Health Index
2017 REPORT

Measuring our success in improving the health of Maine

MaineHealth
www.mainehealth.org
Working together so our communities are the healthiest in America.
— MaineHealth Vision

2017 Health Index Report contents

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Priorities at-a-glance: How are we doing?

Increase Childhood Immunizations

The rate of toddlers up-to-date for immunizations in 2016 was statistically similar to the rate in 2015.

Decrease Tobacco Use

The rate of adults who smoke every day or some days in 2016 was statistically similar to rates in 2012–2015.

Decrease Obesity

The rate of adults with obesity in 2016 was statistically similar to rates in 2012–2015.

Decrease Preventable Hospitalizations

The rate of hospitalizations for ambulatory care sensitive conditions in 2015 was higher than the rate in 2014.

Decrease Cardiovascular Deaths

The rate of cardiovascular deaths in 2014–2016 was higher than the rate in 2011–2013.

Decrease Cancer Deaths

The rate of cancer deaths in 2014–2016 was the same as the rate in 2011–2013.

Decrease Prescription Drug Abuse and Addiction

The rate of drug overdose deaths in 2014–2016 was substantially higher than the rate in 2011–2013.
This is the eighth consecutive year that the MaineHealth Health Index Report has been published. It provides an annual review of progress on seven high-priority population health issues that impact the health status of people and communities across the state of Maine. Used by policymakers, community organizations, hospital leaders, clinicians and other stakeholders, the Report has earned a reputation as an authoritative source of relevant and useful data and a high-level analysis of trends in key health outcomes.

The Health Index was conceptualized in 2009 by MaineHealth and our partners (clinicians, researchers, public health experts and others). It was in response to a challenge from the health system’s board of trustees to develop a tool that could help assess the impact of our focused population health strategies and interventions (such as referrals to telephonic counseling for tobacco users), while tracking overall population health metrics (such as the prevalence of tobacco use among all adults).

Over the years, a number of updates have been made to the Health Index initiative:
- A seventh priority, “Decrease Prescription Drug Abuse and Addiction,” was added in 2012
- New graphics in the annual reports such as at-a-glance “speedometers” comparing rates with MaineHealth targets, and maps showing regional variations for each priority
- Short- and long-term targets (for FY2018 and FY2021, respectively) for each priority

The most notable update is the newly designed Health Index website, www.mainehealth.org/healthindex. The site features easy-to-search descriptions of strategies being implemented as well as data and graphics presenting progress, all designed to help users access and use the information to accelerate adoption of evidence-based and best practice interventions that will ultimately improve individual and community health.

Feedback and suggestions about this report and the website, as well as requests for copies of prior years’ Health Index reports, are welcome and should be directed to cowant@mainehealth.org.

MaineHealth system measures

In 2017, the MaineHealth Chief Medical Officer brought together chief medical officers, chief nursing officers and medical staff presidents from across MaineHealth to form the MaineHealth Clinical Leadership Council. The purpose of this council is to align and prioritize clinical initiatives across the health system, and present recommendations for annual clinical goals and performance targets to the MaineHealth Board of Trustees.

Using the vision of MaineHealth as their “true north,” our clinical leaders aligned with the Health Index priorities and measures as a way of assessing whether in fact “our communities are the healthiest in America,” and identified projects that support achievement of the Health Index targets. Seven of the 10 annual MaineHealth system quality goals for FY18 involve work that directly or indirectly impacts the Health Index targets (highlighted in red). Our clinical and community health teams are working together, with support from the MaineHealth Center for Health Improvement, to implement evidence-based strategies.

The Council tracks overall system and individual member hospital performance monthly, identifying best practices and opportunities for improvement, and submits reports around this work to the Quality Committee of the MaineHealth Board of Trustees. The System Quality Dashboard and site-specific dashboards are distributed monthly to system leaders, member hospital and medical staff leaders, and the MaineHealth Board of Trustees.

