SAVI ONLINE Magazine

what's trending in your community

"Where a person lives is an integral factor when considering an individual's and a community's healthcare concerns and vulnerabilities"

This issue of SAVI Online Magazine covers the influence of location on health. We will share with you highlights from four projects that incorporate statistics from the SAVI community information system. In each instance, data guide program and policy decisions that will have a significant impact on the health of a community's residents and population health in general.

- Parkview Health System collaborated with The Polis Center and IU's Richard M. Fairbanks School of Public Health, acting jointly as the Indiana Partnership for Healthy Communities, to identify the top health concerns in Fort Wayne and the surrounding counties.
- The IU Richard M. Fairbanks School of Public Health is testing a tool that integrates medical records and neighborhood-level data to predict the best type of treatment for a patient.

- Students in public health are using SAVI in their research to more completely understand and identify the socioeconomic determinants of health.
- The report, *Unequal Access: Tobacco Retail in the Indianapolis Metro Area* reveals that tobacco is more readily available for purchase in areas that already struggle with quality-of-life issues.

The SAVI Community Information System allows one to focus on a particular geography and look at a health challenge in relationship to other factors, including financial stability, education, health, and culture, among others. It also allows one to see across a larger community such as a county where a health concern is concentrated and what other challenges the population in those areas face. Armed with this information, organizations and decision makers can develop a targeted solution to increase successful intervention rates.

As you will learn through the stories in this issue, providing better contextual information—and integrating information by geography—often results in more meaningful outcomes.

HEALTH ACROSS CENTRAL INDIANA

Life expectancy at birth varies by more than 14 years across the region. Life expectancy can encapsulate a broad range of health related issues, including disease risk, environmental factors, and access to care, as well as the systemic problems that drive these imabalances, like income and education inequality.
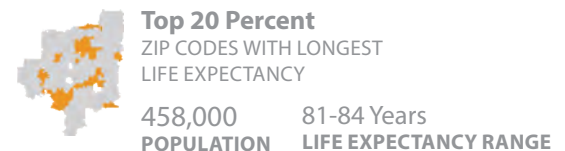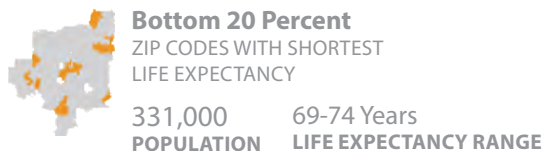
Life Expectancy at Birth
FOR 2013 BY ZIP CODE

Lebanon
Noblesville
Danville
Indianapolis
Shelbyville
Martinsville
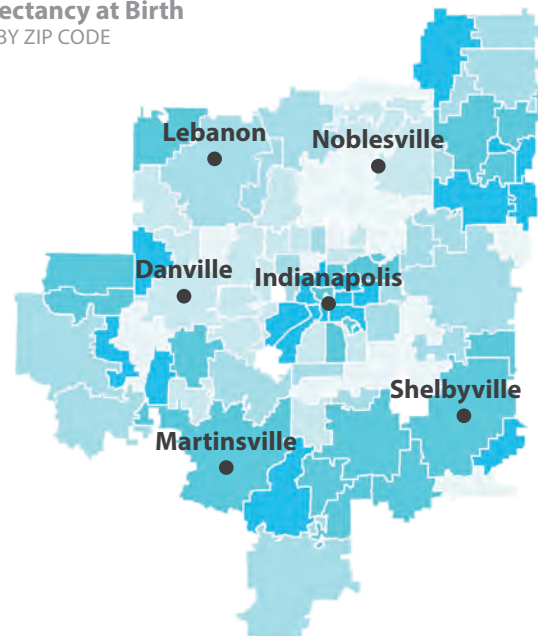
Legend
AND DISTRIBUTION

Range	Percentile
69.4-74.4 YEARS	BOTTOM 20% OF ZIP CODES FALL INTO THIS RANGE
74.5-76.8	21-40%
76.9-78.0	41-60%
78.1-80.4	61-80%
80.5-83.7	TOP 81-100%

