9<sup>^</sup></b> 10.2 – 23.5	<b>8.9</b> 8.5 – 9.4	<b>9.1</b> 8.6 – 9.5	
Uninsured, all ages, 2016 <sup>2</sup>	<b>16.7</b> 12.0 – 21.4 <sup>†</sup>	<b>7.8</b> 7.3 – 8.3 <sup>†</sup>	<b>8.0</b> 7.5 – 8.5 <sup>†</sup>	
Health rating: fair to poor, adults, 2011-2016 <sup>1</sup>	<b>15.3</b> 11.2 – 19.5	<b>15.7</b> 15.3 – 16.1	<b>15.7</b> 15.3 – 16.1	
Obesity, adults, 2011-2016 <sup>1</sup>	<b>27.5</b> 21.9 – 33.2	<b>28.9</b> 28.4 – 29.4	<b>28.9</b> 28.3 – 29.4	
Current smoking, adults, 2011-2016 <sup>1</sup>	<b>26.1</b> 20.0 – 32.1	<b>20.2</b> 19.7 – 20.7	<b>20.3</b> 19.8 – 20.8	
Sedentary lifestyle, adults, 2011-2016 <sup>1</sup>	<b>19.7</b> 15.0 – 24.3	<b>22.0</b> 21.5 – 22.4	<b>22.0</b> 21.5 – 22.5	
Past 30-day misuse of prescription drugs, adults, 2011-2016 <sup>1</sup>	<b>1.8<sup>^</sup></b> 0.0 – 4.4	<b>0.9<sup>^</sup></b> 0.7 – 1.0	<b>0.9</b> 0.7 – 1.1	
Coronary heart disease deaths per 100,000 (age-adjusted), 2007-2016 <sup>3</sup>	<b>22.3</b> 13.6 – 33.8	<b>90.9</b> 89.4 – 92.3	<b>90.5</b> 89.1 – 91.9	
High blood pressure adults, 2011, 2013 & 2015 <sup>1</sup>	<b>21.7</b> 15.6 – 27.8	<b>33.3</b> 32.6 – 34.0	<b>33.2</b> 32.5 – 33.9	
Diabetes, adults, 2011-2016 <sup>1</sup>	<b>7.9</b> 5.2 – 10.6	<b>9.8</b> 9.5 – 10.1	<b>9.8</b> 9.5 – 10.1	
Current asthma, adults, 2011-2016 <sup>1</sup>	<b>13.3</b> 9.1 – 17.6	<b>11.7</b> 11.3 – 12.0	<b>11.7</b> 11.3 – 12.1	
Diagnosed depression (lifetime), adults, 2011-2016 <sup>1</sup>	<b>27.1</b> 21.4 – 32.7	<b>23.2</b> 22.7 – 23.6	<b>23.2</b> 22.7 – 23.7	

## Ethnicity and Health in Maine

This table shows the percentage or rate of each indicator among different ethnicity groups in Maine.

For example, 36.2% of Hispanic adults have an annual income of less than \$25,000 per year.

Ethnicity	Hispanic	Non-Hispanic	Maine Overall	Indicator by Ethnicity
Indicator, Year	Estimate 95% CI	Estimate 95% CI	Estimate 95% CI	
Poverty status, 2012-2016 <sup>2</sup>	<b>17.9</b> 12.2 – 23.6 <sup>†</sup>	<b>11.5</b> 10.8 – 12.2 <sup>†</sup>	<b>13.5</b> 13.2 – 13.8 <sup>†</sup>	
Dentist visits in the past year, high school students, 2017 <sup>4</sup>	<b>75.1</b> 70.6 – 79.6	<b>80.9</b> 78.8 – 82.9	<b>80.4</b> 78.4 – 82.5	
Cost barriers to health care, adults, 2011-2016 <sup>1</sup>	<b>18.4</b> 13.1 – 23.6	<b>10.5</b> 10.1 – 10.9	<b>10.7</b> 10.3 – 11.0	
Bullied on school property, high school students, 2017 <sup>4</sup>	<b>31.4</b> 28.2 – 34.6	<b>21.6</b> 20.5 – 22.6	<b>21.9</b> 20.9 – 23.0	
Sexual assault, high school students, 2017 <sup>4</sup>	<b>17.4</b> 13.8 – 21.0	<b>6.9</b> 6.3 – 7.5	<b>7.2</b> 6.7 – 7.8	
Heart attack deaths per 100,000 (age-adjusted), all ages, 2007-2016 <sup>3</sup>	<b>6.9<sup>‡</sup></b> 2.7 – 14.0	<b>31.7</b> 30.8 – 32.5	<b>31.5</b> 30.7 – 32.4	
Poisoning deaths (unintentional and undetermined intent) deaths per 100,000 (age-adjusted), all ages, 2007-2016 <sup>3</sup>	<b>10.9<sup>‡</sup></b> 6.4 – 17.6	<b>14.3</b> 13.6 – 15.0	<b>14.3</b> 13.6 – 15.0	
Past 30-day prescription drug misuse, high school students, 2017 <sup>4</sup>	<b>14.3</b> 12.3 – 16.3	<b>5.4</b> 5.1 – 5.8	<b>5.9</b> 5.5 – 6.2	
Past 30-day cigarette smoking, high school students, 2017 <sup>4</sup>	<b>20.4</b> 18.1 – 22.7	<b>8.2</b> 7.7 – 8.8	<b>8.8</b> 8.2 – 9.4	
Met physical activity recommendations, high school students, 2017 <sup>4</sup>	<b>18.9</b> 16.9 – 20.9	<b>20.3</b> 19.6 – 21.1	<b>20.3</b> 19.6 – 21.1	

All estimates are percentages unless otherwise noted.

<sup>1</sup> BRFS, Behavioral Risk Factor Surveillance System.

<sup>2</sup> U.S. Census Bureau, American Community Survey.

<sup>3</sup> Maine Mortality Database; Data, Research, and Vital Statistics Program, Maine CDC.

<sup>4</sup> MIYHS, Maine Integrated Youth Health Survey.

The comparison group for Hispanic for the U.S. Census Bureau, American Community Survey and MIYHS is non-Hispanic Whites.

<sup>^</sup> Interpret with caution; unweighted numerator less than 50.

NA: Not available.

<sup>†</sup> Indicates 90% margin of error was used.

<sup>\*</sup> Unreliable rates; total numerator of 20 or less.
















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## Sexual Orientation and Health in Maine

This table shows the percentage or rate of each indicator among different sexual orientation groups in Maine.

For example, 49.1% of bisexual adults have an annual income of less than \$25,000 per year.

