



Issue 7—April 5, 2005

Welcome to SAVI Connections, the bi-monthly electronic newsletter regarding the SAVI system. SAVI Connections provides news about SAVI, demonstrates various ways in which SAVI can benefit your organization, announces release of new data, showcases new tools, highlights a variety of SAVI users, and broadcasts user support and training options. The Polis staff encourages your ideas and feedback. Please address comments to: skandris@iupui.edu. View past newsletters at:

<http://www.savi.org/savii/about/news.aspx>.

What's New?

SAVI Interactive has new Data. Check them out at <http://www.savi.org>.

New Data

- Nearly 3,000 new Census items
- Quarter 2, 2004 Uniform Crime Report Data for Marion County
- Schools
- Human Service Programs

SAVI User Conference

June 10, 2005, 9:00 – 4:00 at Ruth Lilly Education Center (2055 N. Senate Avenue, Indianapolis)

Using SAVI to Understand Obesity in Central Indiana

Obesity. Hardly a day goes by without a new report on the dangers posed to public health by this lifestyle epidemic. Experts agree that the threat is real and that the physical, economic, and social well-being of Americans, including residents of Central Indiana, is at risk. What can we do about it?

In 2003 Dr. Gil Liu, a pediatric researcher at the IU School of Medicine, raised a simple question: could SAVI help him locate vulnerable youth populations and view them in relationship to the community assets and liabilities that promote healthy and unhealthy behaviors. He wanted to understand the environmental influences on obesity, with the goal of using the analysis to influence healthier life choices.

Working with Sharon Kandris, SAVI project manager, Liu soon had enough information to convince him that the project was not only feasible but highly fundable as well if it could be combined with the Regenrief Institute clinical database. Significantly, this rich set of patient data contained enough information to calculate BMI, or body mass index, a measure of obesity for hundreds of young patients. Linking SAVI and Regenrief data would allow Liu to answer questions that would be too expensive in other locales because of the cost of data collection.

After passing a stringent review to protect confidential information, the team of Liu and Kandris began to link the two systems. SAVI makes this linkage possible without requiring data to be reformatted because it is, in fact, a geographic information system that relates disparate data to each other through the common denominator of space or location.

Addresses in the patient database allowed the team to locate obese children in their socio-economic and physical environment. Now the researchers could measure such variables as distance to playgrounds and green spaces or access to fast food outlets and determine if proximity had any influence on healthy or unhealthy BMI.

The pilot study proved so promising that soon Dr. Liu won significant grant funding to expand the research. Now in the second year of a five-year project, the research already is beginning to pay dividends to Indianapolis communities. Liu shares the results with urban planners, parks and recreation staff, and public health officers, among others, who

SAVI People

*Dr. Gilbert Liu
Indiana University
Department of Pediatrics*



Although no one could tell it by looking at the trim figure of Dr. Gil Liu, an IU pediatric researcher, he finds it difficult to find enough time to exercise and eat right. His struggle prompted an interest in disease processes such as obesity that have substantial behavioral components. “How can we modify childhood behaviors and the environment in which children live,” he wondered, “to reduce the obesity that plagues American young people?”

When the Ames, Iowa native came to IU’s Children’s Health Services Research Program after post-doctoral work at the University of North Carolina, he quickly learned about SAVI and its potential for helping to decipher the causes of obesity. “SAVI contains a wealth of information about the social and economic environment of children,” he notes, “and I realized that we could link clinical data with this information to examine whether and how these factors influence weight problems.” For example, does the absence of easily accessible playgrounds or the too ready availability of fast food places correlate positively with the number of obese children in a geographic area? “It’s a new area of research,” Liu offers, “and one that promises to help us not only understand the problem but perhaps provide remedies as well.”

Funding agencies liked Liu’s approach. An early collaboration with SAVI staff on an Urban Institute Neighborhoods and Health project provided enough good data to allow Liu to win a prestigious National Institutes of Health award of \$608,000 for the expanded Environmental Risks of Obesity (PESERO) Project. “The availability of SAVI and the presence of a highly skilled GIS staff,” he argues, “were instrumental in the NIH decision to fund this study. Indianapolis and the IU School of Medicine are fortunate to have this amazing resource. It will pay rich dividends for our work in the life sciences.”

are able to use the results to encourage healthier lifestyle choices among youth.