System Quality Dashboard measures

<table>
<thead>
<tr>
<th>Health outcomes</th>
<th>System Quality Dashboard measures</th>
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</thead>
<tbody>
<tr>
<td><strong>Health outcomes</strong></td>
<td></td>
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<tr>
<td>Opioid addiction treatment—</td>
<td># of patients served in the MaineHealth integrated medication-assisted treatment network</td>
</tr>
<tr>
<td>Tobacco use disorder treatment—</td>
<td># of referrals to the Maine Tobacco HelpLine per 100 active smokers</td>
</tr>
<tr>
<td>Childhood immunizations—</td>
<td>% of 2-year-olds who received all 10 recommended vaccines on time</td>
</tr>
<tr>
<td>Patient safety</td>
<td></td>
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<tr>
<td>Central line-associated blood stream infections—cumulative rate (excluding mucosal barrier injury)</td>
<td></td>
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<tr>
<td>Methicillin-resistant Staph. aureus (MRSA)—</td>
<td>% of hospitals with standardized infection ratio &lt;1.0</td>
</tr>
<tr>
<td>Falls with injury during hospital stays—</td>
<td># per 1,000 patient days</td>
</tr>
<tr>
<td>Effectiveness and affordability</td>
<td></td>
</tr>
<tr>
<td>Congestive heart failure admissions—</td>
<td># per 1,000 Medicare Shared Savings Program patients with congestive heart failure</td>
</tr>
<tr>
<td>COPD emergency department visits—</td>
<td># per 1,000 Medicare Shared Savings Program patients with chronic obstructive pulmonary disease</td>
</tr>
<tr>
<td>Colorectal cancer screening—</td>
<td>% of eligible patients screened</td>
</tr>
<tr>
<td>Diabetes treatment—</td>
<td>% of patients with HbA1c &gt;9.0%</td>
</tr>
</tbody>
</table>

Line items in red indicate Health Index priorities.
Does the healthcare system have a role to play in improving the health of the population? According to Steve Shortell, PhD, MPH, MBA, former head of the Robert Wood Johnson Foundation and current faculty member at the University of California, Berkeley School of Public Health, the answer is an emphatic “yes.” Along with others who estimate the healthcare system directly accounts for only about 10 percent of overall population health, Shortell says that “controlling healthcare costs AND improving overall health will require closer partnership, permeable boundaries, and increased interdependence among the healthcare delivery system, the public health sector, and the community development and social service sectors.”

Hospitals and health systems across the United States, including MaineHealth, are moving toward developing new and innovative partnerships with organizations that provide housing, transportation, food access, behavioral health and other services that address the social determinants of health. These services and resources augment care provided in hospitals, health centers and physician practices as well as improve outcomes, lower costs and increase quality of life among individuals and communities.

Effective cross-sector partnerships require strong leadership and a willingness to develop collaborative solutions that may require many years of sustained effort. Invest Health, a collaboration between Reinvestment Fund and the Robert Wood Johnson Foundation, is one example of an exciting initiative aimed at addressing the social determinants of health. Fifty midsize cities across the United States, including Greater Portland, were selected to develop strategies for improving health in low-income communities through multisector collaborations. United Way of Greater Portland, the City of Portland, Portland Housing Authority, Coastal Enterprises, Inc. and MaineHealth came together to focus on Sagamore Village, a multicultural low-income neighborhood administered by Portland Housing Authority. After neighborhood residents identified food access and food security as their biggest immediate needs, the Invest Health core team secured a grant from Harvard Pilgrim Health Care Foundation to create a community garden and farmers market, hold cooking classes and expand access to the weekly food pantry. Longer-term strategies being explored are expanding on-site healthcare and dental care, safety improvements and building a new community center.

Tackling the social determinants of health

Select social determinants by the numbers

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### Population and % in rural communities

<table>
<thead>
<tr>
<th>Maine counties</th>
<th>Population</th>
<th>% rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Androscoggin</td>
<td>107,319</td>
<td>43.4%</td>
</tr>
<tr>
<td>Aroostook</td>
<td>67,959</td>
<td>80.3%</td>
</tr>
<tr>
<td>Cumberland</td>
<td>292,041</td>
<td>36.1%</td>
</tr>
<tr>
<td>Franklin</td>
<td>30,001</td>
<td>83.0%</td>
</tr>
<tr>
<td>Hancock</td>
<td>54,419</td>
<td>90.1%</td>
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<tr>
<td>Kennebec</td>
<td>120,569</td>
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<tr>
<td>Knox</td>
<td>39,744</td>
<td>67.9%</td>
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<tr>
<td>Lincoln</td>
<td>34,216</td>
<td>100.0%</td>
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<tr>
<td>Oxford</td>
<td>57,217</td>
<td>83.1%</td>
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<td>Penobscot</td>
<td>151,806</td>
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<td>Piscataquis</td>
<td>16,843</td>
<td>100.0%</td>
</tr>
<tr>
<td>Sagadahoc</td>
<td>35,273</td>
<td>61.7%</td>
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<tr>
<td>Somerset</td>
<td>50,915</td>
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<tr>
<td>Waldo</td>
<td>35,273</td>
<td>91.3%</td>
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<tr>
<td>Washington</td>
<td>31,450</td>
<td>92.4%</td>
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<tr>
<td>York</td>
<td>202,343</td>
<td>56.8%</td>
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<table>
<thead>
<tr>
<th>New Hampshire counties</th>
<th>Population</th>
<th>% rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carroll</td>
<td>47,289</td>
<td>90.2%</td>
</tr>
</tbody>
</table>