COMPARING ACCESS TO HEALTH CARE

Bottom 20 Percent
ZIP CODES WITH SHORTEST LIFE EXPECTANCY

331,000 POPULATION   **69-74 Years** LIFE EXPECTANCY RANGE

FOR EVERY 1,000 PEOPLE

196 HAVE NO INSURANCE

17 HEALTH NEEDS FROM 211 CALLS
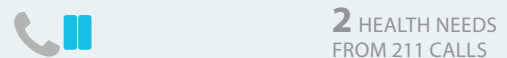
FOR THE AVERAGE ZIP CODE IN BOTTOM 20 PERCENT
FACILITIES PER 100,000 PEOPLE

9 CLINICS

9 URGENT CARE CENTERS

6 HOSPITALS

2 OUTPATIENT MENTAL HEALTH FACILITIES

Top 20 Percent
ZIP CODES WITH LONGEST LIFE EXPECTANCY

458,000 POPULATION   **81-84 Years** LIFE EXPECTANCY RANGE

FOR EVERY 1,000 PEOPLE

77 HAVE NO INSURANCE

2 HEALTH NEEDS FROM 211 CALLS

FOR THE AVERAGE ZIP CODE IN TOP 20 PERCENT
FACILITIES PER 100,000 PEOPLE
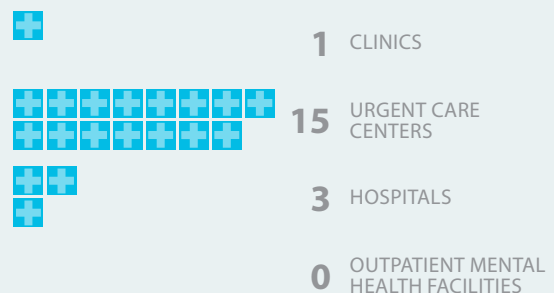
1 CLINICS

15 URGENT CARE CENTERS

3 HOSPITALS

0 OUTPATIENT MENTAL HEALTH FACILITIES

For Health initiatives, contact Karen Comer, kfrederi@iupui.edu

WHERE DOES CREATING A HEALTHY COMMUNITY START?

This year, Parkview Regional Medical Center in Fort Wayne will open a 2,000 square-foot greenhouse that the community can use for growing fruits and vegetables. The greenhouse facility will house a "learning kitchen" and meeting space near a home for seniors and an early childhood education center.

The Parkview Regional Medical Center is part of Parkview Health, a not-for-profit health system in northeast Indiana that consists of nine hospitals serving about 800,000 people across seven counties. Its new greenhouse will address the problem of obesity by encouraging a culture of healthy eating. A wide range of community groups in Fort Wayne have expressed interest in partnering on it.

Parkview Health is targeting obesity based on a community health needs assessment (CHNA) that it released this past December. As part of the assessment process, input was gathered from the community about their top community health concerns. Public health data was collected to understand the size and seriousness of identified health problems. Obesity ranked highest among several community health challenges.

The Affordable Care Act of 2010 mandated that hospitals produce a CHNA every three years, but Parkview has been producing them for more than a decade. The assessments "help us identify the community's priorities," says Sue Ehinger, the Chief Experience Officer with Parkview Health. "And then, we can partner with people in the community in order to close the gaps on those issues."

Creating an assessment

To create its 2016 CHNA, Parkview Health collaborated with The Polis Center and Indiana University's Richard M. Fairbanks School of Public Health, acting collaboratively as the Indiana Partnership for Healthy Communities (IN-PHC). The mission of IN-PHC is to make the knowledge generated by communities and academic institutions more accessible to the public, and to translate that knowledge into practices that improve public health. It was founded in 2012 with the support of the Indiana Clinical and Translational Science Institute.

According to Karen Frederickson Comer, director of collaborative research and health geoinformatics at The Polis Center, the IN-PHC team used a variety of state and national sources to create a preliminary list of health needs in the counties that Parkview Health serves and used SAVI's inventory of community assets to identify relevant community programs. Then,

Parkview Regional Medical Center

it gathered more detailed data about them by conducting phone surveys and organizing focus groups with people who live in the communities.

By analyzing hard data and incorporating community input, the team identified 13 major health issues in the region, including cancer, diabetes, the cost of healthcare, mental health, and sexually transmitted diseases. Next, it applied a method for ranking them that took into account the size of the problem, the seriousness of the problem, and the effectiveness of potential interventions.

