CDC WONDER

CDC Wide-ranging ONline Data for Epidemiologic Research (CDC WONDER) is a web application that makes many health-related data sets available to the worldwide public health community. Users include state and local health departments, academic researchers, healthcare providers, CDC surveillance programs, and the general public. The data found on CDC WONDER aid users in public health research, decision making, priority setting, program evaluation, and resource allocation.

Features

CDC WONDER manages nearly 20 collections of public-use data for U.S. births, deaths, cancer diagnoses, Tuberculosis (TB) cases, vaccinations, environmental exposures, and population estimates, among many other topics. These data collections are available as online databases, which provide public access to ad-hoc queries, summary statistics, maps, charts, and data extracts. Most of the data are updated annually; some collections are updated monthly or weekly.

System functions include the following:

- creates tables, maps, charts, and data exports with the ability to index data from any field or limit data by any field;
- produces ad-hoc summary statistics, such as frequency counts, rates, confidence intervals, standard errors, and percentages;
- organizes data results into categories; and
- compares specific populations, locations, and/or groups of people with custom measures, such as age-adjusted rates calculated with various standard populations.

These data are available in several file formats, including web pages (HTML), chart and map images (jpgs), and spreadsheet files (simple text [ASCII] with tab-separated values).

Data Sharing

The collections available on CDC WONDER are based on the collaboration of several agencies. Many CDC programs partner with CDC WONDER to provide external partners and the public with access to data. An example of this partnership is the CDC Immunization Safety Office collaborating with the Food and Drug Administration to share adverse vaccine event data from CDC WONDER.

Another example of data sharing is that the North American Association of Central Cancer Registries relies on CDC WONDER to access finalized cancer data for each central cancer registry location, which allows comparisons of finalized data among locations.

State, local, and county health departments rely on data shared on CDC WONDER to review their community's population health trends, evaluate their program's performance for planning purposes, and compare their community with other locations.

In addition, CDC WONDER adds value to a partner's ability to develop innovative data analysis and delivery. The system's application programming interface (API) and shared public domain software allow others to access statistical data for their own applications and develop their own online databases for data analysis. For example, Google partnered with CDC WONDER through an API to provide the data featured on Google's Public Data Explorer. The WONDER API also has been shared with many informatics developers, including Lincoln Laboratory at MIT and Temboo, a programming website.

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