Line items in red indicate counties within the MaineHealth service area.
Select social determinants by the numbers

**Food insecurity**

% of population who lacked access to reliable sources of food in past year (2015)

- 16.0 to 17.4%
- 14.5 to 15.9%
- 13.0 to 14.4%
- 11.5 to 12.9%
- 9.0 to 11.4%

**Education**

% of adults ages 25 to 44 with some postsecondary education (2012–2016)

- College graduate
- Some post-high school
- Graduated high school
- Less than high school

**Poor mental health in MaineHealth service area**

% of adults reporting their mental health was not good

On 14+ of the past 30 days (2014–2016)

- Less than $15k
- $15–24k
- $25–34k
- $35–49k
- $50–74k
- $75k+

**Poor physical health in MaineHealth service area**

% of adults reporting their physical health was not good

On 14+ of the past 30 days (2014–2016)

- Less than $15k
- $15–24k
- $25–34k
- $35–49k
- $50–74k
- $75k+

for more information, visit mainehealth.org/healthindex
Where we live matters to our health, and one of the greatest disparities in the United States is the variation of health among communities. The County Health Rankings® provides information for each state to identify where disparities exist and where there are opportunities for action.11

The table below presents each county’s Health Outcomes Ranking from 2012 to 2018. The Health Outcomes Ranking is based on five measures, listed below, that represent how long people live and how people rate their overall health. A second ranking published for each county, Health Factors Ranking, can be found on the County Health Rankings & Roadmaps website, www.countyhealthrankings.org.

The healthiest county in the state per the 2018 edition of the County Health Rankings is Cumberland County.11

<table>
<thead>
<tr>
<th>Health Outcome Rankings over time*</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
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<td>Androscoggin</td>
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<td>Knox</td>
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<td>Penobscot</td>
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<td>Piscataquis</td>
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<td>Waldo</td>
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<td>New Hampshire counties (n=10)</td>
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<td>Carroll</td>
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<td>4</td>
<td>2</td>
<td>7</td>
</tr>
</tbody>
</table>

Line items in red indicate counties within the MaineHealth service area.

*Lower number = healthier population

**Metrics in Health Outcomes Ranking**

**Length of Life (50% weight in Outcomes Ranking)**

Premature death (years lost before age 75)

**Quality of Life (50% weight in Outcomes Ranking)**

Poor or fair health (% of adults; self-report)

Poor physical health days in previous 30 days (% adults; self-report)

Poor mental health days in previous 30 days (% adults; self-report)

Live births with low birth weight (% <2,500 grams)
MaineHealth priorities: Key outcomes by county

The MaineHealth Health Index initiative focuses on monitoring seven high-priority health issues:

- Childhood Immunizations
- Tobacco Use
- Obesity
- Preventable Hospitalizations
- Cardiovascular Health
- Cancer
- Prescription Drug Abuse and Addiction

Within these priorities, key indicators and outcomes are identified, facilitating comparisons with the United States overall, with other states and within Maine. At the county level, these data support assessing not only overall health status but also measurement of health behaviors; clinical care; physical environments; and the age, income and educational disparities that impact outcomes, all with the goal of turning data into action at the local level.

