

# Public Health Infrastructure and Health Information Technology

## Background:

The Healthy People 2020 guidelines list the three key components of the Public Health Infrastructure as:<sup>1</sup>

1. A capable and qualified workforce.
2. Up-to-date data and information systems.
3. Public health agencies capable of assessing and responding to public health needs.

## Health Equity Highlight: Tribal Health and Health Care

Native Americans experience higher rates of diabetes and chronic liver disease and higher death rates due to unintentional injuries than other populations.<sup>2</sup>

Both the State of Maine and tribal governments have specific responsibilities to improve the health of Native Americans who reside in Maine. As both governments work together toward achieving this goal, there is a continued recognition of the unique government-to-government relationship that exists between the Tribes and the State. Our infrastructure development takes this into account—the Tribes have their own Tribal Public Health District, staffed by the Tribes. Maine CDC's role is to provide the Tribal District with technical assistance and coordination, but not oversight.

Items 1 and 3 refer to organizations and people. Item 2 refers to technological aspects of a public health system that present unique challenges, related to equipment and external conditions. In recognition of this special feature of health information technology (HIT), Healthy People 2020 also devotes an entire separate section to this aspect of public health. Our Healthy Maine 2020 document combines the topics of HIT and Public Health Infrastructure in recognition of their intertwined nature and their importance to

achieving the goal of public health accreditation for each level of Maine's emerging public health system.

Maine is a large rural state, with many small towns and limited county government. Much of public health delivery across the state is coordinated through the state government public health agency, the Maine CDC. Only two local communities include full-service traditional health departments, Bangor and Portland.

Maine recently established nine Local Public Health Districts to serve the entire state. These districts coordinate services and supplies to respond to public health needs in their particular district.<sup>3</sup> Eight of these are based on county boundaries and coordinate for those geographic areas, while the ninth district comprises the tribal health systems. The Maine CDC employs a District Liaison in each of the eight geographic public health districts. The Liaisons work with their District Coordinating Committee (groups comprised of local public health partner representatives) to meet the needs of their district. Two Tribal Health Liaisons currently represent four tribes in the state: the Passamaquoddy Tribe of Maine, the Penobscot Tribe of Maine, the Houlton Band of the Maliseet Indians of Maine, and the Aroostook Band of Micmac Indians. Tribal Liaisons work with local public health agencies and public health partners.<sup>3</sup>

In addition to Maine CDC staff located in each district for epidemiology, public health nursing, health inspection, and drinking water inspection, many public health services are provided through contracts with local agencies and organizations. The Healthy Maine Partnerships, local community coalitions funded through Maine's tobacco settlement funds, deliver chronic disease prevention programs and administer and distribute other program funds. Each municipality also has a

local health officer who reports to the Maine CDC regarding communicable diseases and examines complaints of public health threats. The major health care organizations also fulfill some public health functions, sometimes with state funding, and other times through federal or local funding. These local and regional public health entities and structures continue to evolve to better meet the public health needs of the state.

Maine faces technological challenges due to incomplete availability of cell phone and cable services, especially in very remote areas, including tribal lands. For example, The ConnectME Authority has noted that while basic broadband services generally have good coverage, many areas do not meet the preferred level of speed for conducting business, and therefore current service levels do not allow Mainers to realize the full advantages of broadband access.<sup>4</sup> In addition, an older population profile and the number of small businesses with fewer than five employees are both factors that generally decrease the use of broadband.<sup>4</sup> Despite this, Maine has been a national leader in adoption of electronic health records (EHR) technology and use of health information exchange. In 2010 a statewide survey showed over 80% of hospitals have EHR systems functioning in over 90% of areas, and 49% of dental practices and 43% of ambulatory sites have EHRs in operation.

### The Public Health Response

The Public Health Accreditation Board's voluntary national accreditation process measures the competencies of agencies and their personnel across the ten essential public health services, works to standardize the quality of services Americans can expect from their state and local agencies.<sup>6</sup> Departments that achieve accreditation certify to the people of their service areas that they consistently deliver the highest quality services vital to protecting and sustaining population health.

