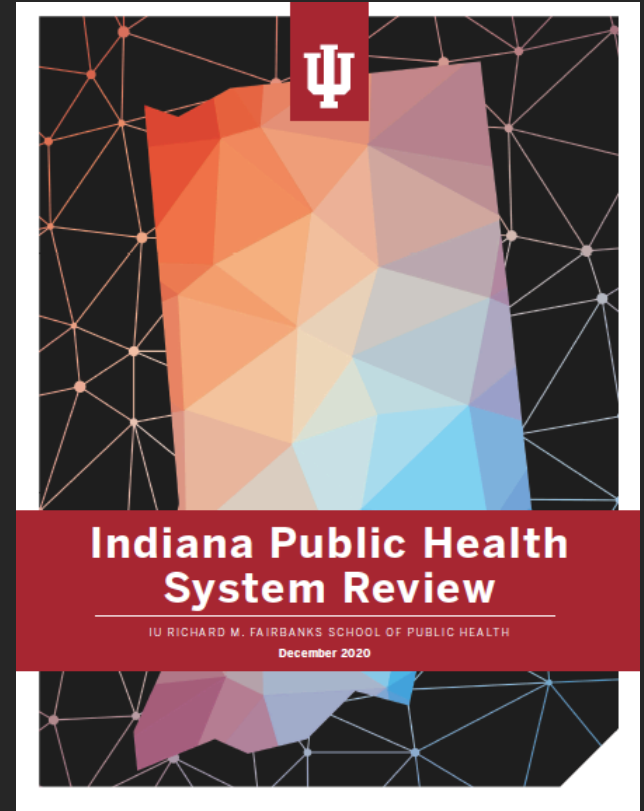




Indiana Public Health System Review

IU Richard M. Fairbanks School of Public Health

Published January 2021



PROJECT LEADS

Paul Halverson, DrPH, FACHE
Valerie A. Yeager, DrPH, MPhil

EXTERNAL CONSULTANTS

Glen P. Mays, PhD, MPH
Hugh Tilson, MD, DrPH

WITH CONTRIBUTIONS FROM

Amber Blackmon, MPH

Amanda Briggs, MS

Jyotsna Gutta, MPH

Harold Kooreman, MA, MSW

Nir Menachemi, PhD, MPH

Nadia Unruh Needleman, MS

Joshua R. Vest, PhD, MPH

This report is made possible by funding the Richard M. Fairbanks Foundation



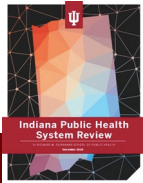
COVID-19 Sounded the Alarm

Indiana's public health system is chronically underfunded and undervalued

➔ Indiana ranks 48th for state-provided public health funding

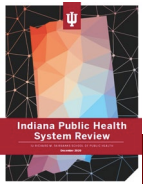
Hoosiers experience higher rates of preventable diseases and injuries as well as healthcare costs compared to other states

➔ Indiana ranks 41st out of 50 states for overall health



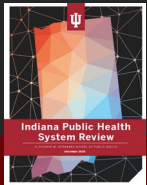
Purpose of this Report

To summarize the current state, including the challenges and strengths, of Indiana's public health system and to make recommendations for improvements to the system.



Section 1: Introduction to Public Health Systems

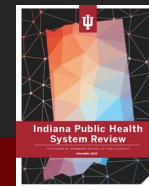
Initial interviews with stakeholders drew attention to the need to provide a clear understanding of the differences between public health and healthcare.



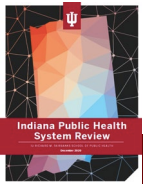
Section 1: Introduction to Public Health Systems

Initial interviews with stakeholders drew attention to the need to provide a clear understanding of the differences between public health and healthcare.

While both work to improve the health of Hoosiers, public health is focused on preventing illness and protecting the population from injury, communicable diseases, and premature death whereas, the vast majority of the time, healthcare primarily serves to treat disease and injury and is focused on making people well again.



Approximately 3% of national health expenditures are spent on governmental public health, despite that more than 75% of overall healthcare costs are attributable to preventable health conditions.