These maps provide an overview of the key outcome measures by county, both statewide and within the MaineHealth service area (including Carroll County, New Hampshire). Pages 8–14 provide additional information and data regarding each priority.
Tobacco Use

% of adults who smoke daily or some days (2014–2016)\(^\text{10}\)

- 23.0 to 25.9%
- 20.0 to 22.9%
- 16.0 to 19.9%
- 13.0 to 15.9%
- No data

Obesity

% of adults with body mass index ≥30 (2014–2016)\(^\text{15}\)

- 34.0 to 36.9%
- 31.0 to 33.9%
- 28.0 to 30.9%
- 25.0 to 27.9%
- No data

Cancer

Age-adjusted rates for all cancer deaths per 100,000 population (2014–2016)\(^\text{14}\)

- 195.0 to 214.9
- 180.0 to 194.9
- 165.0 to 179.9
- 150.0 to 164.9

Prescription Drug Abuse and Addiction

Age-adjusted rates for all drug overdose deaths per 100,000 population (2012–2016)\(^\text{15}\)

- 25.0 to 35.9
- 20.0 to 24.9
- 18.0 to 19.9
- 15.0 to 17.9
- 8.0 to 14.9
Increase Childhood Immunizations

In 2017, MaineHealth providers increased the percentage of 2-year-olds up-to-date for all 10 vaccines recommended by the U.S. Centers for Disease Control and Prevention. Up-to-date means each child received 24+ doses on time.

The U.S. Centers for Disease Control and Prevention (CDC) currently recommends 10 immunizations be fully administered to all children by age 2. To be considered up-to-date for all 10 vaccines, a 2-year-old child must have received 24+ doses within the time frames established in the CDC’s immunization schedule. Not even one dose of one vaccine can be missed or administered late.16

This strict definition is the reason that rates for the 10-vaccine bundle are so much lower than the rates for any individual immunization. Across MaineHealth member-owned practices, the rate for the 10-vaccine bundle was 58 percent as of December 2017. For the same time period, the up-to-date rates for individual immunizations ranged from 70 to 95 percent.17

After remaining at 55 percent for months between January 2016 and April 2017, the MaineHealth systemwide 10-vaccine bundle rate steadily increased to 58 percent as of December 2017 (Figure 15).16 During this period of steady improvement, up-to-date rates improved for eight of the 10 individual vaccines. The largest increases were for the rotavirus vaccine (from 79 percent as of April 2017 to 82 percent as of December 2017) and influenza vaccine (from 67 percent to 70 percent), followed by pneumococcal vaccine (from 88 percent to 90 percent) and hepatitis A vaccine (from 89 percent to 90 percent).17

At this time, the National Immunization Survey does not calculate up-to-date rates for the 10-vaccine bundle. Thus, to compare Maine’s statewide rates to rates of the United States, Figure 1418 shows the seven-vaccine bundle rates (19+ doses on time). The fluctuations in Maine’s estimated rates (yellow line) are due to the statistical limitations of surveying small samples of 200 to 250 parents per year.18 Because of the small samples in the National Immunization Survey, the Maine Center for Disease Control & Prevention estimates more reliable up-to-date rates for the seven-vaccine bundle using data submitted by providers to ImmPact, Maine’s Immunization Information System. As of Dec. 31, 2017, 73.5 percent of 2-year-olds were up-to-date for the seven-vaccine bundle.12

Visit mainehealth.org/healthindex for a more in-depth look at actions being taken to increase immunizations.
Decrease Tobacco Use

In 2017, MaineHealth providers significantly increased the number of proactive referrals to the Maine Tobacco HelpLine; and thus increased the number of adult patients provided treatment services for tobacco use disorder.

Smoking is the leading cause of preventable illness and death. On average, smokers die 10 years earlier than nonsmokers.19

While the smoking rates for the MaineHealth service area and for the entire state did not change substantially from 2012 to 2016, Maine fell behind the rest of the country. Smoking rates in the United States and many individual states decreased significantly (Figure 16).10 In 2012, there were 12 states with smoking rates that were significantly higher than Maine’s. In 2016, only four states had a higher rate. Meanwhile, the number of states with significantly lower smoking rates than Maine’s increased from 16 in 2012 to 24 in 2016.10

The news is better among Maine’s high school students. The percentage of Maine high schoolers who used cigarettes in the past 30 days has decreased significantly in recent years, from 15 percent in 2011 to 9 percent in 2017. But again, Maine lost ground relative to the rest of the country. Nationally in 2011, 18 percent of high school students had used cigarettes in the past 30 days; in 2017, this rate decreased to 7 percent.20 Furthermore, with 15 percent of Maine’s high school students having used an electronic-vapor product and 9 percent having used a smokeless tobacco product in the past month, vigilance is needed to prevent Maine’s youth from using any nicotine products.21

Studies have shown that when healthcare providers advise patients to quit tobacco and assist them in accessing treatment services, quit rates go up. Research also shows improved quit rates when smokers use tobacco quitline counseling over the phone.22

