

Informed Alaskans Initiative: Public Health Data in Alaska

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Access to public health data is critical for health and medical researchers, nonprofit and government agencies, policy makers, and citizens. The challenge is to present health data in a way that is easy to access, easy to understand, and cost-effective to disseminate. To meet this challenge, the Alaska Division of Public Health within the Department of Health and Social Services (DHSS) launched the Informed Alaskans Initiative in 2012 to make the increasing amount of national and state public health data available online. Public health data that are accessible and understandable contribute to informed decision-making and effective responses to public health issues.

The Informed Alaskans Initiative is modeled on a Centers for Disease Control and Prevention (CDC) program “to improve access to and the use of health data.” DHSS designed a website with two main components: public health datasets, and interactive health data maps for Alaska’s regions. The datasets are found in the Alaska Indicator-Based Information System for Public Health (AK-IBIS) while the interactive health data maps are created using InstantAtlas interactive mapping software. Users can select health data charts that are combined with the mapping system to produce statewide and regional maps. The site includes customizable screens for displaying statistics, maps, and charts for Alaska public health regions, Alaska metropolitan/micropolitan statistical areas, Alaska borough/census areas, and Alaska tribal health regions.

AK-IBIS

The Alaska Indicator-Based Information System for Public Health (AK-IBIS) contains a number of health datasets or health indicators. A health indicator is defined by DHSS as a

measurable element of the status of a population or health system as it relates to an identified public health factor, e.g., the percentage of adults in Alaska who reported binge drinking in the past 30 days. The health indicators data are viewable across digital platforms including computers, tablets, and smart phones.

The goal of the Informed Alaskans Initiative is to present data that allow for regional level analysis while providing accurate statewide estimates, as well as comparisons with national data estimates. Data from statewide health systems and tribal health systems are organized to facilitate examining information at more detailed regional and community levels. Data in this format assist in community health assessment and the development of intervention efforts in Alaska. Public health challenges such as health disparities between populations and regions can be identified and addressed with the help of the data from the Informed Alaskans Initiative.

Health Indicators

AK-IBIS, the database component, contains 62 health indicators as of this writing. To help navigate through the AK-IBIS data, the health indicators have been divided into the following health topics which show up as user-friendly icons on the website (Figure 1):

- Population Characteristics (including demographics and social determinants of health such as education, income and poverty, and employment);
- Risk and Resiliency Factors (such as physical activity, nutrition, alcohol and tobacco use, and the physical environment—including water and waste water services);
- Health Care Services and Systems (health care availability, health care coverage and cost, use of preventive services, etc.); and

- Health Outcomes (maternal and infant wellness, leading causes of death, injury and violence, substance abuse, mental health, etc.).

Selecting one of the icons takes the user to a new webpage with a concise description of the desired health indicator and a listing of background information on the subject. A user can choose from options that include the importance of the health indicator, a brief summary of what is currently known about it, an outline of the populations at risk and strategies for risk reduction (where applicable), an explanation of how the health indicator is tracked, and indicator reports with additional information.

The major datasets contained in AK-IBIS are the:

- Pregnancy Risk Assessment and Monitoring System 2009–2011 (PRAMS)—a survey conducted annually by the Centers for Disease Control (CDC) and state health departments that collects data on maternal attitudes and experiences before, during, and shortly after pregnancy;
- Behavioral Risk Factor Surveillance System (BRFSS)—a nationwide CDC telephone survey that collects data on health-related risk behaviors, chronic health conditions, and use of preventive services;
- Youth Risk Behavior Surveillance System (YRBSS)—includes a nationwide high school-based survey conducted by the CDC biennially that collects data on six types of health-risk behaviors that contribute to the leading cause of death and disability among youth and adults;
- Chlamydia and Gonorrhea Rates; and
- Infectious Diseases.

Health data from local surveys conducted by entities such as state and tribal health agencies, tribal governments, and school districts are also part of AK-IBIS. Data from these sources are gathered on the DHSS Alaska Center for Health and Data Statistics website and made available to users via the Informed Alaskans Initiative.