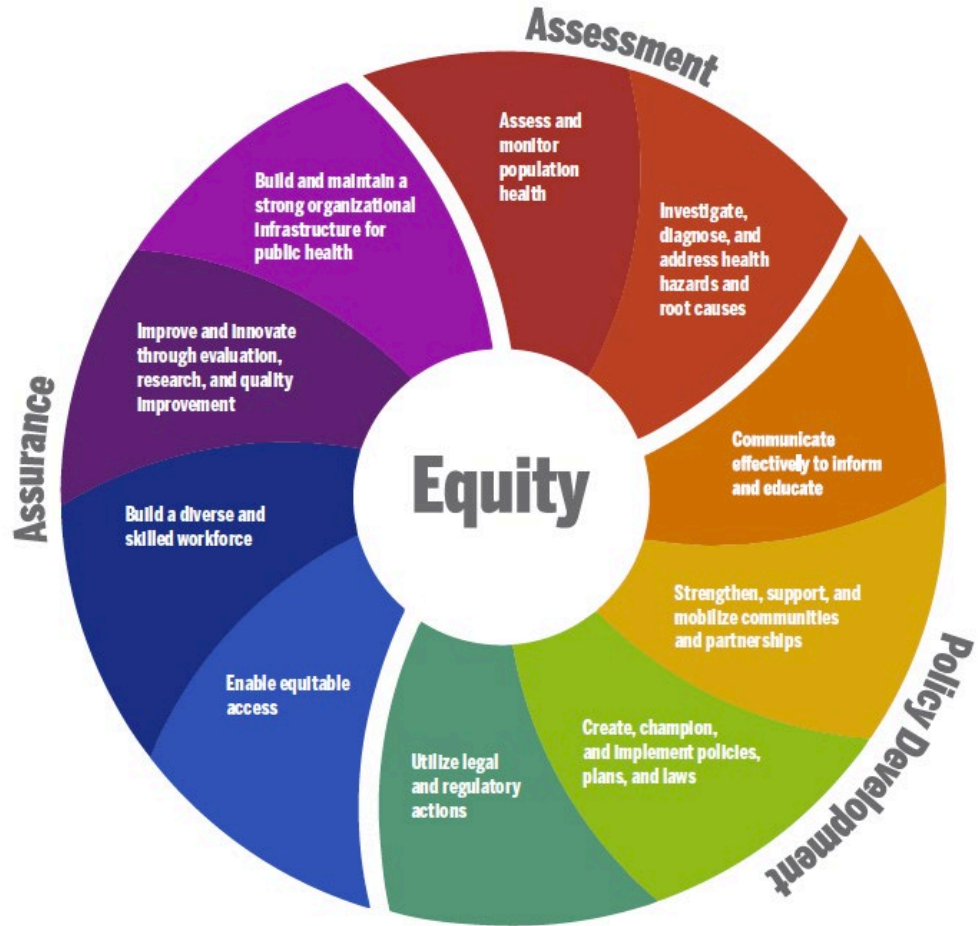
Expectations of a functioning public health system

The 10 Essential Public Health Services

Some activities are conducted primarily at the state level and or are state level components that provide the infrastructure - such as the reporting system - that locals will use to conduct their work.

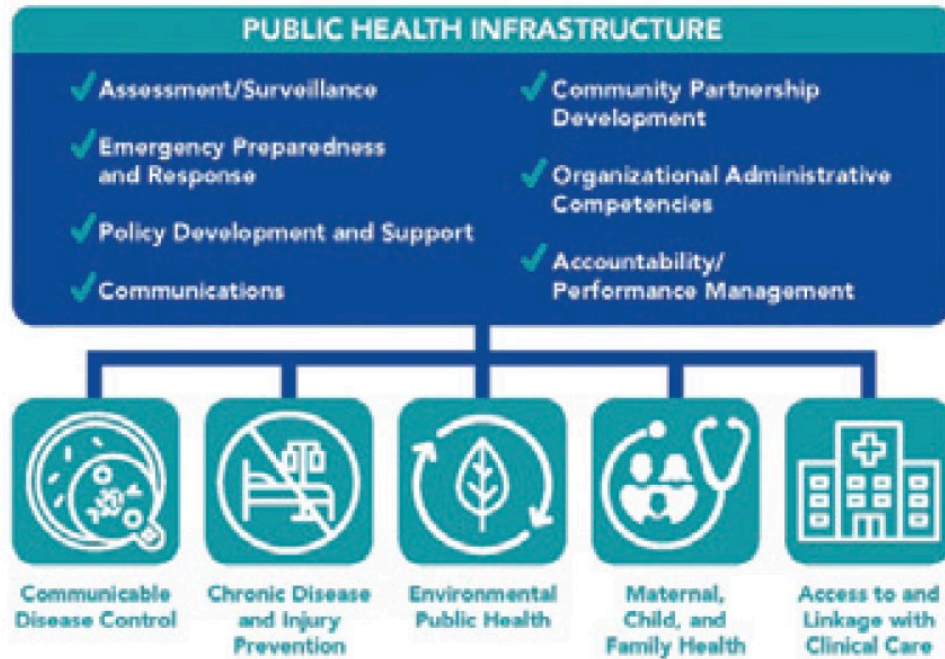
Some of these system activities are conducted in collaboration with system partners.