Health care reform is another one force bringing changes to public health infrastructure standards and also brings together health care providers and public health. The meaningful use of electronic health data bridges the work of these partners. The American Recovery and Reinvestment Act of 2009 specifies three main components of Meaningful Use:<sup>7</sup>

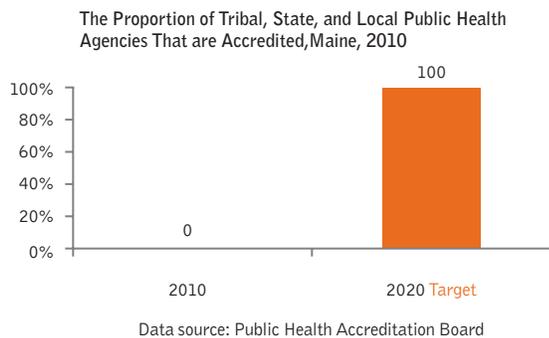
- The use of a certified EHR in a meaningful manner, such as e-prescribing.
- The use of certified EHR technology for electronic exchange of health information to improve quality of health care.
- The use of certified EHR technology to submit clinical quality and other measures.

When providers engage in “meaningful use,” they are using certified EHR technology to perform functions that are recognized as appropriate and doing so in a manner consistent with the intentions of their design. The meaningful use of EHR facilitates optimal planning and response to public health needs because it provides timely information about actions taken (e.g. drugs prescribed, immunizations given), which can then be measured against quality expectations and used to determine supplies needed for future responses. The U.S. Centers for Disease Control and Prevention endorses this approach to measuring the soundness of health information technology as used for public health purposes.<sup>8</sup>

### HM2020 Objectives

#### 1. Increase the proportion of Tribal, State, and local public health agencies that are accredited

Public health accreditation serves to document whether an agency is adequately providing the ten essential public health services to the population under its jurisdiction, and is a measure of the quality of services provided.

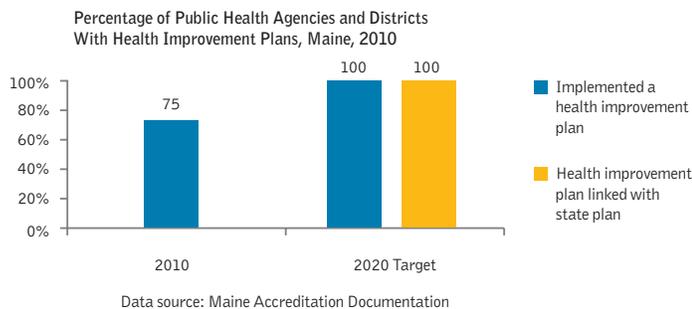


Public health accreditation started in 2011. No public health agencies were accredited at the beginning of this decade. Reaching the goal of 100% accreditation will be dependent on the state and local resources available to develop full public health services in each jurisdiction.

**2. Increase the proportion of Tribal, State, and local public health agencies that have implemented a health improvement plan and increase the proportion of local health jurisdictions that have implemented a health improvement plan linked with their State plan**

A health improvement plan is a data-driven, long-term, systematic, collaborative and inclusive plan that sets the direction for both the public health agencies and their partners. An effective plan ensures that needs are clearly identified and resources are used well.

Although there is currently no Tribal public health agency, the Tribal public health district will be



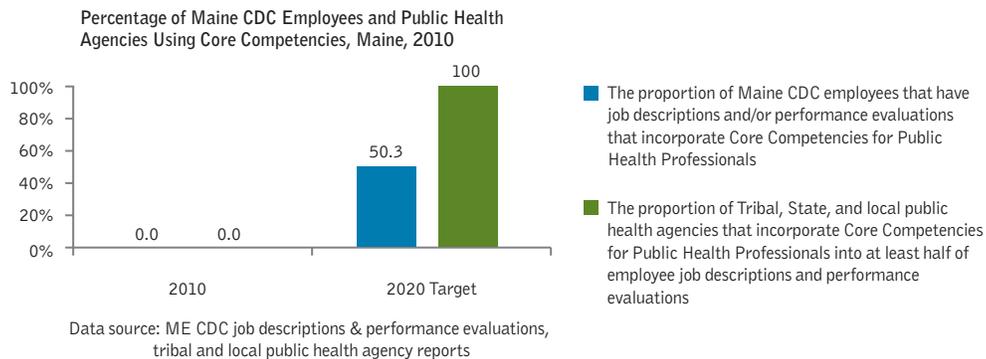
fulfilling these functions. While the other Public Health Districts may not fill all functions of a local public health agency, they have been charged with developing and implementing district public health improvement plans. Currently all district public health improvement plans are in place, and one local public health agency has a health improvement plan. The Healthy Maine 2020 goal is for 100% of public health districts and local public agencies to have health improvement plans.