Indicator Reports

Indicator reports (also called profiles) are documents that include text, charts and tables with Alaska data, and provide the measurement for a health indicator, the public health context including comparison with the U.S., data interpretation issues, the current status of the indicator, what is being done to improve the status, and other program information. AK-IBIS Indicator Reports are part of the information under individual topics in the Health Indicators portion of the website, and the reports are also under a separate tab that allows the user to search in either the categorized or the alphabetical index of topics. There are

Figure 1. Public Health Topics from AK-IBIS Website (Excerpt)

The screenshot shows the 'Alaska's Indicator-based Information System for Public Health (AK-IBIS) Topics' section. It features a blue header with the title and a sub-header 'The Topics section organizes AK-IBIS website content into the following categories. See the [Topics Introduction](#) for information like "How to find Data and Information on this Site" and "The Alaska Health Status Model." Below this, there are two main topic areas: 'Population Characteristics Topic Pages' and 'Risk and Resiliency Factors Topic Pages'. Under 'Population Characteristics', there are sub-sections for 'Demographic Characteristics' (with a pie chart icon) and 'Social Determinants of Health' (with icons for Education, Income and Poverty, and Employment). Under 'Risk and Resiliency Factors', there are sub-sections for 'Healthy Behaviors' (with icons for Physical Activity, Nutrition, Weight Status, Alcohol, and Tobacco) and 'Physical Environment' (with a tree icon). A source note at the bottom reads: 'Source: "Health Topics," Alaska Indicator-Based Information System for Public Health (AK-IBIS), <http://ibis.dhss.alaska.gov/topic/Index.html>'

62 indicator reports currently on the DHSS website. As noted above, the main topic areas are Population Characteristics, Risk and Resiliency Factors, Health Care Services and System, and Health Outcomes. If a report does not contain the data needed, requests for specific information may be made using the custom query system on the website or by contacting the DHSS office. To ensure accessibility, data are available in both text and graphics.

Interactive Health Maps

Interactive health profile maps are available for the following data sets: Behavioral Risk Factor Surveillance System (BRFSS), Student Weight Status Surveillance System, Youth Risk Behavior Surveillance System (YRBSS), Chlamydia and Gonorrhea Rates, and Infectious Diseases. Clicking on a profile name takes the user to a page with the list of different interactive maps available.

The health profile maps are organized by federally defined and local administrative geographic units and include 7 public health regions, 12 tribal health regions, 5 metro/micropolitan statistical areas, and 29 borough/census areas. Each page includes charts, a map, and an interactive time animation bar that allows the user to select a year in a time series. The changes over time are illustrated in a bar chart and in a map (Figure 2).

Help for Website Users

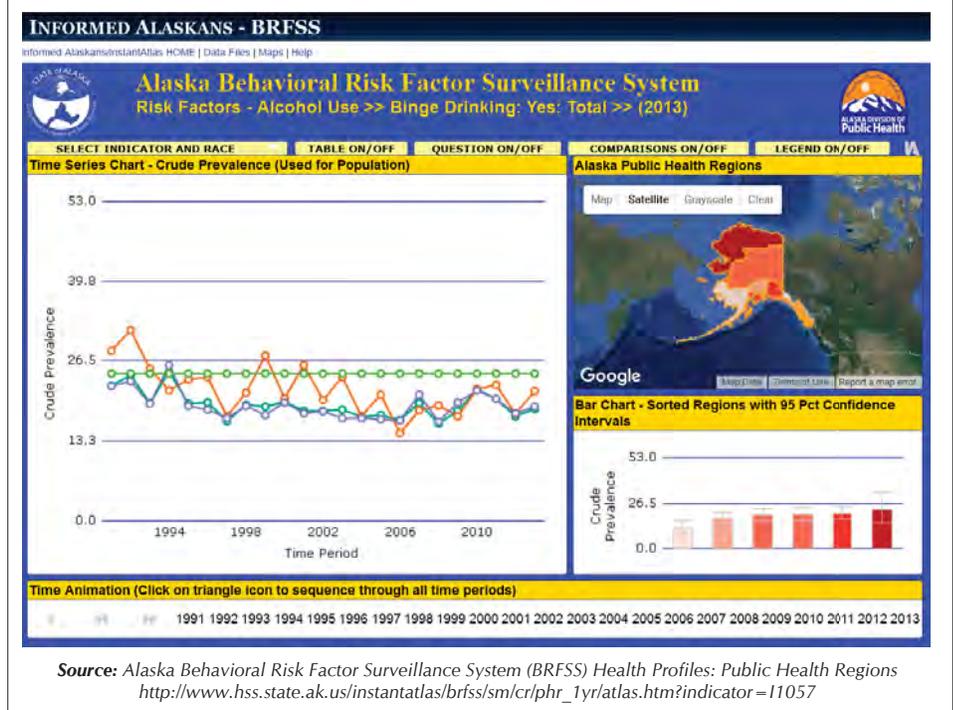
The Informed Alaskans Initiative website also includes links to other sources of public health information, and there is an extensive help page for navigating the site. Links to other health data can be found on the DHSS Alaska Center for Health Data and Statistics website <http://dhss.alaska.gov/dph/infocenter/Pages/default.aspx>. Training on using the AK-IBIS database is available from DHSS—contact Charles J. Utermohle, Ph.D., 907-269-8030 or email Charles.Utermohle@alaska.gov.