The 10 Essential Services are system-wide and all-encompassing.



Expectations of a functioning public health system

The Foundational Public Health Services

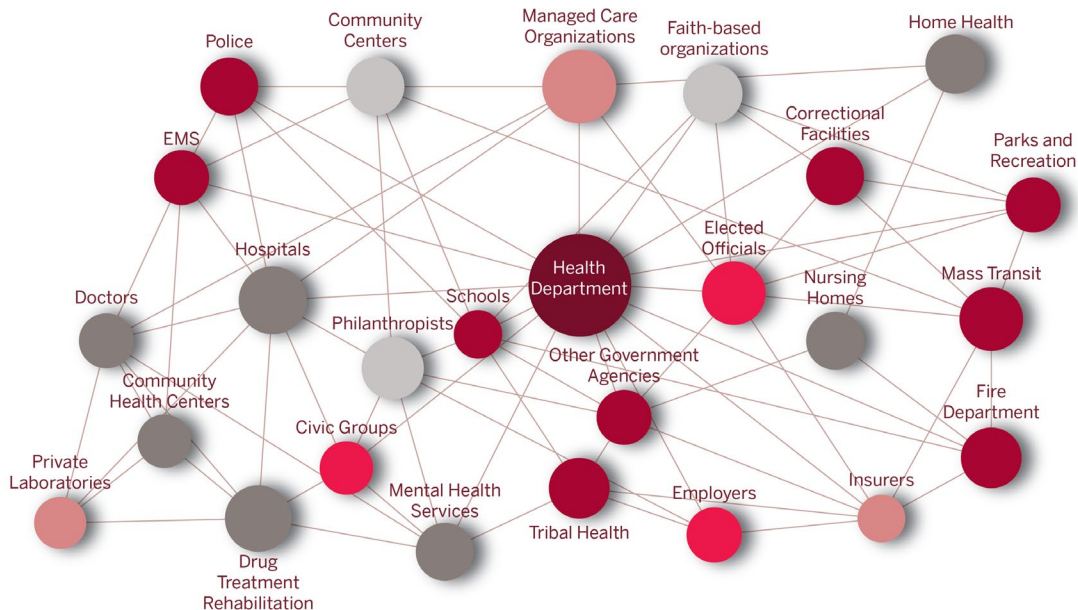


The Foundational Public Health Services are those services that have been nationally recommended to be provided at the local level.

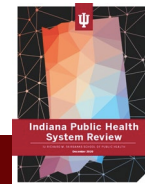
These are particularly important because the local level is where direct services are most commonly provided to communities.



The Public Health System



Public health agencies connect and lead other community partners in the effort to promote and protect public health and specifically address social determinants of health.



10 GREAT PUBLIC HEALTH ACHIEVEMENTS



**Control of
Infectious Diseases**



**Family
Planning**



**Healthier Mothers
and Babies**



**Motor Vehicle
Safety**



**Tobacco as a
Health Hazard**



**Declines in deaths from
heart disease and stroke**



**Fluoridation of
Drinking Water**



Immunizations

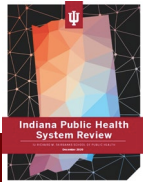


**Safer and
Healthier Foods**



**Workplace
Safety**

In the period of the 20th century, the US has gained an additional 30 years in life expectancy. Twenty-five of those 30 years are attributed to public health efforts, including the 10 great public health achievements.