Last summer, the IN-PHC team presented its findings to executives from each of the Parkview Health hospitals, who then voted on which health issues to prioritize. Obesity was easily their first choice, followed by mental health, maternal and child health, drug abuse, and diabetes. Each hospital in the

Parkview Health system also selected its own top priorities.

"More than just a report"

The challenges identified by the CHNA are well known to health experts, but the process of creating a formal assessment is useful, according to Ehinger, because it "helps us to focus and funnel all our activities into what the community believes is most needed."

The process is also valuable because it helps keep the issues in the public eye.

"It's very easy for us, as humans, to keep our heads in the sand," says Sarah Wiehe, director of the Community Health Engagement Program at the Indiana Clinical and Translational Sciences Institute. "These are very challenging problems to address. A lot of them are interrelated, and they don't have a silver bullet answer. Having a place to

start is extremely valuable. It starts the conversation within the health system, and between the health system and the community. And together, they identify ways in which they can intervene."

The collaboration between Parkview and IN-PHC has now moved into a new phase, and The Polis Center is helping Parkview with implementing solutions. "We've asked them to walk through the solutions, and help us figure out: Are these indeed best practices?" Ehinger says. "Or, do we need to stop going in this direction and go a different route? They'll help us solidify the direction that we're going with all our solutions, and understand which measures we should be focused on."

"We'll help them assess their chosen interventions," says Comer, "to determine which are best practices and whether there's a better way to measure their effectiveness. So, we'll be doing literature reviews, looking at which programs are evidence based and which are not. For the ones that are not, we'll look at how others have measured whether they have the desired impact." Effectiveness is the most obvious metric to measure programs by, "but there are other dimensions to take into account," Comer says. "For example, a program might be effective, but if it's also extremely costly, it might become a lower priority than a program that's very effective but less costly."

Parkview's commitment to cultivating partners both inside and outside the community—partners who can help them both identify and solve problems—is critical to the organization's long-term success, according to Wiehe.

"By going through this process, they're getting more than just a report at the end," Wiehe says. "Now, they have partners who are invested in it. And, that spirit of partnership is notable."

UNDERSTANDING THE "WHY" BEHIND THE "WHAT" IN THE SPREAD OF DISEASE
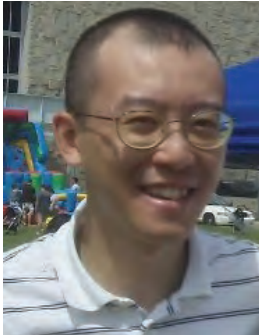
PATRICK T.S. LAI

A team whose players complement each other well is sometimes described as "more than the sum of its parts." Patrick T.S. Lai was drawn to Central Indiana because such synergies are emerging in the realm of health care.

Lai, a doctoral candidate in the School of Informatics and Computing at IUPUI, says that the region has two resources that are valuable in themselves: a network of comprehensive electronic health records, called the Indiana Network for Patient Care, and The Polis Center's SAVI database, which offers comprehensive community data.

By combining data from these resources for his dissertation work, Lai is trying to understand which neighborhoods have the highest rates of two sexually transmitted diseases (STDs), chlamydia and gonorrhea. But, he's also aiming to understand why those neighborhoods have higher rates.

Getting at the "why" requires the kind of rich neighborhood profiles that SAVI offers, which when used with health record data "is a great opportunity to understand the underlying factors of disease."

Certain social factors influence and predict the rate of STDs in a given neighborhood. These "social determinants" include median income, education level, population density, and the unemployment rate, among others.

It's well know that such factors play a role in disease transmission, but the exact relationship isn't clear. Lai aims "to identify which social determinants contribute most" to STD rates in a neighborhood.

His work is important, he says, because "knowing some of the biggest contributors could guide us in thinking about how we can effectively combat and reduce the spread of disease."

Another example of how SAVI is fostering healthcare synergies is the community public health course offered by Barbara Blackford, an assistant professor in the School of Nursing at Marian College.