Linkages between the health improvement plans at the local, tribal and district levels and the State Health Improvement Plan (SHIP) demonstrate that that the state plan is responsive to local needs and that the local plans have considered state priorities and information. Since there is no SHIP at this time, there are also no linkages. However, this graph does not currently reflect the coordination that does occur.

**3. Increase the proportion of Tribal, State, and local public health agencies that incorporate Core Competencies for Public Health Professionals into job descriptions and performance evaluations**

Using nationally established Core Competencies in job descriptions is one way to ensure a competent and qualified workforce and to design training and professional development that appropriately targets gaps. In the past, this practice was not widely used by the Maine CDC or other public health agencies, however the value of core competencies has been increasingly recognized and discussed among public health leaders and partners.

In 2010 no Maine CDC employees had job descriptions and/or performance evaluations that incorporated Core Competencies for Public Health Professionals. The Healthy Maine 2020 goal is 50%. Similarly, in that same year no Tribal, state, or local public health agencies incorporated Core Competencies for Public Health Professionals, and the Healthy Maine 2020 goal is 100%.



**4. Increase the proportion of Tribal, State, and local public health agencies that have implemented an agency-wide quality improvement process**

Quality improvement is a critical part of effective performance management and an agency-wide QI process is a requirement for public health accreditation.

Before the focus on public health accreditation and HM2020, QI in public health at an agency level had not been a focus of measurement, therefore trend data is not available. In 2010 25% of public health agencies had implemented agency-wide QI processes; the Healthy Maine 2020 goal is 100%.

**5. Increase the proportion of qualified providers that use certified health information technology (HIT) to achieve meaningful use**

The meaningful use of electronic medical records can improve quality of care and coordination of care. CMS criteria includes several measures that make a connection between health care and public health data, which encourages health care providers to participate in public health systems and registries that help determine public health needs. These include:

1. Performed at least one test of certified EHR technology’s capacity to submit electronic data to immunization registries and follow up submission if the test is successful (unless none of the immunization registries to which the eligible provider or eligible hospital submits such information have the capacity to receive the information electronically).
2. Performed at least one test of certified EHR technology’s capacity to submit electronic data on reportable lab results to public health agencies and follow-up submission if the test is successful (unless none of the public health agencies to which an eligible hospital submits such information have the capacity to receive the information electronically).
3. Performed at least one test of certified EHR technology’s capacity to submit electronic syndromic surveillance data to public health agencies and follow-up submission if the test is successful (unless none of the public health agencies to which an eligible provider or eligible hospital submits such information have the capacity to receive the information electronically).

In addition to these specific public health oriented measures, the meaningful use of EHR can improve patient care and coordination with public health approaches to better health.

Meaningful use data will begin to be collected in 2011, and thus no data is available for this measure at this time.

## Methodology notes

### 1. Increase the proportion of Tribal, State, and local public health agencies that are accredited

*Measure:* The proportion of Tribal, State, and local public health agencies that are accredited.

*Numerator:* Number of public health agencies who are accredited by PHAB.

*Denominator:* All eligible public health agencies in Maine, including local public health agencies recognized by the state (currently 2), the Tribal Public Health District and Maine CDC.

*Target setting method:* complete achievement by 2020.

*Other notes:* This is a Healthy People 2020 objective, and is currently developmental. The Public Health Accreditation Board (PHAB) will be tracking accreditation, and this data will be accessed either from the public health agencies in the state or via PHAB.

### 2. Increase the proportion of Tribal, State, and local public health agencies that have implemented a health improvement plan and increase the proportion of local health jurisdictions that have implemented a health improvement plan linked with their State plan

#### SUB-OBJECTIVES

2a. Increase the proportion of Tribal, State, and local public health agencies that have implemented a health improvement plan.

*Measure:* Proportion of state and local public health agencies and public health districts (including the Tribal PH District) that have implemented a health improvement plan.

*Numerator:* Number of current health improvement plans completed in the last 2 years.

*Denominator:* Number of public health districts plus the number of state-recognized local public health agencies plus Maine CDC.

*Data source:* Accreditation documentation for local and state health agencies, as well as district health improvement plans.

2b. Increase the proportion of Tribal and local public health agencies that have implemented a health improvement plan linked with their State plan.

*Measure:* Proportion of PH District and local health agency health improvement plans that are linked with the state health improvement plan.

*Numerator:* Number of PH District and local health agency health improvement plans that are linked with the state health improvement plan.

*Denominators:* Number of public health districts + number of state-recognized local public health agencies. (Maine CDC is not included, since the others will link to Maine CDC, but Maine CDC will have a role in documenting this linkage.)

