The current economic climate and changing healthcare landscape require difficult decisions to maximize limited program resources and articulate the unique role of public health. State health officials may consider ways to integrate infectious disease programs in their departments and develop partnerships with provider groups.

**Opportunity and Need for Integration**

For maximum impact on health and to ensure adequate services for the population, public health must work in effective partnerships and be strategically integrated with existing state and community systems. The Association of State and Territorial Health Officials (ASTHO) is working with its members and partners to examine how the evolving healthcare system will influence the role of state and territorial health departments. As part of that effort, the ASTHO Infectious Disease Policy Committee hosted a meeting to focus on the impact of public health and primary care integration on infectious disease programs. For more information, please visit ASTHO’s webpage, “Public Health and Primary Care Integration: Infectious Disease.” This paper summarizes the in-person meeting.

State and local health departments provide crucial services and expertise for individuals with infectious diseases, including providing care, linking them to appropriate care, conducting surveillance, and analyzing data from providers to detect trends. Health reform implementation will increase coverage of disease screening and clinical preventive services as well as change the way services are provided. The key during this transition is ensuring that services for infectious disease do not fall through the cracks and that unique public health expertise and “wrap-around” services are still available to all who need them. Most state health departments face difficult decisions about what services they should continue to provide—a situation compounded by budgetary constraints. It is important that weakened public health capacities do not negatively affect human health. All stakeholders need to maximize limited financial and workforce resources more effectively by working together to provide comprehensive preventive services.

Although primary care has traditionally focused on providing medical services and addressing individual health, and public health on community services and population health, healthcare’s transformation is opening up new opportunities for public health and primary care to work together in a more systematic way to improve the health of the population. There is increased recognition of a successful primary care-public health partnership’s benefits, which include prevention leading to fewer expensive medical interventions; improved quality of life and quality of care; a healthier workforce; and healthier schoolchildren better situated to thrive. Health departments may partner with primary care organizations and provider groups to plan and share responsibility for health improvement and ensure all needed services are available and accessible. These partnerships may take different forms based on the motivating circumstances and fall along a continuum spanning isolation to complete merger.
To support state health agencies’ efforts in this area, ASTHO partnered with the Institute of Medicine (IOM) to develop a strategic map on how to move toward effective integration. The Primary Care and Public Health Strategic Map was created in July 2012 with support from IOM, the United Health Foundation, CDC, and HRSA. This strategic map is intended to guide the work of ASTHO, our partners, and others interested in supporting the integration of public health and primary care. The central challenge, “implement integrated efforts that improve population health and lower health cost,” is supported by five strategic priorities and associated objectives. The Primary Care and Public Health Integration Workgroup, comprised of ASTHO and partners, has combined targeted groups of objectives into four tracks of work for immediate action: value proposition/business case, successes, resources, and measures.

One of the map’s strategic priorities is to identify and create demonstrated successes, which includes identifying examples of integration anywhere along the continuum and analyzing the common factors that have led to success. New Hampshire Division of Public Health Services and ASTHO President José Montero’s President’s Challenge is for each state to identify at least one example from their state/territory that demonstrates successful integration of public health and healthcare delivery. State and territorial health agencies can make an incredible impact in this area by decoding the key elements for success that can then be shared with others to promote further integration, increase healthcare quality, decrease cost, and improve overall population health.

To move this agenda forward for infectious disease issues, ASTHO convened state health agency leadership to examine examples of integration between public health infectious disease programs and primary care, analyze key components that led to success, and use these examples to further define the unique role of public health in improving population health.

This meeting report provides considerations for moving forward along the continuum of integration. It also highlights two promising channels for integration—workplaces and schools—and examples depicting integration successes.
Moving Integration Forward—Key Components

Partnerships
Establishing diverse teams to work on integration is crucial. Formal infrastructure, such as advisory groups, can provide opportunities for partners to participate. These partners can include state or local health agencies, hospital associations, medical societies, clinicians, state chapters for family/preventive medicine, data analysts, school nurses, legislators, governor’s offices, insurance commissioners, chambers of commerce, other state agencies that impact health, and federal agencies such as CDC, HHS, the Department of Defense, or the Department of Veterans Affairs. Each partner in integration needs to understand what the other partners bring to the table. Using a collaborative approach will ensure that all relevant parties are involved and accountable and the proposed effort works across sectors.

