Division of Notifiable Diseases and Healthcare Information

Advancing Public Health Surveillance Through Science and Collaboration

The Centers for Disease Control and Prevention (CDC)'s Division of Notifiable Diseases and Healthcare Information (DNDHI) helps protect the health of the U.S. population by rapidly identifying and monitoring disease outbreaks and harmful health effects of hazardous conditions and by tracking outbreaks and adverse health effects over time. This information is provided to national, state, and local public health programs for their use in planning and implementing programs to prevent and control disease and injury.

Within CDC, DNDHI leads the integration of CDC's statistical, epidemiologic, and informatics methods for public health surveillance and evaluation. DNDHI works closely with federal, state, and local public health partners to support and improve timely and efficient collection, sharing, and analysis of healthcare and public health information.

By bringing together the **National Notifiable Diseases Surveillance System** (NNDSS) and **BioSense** program, DNDHI helps create administrative efficiencies for CDC, improves CDC program collaboration, and strengthens CDC's partnerships with federal, state, and local public health authorities and others. The BioSense program collects timely hospital data for syndromic surveillance, and NNDSS collects data on specific diseases and conditions.

Both programs aggregate and present these data for use by CDC programs, state and local public health authorities, and others. They both also work closely with partners—which include all 50 U.S. states, six large local health departments, five territories, and federal partners—to electronically collect public health data.

DNDHI is in CDC's Public Health Surveillance and Informatics Program Office; Office of Surveillance, Epidemiology, and Laboratory Services.

Division Key Activities

DNDHI's key activities include the following:

- collecting and sharing information on diseases and harmful health effects of hazardous conditions over time;
- working with CDC programs, state and local health departments, and other partners to provide a regional and national public health surveillance picture for all health hazards, diseases, and injuries;
- developing and supporting development of syndromic surveillance data standards to help states implement the national initiative for meaningful use of electronic health records;
- maintaining an annual list of nationally notifiable conditions and case definitions based on Council of State and Territorial Epidemiologists Position Statements; and
- producing the weekly notifiable diseases and mortality tables and annual *Summary of Notifiable Diseases* for the *Morbidity and Mortality Weekly Report (MMWR)*.

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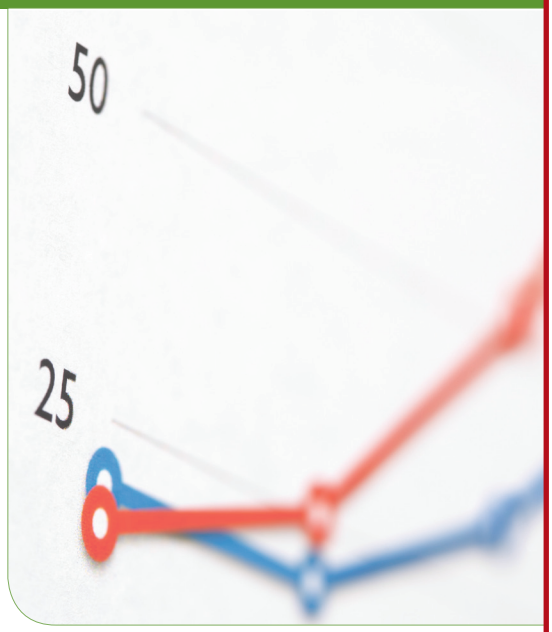
Flagship Systems

BioSense



The BioSense program tracks health problems in the United States as they evolve. It provides public health officials with the data, information, and tools needed to better prepare for and coordinate responses to safeguard and improve the health of the U.S. population.

BioSense 2.0 launched in November 2011. It is a collaborative syndromic surveillance system that integrates local- and state-level health data to provide local, state, and federal partners and CDC programs a near real-time nationwide all-hazards picture. This latest version of BioSense is the result of an interactive partnership within the public health community led by CDC.

This collaborative data exchange system allows users to track health issues as they evolve. BioSense 2.0 is the only public health tool that provides a picture of what is happening right now with any health condition, anywhere and everywhere in the country.