Providers in MaineHealth member-owned organizations are focusing on increasing the number of tobacco users in Maine who are proactively referred to the Maine Tobacco HelpLine. This means patients are registered with the HelpLine, receive a call from a counselor and, when appropriate, are provided medication support. As a result, the number of patients referred to the HelpLine increased substantially from April through December 2017 (Figure 17).23 The total number of tobacco users referred in 2017 (2,996) was 30 percent higher than in 2015 and 45 percent higher than in 2016.23
In recent years, rates of adult obesity in Maine and the MaineHealth service area have begun to stabilize. Having stable rates over time can be viewed as an intermediate step toward the ultimate goal of decreasing obesity. In 2016, the adult obesity rate in Maine was 29.9 percent, and during 2012–2014 ranged from 28.2 to 30.0 percent; importantly, there were no statistically significant increases or decreases during this period (Figure 18). Obesity rates also have been stable among fifth-graders as well as seventh- and eighth-graders. During the five-year period from 2013 to 2017, rates ranged from 19.1 to 22.6 percent and 14.2 to 15.3 percent, respectively, with no statistical differences in the rates. The most encouraging trend is that there was a significant decrease in obesity among Maine’s third-graders, from 20.8 percent in 2015 down to 12.3 percent in 2017.

After 10 years of successfully implementing strategies to reduce childhood obesity, Let’s Go!, with support from MaineHealth and Maine Medical Partners, adapted the pediatric model and the evidence-based concepts it is built on, for adults. Let’s Go! reviewed the latest evidence and determined that success is typically achieved in small steps and that one small step after another leads to significant changes in health. The program developed for adults, Small Steps, incorporates four key healthy eating and active living messages to encourage adult patients to make small lifestyle changes for a healthier life, including:

- Move More — it’s a great way to improve your health
- Eat Real — foods that come from nature give you energy
- Drink Water — it’s the best choice
- Rest Up — good sleep restores your body and mind

Implementing Small Steps protocols requires primary care practices to: be knowledgeable about healthy eating and active living messages, follow clinical and administrative workflow procedures that support the assessment of lifestyle habits, be comfortable initiating compassionate conversations around a specific healthy eating or active living goal and develop and document follow up plans for patients.

As of September 2017, clinical teams at 13 of 42 MaineHealth member-owned adult primary care practices were trained in the standard of care for adults with obesity (Figure 19).
Decrease Preventable Hospitalizations

Among Medicare patients cared for by MaineHealth providers, hospitalization rates for heart failure and COPD/asthma were increased slightly in 2017, although these rates were still lower than national rates.

One metric often used to monitor preventable hospitalizations is the rate of admissions for 12 ambulatory care sensitive conditions. For these health issues, patients who are provided with high-quality community-based primary healthcare often can avoid hospitalizations or more severe disease that requires treatment within a hospital. As of 2014, the three conditions with the highest admission rates are heart failure, bacterial pneumonia and chronic obstructive pulmonary disease (COPD)/asthma.

The hospitalization rates of ambulatory care sensitive conditions in the MaineHealth service area and for Maine overall increased slightly from 2014 to 2015. The service area’s rate remains lower than the U.S. rate, although from 2012 to 2015, the U.S. rate decreased more than the service area rate (Figure 20).

MaineHealth continues to prevent unnecessary hospitalizations by coordinating clinical and community strategies into patient- and family-centered care that is provided by collaborative, integrated teams.

As of December 2017, 100 percent of MaineHealth member-owned practices attained the highest National Committee for Quality Assurance, Patient Centered Medical Home recognition, with 80 percent (44 out of 45) achieving the highest level.

- MaineHealth hospitals, outpatient practices and home-health teams continued collaborative efforts with one another as well as with external partners to prevent 30-day readmissions.
- MaineHealth organizations implemented strategies in ambulatory practices, other healthcare settings and community settings to reduce emergency department and urgent care utilization by patients with COPD. Strategies that reduce emergency department visits also help reduce admissions for COPD.