Blackford assigns groups of nursing students to conduct a "windshield survey" of certain census tracts. Each group drives around its assigned area, making notes of the community's assets and liabilities. Then, they use SAVI to flesh out their observations with hard data about the prevailing socioeconomic and physical conditions, and each group gives a presentation about what they've learned.

Before Blackford's students began using SAVI five years ago, they drew on a variety of scattered sources to supplement their windshield surveys.

"SAVI makes it so much easier," she says. "It's been a fantastic tool to help my students consider social and environmental determinants of health."

UNEVEN SUCCESS—AND ACCESS—WHEN IT COMES TO TOBACCO

**The sharp decline in smoking rates since the 1960s
is a remarkable public health success story.**

About 45 percent of the U.S. population smoked in the mid-1960s. In the last half century, the rate has fallen by two-thirds, to about 15 percent.

But the success is uneven, and the story is complicated. Smoking rates vary widely from state to state, city to city, and even neighborhood to neighborhood. In Indiana, 20.6 percent of the population smokes—the 12th highest rate in the nation. In Marion County, the rate is just as high: 21.8 percent of the population smokes. In the five states with the lowest smoking rates, the numbers range from nine to 14 percent.

Just as smoking rates vary widely across geographies, access to tobacco is radically uneven from place to place. That's the key finding of a new report from The Polis Center, *Unequal Access*, which details the density of tobacco retailing in the Indianapolis area.

"While unequal access typically refers to less access to a desirable resource by marginalized populations," the report notes, "greater access by and to marginalized populations is the troublesome inequity" in the case of tobacco products and tobacco marketing.

The disparities in tobacco access matter because greater density of tobacco retailers has been associated with higher rates of smoking. High density of retailers also means there is a concentration of tobacco marketing among populations that are already vulnerable to high rates of tobacco use.

Unequal Access helps policymakers and public health professionals connect these dots—between poor health outcomes, high smoking rates, access to tobacco products, and potential solutions.

"We've known for a long time that smoking is bad—that it causes cancer and a lot of other health problems," says Karen Frederickson Comer, a co-author of the report and the director of collaborative research and health geoinformatics at The Polis Center. "And yet, despite all this knowledge, our population continues to smoke at higher rates than the rest of the nation. So the question is, what more can we do to target the problem?"

The price of access

Indiana has about 8,500 licensed tobacco retailers. About 2,000 of them are located in the Indianapolis metro area, where, "as in other U.S. cities, tobacco retail outlets are concentrated where smoking rates are predicted to be the highest."

The report found that in "high access" areas, the poverty rate is more than three times higher than in "low access" areas. The differences are similarly stark across a range of metrics. In the areas of high access, the number of people without a high school degree is almost three times higher than in low access areas; the rate of maternal smoking is nearly double; and the number of people without access to a car is over four times higher. High access areas also have the greatest populations of people of color and the highest rates of people with self-reported mental health issues. Nationwide, people with psychiatric or addictive disorders consume about 40 percent of the cigarettes purchased.

"Smoking rates are higher among people of limited means, and there's a very high rate of smoking among people with a mental health diagnosis," says Virginia Caine, director of the Marion County Health Department. "Many people with mental