Sexual Orientation	Bisexual	Heterosexual or straight	Gay or lesbian	Other	Maine Overall	Indicator by Sexual Orientation
Indicator, Year	Estimate 95% CI	Estimate 95% CI	Estimate 95% CI	Estimate 95% CI	Estimate 95% CI	
<b>Overall proportion of adults by sexual orientation, 2011-2015<sup>1</sup></b>	<b>1.7</b> 1.5 – 1.9	<b>96.2</b> 95.9 – 96.4	<b>1.6</b> 1.5 – 1.8	<b>0.5</b> 0.4 – 0.6	<b>NA</b> –	
Income less than \$25,000 per year, adults, 2011-2015 <sup>1</sup>	<b>49.1</b> 42.2 – 55.9	<b>29.1</b> 28.5 – 29.7	<b>35.5</b> 30.2 – 40.9	<b>66.2</b> 57.0 – 75.3	<b>29.8</b> 29.2 – 30.4	
High school degree or less, adults, 2011-2015 <sup>1</sup>	<b>50.7</b> 44.2 – 57.1	<b>43.9</b> 43.3 – 44.6	<b>28.6</b> 23.3 – 33.8	<b>67.8</b> 59.1 – 76.4	<b>44.2</b> 44.2 – 44.8	
Unemployment rate, adults, 2011-2015 <sup>1</sup>	<b>22.1<sup>^</sup></b> 14.2 – 30.0	<b>9.6</b> 9.1 – 10.2	<b>10.5<sup>^</sup></b> 6.2 – 14.7	<b>DSU</b> –	<b>9.5</b> 9.0 – 10.0	
Uninsured, all ages, 2011-2015 <sup>1</sup>	<b>19.3</b> 13.1 – 25.5	<b>11.6</b> 11.1 – 12.1	<b>12.4</b> 8.8 – 16.0	<b>22.5<sup>^</sup></b> 12.5 – 32.5	<b>11.9</b> 11.4 – 12.4	
Health rating: fair to poor, adults, 2011-2015 <sup>1</sup>	<b>21.7</b> 15.9 – 27.4	<b>15.4</b> 14.9 – 15.8	<b>16.2</b> 12.5 – 20.0	<b>28.6</b> 20.5 – 36.7	<b>15.6</b> 15.2 – 16.0	
Obesity, adults, 2011-2015 <sup>1</sup>	<b>30.4</b> 24.5 – 36.3	<b>28.9</b> 28.3 – 29.5	<b>30.3</b> 25.7 – 35.0	<b>32.7</b> 23.7 – 41.8	<b>28.7</b> 28.1 – 29.2	
Current smoking, adults, 2011-2015 <sup>1</sup>	<b>37.6</b> 31.1 – 44.2	<b>20.0</b> 19.4 – 20.5	<b>24.3</b> 19.5 – 29.1	<b>22.9<sup>^</sup></b> 14.2 – 31.6	<b>20.4</b> 19.9 – 21.0	
Sedentary lifestyle, adults, 2011-2015 <sup>1</sup>	<b>22.4</b> 16.9 – 28.0	<b>22.3</b> 21.8 – 22.9	<b>18.6</b> 14.8 – 22.4	<b>35.0</b> 26.1 – 44.0	<b>22.3</b> 21.8 – 22.8	
Past 30-day misuse of prescription drugs, adults, 2011-2015 <sup>1</sup>	<b>1.9<sup>^</sup></b> 0.0 – 4.5	<b>0.8</b> 0.6 – 1.0	<b>0.8<sup>^</sup></b> 0.0 – 1.9	<b>0.1<sup>^</sup></b> 0.0 – 0.3	<b>0.8</b> 0.6 – 1.0	
Coronary heart disease deaths per 100,000 (age-adjusted), 2016 <sup>2</sup>	<b>NA</b> –	<b>NA</b> –	<b>NA</b> –	<b>NA</b> –	<b>79.7</b> 75.7 – 83.9	
High blood pressure, adults, 2011, 2013 & 2015 <sup>1</sup>	<b>15.0</b> 10.0 – 20.0	<b>34.0</b> 33.2 – 34.7	<b>30.1</b> 24.2 – 35.9	<b>DSU</b> –	<b>33.2</b> 32.5 – 33.9	
Diabetes, adults, 2011-2015 <sup>1</sup>	<b>7.7</b> 4.9 – 10.5	<b>9.7</b> 9.4 – 10.1	<b>8.6</b> 6.4 – 10.9	<b>12.1<sup>^</sup></b> 7.5 – 16.7	<b>9.7</b> 9.3 – 10.0	
Current asthma, adults, 2011-2015 <sup>1</sup>	<b>21.4</b> 15.9 – 26.9	<b>11.5</b> 11.0 – 11.9	<b>16.3</b> 12.5 – 20.0	<b>11.8<sup>^</sup></b> 6.1 – 17.6	<b>11.6</b> 11.2 – 12.0	
Diagnosed depression (lifetime), adults, 2011-2015 <sup>1</sup>	<b>59.3</b> 53.0 – 66.5	<b>22.9</b> 22.3 – 23.4	<b>37.3</b> 32.4 – 42.3	<b>26.6</b> 18.2 – 35.0	<b>23.6</b> 23.1 – 24.2	

## Sexual Orientation and Health in Maine

This table shows the percentage or rate of each indicator among different sexual orientation groups in Maine.

For example, 49.1% of bisexual adults have an annual income of less than \$25,000 per year.

Sexual Orientation	Bisexual	Heterosexual or straight	Gay or lesbian	Other	Maine Overall	Indicator by Sexual Orientation
Indicator, Year	Estimate 95% CI	Estimate 95% CI	Estimate 95% CI	Estimate 95% CI	Estimate 95% CI	
Sad/hopeless for 2 weeks in a row, high school students, 2017 <sup>3</sup>	<b>64.4</b> 62.2 – 66.6	<b>21.8</b> 21.0 – 22.6	<b>54.7</b> 51.2 – 58.3	<b>39.3</b> 36.3 – 42.4	<b>26.9</b> 26.0 – 27.8	
Seriously considered suicide, high school students, 2017 <sup>3</sup>	<b>42.9</b> 40.8 – 44.9	<b>10.8</b> 10.2 – 11.3	<b>36.3</b> 33.0 – 39.6	<b>24.2</b> 21.8 – 26.6	<b>14.7</b> 14.0 – 15.3	
Bullied on school property, high school students, 2017 <sup>3</sup>	<b>37.5</b> 35.1 – 39.9	<b>19.6</b> 18.6 – 20.7	<b>34.2</b> 30.6 – 37.8	<b>27.7</b> 24.8 – 30.7	<b>21.9</b> 20.9 – 23.0	
Past 30-day binge drinking, high school students, 2015 <sup>3</sup>	<b>14.0</b> 12.4 – 15.7	<b>11.9</b> 11.2 – 12.6	<b>15.4</b> 12.9 – 18.0	<b>14.5</b> 12.5 – 16.5	<b>12.2</b> 11.5 – 12.8	
Past 30-day misuse of prescription drugs, high school students, 2017 <sup>3</sup>	<b>8.7</b> 7.6 – 9.9	<b>5.0</b> 4.7 – 5.4	<b>10.9</b> 8.6 – 13.1	<b>11.1</b> 9.6 – 12.7	<b>5.9</b> 5.5 – 6.2	
Obesity, high school students, 2017 <sup>3</sup>	<b>22.0</b> 19.9 – 24.0	<b>13.9</b> 13.0 – 14.9	<b>21.8</b> 19.0 – 24.6	<b>20.4</b> 17.7 – 23.1	<b>15.0</b> 14.1 – 16.0	
Sexual assault, high school students, 2017 <sup>3</sup>	<b>18.7</b> 16.1 – 21.2	<b>5.5</b> 5.0 – 6.0	<b>14.6</b> 10.5 – 18.8	<b>13.3</b> 10.5 – 16.1	<b>7.2</b> 6.7 – 7.8	
Met physical activity recommendations, high school students, 2017 <sup>3</sup>	<b>9.9</b> 8.8 – 11.1	<b>22.1</b> 21.4 – 22.9	<b>10.2</b> 7.8 – 12.5	<b>12.4</b> 10.5 – 14.3	<b>20.3</b> 19.6 – 21.1	
Cost barriers to care, adults, 2011-2015 <sup>1</sup>	<b>21.4</b> 16.3 – 26.5	<b>10.1</b> 9.7 – 10.5	<b>14.4</b> 10.8 – 18.1	<b>8.9<sup>^</sup></b> 3.7 – 14.1	<b>10.6</b> 10.2 – 11.0	
Overweight, adults, 2011-2015 <sup>1</sup>	<b>21.1</b> 16.5 – 25.8	<b>36.8</b> 36.2 – 37.4	<b>30.3</b> 25.6 – 35.0	<b>26.7</b> 18.4 – 35.1	<b>36.2</b> 35.6 – 36.7	