Figure 21 presents hospitalization rates for heart failure and for COPD/asthma among all beneficiaries in the MaineHealth Accountable Care Organization’s Medicare Shared Savings Program. Overall, hospitalization rates for heart failure were slightly higher in both 2016 and 2017 than in 2014 and 2015. Similarly, the hospitalization rates for COPD/asthma were higher in 2017 than in 2014–2016. However, for both conditions, the 2017 rates for beneficiaries were lower than the respective rates for enrollees in all Medicare Shared Savings Programs in the United States.
For decades, age-adjusted rates for deaths due to cardiovascular disease steadily decreased across the United States. A reduction in the prevalence of smoking and exposure to secondhand smoke, advancements in technologies to diagnose and treat cardiovascular disease, and more effective use of heart medications have been instrumental in this reduction. However, this long-running decline in mortality has recently slowed in the United States, and recent data suggest a worrisome uptick in cardiovascular death rates in the MaineHealth service area (Figure 22). While the U.S. age-adjusted rate significantly decreased from 224 per 100,000 population in 2011–2013 to 219 in 2014–2016, the three-year rate in the MaineHealth service area increased from 185 to 191. Although this increase in the service area was not statistically significant, each of the four rolling three-year rates increased slightly from 2011–2013 to 2014–2016, suggesting the upward trend may continue.

Coronary heart disease includes conditions such as heart attacks that restrict or reduce blood flow to the heart. Since 2000, the age-adjusted rates for deaths due to coronary heart disease have been significantly higher in the United States overall than in the MaineHealth service area. However, since 2011, the decrease in the rate for the United States was five times larger than the rate change in the MaineHealth service area. The three-year rate for the United States significantly decreased from 106/100,000 in 2010–2012 to 97 in 2014–2016. Meanwhile, the small decrease in the MaineHealth service area rate was not significant between these time periods (78.8 to 77.6/100,000).

Helping patients manage their blood pressure is a key strategy employed by physician practices within the MaineHealth Accountable Care Organization to reduce cardiovascular disease and deaths. Among patients diagnosed with hypertension, the percentage whose blood pressure was under control (<140/90 mm Hg) increased from 70 percent as of January 2017 to 72 percent in June 2017, and remained between 72 and 73 percent through December 2017. These recent results meet the Health Index target of 72 percent or more by September 2018 (Figure 23). As of December 2017, seven of the 10 MaineHealth member and affiliate organizations were at or above 72 percent.
Decrease Cancer Deaths

In 2017, primary care practices in the MaineHealth Accountable Care Organization substantially increased the percentage of 50- to 75-year-old patients screened for colorectal cancer.

For decades, the age-adjusted rates for cancer deaths in Maine and the MaineHealth service area have been significantly higher than rates in the United States overall. This is predominantly because of the high smoking rate in Maine. For three of 11 tobacco-related cancers, lung/bronchus, esophageal and bladder, the most recent death rates (2014–2016) were significantly higher in Maine and in the MaineHealth service area than in the nation as a whole. Rates for the other eight tobacco-related cancers were similar to U.S. rates.15

It’s concerning that in recent years the rates for all cancers have not changed in the MaineHealth service area while rates across the United States have continued to decrease. The rate in the MaineHealth service area was 171.6/100,000 in 2012–2014 and 171.3 in 2014–2016. In contrast, the all-cancer death rates for the United States decreased significantly over this time period, from 163.7 to 158.6/100,000 (Figure 24).15

Among men and women in Maine, colorectal cancer is currently the fourth and third most commonly diagnosed cancer, respectively, and the third leading cause of cancer death.35 In contrast with other cancers, colorectal cancer death rates have declined more in the MaineHealth service area than in the United States since 2000. The age-adjusted rate in the service area went from being significantly higher than the national rate in 1991–2001 (23.1 vs. 21.0/100,000, respectively) to lower than the national rate in 2014–2016 (13.3 vs. 14.3/100,000, respectively).15

A key factor that contributed to the decline in Maine was the increased use of evidence-based colorectal cancer screenings. Screenings help identify tumors in earlier stages, when treatment is most effective. When a colonoscopy screening is performed, colorectal cancers can even be prevented by removing precancerous polyps.36 Primary care practices within the MaineHealth Accountable Care Organization are working to continue increasing colorectal cancer screening rates among their 50- to 75-year-old patients. The percentage of patients who had the appropriate screening for colorectal cancer rose from 65 percent as of December 2016 to 74 percent as of December 2017 (Figure 25).34

Visit mainehealth.org/healthindex for a more in-depth look at actions being taken to decrease cancer deaths
In recent years, Maine had the fifth-largest increase in age-adjusted drug overdose death rates in the United States, rising from 12.2 per 100,000 population in 2011–2013 to 22.2 in 2014–2016. The increase was similar within the 12-county MaineHealth service area (Figure 26). Maine’s recent surge in overdose deaths continued in 2017 with 418 Mainers lost, compared with 378 in 2016.