TOBACCO ACCESS IN CENTRAL INDIANA

Tobacco retailers not only provide access to tobacco product, but also expose people to tobacco marketing.
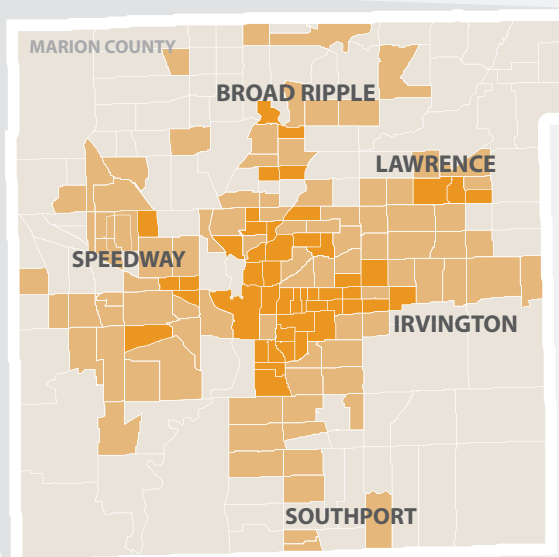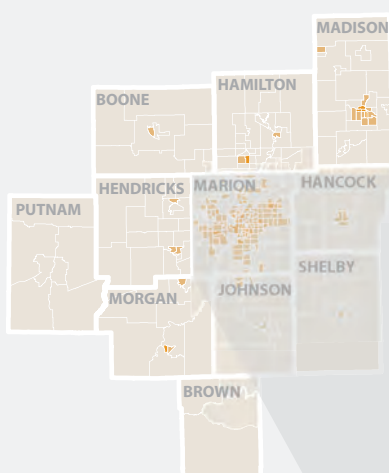
	SMOKING PREVALENCE (18+)	MATERNAL SMOKING RATE	POVERTY RATE	ADULTS WITHOUT H.S. DIPLOMA	ADULTS SELF-RPT POOR MENTAL HEALTH	HOUSEHOLDS WITHOUT VEHICLE ACCESS	PEOPLE OF COLOR
LOW ACCESS CENSUS TRACTS	19.6%	12.2%	10.5%	8.8%	11.7%	4.3%	20.2%
MEDIUM ACCESS CENSUS TRACTS	27.1%	16.4%	25.2%	18.9%	15.6%	11.2%	40.6%
HIGH ACCESS CENSUS TRACTS	29.4%	22.5%	34.3%	23.2%	16.8%	18.5%	43.6%

Tobacco Access in Central Indiana

Photo courtesy of WhyQuit.com

health issues want to quit, but for some of them it's a coping mechanism, or strategy, that helps them reduce their stress."

There are good reasons to quantify tobacco retailing in relationship to high smoking rates in Indiana and the Indianapolis metro area. The stakes are high on multiple levels, beginning with economics.

Each year, healthcare expenses related to smoking cost Indiana an estimated $3 billion. The state and federal tax bill for treating smoking-related diseases, per household, is about $900. And, the annual cost for lost productivity due to smoking is another estimated $3 billion.

Smoking also imposes profound human costs across all age ranges. Nearly 20 percent of deaths in the state are attributable to it, according to Caine, while in Utah, which has the lowest percent of smoking-related deaths, the figure is less than 10 percent.

A long way come, a long way to go

The "common sense" about smoking, which blames it on a weakness of individual will, underplays the addictive power of tobacco and the power of marketing that targets vulnerable populations. Tobacco is "aggressively and skillfully marketed by the tobacco companies," Caine says, and smoking is "often perceived as a bad habit that's easily broken. Too often, it's not seen as a public health issue" that can be dramatically influenced—for good or bad—by public policy.

Caine notes that Indiana has had some notable recent success in this arena. Over the past five years, the smoking rate has dropped by several points, from the mid-20s to the low-20s, and there are some small but important signs of progress. For example, the Indianapolis Motor Speedway recently announced that it would ban smoking in grandstand seats beginning in late 2017.

"We've come a long way," Caine says. "I don't think, even 10 to 15 years ago, people realized the extent of the harm done by smoking."

For all the progress, though, much more could be done. Indiana should invest about $74 million per year in tobacco control, according to the Centers for Disease Control's recommendation. Yet the state's tobacco control programs receive only $7 million annually in state and federal funding. Tobacco companies, meantime, spend nearly $285 million on marketing their products in the state each year.

And, crucially, policy makers' most powerful tool to reduce smoking is blunted in Indiana, relative to other states. Studies consistently demonstrate that "cigarettes are no different than any other consumer product," in that they're price sensitive: "As the price of cigarettes goes up, the sale of cigarettes goess down."

Indiana's tax per pack is $0.995, which is lower than all but 13 states. The average tax in all states is $1.69 per pack. "A broad coalition of business, health care, not-for-profit and academic groups have joined forces to advocate for legislation to raise the tax by $1.50," the report notes. The move would have both human and economic benefits, "saving countless Hoosier lives and avoiding millions in healthcare and lost productivity costs."

Stricter smoke-free air laws would also make a difference, along with raising the legal age for purchasing tobacco. State lawmakers could also address the problem

by reducing the number of tobacco retailers and imposing tighter restriction on point-of-sale marketing—actions that cities and towns can't take on their own, by state law.

