Chronic Disease Tracking

What Is Chronic Disease Tracking?

Chronic disease tracking, also known as surveillance, is the collection and analysis of data on chronic conditions. An effective chronic disease-tracking network should include local, state, and federal public health agencies that work together to track the incidence and prevalence of certain chronic diseases. When combined with a strong biomonitoring program and environmental hazard tracking (i.e. the Toxic Releases Inventory (TRI) carried out by the Environmental Protection Agency), health practitioners and environmental regulators will have the ability to identify clusters of disease and make informed decisions when formulating policy that affects health.

How Do We Currently Track Disease?

There are national, state and local databases that make up chronic disease tracking in the United States. However, most of them are specific to only one disease and do not communicate with other registries or tracking systems.

These tracking systems fall primarily into two categories: active and passive. One example of a passive tracking system is a registry. Registries are usually state-based and require health care providers to report every incidence of a specific disease encountered when treating patients, including the extent, treatment, and outcome of the illness. Physicians are typically more familiar with registries than with other types of disease tracking because of reporting requirements. However, registries are not the only mechanism used to track diseases.

Active health tracking relies on population-based survey methods, which include reviewing existing medical records and conducting interviews with individuals in an attempt to understand health trends. Active health tracking is the responsibility of personnel at local, state and federal public health agencies.

The following are some examples of existing tracking systems:

Passive Health Tracking

- The Surveillance, Epidemiology, and End Results (SEER) program is an example of a population-based registry of cancer incidence and mortality in the United States. SEER data are based on state cancer registry information for a select group of states and cover only 14% of the population.

- The Iowa Birth Defects Registry is an example of a state-based registry. Health care providers are required to report each birth defect case to the state
health department. This registry provides information for research projects that attempt to identify risk factors for birth defects.

**Active Health Tracking**

- The National Health Interview Survey (NHIS) is designed to represent the civilian, non-institutionalized population in the United States. Conducted by the CDC’s National Center for Health Statistics (NCHS), this survey collects information on illness, accidental injuries, disability, use of dental, medical and hospital services, and other health-related topics. It has been conducted continuously since 1957.

- The National Hospital Discharge Survey (NHDS) is a continuous survey based on a sample of medical records for patients discharged from short-stay hospitals. It collects demographic information, admission and discharge dates, diagnoses and procedures performed.

- The National Ambulatory Medical Care Survey (NAMCS) and the National Hospital Ambulatory Medical Care Survey (NHAMCS) are national surveys designed to provide information on the types and uses of outpatient health care services for office-based physicians, emergency rooms and hospital outpatient centers.

These surveys provide a good overview of certain health outcomes nationally, but were not designed to describe the health of state and local communities. Nor do the surveys have the capacity to pinpoint clusters of chronic disease and link them to communities exposed to environmental contaminants.

A national chronic disease monitoring and tracking network would link these existing data collection capacities together and incorporate environmental hazard tracking components into the network. Gaps in knowledge would then be identified and systems designed to paint a complete picture nationally, regionally, and eventually statewide and locally.

**America Needs Environmental Health Tracking**

This century has witnessed a shift in the leading causes of morbidity and mortality from infectious to chronic diseases, but support for tracking-related efforts has lagged. The EPA and state environmental agencies have pursued a risk-based regulatory approach, focusing primarily on extrapolation from animal toxicology tests, to determine which environmental pollutants are damaging to humans. At the same time, public health agencies have used a tracking-based population approach to try and determine the primary dangers to human health.

Unfortunately, there has been little fusion of these two systems, which has stagnated any attempt to identify environmental hazards that may have detrimental effects on human health. A vital step in continuing to address the public health needs of the United States is the formation of a network that can track clusters of common conditions and monitor environmental exposures.