All estimates are percentages unless otherwise noted.

<sup>1</sup> BRFSS, Behavioral Risk Factor Surveillance System.

<sup>2</sup> Maine Mortality Database; Data, Research, and Vital Statistics Program, Maine CDC.

<sup>3</sup> MIYHS, Maine Integrated Youth Health Survey.

<sup>^</sup> Interpret with caution; unweighted numerator less than 50.

NA: Not available.

DSU: Data is suppressed if total respondents less than 50 or 95% confidence interval half-widths are less than 10.

DSP: Data is suppressed for privacy if less than 6 respondents.

† Indicates 90% margin of error was used.

High school students responding 'Not sure' for sexual orientation on the MIYHS are presented in the 'Other' column.

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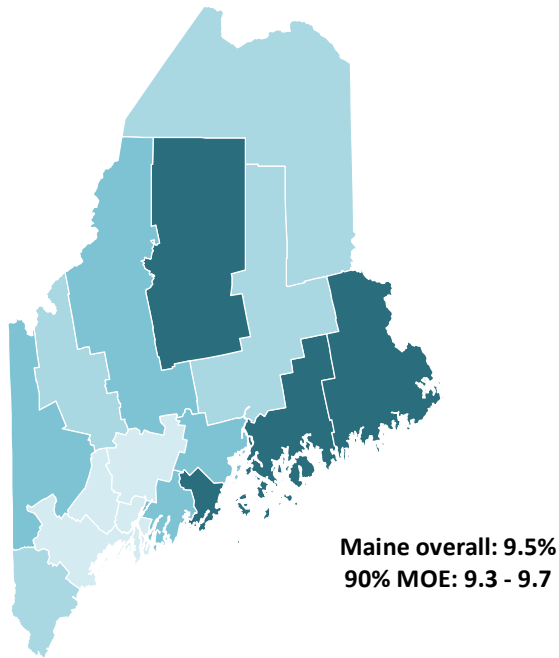


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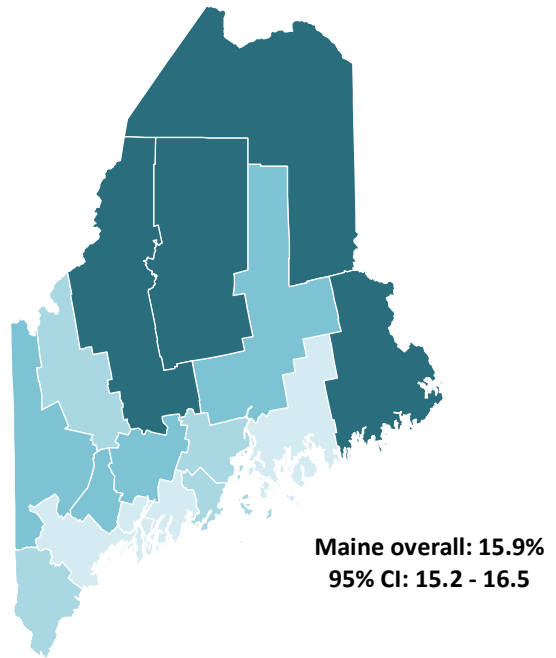
# APPENDIX II: COUNTY OF RESIDENCE & HEALTH IN MAINE

# County of Residence & Health in Maine

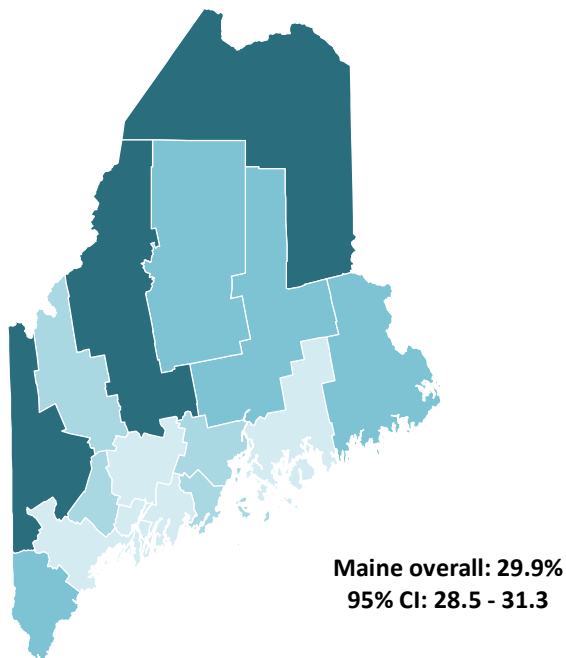
**Uninsured, all ages, 2012-2016**



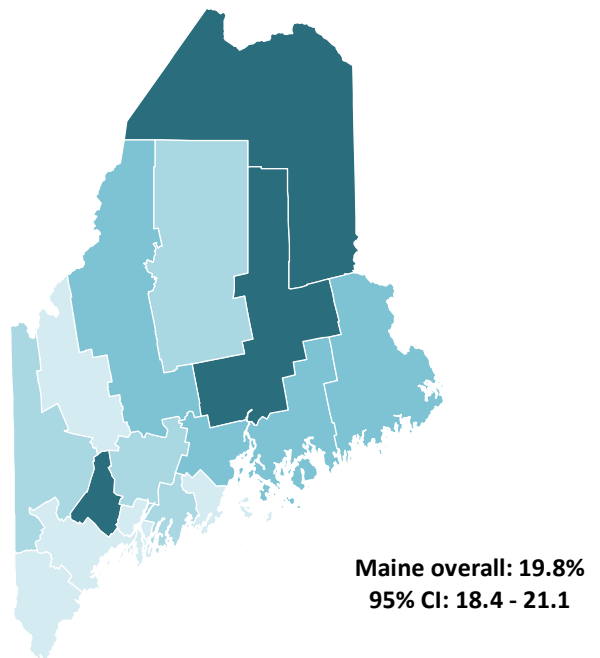
**Health rating: fair to poor, adults, 2014-2016**



**Obesity, adults, 2016**



**Current smoking, adults, 2016**



See the tables on the following pages for county percentages or rates and confidence intervals. Quartile categories created using quantile methods with four categories based on county percentages or rates.