As prescription forms of opioids become more tightly controlled, some individuals with opioid use disorder are turning to more available, less expensive heroin. Nearly 80 percent of heroin users reported misusing prescription opioids prior to using heroin. The heroin being used, which is often laced with fentanyl and other lethal forms of synthetic opioids, has fueled the surge in overdoses and overdose deaths.

Although drug overdose deaths are often associated with young people who use heroin and other street drugs, there has recently been an increase in the proportion of older adults dying of overdose. Over a decade ago, 2004–2006, 23 percent of those who died of a drug overdose in the MaineHealth service area were ages 45–54 and 13 percent were 55 and over. In 2014–2016, 25 percent were 45–54 and 18 percent were 55 and over.

In response to this public health crisis, MaineHealth developed a comprehensive set of evidence-based strategies that incorporate appropriate prescribing of opioids; education of patients, clinicians and communities; and the prevention and treatment of opioid use disorder.

In 2017, providers at MaineHealth member practices continued to reduce the number of patients who were prescribed opioids with an estimated daily morphine equivalent of ≥100mg; this level of morphine is considered to be a high risk for addiction and overdose (Figure 27). To assist those struggling with opioid addiction, MaineHealth members and affiliates have implemented an integrated “hub and spoke” treatment model. The most intensive treatment is provided at specialty hubs, while intermediate- and long-term treatment is provided at primary care patient-centered medical homes (the spokes). To date, more than 750 patients have enrolled in treatment.

Visit mainehealth.org/healthindex for a more in-depth look at actions being taken to decrease prescription drug abuse and addiction.
References and notes


4. For more information regarding the Invest Health project, visit https://www.investhealth.org/


6. Rural communities are geographical areas that do not meet the U.S. Census Bureau criteria for an urban area. Urban areas are densely settled territories with at least 2,500 people. For more information, visit https://www.census.gov/geo/reference/urban-rural.html.


16. For more information regarding the CDC's immunization schedule, visit https://www.cdc.gov/vaccines/schedules.


References and notes


24. Let’s Go!, a program of The Barbara Bush Children’s Hospital at Maine Medical Center, is a nationally recognized childhood obesity prevention initiative. Our goal is to increase physical activity and healthy eating for children from birth to 18 through policy and environmental change. Let’s Go! uses a multi-setting approach to reach youth and families where they live, learn, work, and play to reinforce the importance of healthy eating and active living.

25. The Small Steps Program, from Let’s Go!, a program of The Barbara Bush Children’s Hospital at Maine Medical Center, is an initiative to prevent, assess and manage adult patients at risk for or who have overweight or obesity. Our goal is to increase physical activity and healthy eating for all adults 18 years and above by encouraging patients to make small, incremental behavior changes to improve healthy habits. This initiative uses the healthcare setting to reach adults to reinforce the importance of healthy eating and active living. For more information, visit https://mainehealth.org/lets-go/adult-program.


31. The Patient Centered Medical Home (PCMH) is an approach to providing comprehensive primary care for children, youth and adults. The PCMH is a healthcare setting that facilitates partnerships between individual patients, their personal physicians and, when appropriate, the patient’s family. The joint principles are 1) Personal Physician, 2) Physician-Directed Medical Practice, 3) Whole-Person Orientation, 4) Coordinated Care, and 5) Quality and Safety. For more information, visit https://www.aafp.org/practice-management/pcmh.html.


