



The Computerworld Honors Program

Honoring those who use Information Technology to benefit society

Final Copy of Case Study

YEAR:
2012

STATUS:
Laureate

Organization name:
Centers for Disease Control and Prevention, Management Information Systems Office

Organization URL:
www.cdc.gov/od/ocio/overview/miso.htm

Project Name:
Winnable Battles Sortable Stats

What social/humanitarian issue was the project designed to address? What specific metrics did you use to measure the project's success?

This project supports CDC's focus on "Winnable Battles," including chronic illnesses like obesity, heart disease, HIV infection and other preventable events such as binge drinking, smoking, and motor vehicle-related deaths. In total, the 20 health indicators reported in the Sortable Stats application map to CDC's Winnable Battles public health priorities with large-scale impact on health and with known, effective strategies to address them. Specifically, the application addresses the awareness gap in both the prevalence and severity of these preventable conditions. By providing views and supporting trend analysis at the national and state level, Sortable Stats is targeted at helping people understand the magnitude and prevalence of serious but preventable health issues. Also, because different people learn through different means, the application provides multiple ways of viewing the health data associated with these winnable battles, including a map-based view that illustrates regional trends, a detail view that presents health indicator data by ethnicity and gender, and a trend view that shows improvement or decline for a particular health indicator over time. The team collects standard web traffic metrics such as the number of clicks or visits to the site and the time spent at the site. While this does not provide a complete picture, it does provide a quantifiable metric that helps us gauge the site traffic and upward or downward trends in site visits. The team also captures a qualitative metric based on input from state and local public health departments. Many state health departments use the application daily and share it with their own stakeholders. Success was also measured by the large number of requests from HHS and state health departments to expand the application's capabilities, adding more health indicator data and enhancing analytical tools.

Please describe the technologies used and how those technologies were deployed in an innovative way. Also, please include any technical or other challenges that were overcome for the successful implementation of the project.

The objectives for Winnable Battles Sortable Stats included a cost-efficient, high-quality, and easy-to-use application that could be broadly distributed. To meet these objectives, we built the application using Microsoft Silverlight Version 4. Silverlight provided data visualization to offer the public rich and interactive views of health indicator data and trends as well as geospatial information. This was the CDC's first deployment of Microsoft Silverlight in the public domain, offering new perspectives on how chronic diseases vary by state and region over time. The public can now view how their region compares with others, both for existing health statistics and for indicators of future health issues such as obesity rates, underinsured population, tobacco use, and alcoholism. The primary challenges involved making a visual-based application compliant with federal usability and accessibility requirements as mandated by Section 508 of the Americans with Disabilities Act. These requirements state that the application must be navigable using the tab key and must provide a comparable user experience for people who may be visually impaired and rely on screen readers to convey the information presented in the application. The fully compliant application was released with these considerations built into the user interface design.

Please list the specific humanitarian benefits the project has yielded so far.

As a publicly available web application, this tool disseminates information to broad and sometimes underserved populations. However, due to the one-way flow of information, it is difficult to measure the direct benefit gained from the information shared and the awareness created. The humanitarian benefit provided, while not direct, is still substantial. Through increased public awareness of serious and preventable health issues, this initiative strives to educate the public and arm CDC's public health partners with the information needed to understand the prevalence of preventable health issues. Furthermore, by providing trend analysis at the national and state levels we are providing evidence that as a nation and as individual states we are making progress in improving public health. For example, the Detail View Screen for Heart Disease shows states including Georgia and California achieved a 25% reduction in the number of heart disease-related deaths from 2000 to 2007. These encouraging downward trends can point other state health departments to contact Georgia or California to understand what mix of education and policies helped achieve these results. This is simply one example of the power of trend analysis and benchmarking enabled by Winnable Battles Sortable Stats.

Please provide the best example of how the project has benefited a specific individual, enterprise or organization. Feel free to include personal quotes from individuals who have directly benefited from the work.

Winnable Battles Sortable Stats enables users to access regional estimates as well as state data on the leading health indicators identified by the Institute of Medicine (IOM). These enhancements will enable end users at the regional, state, and local levels to access information in an easily digestible format including demographic data across all 50 states and U.S. territories. The data-sharing ability created by this tool enhances the ability of CDC stakeholders to make data-driven decisions that impact programmatic activities and the success of program strategy and implementation, and should ultimately result in improvements in health outcomes. Additionally, this application supports the Health and Human Services (HHS) Assistant Secretary for Health Regional Health Profile, who provides data for regional health administrators. State public health officials and the public now have access to broad-spectrum data on regional health impacts associated with behaviors and mortality rates of diagnosed diseases, such as cancer.