Data Sources: U.S. Census Bureau, American Community Survey (Uninsured); Maine BRFSS (Health rating: fair to poor, obesity, current smoking).

95% CI: 95% confidence interval of the rate. 90% MOE: 90% margin of error.

All estimates are percentages unless otherwise noted.

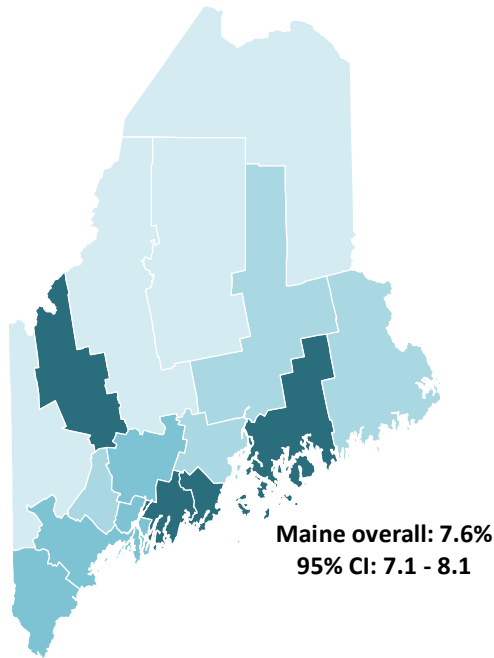
**Quartile based on county percentage or rate:**

- 1st Quartile (Lowest)
- 2nd Quartile
- 3rd Quartile
- 4th Quartile (Highest)

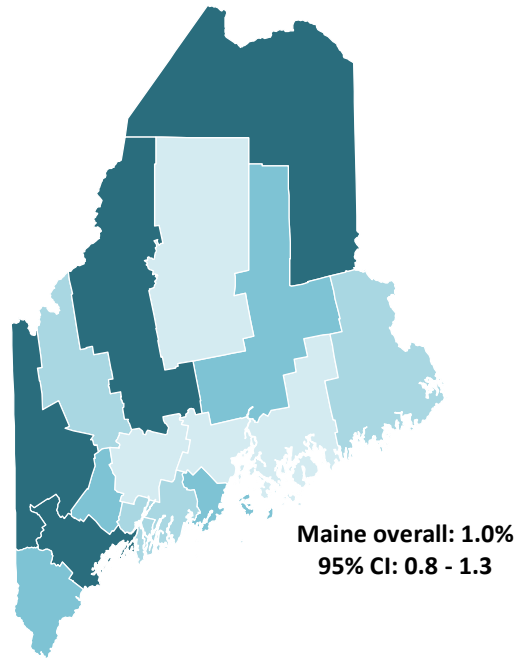


# County of Residence & Health in Maine

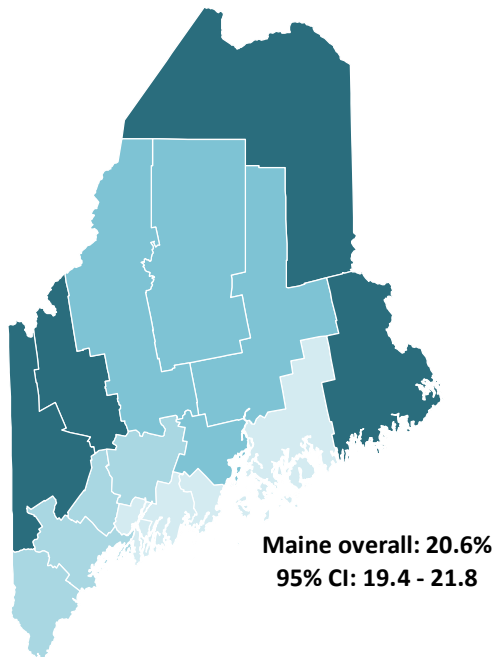
**Chronic heavy drinking, adults, 2014-2016**



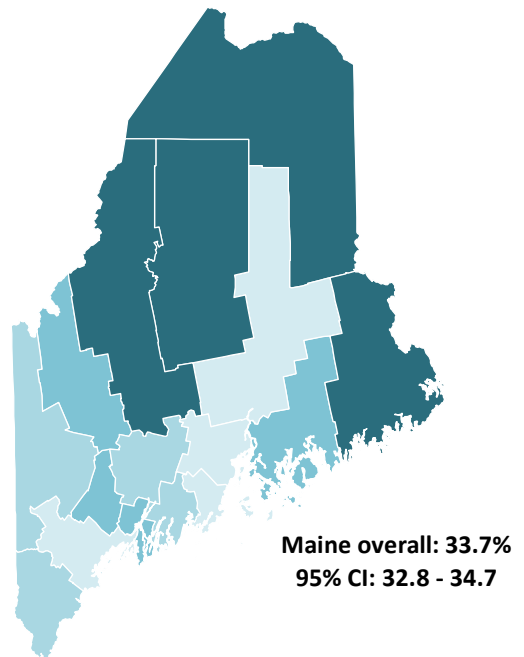
**Past 30-day misuse of prescription drugs, adults, 2012-2016**



**Sedentary lifestyle, adults, 2016**



**Hypertension, adults, 2013 & 2015**



See the tables on the following pages for county percentages or rates and confidence intervals. Quartile categories created using quantile methods with four categories based on county percentages or rates.

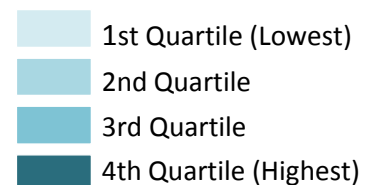
Data Source: Maine Behavioral Risk Factor Surveillance System (all indicators on page).

95% CI: 95% confidence interval of the rate.

All estimates are percentages unless otherwise noted.

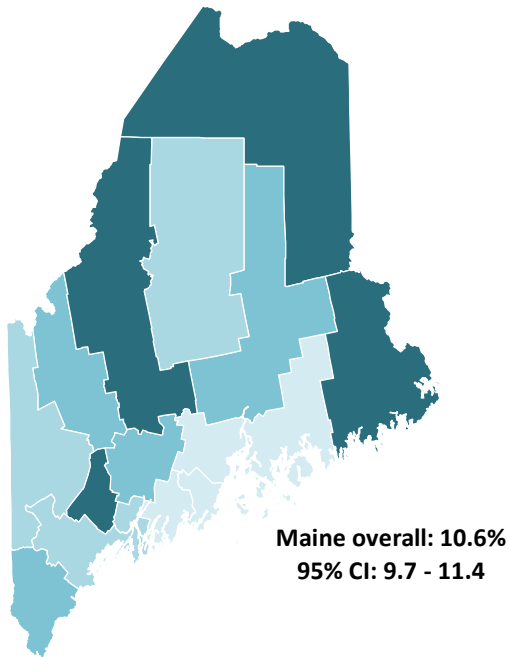
All Maine BRFSS data are weighted to be more representative of the general Maine adult population and to adjust for non-response.