Although complete merger of public health and primary care is not always the goal of integration, partners should always be moving away from isolation. A first step toward integration is articulating needs and goals in a common language. Once partners identify key overlapping issues, they must work together across sectors to address them. Solutions are different in every setting; what’s important is for partners to create a process of problem solving and be definite about the goals they hope to achieve. It is vital for all parties to communicate effectively and demonstrate true ownership of the problems and solutions.

Integration efforts in a particular jurisdiction can start small and localized. Pilot programs can provide proof of concept and then be brought to scale and replicated in other jurisdictions with adaptations for local circumstances.

Successful integration efforts demonstrate the importance of partnerships. Washington state’s Public Health Improvement Partnership—which includes local and state public health leaders, local boards of health and tribal nations, the state board of health, the American Indian Health Commission for Washington State, and HHS—worked together to produce the Agenda for Change Action Plan for Washington’s Public Health Network. Also in Washington, the Puget Sound Health Alliance, which is composed of employers, physicians, hospitals, patients, health plans, and others, measures the quality of healthcare and produces public reports designed to help improve healthcare decisionmaking.

In Indiana, a prescription drug abuse task force convenes a range of partners: providers, pharmacies, behavioral health, and law enforcement. The root of the prescription drug abuse problem may lie with over/under-prescribing, but there is a measurable effect on public health. This is a great integration effort that allows the group to address broader policy issues. The childhood obesity initiative in Georgia is a coalition of public, private, philanthropic, and government sectors. Awareness and cooperation are key to the success of this initiative. In New York, immigrant clinics, migrant clinics, and refugee health programs offer opportunities for integration.

Ensure Safety Net
Throughout the integration process, it is important to maintain a safety net to ensure that services are accessible to all populations. This might work out differently in various jurisdictions (e.g., depending on the availability of medical homes; ideally, a medical home should be bigger than one physician’s office). For populations disconnected from the medical community, the concept of a “medical neighborhood” might be needed. Going forward, there will be a particular focus on Accountable Care Organizations (ACOs) and the need for partnerships to be leveraged effectively.
If health departments continue to provide clinical services, they need to utilize reimbursement and payment mechanisms. A code to bill for public health and preventive care would help demonstrate the value of the services provided, as would concrete examples of the return on investment generated. However, it is important to remember that public health does not always need to save money to be valuable. For example, value can include improved health status for the community.

**Data Driven**

Data management to share information across sectors will become increasingly important as partners work together. To allow for streamlined data systems within and across states, public health can partner with primary care to develop universal minimum data sets: small numbers of data measures that are consistent and measured across groups. Part of a minimum data set might be important clinical indicators such as percentage of enrollees with complete exams, documented BMI, behavior health screenings, immunizations, etc. A program like the Healthcare Effectiveness Data and Information Set (HEDIS) might incentivize providers to collect this data. The data can also be used to assess quality of care. If so, it is important to develop standardized quality metrics because this will allow quality improvement to be a realizable priority.

**Channels of Integration**

Workplaces and schools are two of the five major communities that affect behaviors (the others being rural communities, faith-based groups, and other organizations, such as Rotary International) and are low-hanging fruit to influence change because the majority of people can be reached on a daily basis through work and school. By examining integration efforts through these settings, or “channels,” public health and primary care may be able to discover templates with global applications that can serve in other integration interventions.

