

Integrated Electronic Data and Information Systems

Objective: By 2010, Wisconsin will have an integrated electronic information system that measures public health system capacity and provides meaningful information about Wisconsin's five infrastructure priorities and 11 health priorities for individuals and organizations to improve the health of Wisconsin's population.

Selected Accomplishments and DHFS Activities

- Continued efforts to educate the public health system workforce about the Public Health Information Network and the Health Alert Network. A public Web site is being developed to provide detailed information and learning modules on both these systems (available spring 2006 at <http://dhfs.wisconsin.gov/wiphin/>).
- Developed a dataset listing the measures for the state health plan. This work includes complex analysis and identification of all needed measures, determining the availability of data for these measures, and identifying gaps in current measurement.
- Investigated the utility of a master index to link client records across systems to create comprehensive views of clients and reduce duplicate data entry within privacy boundaries.
- Provided support for the implementation of the Wisconsin State Laboratory of Hygiene Web portal. This sets the stage for effective interchange of electronic information between laboratories, increasing the speed, efficiency, completeness, and quality of data.
- Expanded the scope of electronic laboratory reporting beyond reference laboratories (Wisconsin State Laboratory of Hygiene) to include major hospital laboratories in Wisconsin. This sets the stage for eliminating paper reporting of notifiable and environmental conditions and radically increases reporting speed, efficiency, completeness, and quality.
- Determined an approach for acquiring a comprehensive electronic statewide disease and environmental surveillance system. This will provide a single integrated system for reporting, surveillance, case management, and outbreak management of all "notifiable" conditions (e.g., tuberculosis) and environmental hazards (e.g., lead).
- Developed a survey that identifies the specific sets of data that partners within the public health system are sharing, plan to share, or need to share (interoperability). For example, SPHERE needs data from vital records, and plans are underway to share the data with the Wisconsin Immunization Registry. Another example is linking air quality data with rates of asthma.
- Established the requirements and technical architecture needed for a system-wide data analysis, visualization, and reporting service for public health. This will enable convenient and uniform access to diverse sets of public health data for epidemiology, surveillance, research, training, management, and policy.
- Activated CommandCaller to notify Wisconsin Emergency Assistance Volunteer Registry (WEAVR) volunteers of the need to respond to Hurricane Katrina and keep them informed of evolving needs in the Gulf Coast states.
- Used the Health Alert Network to communicate and coordinate local public health activities in support of Hurricane Katrina response and recovery efforts.

- Implemented technologies and procedures to enable local verification of the identity and organizational affiliation of users of the Public Health Information Network, a critical step in ensuring secure access to the data managed within the Network.
- Piloted the technology that will allow PHIN users to access multiple computer systems by logging in once. This streamlines workflow and access to information, and allows comprehensive views of data about a subject.
- Was awarded \$100,000 in an “InformationLinks” grant from the Robert Wood Johnson Foundation to understand and define the role of public health in regional health information organizations – the building blocks of the National Health Information Network.
- Improved the data linking and analysis necessary to measure and address health disparities in Wisconsin. Data linking enables discovery of previously unrecognized disparities and measurement of progress in their elimination. These improvements will create comprehensive documentation on disparities and the effectiveness of prevention efforts.

New and Emerging Issues

- New technologies that can translate and transport data between disparate systems and among varying public health system partners and providers. Such technologies must meet national standards for interoperability. Public health in Wisconsin spends less than 1% of its outlays on information technology. Outlays for information technology in banking are about 10%, manufacturing 6 to 8%, and health care about 2%.
- National studies have revealed that a large portion (30%-50%) of health care expenditures is inappropriate, redundant, or unnecessary. Health information technology can be leveraged to prevent inappropriate health care decisions and improve health outcomes. In 2006, Governor Doyle launched an initiative, through the creation of the eHealth Care Quality and Patient Safety Board, to utilize health information technology to help reduce medical costs and improve the safety of health care.
- Wisconsin public health data systems must be created within a larger digital framework of clinical care, self-care, and research, compatible with national initiatives such as the National Health Information Network.
- Population-based data provides value-added information to the clinical practice environment. For example, the Lead Program is working to create clinician scorecards on lead screening. Aggregated data on lead screening adds value to clinical practice. Scorecards provide insight into the degree to which a clinician is screening Medicaid children for lead poisoning. Such data foster quality improvements in clinical practice and clinical decision-making to prevent negative health outcomes. The data may also provide a competitive edge that can stimulate an increase in screening in the clinical setting for children at risk.