**Quartile based on county percentage or rate:**

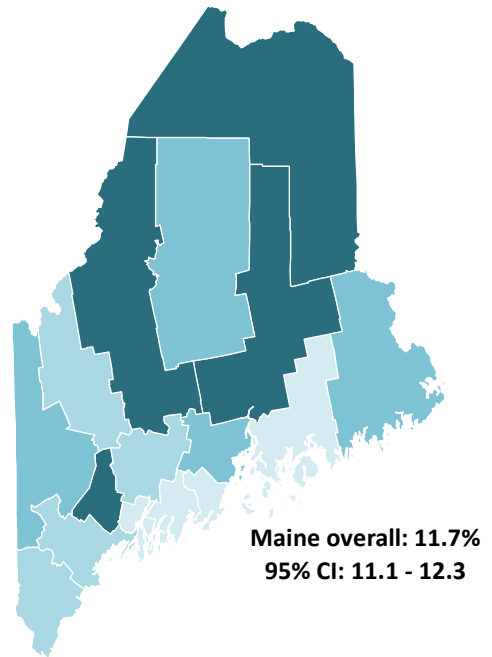


# County of Residence & Health in Maine

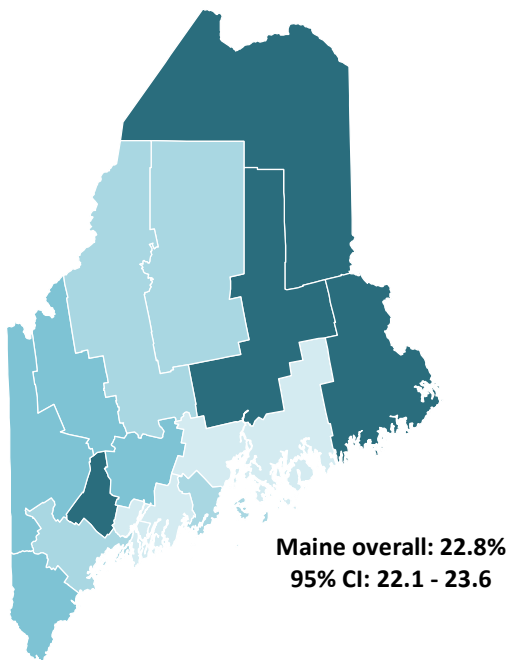
**Diabetes, adults, 2014-2016**



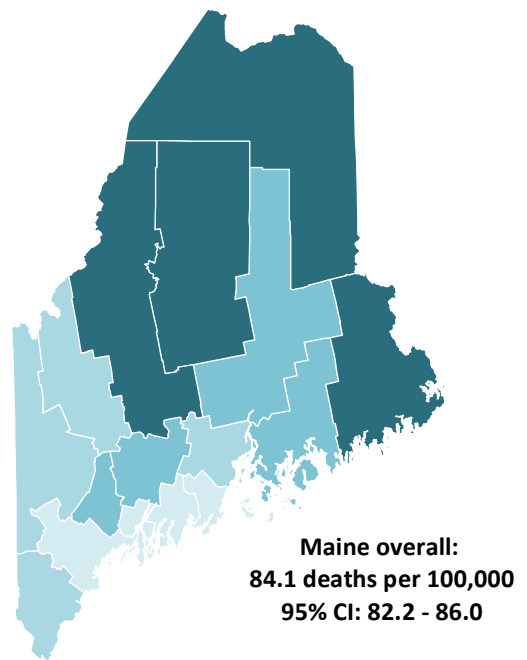
**Current asthma, adults, 2014-2016**



**Lifetime depression, adults, 2014-2016**



**Coronary heart disease deaths, adults, 2012-2016**



See the tables on the following pages for county percentages or rates and confidence intervals. Quartile categories created using quantile methods with four categories based on county percentages or rates.

Data sources: Maine Behavioral Risk Factor Surveillance System (diabetes, asthma, lifetime depression); Maine Mortality Database; Data, Research, and Vital Statistics Program, Maine CDC (coronary heart disease deaths).

95% CI: 95% confidence interval of the rate.

All estimates are percentages unless otherwise noted.

All percentages using Maine BRFSS data are weighted to be more representative of the general Maine adult population and to adjust for non-response.

**Quartile based on county percentage or rate:**

- 1st Quartile (Lowest)
- 2nd Quartile
- 3rd Quartile
- 4th Quartile (Highest)

## County of Residence & Health in Maine

Indicator, Year	Uninsured, all ages, 2012-2016 <sup>1</sup>	Health rating: fair to poor, adults, 2014-2016 <sup>2</sup>	Obesity, adults, 2016 <sup>2</sup>	Current smoking, adults, 2016 <sup>2</sup>
County of Residence	Percentage 90% MOE	Percentage 95% CI	Percentage 95% CI	Percentage 95% CI
Androscoggin	8.6 8.0 - 9.2	19.3 16.9 - 21.7	28.0 23.1 - 33.0	25.0 19.3 - 30.7
Aroostook	9.5 8.9 - 10.1	23.4 20.5 - 26.3	35.6 30.4 - 40.8	26.6 21.5 - 31.6
Cumberland	7.5 7.0 - 8.0	10.7 9.3 - 12.1	27.0 23.3 - 30.7	13.9 10.9 - 17.0
Franklin	10.9 9.7 - 12.1	17.3 14.0 - 20.6	32.0 26.0 - 38.0	18.4 13.7 - 23.1
Hancock	12.9 12.0 - 13.8	13.2 10.6 - 15.7	25.8 20.5 - 31.2	21.3 16.1 - 26.6
Kennebec	8.5 7.7 - 9.3	17.4 15.2 - 19.6	27.0 22.1 - 31.8	20.3 15.5 - 25.1
Knox	12.4 11.2 - 13.6	14.1 11.7 - 16.6	28.8 23.4 - 34.3	14.2 10.0 - 18.4
Lincoln	11.4 10.1 - 12.7	11.4 8.9 - 13.8	23.8 18.8 - 28.8	19.9 14.4 - 25.5
Oxford	11.0 10.1 - 11.9	17.9 15.4 - 20.4	35.7 29.6 - 41.8	21.0 15.3 - 26.8
Penobscot	10.5 9.8 - 11.2	17.6 15.5 - 19.7	35.1 30.3 - 39.8	24.6 19.9 - 29.4
Piscataquis	12.8 10.6 - 15.0	20.0 15.8 - 24.2	35.1 29.0 - 41.3	20.8 15.3 - 26.3
Sagadahoc	7.8 6.4 - 9.2	13.9 10.7 - 17.2	25.2 17.8 - 32.5	17.0 <sup>^</sup> 9.3 - 24.7
Somerset	11.3 10.2 - 12.4	20.2 17.0 - 23.3	36.5 30.6 - 42.4	24.1 18.9 - 29.3
Waldo	11.9 10.7 - 13.1	16.8 14.1 - 19.4	30.5 25.5 - 35.5	21.5 16.5 - 26.4
Washington	12.7 11.8 - 13.6	19.6 16.6 - 22.7	35.4 29.2 - 41.6	23.6 17.8 - 29.3
York	8.7 8.0 - 9.4	16.2 14.3 - 18.2	32.5 28.3 - 36.7	18.4 14.3 - 22.4
Maine Rate	9.5 9.3 - 9.7	15.9 15.2 - 16.5	29.9 28.5 - 31.3	19.8 18.4 - 21.1

All estimates are percentages unless otherwise noted. For full indicator definitions, see appendix.

