

1. What role does health IT play in helping improve health coordination?

Health IT supports a variety of coordination, tracking and reminder functions for both the provider and public health levels. The provider level functions focus on patient care and outcomes such as providing consolidated immunization histories for use in determining appropriate client vaccinations. At the public health level, CDC's National Center for Immunization and Respiratory Diseases (NCIRD) supports the development of Immunization Information Systems (IIS). IIS supports analytics by providing aggregate data on vaccinations for use in surveillance and program operations, and in guiding public health action with the goals of improving vaccination rates and reducing vaccine-preventable disease. IIS are confidential, population-based, computerized databases that participating vaccine providers can use to record immunization doses administered. Use of IIS is important since having a record of vaccinations is needed for school entry, college entrance, working in health care settings, military service, and to ensure patients are up-to-date on recommended vaccinations. In addition, vaccination recommendations are complex, and change over time, so having an up-to-date record is key to knowing which vaccines are needed and ensuring patients receive the right vaccines at the right time, and are neither over-vaccinated (get too many doses) nor are missing vaccines. Patients may also seek care from several different providers so the IIS serves as a central source of information on which vaccines a patient received from other medical providers, pharmacies, or other locations such as work place, mass vaccination, or hospital settings. NCIRD has also supported advancements in a vaccine ordering system called VTrckS to improve efficiencies in the vaccine ordering and distribution network at the Federal, state/local, and vaccination provider levels. Finally, advances in health IT have led to the addition of two-dimensional (2D) barcodes on many vaccines which can be scanned and assist providers in documenting key data elements of the vaccination record such as lot number, expiration date, and product identification. These advances can aid providers in more quickly and accurately documenting administered vaccines which further strengthens health coordination.

2. What is the CDC's role in supporting public health agencies and encouraging bidirectional communication with physicians? Since the Meaningful Use program requires physicians to e-prescribe and to input immunization data into registries what are the capabilities for bidirectional communication from pharmacies and public health departments back to physicians?

CDC provides support through a variety of mechanisms to 56 U.S. immunization programs housed within state and local public health departments; all but one of these immunization programs (New Hampshire) operate Immunization Information Systems (IIS). CDC leads the development and publication of health IT communication standards for immunizations that facilitate effective bi-directional communication between IIS, electronic medical records, and other health IT systems. CDC provides financial support and technical assistance to immunization programs to implement current health IT standards for bi-directional exchange, and to identify and enroll vaccination providers in the IIS to facilitate data exchange. Approximately 90 percent of IIS have the capability to receive immunization information from electronic medical records consistent with Meaningful Use messaging standards; approximately half of the IIS are engaged in bi-directional data exchange. These efforts have helped to support not only the CDC program but also the Office of the National Coordinator for Health IT interoperability initiatives. A 2014 survey found that pharmacies were reporting doses administered to IIS in 36 of the 45 immunization programs that responded (80 percent); pharmacies were required to report to IIS in 22 jurisdictions (49 percent). This survey found almost no pharmacy capability for bi-directional communication with IIS. However, as vaccinations are reported to IIS from pharmacies, they become available to clinicians as part of the immunization history, upon which clinical decisions can be made.

3. Some physicians report that submitting data to their state registries is seamless while others say that they must input data manually or that a few states do not have much of a registry at all. How would you describe interoperability among state registries?

Technical and operational capacities vary tremendously among IIS, electronic medical record systems, and other health IT systems. Inconsistent implementations result in limited data exchange. As mentioned in response to question 2, approximately 90 percent of IIS have the capability to receive immunization information from electronic medical records (EMRs) and other health IT systems consistent with Meaningful Use messaging standards; approximately half of the IIS are engaged in bi-directional data exchange with EMRs. As of 2014, almost no pharmacy capability for bi-directional communication with IIS existed. Policies that impact data sharing between providers and IIS also vary at the state and local level. A 2012 survey found that explicit consent was required in three states (Kansas, Montana, and Texas) to share childhood immunization information from a provider to an IIS, and in eight states it is required for adult immunization information.

CDC and its partners are committed to overcoming barriers in the registry community. An IIS Executive Board, comprised of Federal, state, and local government stakeholders, was established at CDC to support prioritization and development of IIS initiatives to improve interoperability and other key outcomes. Examples of initiatives recently launched include targeted technical assistance to immunization programs that require assistance to overcome local barriers to IIS success and the identification of non-technical barriers that limit IIS data accuracy, use and exchange. With continued support from and collaboration between Federal, state, local, and private-industry stakeholders, barriers to effective interoperability between IIS and other health IT systems can be overcome.