The key is to stay focused, and to keep working on a problem that poses serious health challenges and imposes steep costs on the whole state—but affects different communities in very different ways.

"We have to continue to be vigilant," Caine says. "We have to have discussions, and we have to push our policy makers to understand that we still have a crisis of public health related to tobacco use."

THE BIG-PICTURE TRANSFORMATION OF HEALTH CARE

Dr. Nir Menachemi, chair of the health policy and management department at Indiana University's Richard M. Fairbanks School of Public Health.

There is one clue that speaks volumes about your health prospects but has nothing to do with your medical records.

"We know now that one of the greatest predictors of health outcomes for almost any patient, undergoing any procedure, or with almost any disease, is one value on a patient's chart," says Dr. Nir Menachemi, chair of the health policy and management department at Indiana University's Richard M. Fairbanks School of Public Health. "And that value isn't medical. It's their ZIP code. You can tell with extreme accuracy how someone is going to fare, after a procedure, by their ZIP code."

Where a person lives is critical because health is shaped by factors outside the scope of traditional medical interventions and advice.

"In this country, we tend to medicalize health-care issues," Menachemi says. "If someone is having a health issue, we automatically assume the medical system can fix it. A lot of organizations are now beginning to realize that many health issues are not necessarily problems that can be addressed through medical care alone. They're bigger issues in the communities where people live."

Menachemi is participating in a study, funded by the Robert Wood Johnson Foundation, that aims to help medical professionals and institutions make better use of that data. The project, which draws on the resources of The Polis Center, the Regenestrief Institute, and the Richard M. Fairbanks School of Health, is testing a tool that predicts what kind of care might best serve a patient. To do so, it uses an algorithm that incorporates medical records as well as neighborhood-level data from the SAVI Community Information System supplied by Polis.

"We're taking data about the neighborhood where patients live and seeing if we can predict who's at risk for needing some of these social services," Menachemi says. Services include nutritionists, financial and legal advisers, and mental health professionals. "The medical way of thinking about a problem is, if the patient isn't doing well after a

couple of visits, figure out the next medical intervention. Whereas, if you deploy a nutritionist to take them grocery shopping, and better educate the family on how to stretch the buck to incorporate healthy eating into the family's lifestyle, maybe you'll actually put a dent in the ability of the family to manage diabetes, for example."

The tool has been in the pilot stages and will soon be implemented in the 10 health clinics maintained by Eskenazi Health.

"This is absolutely at the cutting edge," Menachemi says of the collaboration. "It's almost like this perfect marriage of forces— all of us on the same team, trying to figure out how to lead the nation in improving quality and reducing costs in health care."

THE DEVASTATING TOLL OF

INDIANA'S TOBACCO ADDICTION

Indiana's current smoking rate is one of the highest in the nation — exacting a significant toll on our economy and costing Indiana in increased healthcare costs, lost productivity and premature loss of life. The recent SAVI Talk, "Unequal Access: Tobacco Retail in the Indianapolis Metro Area," illuminated the relationship between tobacco outlet density and tobacco use in Central Indiana's most vulnerable populations. To learn more about Indiana's smoking epidemic, we encourage you to read the Fairbanks' *Report on the Tobacco Epidemic in Marion County and Indiana.* View the full report at go.iu.edu/1DD1.
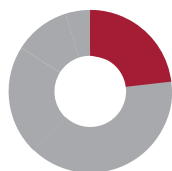
23%
23 percent of Hoosiers smoke, ranking Indiana 39th for smoking in the nation.

$2.9b
Smoking results in an estimated **$2.9 billion worth of healthcare costs**.

$2.6b
Smoking results in an estimated **$2.6 billion annually lost in productivity**.

Report on the Tobacco Epidemic in Marion County and Indiana

RICHARD M. FAIRBANKS
SCHOOL OF PUBLIC HEALTH   September 2016

Funded through a grant from the Richard M. Fairbanks Foundation

View the full report at go.iu.edu/1DD1

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CHECK OUT
Unequal Access: Tobacco Retail in The Indianapolis Metro Area

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