Compared to state rate, county rate is:   statistically higher,   statistically lower.

<sup>1</sup> U.S. Census Bureau, American Community Survey.

<sup>2</sup> Maine Behavioral Risk Factor Surveillance System.

<sup>^</sup>Use caution in interpreting estimates with an unweighted numerator less than 50.

95% MOE: 95% margin of error. 95% CI: 95% confidence interval of the rate.

## County of Residence & Health in Maine

Indicator, Year	Chronic heavy drinking, adults, 2014-2016 <sup>2</sup>	Past 30-day misuse of prescription drugs, adults, 2012-2016 <sup>2</sup>	Sedentary lifestyle, adults, 2016 <sup>2</sup>	Hypertension, 2013 & 2015 <sup>2</sup>
County of Residence	Percentage 95% CI	Percentage 95% CI	Percentage 95% CI	Percentage 95% CI
Androscoggin	6.6 5.0 - 8.1	1.1 0.4 - 1.8	22.2 17.4 - 27.1	36.0 32.6 - 39.5
Aroostook	5.8 4.0 - 7.5	2.0 0.5 - 3.4	30.1 25.1 - 35.0	40.0 35.8 - 44.1
Cumberland	8.2 6.9 - 9.5	1.3 0.5 - 2.1	17.9 14.8 - 21.0	30.4 28.2 - 32.6
Franklin	8.6 6.1 - 11.1	0.7 0.0 - 1.4	25.0 19.4 - 30.5	35.4 30.2 - 40.6
Hancock	9.9 7.5 - 12.4	0.4 0.0 - 1.0	14.0 10.4 - 17.7	37.4 32.9 - 41.9
Kennebec	7.9 6.3 - 9.6	0.4 0.0 - 0.7	22.1 17.7 - 26.6	35.2 32.1 - 38.2
Knox	8.9 6.7 - 11.1	1.0 0.1 - 2.0	17.4 12.9 - 21.8	32.5 28.3 - 36.8
Lincoln	9.0 6.8 - 11.2	0.7 0.0 - 1.5	17.2 12.6 - 21.9	35.0 30.5 - 39.5
Oxford	6.2 4.6 - 7.8	1.5 0.0 - 3.4	26.1 20.6 - 31.6	35.0 30.8 - 39.2
Penobscot	6.6 5.2 - 8.0	0.9 0.2 - 1.5	22.7 18.7 - 26.6	32.4 29.6 - 35.1
Piscataquis	5.6 3.1 - 8.1	0.5 0.0 - 1.0	23.5 18.3 - 28.8	40.0 33.1 - 46.8
Sagadahoc	8.5 5.4 - 11.5	0.8 0.3 - 1.3	13.9 8.2 - 19.6	38.3 32.8 - 43.9
Somerset	6.2 4.3 - 8.1	1.8 0.0 - 3.7	23.0 18.2 - 27.9	39.2 34.1 - 44.2
Waldo	6.6 4.9 - 8.4	0.6 0.1 - 1.1	23.4 18.5 - 28.4	34.3 29.6 - 38.9
Washington	7.3 4.9 - 9.7	0.7 0.1 - 1.2	25.3 19.9 - 30.7	39.7 34.4 - 45.0
York	8.1 6.6 - 9.6	1.1 0.2 - 2.0	19.2 15.8 - 22.5	34.4 31.7 - 37.1
Maine Rate	7.6 7.1 - 8.1	1.0 0.8 - 1.3	20.6 19.4 - 21.8	33.7 32.8 - 34.7

All estimates are percentages unless otherwise noted. For full indicator definitions, see appendix.

Compared to state rate, county rate is:   statistically higher,   statistically lower.

<sup>2</sup> Maine Behavioral Risk Factor Surveillance System.

95% CI: 95% confidence interval of the rate.

## County of Residence & Health in Maine

Indicator, Year	Diabetes, adults, 2014-2016 <sup>2</sup>	Current asthma, adults, 2014-2016 <sup>2</sup>	Lifetime depression, adults, 2014-2016 <sup>2</sup>	Coronary heart disease deaths, 2012-2016 <sup>3</sup>
County of Residence	Percentage 95% CI	Percentage 95% CI	Percentage 95% CI	Rate per 100,000 95% CI
Androscoggin	10.9 9.3 - 12.4	14.9 12.7 - 17.1	26.6 24.0 - 29.3	96.7 89.3 - 104.5
Aroostook	13.0 10.8 - 15.2	12.6 10.3 - 14.8	23.6 20.6 - 26.6	106.3 97.8 - 115.4
Cumberland	9.7 8.5 - 10.9	10.4 9.1 - 11.7	22.3 20.3 - 24.2	61.6 58.1 - 65.3
Franklin	9.9 7.6 - 12.2	10.5 7.7 - 13.4	22.7 19.0 - 26.4	90.8 78.2 - 105.2
Hancock	7.8 6.3 - 9.4	9.9 7.8 - 12.0	20.8 17.8 - 23.8	94.4 85.2 - 104.5
Kennebec	10.2 8.8 - 11.7	10.4 8.6 - 12.2	23.2 20.8 - 25.6	95.9 89.2 - 103.1
Knox	7.9 5.8 - 9.9	9.5 7.4 - 11.7	20.8 17.6 - 24.0	69.9 61.3 - 79.6
Lincoln	8.6 6.6 - 10.5	8.2 6.0 - 10.4	20.0 16.7 - 23.3	68.4 59.2 - 78.9
Oxford	9.8 8.0 - 11.7	11.5 8.8 - 14.3	23.0 19.9 - 26.1	87.4 78.5 - 97.0
Penobscot	10.3 8.9 - 11.7	14.4 12.5 - 16.4	24.9 22.5 - 27.3	96.6 90.5 - 103.0
Piscataquis	9.8 7.1 - 12.5	12.4 8.5 - 16.3	21.3 17.2 - 25.5	102.4 86.0 - 121.7
Sagadahoc	9.8 6.6 - 13.0	10.3 6.9 - 13.6	20.1 16.3 - 23.8	63.2 53.8 - 74.1
Somerset	11.7 9.6 - 13.9	15.4 12.5 - 18.3	21.0 17.6 - 24.3	131.0 119.0 - 144.0
Waldo	9.5 7.5 - 11.4	11.9 9.4 - 14.4	19.8 16.8 - 22.8	82.5 71.8 - 94.5
Washington	12.8 10.5 - 15.1	11.6 8.9 - 14.2	24.6 21.1 - 28.1	120.8 107.4 - 135.8
York	10.1 8.7 - 11.6	11.4 9.7 - 13.0	22.4 20.3 - 24.6	70.1 65.7 - 74.7
Maine Rate	10.6 9.7 - 11.4	11.7 11.1 - 12.3	22.8 22.1 - 23.6	84.1 82.2 - 86.0

All estimates are percentages unless otherwise noted. For full indicator definitions, see appendix.