One way to do this has emerged in a separate but related project that also draws upon SAVI. Both Liu and Kandris are working with the Ruth Lilly Health Education Center to use information about the environments students come from to help teachers become more effective health educators. This project, led by Dean Mark Sothman of the IU School of Health Rehabilitative Services, also has attracted external funding from the National Library of Medicine.

NOTE: On March 31 the SAVI Website published a report on the preliminary findings of Dr. Liu’s research into environmental influences on childhood obesity. View the report at:

<http://www.savi.org/savii/reports/obesityreport>.

SAVI as a Research Tool

Although designed initially as a human services and community planning tool, SAVI is proving its worth in another arena of importance to Central Indiana—research. The life sciences especially are finding the comprehensive community information system to be valuable in attracting external funding. In addition to the gain in knowledge, this research also advances the region’s claim to leadership in the life sciences.

Among the recent uses of SAVI in health-related research are:

- *Predictors of Cancer Screening* (Kathleen Russell, IU School of Nursing) identified predictors of cancer screening by studying the relationship between cancer screening in patients and the characteristics of their neighborhoods.
- *Community Assets and Cancer Screening in Low-Income Women* (Kathleen Russell, IU School of Nursing) was a follow-up study to identify the neighborhoods most at risk for breast, cervical, and colorectal cancer among low-income women and to identify the community organizations in those areas that could serve as sites for education and/or screening opportunities.
- *Riley Leukemia Study* (Suzanne Ragg, Riley Children’s Hospital) examined the relationship of pediatric leukemia treatment adherence and socioeconomic indicators associated with the neighborhoods where patients lived.
- *Childhood Asthma Study* (Mary Beth Riner, IU School of Nursing, in association with Children’s Health Services Research Program and Regenstrief Institute) used SAVI data to assess the distribution of childhood asthma in Marion County for the purpose of providing more effective interventions.

SAVI is used in other university-based research outside the life sciences, as indicated by researcher Drew Klacik’s analysis of housing markets in Central Indiana, conducted through the IUPUI Center on Urban Policy and Environment.

University and community researchers who are interested in using SAVI for advanced analysis should contact Sharon Kandris, SAVI project manager, at skandris@iupui.edu.

Did You Know

U.S. and Indiana Facts:

- 55% of U.S. adults are overweight, with minority women being the most affected.
- 21% of Indiana adults are obese.
- 35% of Indiana adults are overweight.
- 22-30% of U.S. children are overweight, which has doubled since 1980.
- Indiana is the twelfth fattest state in the nation.

Marion County Facts* on Children Ages 4 – 18:

Females:

- 20% of Caucasians are obese
- 23% of African Americans are obese
- 25% of Hispanic are obese
- 21% of Other races are obese

Males:

- 21% of Caucasians are obese
- 20% of African Americans are obese
- 26% of Hispanic are obese
- 14% of Other races are obese

**Based on patients in Regenstrief Medical Record System with height and weight measurements in 1996 – 2000.*

Sources: Centers for Disease Prevention and Control, National Center for Health Statistics, 2000. Obesity in the Heartland: The Costs to Health and Pocketbooks. Indianapolis: Indiana Family and Social Services Administration; 2001. Regenstrief Medical Record System, 1996 – 2000.



SAVI is a community information system administered and maintained by The Polis Center at IUPUI. SAVI is supported financially by the following organizations: Nina Mason Pulliam Charitable Trust; Richard M. Fairbanks Foundation, Inc.; Health Foundation of Greater Indianapolis, Inc.; Annie E. Casey Foundation; Lilly Endowment, Inc.; United Way of Central Indiana; City of Indianapolis, Department of Metropolitan Development; Marion County Health and Hospital Corporation; Indiana University-Purdue University at Indianapolis (IUPUI).

For more information about SAVI, please visit the website at <http://www.savi.org>.