### Short- and long-term Health Index targets

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>Increase Childhood Immunizations</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measure</td>
<td>% of 2-year-olds served by MaineHealth member-owned family medicine and pediatric practices who are up-to-date on all 10 vaccines recommended by 2\textsuperscript{nd} birthday</td>
<td>% of 19- to 35-month-olds in Maine who are up-to-date for bundle of 7 vaccines (4:3:1:3*:3:1:4)</td>
</tr>
<tr>
<td>Baseline</td>
<td>Target</td>
<td>Baseline</td>
</tr>
<tr>
<td>57% as of 9/30/15</td>
<td>≥60% as of 9/30/18</td>
<td>85% in 2014</td>
</tr>
<tr>
<td><strong>Decrease Tobacco Use</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measure</td>
<td># of adults with tobacco dependence who are electronically referred to Maine Tobacco HelpLine by providers in MaineHealth member-owned organizations</td>
<td>% of adults in the MaineHealth service area who smoke cigarettes daily or some days</td>
</tr>
<tr>
<td>Baseline</td>
<td>Target</td>
<td>Baseline</td>
</tr>
<tr>
<td>2,228 in 2015</td>
<td>4,000 in FY 2018*</td>
<td>18% in 2014</td>
</tr>
<tr>
<td><strong>Decrease Obesity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measure and Target</td>
<td>Among MaineHealth member-owned family and internal medicine practices using the Epic Electronic Medical Record: • ≥80% completed training on adult obesity standard of care, and • ≥50% implemented components of standard of care</td>
<td>% of adults in the MaineHealth service area with a body mass index ≥30.0 (indicating obesity)</td>
</tr>
<tr>
<td>Baseline</td>
<td>Target</td>
<td>Baseline</td>
</tr>
<tr>
<td></td>
<td></td>
<td>28% in 2014</td>
</tr>
<tr>
<td><strong>Decrease Preventable Hospitalizations</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measure one</td>
<td>Most recent annual rate of hospitalizations for COPD per 1,000 beneficiaries attributed to the MaineHealth Accountable Care Organization's Medicare Shared Savings Program</td>
<td>Rate of hospitalizations for ambulatory care sensitive conditions per 1,000 Medicare enrollees</td>
</tr>
<tr>
<td>Baseline</td>
<td>Target</td>
<td>Baseline</td>
</tr>
<tr>
<td>8.9 in FY 2015</td>
<td>≤8.31\textsuperscript{†} in FY2018</td>
<td></td>
</tr>
<tr>
<td>Measure two</td>
<td>Most recent annual rate of hospitalizations for heart failure per 1,000 beneficiaries attributed to the MaineHealth Accountable Care Organization's Medicare Shared Savings Program</td>
<td>45 in 2013</td>
</tr>
<tr>
<td>Baseline</td>
<td>Target</td>
<td></td>
</tr>
<tr>
<td>12.6 in FY 2015</td>
<td>≤10.0\textsuperscript{†} in FY2018</td>
<td></td>
</tr>
<tr>
<td><strong>Decrease Cardiovascular Deaths</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measure</td>
<td>Among 18- to 85-year-old patients with hypertension who were cared for by practices within the MaineHealth Accountable Care Organization, % with blood pressure in control (&lt;140/90 mm Hg)</td>
<td>3-year, age-adjusted rate of deaths per 100,000 population</td>
</tr>
<tr>
<td>Baseline</td>
<td>Target</td>
<td>Baseline</td>
</tr>
<tr>
<td>68% in 2015</td>
<td>≥72% in FY2018</td>
<td>185 in 2012–2014</td>
</tr>
<tr>
<td><strong>Decrease Cancer Deaths</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measure</td>
<td>Among 50- to 75-year-olds whose primary care is provided at a practices within the MaineHealth Accountable Care Organization, % with appropriate screening for colorectal cancer</td>
<td>3-year, age-adjusted rate of deaths per 100,000 population</td>
</tr>
<tr>
<td>Baseline</td>
<td>Target</td>
<td>Baseline</td>
</tr>
<tr>
<td><strong>Decrease Prescription Drug Abuse and Addiction</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measure and Target</td>
<td>100% of opioid prescribers at MaineHealth member organizations completed three hours of continuing medical education on prescribing opioid medication by Dec. 31, 2017</td>
<td>3-year, age-adjusted rate of deaths per 100,000 population</td>
</tr>
<tr>
<td>Baseline</td>
<td>Target</td>
<td>Baseline</td>
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</table>

*The MaineHealth fiscal year ends Sept. 30th*

\textsuperscript{†}90th percentile among all Medicare Shared Savings Programs in the quarter 1 2016 report
The MaineHealth system reaches more than 1.1 million residents in central, southern and western Maine and eastern New Hampshire. MaineHealth member organizations include Coastal Healthcare Alliance (Pen Bay Medical Center and Waldo County General Hospital), Franklin Community Health Network, LincolnHealth, Maine Behavioral Healthcare, Maine Medical Center, MaineHealth Care at Home, Memorial Hospital, NorDx, Southern Maine Health Care and Western Maine Health; the MaineHealth Accountable Care Organization is also part of the MaineHealth family. Affiliates of MaineHealth include MaineGeneral Health, Mid Coast-Parkview Health, New England Rehabilitation Hospital of Portland and St. Mary’s Health System.