BioSense 2.0 pulls together information on emergency department visits and hospitalizations from multiple sources, including the Department of Veterans Affairs, the Department of Defense, and civilian hospitals from around the country. The BioSense program works with state and local health departments that have agreed to share data from their own emergency department monitoring systems to collect data from civilian hospitals. Analysis of these data provides insight into the health of communities and the country. Such data are vital to guide decision making and actions by public health agencies at local, regional, and national levels.

NNDSS

To support public health programs, the National Notifiable Diseases Surveillance System collects and shares information on infectious and non-infectious diseases and health conditions that have been designated as *nationally notifiable*.

State, local, territorial, and tribal health departments notify CDC of cases of specific diseases and conditions that they identify in their jurisdictions. Every year, the nation's epidemiologists determine which of these diseases and conditions should be notifiable to CDC and how to define a case.

The National Electronic Disease Surveillance System (NEDSS) is an important piece of NNDSS. NEDSS provides data and information technology standards, support, and leadership to state, local, and territorial health departments. These health departments provide CDC with data on nationally notifiable diseases and conditions. All states use a NEDSS-compatible system. NEDSS supports

- reportable disease surveillance by improving information sharing between healthcare providers and health departments and between states and CDC and
- electronic laboratory reporting as part of the meaningful use initiative to improve public health disease reporting.

Activities of the National Notifiable Diseases Surveillance System include the following:

- NNDSS monitors infectious disease morbidity for state and territorial reportable diseases designated as nationally notifiable.
- NNDSS aggregates data from 57 state, territorial, and local reporting jurisdictions each week.
- NNDSS data are shared with the general public through *MMWR* weekly provisional tables and annual *Summary of Notifiable Diseases in the U.S.* and with CDC programs through NNDSS Link.

Division Accomplishments

DNDHI's key accomplishments include the following:

- BioSense 2.0 launched in November 2011, making it the first Department of Health and Human Services system to move completely to a secure, cost-effective, full-feature cloud computing environment.
  - » With BioSense 2.0, state and local health departments have technology that helps them keep up with the latest advances in electronic health records.
  - » BioSense 2.0 saves health departments time and money by simplifying data collection, storage, and sharing.
  - » BioSense 2.0 improves surveillance and situation awareness by strengthening cross-jurisdictional collaboration and data sharing.
- The BioSense program worked with partners to develop electronic health record requirements for syndromic surveillance. Syndromic surveillance is a system for collecting and analyzing medical data to detect and monitor disease outbreaks and harmful effects of exposures to hazardous conditions.
- NNDSS has helped state and local health departments build a national network to support notifiable diseases surveillance since fiscal year (FY) 2000. NNDSS supports public health jobs in states.
  - » In FY2011, NNDSS supported more than 100 staff in state and local public health departments.
  - » In FY2012, NNDSS provided $10.4 million to 63 state, territorial, tribal, and local public health departments to support personnel and technology through the CDC Epidemiology and Laboratory Capacity program.

Division Future Plans

DNDHI's future plans include the following:

- The division will continue to improve the ability of public health to detect and monitor disease outbreaks and hazardous conditions in the U.S. population.
- The BioSense program will continue to work with new state, local, and territorial health departments to help them join the BioSense 2.0 community of users.
- The BioSense program will provide financial support to state and local jurisdictions.
- NNDSS will continue to work with partners to improve data quality and access.

BioSense 2.0 is the first Department of Health and Human Services system to move completely to a secure, cost-effective, full-feature cloud computing environment.

Division Key Partners

State, local, tribal, and territorial public health departments

Other programs at the Centers for Disease Control and Prevention

International Society for Disease Surveillance

Council of State and Territorial Epidemiologists

Association of State and Territorial Health Officials

National Association of County and City Health Officials

Joint Public Health Informatics Taskforce

Public Health Informatics Institute

Department of Veterans Affairs

Department of Defense

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