**Workplaces**

Worksite wellness enhances employee productivity, reduces absences and idleness, and reduces healthcare costs by encouraging healthy habits and creating an environment where the healthy choice is the easy choice. To be successful, worksite wellness programs need to address businesses’ perceived needs; there is no one-size-fits-all approach. When designing worksite wellness programs and partnerships, it might be helpful to give businesses options so they can select the approach that works best for their organization and employees and own the process of developing the program with their employee population. Business leaders can be introduced to worksite wellness programs through interactive sessions depicting the range of options and motivated by the potential for reduced absenteeism, presenteeism (i.e., being at work but preoccupied with a medical condition), and reduced healthcare expenditures. Workplaces can educate employees on how to be better consumers of healthcare or can provide healthcare services, such as immunizations or mental health services. It is important not to duplicate services available in the community, but instead bridge communications between employee health and primary care and fill gaps where needed.

HealthLead, the US Healthiest workplace accreditation program, was established to set standards of excellence and create evidence-based assessments to evaluate the comprehensiveness of worksite wellness programs. The business case for implementing the HealthLead accreditation process centers on improving employee productivity and business sustainability by supporting employee health and thus, lowering healthcare-related costs.
Key elements of success of a worksite wellness program include:

- A design process that starts with non-controversial topics and does not dictate the solution.
- Working with key leaders from various sectors who can champion and effect change.
- Making and articulating a strong business case.
- Getting the message out: using clear and concise language, making use of nonpaid media, being relevant and timely, and telling people-based stories rather than inundating audiences with too much data.

Integration can allow worksite wellness programs to move forward in a variety of ways. In North Dakota, there is no investment of state funding for worksite wellness, so the health department collaborates with stakeholders on “Healthy North Dakota,” which provides chronic disease management, case management, and call-a-nurse services. Risk factor prevention is key for the program. The Healthy Ohio program, facilitated by US Healthiest, brings population health practices into workplace. Cooperation and collaboration are key to this program.

**Schools**

School nurses and school-based health centers (SBHCs) are active partners in infectious disease prevention and control, playing an important role in disease surveillance, disaster planning, and immunization services. The school nurses and SBHCs’ partnership can be seen as an example of integrating public health and primary care. The more the two work in concert, the more success they will achieve. For example, school nurses successfully promoting influenza vaccination will result in less illness to be treated at the clinic.

SBHCs are funded by state health departments and provide access to care, immunization services, obesity prevention, and preventive care. School nursing is a population-based extension of primary care. Most nurses are hired by the school district through education funding. School nurses and SBHCs provide preventive care that minimizes unnecessary school absences, resulting in decreased student dropout rates, and prevents disease, reducing costly hospitalizations and emergency room visits. The integration between SBHCs, school nurses, and health departments can vary, based on the infrastructure in each area. As partnerships with school health are strengthened, additional training for school-based providers on population health and sustainable reimbursement strategies may be needed.

**Examples of Integration**

As noted by Paul Wallace, MD, who chaired the IOM Committee on the Integration of Primary Care and Public Health, “There is no single best solution for achieving integration.” The natural diversity among states and local communities gives ASTHO members and other state and local public health leaders the opportunity to identify and learn from early adopters and innovators. The following are examples of integration work that can inform future efforts.

**Massachusetts: Health Reform**

From the first year of healthcare reform implementation, Massachusetts saw increased use of preventive services and evidence of improved health. This might be attributed to three factors: the increased access to care facilitated by healthcare reform; the system of community health centers within the state, which serve as a large primary care network; and the integration of public health with prevention efforts.
State example – The health department noted an accelerated impact of access to healthcare when combined with public health efforts, including quality measures. For example, tobacco use dropped sharply when clinical counseling and public health were linked. The most dramatic decrease in tobacco use occurred when there was a public health communications campaign driving people to the counseling service and public health quality measures at the clinical level. When funds were no longer available for the public health campaign, smoking rates increased. There is evidence that HIV/AIDS infections decrease when the integration between care and public health is strong. For example, community-wide education may encourage testing and reduce risk factors. It is important to note that public health was given resources to implement these initiatives.

In Massachusetts, integration is a process and not consistent across the board. Health reform raised questions around who should provide clinical services—and who would pay for the integrated programs—that are being worked out with public health and primary care at the table. Although certain health department activities were reimbursable at primary care sites (vaccines, STD and TB services), the private sector did not have adequate facilities or providers. This led to accelerated licensure approval for new primary care buildings and services. Community health workers emerged as a bridge between public health and clinical care. A new certification board will work to define the role of community health workers in Massachusetts. Regardless of how community health workers are funded, the state can set standards and develop training/certification programs.