Compared to state rate, county rate is:   statistically higher,   statistically lower.

<sup>2</sup> Maine Behavioral Risk Factor Surveillance System.

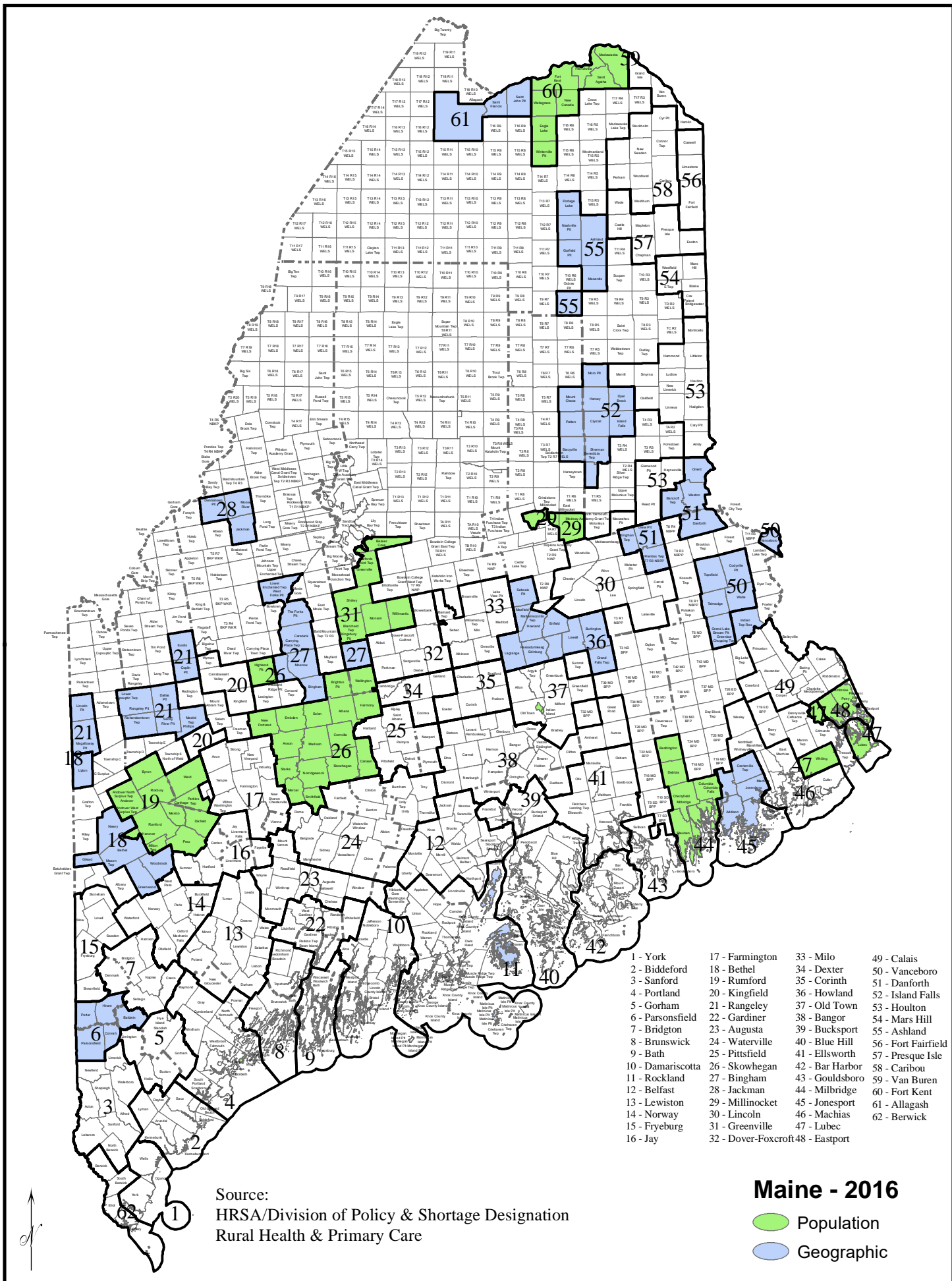
<sup>3</sup> Maine Mortality Database; Data, Research, and Vital Statistics Program, Maine CDC.

95% CI: 95% confidence interval of the rate.



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# APPENDIX III: FEDERALLY DESIGNATED HEALTH PROFESSIONAL SHORTAGE AREAS



Source:  
 HRSA/Division of Policy & Shortage Designation  
 Rural Health & Primary Care

- |                   |                     |                 |                     |
|-------------------|---------------------|-----------------|---------------------|
| 1 - York          | 17 - Farmington     | 33 - Milo       | 49 - Calais         |
| 2 - Biddeford     | 18 - Bethel         | 34 - Dexter     | 50 - Vanceboro      |
| 3 - Sanford       | 19 - Rumford        | 35 - Corinth    | 51 - Danforth       |
| 4 - Portland      | 20 - Kingfield      | 36 - Howland    | 52 - Island Falls   |
| 5 - Gorham        | 21 - Rangeley       | 37 - Old Town   | 53 - Houlton        |
| 6 - Parsonsfield  | 22 - Gardiner       | 38 - Bangor     | 54 - Mars Hill      |
| 7 - Bridgton      | 23 - Augusta        | 39 - Bucksport  | 55 - Ashland        |
| 8 - Brunswick     | 24 - Waterville     | 40 - Blue Hill  | 56 - Fort Fairfield |
| 9 - Bath          | 25 - Pittsfield     | 41 - Ellsworth  | 57 - Presque Isle   |
| 10 - Damariscotta | 26 - Skowhegan      | 42 - Bar Harbor | 58 - Caribou        |
| 11 - Rockland     | 27 - Bingham        | 43 - Gouldsboro | 59 - Van Buren      |
| 12 - Belfast      | 28 - Jackman        | 44 - Milbridge  | 60 - Fort Kent      |
| 13 - Lewiston     | 29 - Millinocket    | 45 - Jonesport  | 61 - Allagash       |
| 14 - Norwary      | 30 - Lincoln        | 46 - Machias    | 62 - Berwick        |
| 15 - Fryeburg     | 31 - Greenville     | 47 - Lubeck     |                     |
| 16 - Jay          | 32 - Dover-Foxcroft | 48 - Eastport   |                     |