*Data source:* Linkages will be measured via reviewing both the SHIP and the district and local health improvement plans.

*Target setting method:* complete achievement by 2020.

*Other notes:* This is a Healthy People 2020 objective, and is currently developmental. Therefore, the HM2020 data source may differ.

### 3. Increase the proportion of Tribal, State, and local public health agencies that incorporate Core Competencies for Public Health Professionals into job descriptions and performance evaluations

SUB-OBJECTIVES

- 3a. Increase the proportion Maine CDC employees who have job descriptions or performance evaluations that incorporate Core Competencies for Public Health Professionals.

*Measure:* The proportion of Maine CDC employees that have job descriptions and/or performance evaluations that incorporate Core Competencies for Public Health Professionals.

*Numerator:* The number of Maine CDC job descriptions and/or performance evaluations that incorporate Core Competencies for Public Health Professionals.

*Denominator:* Total number of Maine CDC staff.

*Target Setting method:* complete achievement by 2020.

*Other notes:* HP2020 is developmental at the state level and has identified ASTHO as a potential data source. They are likely to collect this via a survey in a summary fashion, and Maine CDC will need to collect the data to answer the ASTHO survey. Data collection methodology is yet to be determined. Options include extracting information from performance evaluations or via job descriptions may be used instead.

- 3b. Increase the proportion of Tribal, State, and local public health agencies that incorporate Core Competencies for Public Health Professionals into job descriptions and performance evaluations.

*Measures:* The proportion of Tribal, State, and local public health agencies that incorporate Core Competencies for Public Health Professionals into at least half of employee job descriptions and performance evaluations.

*Numerator:* The number of Tribal, State, and local public health agencies that incorporate Core Competencies for Public Health Professionals into at least half of employee job descriptions and performance evaluations.

*Denominator:* Local public health agencies recognized by the state, the Tribal Public Health District and Maine CDC.

*Target setting method:* complete achievement by 2020.

*Other notes:* Since District public health staff are state employees, the public health districts (other than the Tribal District) are part of MCDC. However, tribal liaisons are tribal employees and thus counted separately. HP2020 has sub-objectives for tribal (developmental) and local (NACCHO), using different data sources. Data will be gathered from the identified agencies.

- 4. Increase the proportion of Tribal, State, and local public health agencies that have implemented an agency-wide quality improvement process**

*Measure:* The proportion of Tribal, State, and local public health agencies that have implemented an agency-wide quality improvement process.

*Numerator:* Number of public health agencies that have an agency-wide quality improvement plan.

*Denominator:* Local public health agencies recognized by the state, the Tribal Public Health District and Maine CDC.

*Target setting method:* complete achievement by 2020.

*Other notes:* Data sources may differ by agency since HP2020 has sub-objectives and for state and tribal public health agencies, these measures are developmental for HP2020 and data collection for Maine has yet to be determined. Baseline data was collected via interview with key staff in each agency.

- 5. Increase the proportion of qualified providers that use certified health information technology (HIT) to achieve meaningful use**

## SUB-OBJECTIVES

5a. Increase the proportion of hospitals that meet meaningful use criteria (stage 1) for use of certified technology established by CMS.

*Measure:* The proportion of hospitals that meet meaningful use criteria (stage 1) for use of certified technology established by CMS.

*Numerator:* Number of hospitals that receive “meaningful use”(stage 1) incentive payments for use of certified technology.

*Denominators:* Number of non-state hospitals in Maine.

*Data Source:* CMS (numerator), count of non-state hospitals (denominator).

5b. Increase the proportion of eligible providers that meet meaningful use criteria established by CMS.

*Measure:* The proportion of eligible providers who meet meaningful use criteria (stage 1) for use of certified technology established by CMS.

*Numerators:* Number of providers that receive “meaningful use” (stage 1) for use of certified technology incentives.

*Denominators:* Licensed qualified providers residing in Maine eligible for CMS incentive payments from boards of licensing.

**Data Source:** CMS (numerator), Office of the State Coordinator for HIT (denominator).

*Target Setting method:* none yet.

*Other notes:* This is a developmental Healthy People 2020 objective. Meaningful use data will begin to be collected in 2011, and thus no data is available for this measure at this time, and targets have not been set. Maine is defining the denominator based on data available in Maine, allowing us to calculate a proportion. As it is expected that the criteria to meet meaningful use definitions may change after

2015, this measure may need to be re-visited at that time. Some providers may not be eligible for meaningful use incentives based on the number of Maine Care clients they have.

## References

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