Public health has a key role in surveillance, collecting and analyzing information and sharing those findings. As integration moves forward, public health is moving toward a greater role in surveillance and quality assurance, which in turn informs care. There is also a strong opportunity for public health to provide social marketing and facilitate community engagement. Health insurance may improve access, but public health messaging can continue to drive behavior change and response.

Massachusetts is now looking at regulatory and payment reform as areas that need to be addressed to facilitate public health and primary care integration. The state established the Massachusetts Prevention and Wellness Trust Fund to support community prevention and links between clinical care and population health. Public health can help with the national goals for payment reform and quality measures for ACOs through educational materials, training, quality measures for licensure, and monitoring health information technology.

Rhode Island: Immunization
Rhode Island has no local health departments. Instead, the state health department collaborates closely with healthcare providers because the state’s small size makes collaboration easier. The state’s Physician Primary Care Advisory Committee, which serves in an advisory role to the state health official, facilitates communication between primary care and public health, and ensures that primary care participates in decisionmaking.

Components of the state’s four-part integration strategy are:

- **Public Health Grand Rounds**: monthly meetings that convene public health and primary care and attempt to institutionalize the communication between the two groups.
- **Academic Detailing**: allows for public health to enter primary care practices to deliver information. This approach can be scaled up by using a web/teleconference model.
- **Quality Improvement Process**: develops ideas on how to pay practices for engaging in QA/QI.
Primary Care Trust: a future goal that involves paying practices to expand access and bring a breadth of services to the table.

Two issues that have been addressed in this integrated model are pertussis and perinatal infectious disease.

State example – To address pertussis, the state health department wanted a multi-pronged approach to reduce incidence of disease. The staff developed a letter to parents, reached out to providers with an advisory, set up mass vaccination clinics at schools using their school-based clinic model, and sent out press releases, depending on the location and scale of reported pertussis cases. These various response mechanisms require a high degree of collaboration and communication between partners and complement individual efforts to reduce disease.

State example – In Rhode Island, perinatal infectious disease prevention activities support efforts to improve health of populations disproportionately affected by HIV and hepatitis, which are often also affected by other infections (TB, STDs). An integrated approach to perinatal prevention maximizes the health impact of public health services, reduces disease prevalence, promotes health equity, and supports multi-program collaboration and service integration efforts. Some of the health department’s specific activities are including the incorporation of vaccine follow-up in case management during home visits and working closely with primary care providers in following through with infants.

Other states have also had success integrating immunization activities. In Indiana, the perinatal hepatitis B (HBV) program at the health department moved out of the immunizations division to HIV/STD, and field staff began educating clients about topics beyond HBV, such as Tdap vaccine for pertussis prevention. In New Hampshire, health department staff do not administer immunizations, but are heavily involved in quality control, storage and handling, and educating providers. Similarly, in Washington state, all immunizations are given in the private sector and the health department has a quality assurance role—it coordinates with providers to ensure proper vaccine storage and handling, monitors immunization rates, etc. With this structure, it is important to have entities that will support partnerships, such as vaccine advisory committees. Vaccine advisory committees with diverse representation have proven effective at addressing issues that are important to their communities.

Sexually Transmitted Diseases (STDs) Prevention Programs
The traditional public health role of providing STD services is changing as more people have access to insurance coverage and have the potential for receiving care in the primary care setting. During the transition, health department programs are shifting their focus to more core functions of public health: assessment, assurance, and policy development. STD prevention programs will need to integrate efforts with private providers to be efficient and cost-effective. Health departments can work closely with primary care partners, monitoring patient access to healthcare and identifying any gaps or needs.

