Success Story

Name of the NPCR Program: Missouri Cancer Registry and Research Center (MCR-ARC)

Title of the Initiative, project or type of data use:

InstantAtlas™ Upgrade: Moving from InstantAtlas™ Standalone version to InstantAtlas™ Server:

Making cancer incidence data even more accessible and understandable

General timeframe (year(s) or months) during which the initiative/project/data use occurred: "InstantAtlas™" Server (upgrade from standalone version) – Planning: Spring 2012. Implementation: June 2012 and ongoing.

Statement of public health issue, concern or problem:

In 2009, MCR purchased stand-alone data visualization software, InstantAtlas™; it became operational in 2010 and met our need for software that would complement the Missouri Department of Health and Senior Services' MICA (Missouri Information for Community Assessment) program. MICA provides a tabular format for viewing cancer case counts and incidence rates by site, age group, gender, race, etc., at the state, regional and county level (http://health.mo.gov/data/mica/CancerMICA/). It is an interactive tool that has provided useful and meaningful cancer incidence data to epidemiologists and health professionals accustomed to reading and interpreting data tables for more than a decade. However, it is often difficult for the general public, and even some health professionals, to understand or relate to data presented in "big tables with lots of numbers." Health consumers and educators expressed a desire for a convenient way of obtaining local-level Missouri cancer incidence data in a user-friendly format. InstantAtlas™ Standalone was a solution.

In January 2011, the Missouri Cancer Registry (MCR) became the Missouri Cancer Registry and Research Center (MCR-ARC). We decided to revamp our website to better reflect the totality of our work. As the revamped website neared completed, we learned that GeoWise, the InstantAtlas™ (IA) vendor, had a new product, InstantAtlas™ Server. With the vendor's assistance, our IA log in reflects our home page.



Fig. 1 - IA log in page

Evidence that the central registry was effective in addressing the issue, concern or problem:

InstantAtlas™ is an interactive, user-friendly system for visualizing health-related data in which a wide range of health indicators can be viewed in either single or double map displays combined with tables, time-series charts, bar charts and scatter plots. This technology has allowed MCR to present data in a more user-friendly way so that the public, health educators and others can view and display data in a variety of formats that can be easily understood and will meet the user's needs.

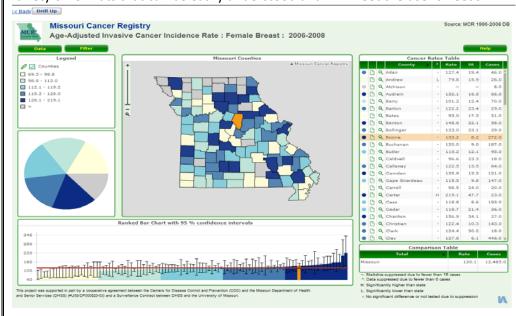


Figure 2: Female breast cancer incidence in Boone Co., MO (highlighted in orange)

The ability to have two maps has been a major incentive for us. For example, breast mammography screening rates (not shown) and breast cancer incidence rates (Figure 2) can be shown alongside each other or rates in one county can be compared with other counties.

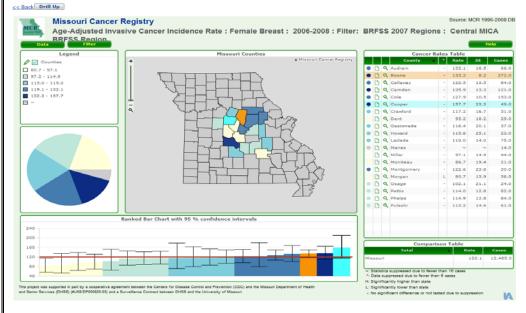


Figure 3: Female breast cancer incidence in the Central Region of Missouri.

Implications regarding this successful effort by the central cancer registry:

This technology has allowed MCR to present data in a more user-friendly way so that the public, health educators and others can view and display data in a variety of formats that can be easily understood and will meet the user's needs (https://mcrregweb.col.missouri.edu/IAS/)

InstantAtlas™ and our "Top Ten Sites" (http://mcr.umh.edu/Counties/Boone.pdf) have been very popular with the general public and staff of local public health agencies. Following introduction of the Top Ten Sites in 2009/10, there was an increase in visits to our website and a decrease in the number of phone calls requesting local-level data. This trend has continued with the introduction of InstantAtlas™.

InstantAtlas™ allows MCR operations and research staff to present the statistical significance of our cancer incidence data at the county level. By improving data visualization, we are able to develop better communication with the general public and engage health policy makers in more informed decision making.

A number of different groups use the online data visualizations. These include MCR-ARC staff, graduate research assistants and a variety of other researchers and health professionals. The number of external users is growing. Local health departments find the MCR-ARC website useful because it is important for them to have county-level data. Many of our Missouri's 115 counties do not have the resources to put something like this together themselves.

Future developments

Although we purchased the server version of InstantAtlas™ more than a year ago, staff have not yet used it to its full potential. In the coming months, we look forward to exploring additional uses. One possibility we are exploring is InstantAtlas' use as a project management tool, e.g., plotting locations of pilot sites for a project to bring data from clinic/physician office (C/PO) electronic health records (EHRs) directly into the central cancer registry (CCR). (See Success Story on Special Project #3: "From EHRs to MCR."

We will also be able to look in depth at various cancers that are amenable to prevention or early detection. The ability to visually display maps and graphs as well as tables and present in a user-friendly visual format will inevitably garner more support for MCR-ARC's work.

Key benefits

- Data visualization has helped MCR-ARC create greater awareness and public recognition of its work.
- MCR-ARC can now use the website to field enquiries about data which saves time and effort.
- Data is presented in an easy-to-understand format that has been welcomed by users.
- At times of economic austerity, it is important for MCR-ARC and other CCRs to meet their objectives, NPCR program standards and contractual obligations (for some CCRs) in a cost-effective way while contributing to efforts aimed at reducing the burden of cancer.

Missouri Cancer Registry and Research Center

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MCR-ARC is a NAACCR Gold-certified Registry