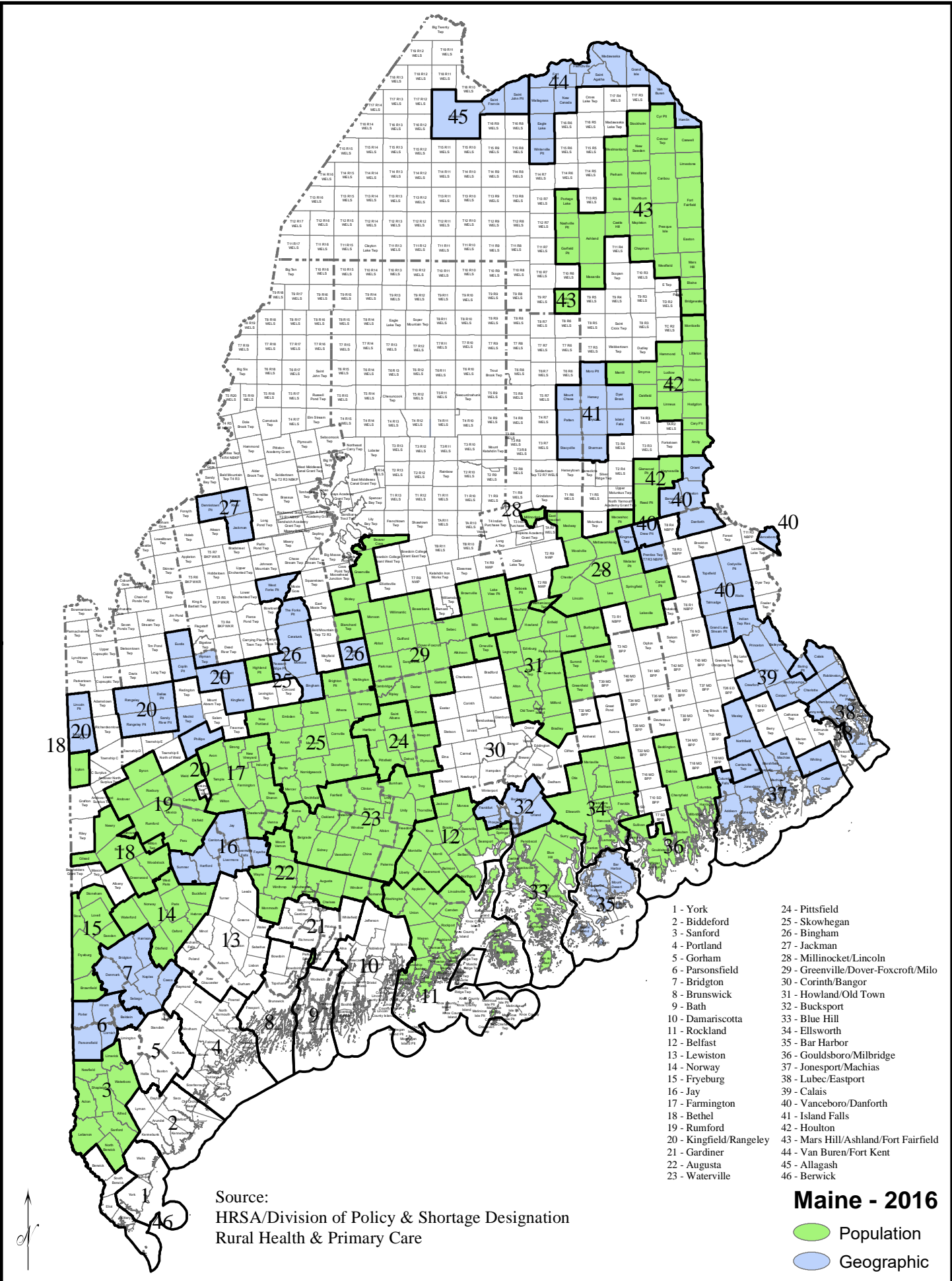
**Maine - 2016**

- Population
- Geographic





# Federally Designated Dental Health Professional Shortage Areas



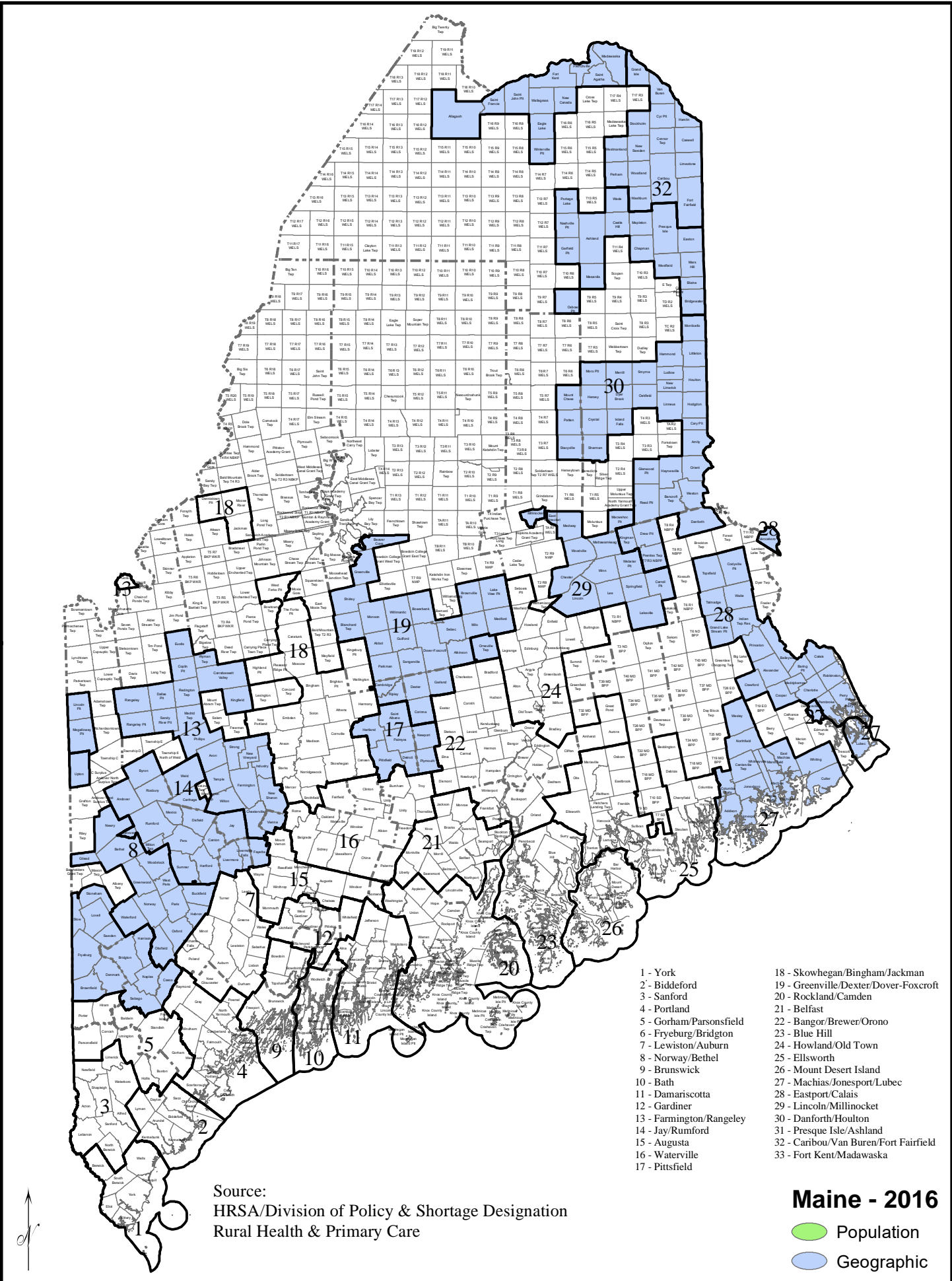
Source:  
 HRSA/Division of Policy & Shortage Designation  
 Rural Health & Primary Care

## Maine - 2016

- Population
- Geographic



# Federally Designated Mental Health Professional Shortage Areas



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