Health department example – Because gonorrhea can be asymptomatic, infected persons may not go to STD clinics to seek treatment. This provides an opportunity for health departments to partner with primary care and leverage STD services in locations where the population is already going for other health services. Health insurance will cover the clinical preventive services. Public health in partnership with providers can support other important STD prevention efforts in terms of surveillance, assessment, assurance, disease intervention specialist (DIS) investigative services, and linkage to care.
Going forward, public health STD clinics must function as centers of excellence in healthcare delivery, providing a safety net and STD specialty services and serving as training and research centers. The role of DIS workers (the “boots on the ground” workforce) can expand to include a more integrated skill set beyond STDs and increased involvement in linkage to care with clinical providers. Public health laboratories will have the opportunity to carve out specialty areas, offering services not available at other labs, and can have a role in surveillance and research.

Lack of workforce capacity poses a challenge to public health’s more focused role. As services shift to primary care, providers will need to be trained in areas such as taking sexual histories, understanding confidentiality rights, and being culturally sensitive. The public health workforce will need to be able to build community engagement models and work beyond historical silos. As STD clinics evolve, training and investment in workforce capacity will be vital. An integrated data sharing system is also needed as STD programs scale up surveillance activities. Public health will play a critical role in monitoring appropriateness of care, ensuring that patients get the care they need to help stop the spread of disease.

**State example** – Due to healthcare reform and the economic crisis, all STD clinics in Massachusetts closed by 2009. Notably, the clinic closure had no discernible impact on the epidemiology of STDs because many cases were being diagnosed outside the clinics. However, the closures did have an impact on the way the state provided STD prevention services. Clinic closure led to a loss of dedicated space for DIS interviews, a loss of data because of changes in reporting, and issues with expedited partner therapy (EPT) due to IT problems with generating a prescription without a name. A major change occurred in DIS workers’ role as they evolved into technical consultants and quality assurers, working in concert with primary care providers. The state also developed creative solutions to new problems: Because private providers may not have bicillin for onsite treatment, the STD program initiated a collaboration with TB clinics to purchase, store, and dispense bicillin. When needed, DIS workers pick up bicillin and transfer it to the provider. Additional changes include an expansion of integrated HIV/STD/viral hepatitis screening sites and a robust training system for clinicians seeking training in STD initiatives.

**Factors Associated with Successful Integration**

- Variety of partners.
- Cross-sector work.
- Leadership.
- Communication in common language—articulation of needs and goals.
- Cooperation and collaboration.
- Formal structures (e.g., advisory committees).
- Proof of concept (e.g., improved health outcomes in pilot program).
- Process of problem-solving—solutions are different in every setting.
- Quality assurance role of public health.
Summary

There are two ways to approach integration: enhancing and leveraging traditional public health activities to improve coordination and collaboration with private clinics, and creating new and nontraditional approaches to foster integration. This meeting report contains examples of forward-thinking approaches to integration. Public health must continue to define its mission and role in relation to primary care, integrating services and activities where appropriate and maintaining capacity for the activities primary care will never do. It is important to take a systems approach to healthcare transformation to achieve lasting improvements in population health.

Suggested Next Steps

- Examine and articulate common goals that drive integration.
- Identify colleagues in primary care and build bridges.
  - Encourage state health officials to serve on medical boards and bring clinicians onto public health boards.
  - Define target for integration plans (may require additional meetings lead by IOM/ASTHO/others).
- Explore methods for public health to bundle messaging when approaching primary care.
- Establish state teams with members from diverse sectors (legislators, hospital associations, clinicians, IT, medical societies, insurance commissioners, chambers of commerce, boards of education, health departments, CDC, etc.) and then set objectives for those teams.
- Establish minimum data set.
- Check in with American College of Physicians regarding their work in response to the IOM report and determine how we can work together.
- Investigate policy issues regarding the changing role of public health laboratories.
- Research how STDs impact workplaces’ bottom line to make the business case, possibly aggregating data from worksite wellness programs.
- Explore the opportunity to coordinate with mental health organizations to foster better infectious disease testing and treatment in behavioral health/substance abuse communities.
- Coordinate with IT groups on how to approach issues regarding EPT prescriptions, registries, etc.
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