What's Next

DHSS is in the process of concluding a three-year survey of Adverse Childhood Experiences (ACEs) in Alaska and will be adding that dataset to the Informed Alaskans Initiative website. The focus of examining ACEs, as outlined by the CDC, is “to assess associations between childhood maltreatment and later-life health and well-being.” Adults who participate in the study self-report specific behaviors and experiences that occurred before age 18. The results from the Alaska survey include information for most areas of the state.

Other projected data to be added to the

Figure 2. Sample Interactive Map—Informed Alaskans Initiative



website reflect developing health concerns such as the use of e-cigarettes, synthetic cannabinoids, and the use of legal marijuana by Alaskans.

Conclusion

The datasets and health profile maps available as a result of the Informed Alaskans Initiative are a valuable resource for researchers and policy makers, as well as community members. The ability to make comparisons between regions and populations assists in early identification of public health issues. In addition, these data hold the promise of furthering our understanding of the connection between public health and criminal justice. Issues such as violence, particularly domestic violence, and substance abuse, for example, have been recognized for some time as both public

health and criminal justice concerns. The examination of health indicators can assist both public health and criminal justice practitioners in identifying populations at risk, and enhancing intervention, prevention, and education efforts. As the criminologists Roberto Potter and Jeffrey Rosky noted in a 2013 article, “The primary essence of criminal justice and public health, as viewed from a social science lens, is the reduction and prevention of negative human outcomes.” As plans go forward to include more data and increase user-friendly aspects of the website, the Informed Alaskans Initiative can provide ever increasing benefits to public health policymaking, education, and prevention efforts in the state.

Barbara Armstrong is the editor of the Alaska Justice Forum.

Public Health Data Resources

- Alaska Department of Health and Social Services. (2016). “Informed Alaskans.” (website). (<http://www.dhss.alaska.gov/dph/InfoCenter/Pages/ia/>).
- Centers for Disease Control and Prevention. (2014). “Adverse Childhood Experiences (ACE) Study.” (website). (<http://www.cdc.gov/violenceprevention/acestudy/>).
- . (2016). “Behavioral Risk Factor Surveillance System (BRFSS).” (website). (<http://www.cdc.gov/brfss/>).
- . (2016). “Data & Statistics.” (website). (<http://www.cdc.gov/DataStatistics/>).
- . (2016). “Pregnancy Risk Assessment Monitoring System (PRAMS).” (website). (<http://www.cdc.gov/prams/>).
- . (2015). “Youth Risk Behavior Surveillance System (YRBSS).” (website). (<http://www.cdc.gov/healthyyouth/data/yrbs/>).
- Potter, Roberto Hugh; & Rosky, Jeffrey W. (2013). “The Iron Fist in the Latex Glove: The Intersection of Public Health and Criminal Justice.” *American Journal of Criminal Justice* 38(2): 276–288 (Jun 2013). (<http://dx.doi.org/10.1007/s12103-012-9173-3>).