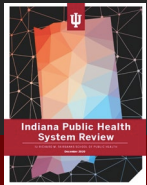


Section 2: Current State of Indiana's Public Health System and Comparison States

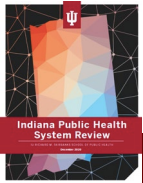
Compare Indiana to neighboring states, states similar in political culture, policy, and structure, as well as states where innovative public health approaches have been employed

Section 3: What Works – Evidence Synthesis

Assess and summarize the evidence focused on public health systems strengthening initiatives.

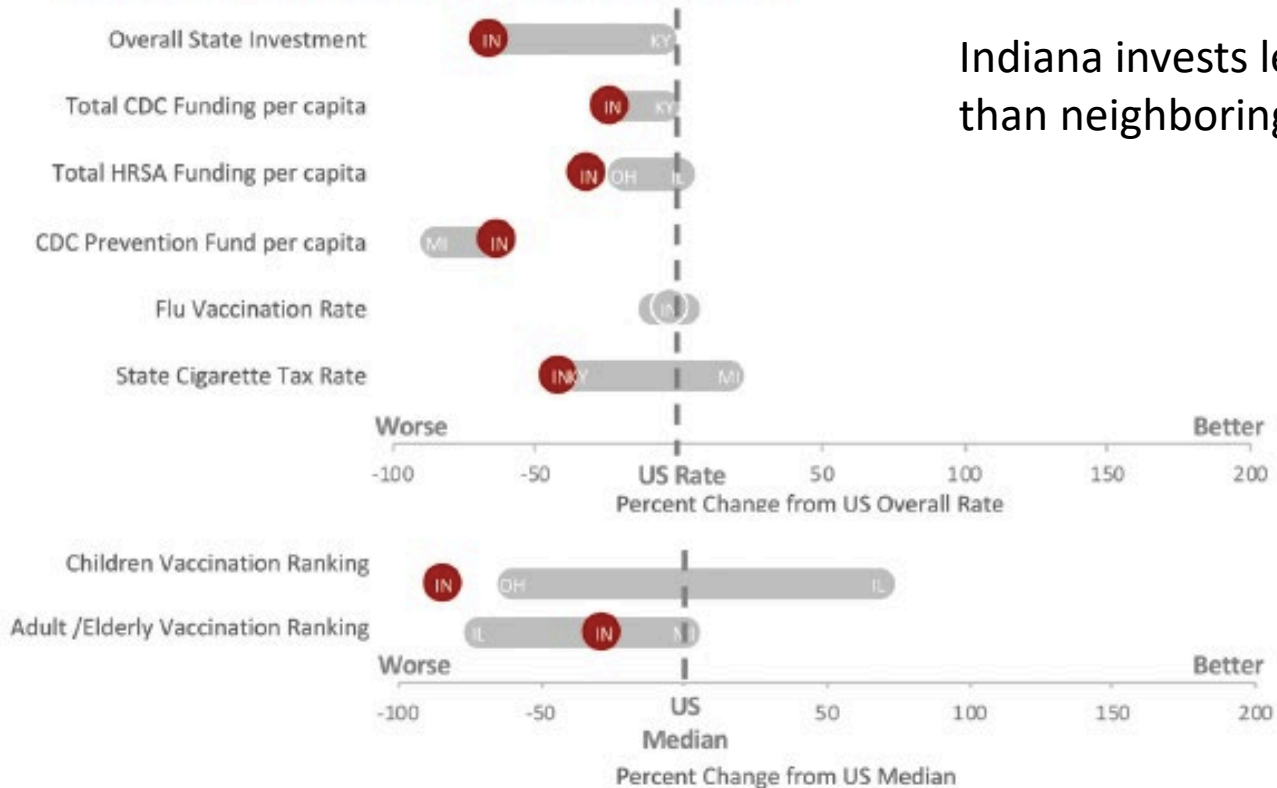


Evidence shows that when communities invest more in public health, they spend less on health care and live longer.

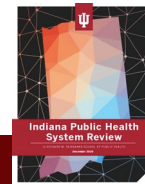


Public Health Investment Across Neighboring States

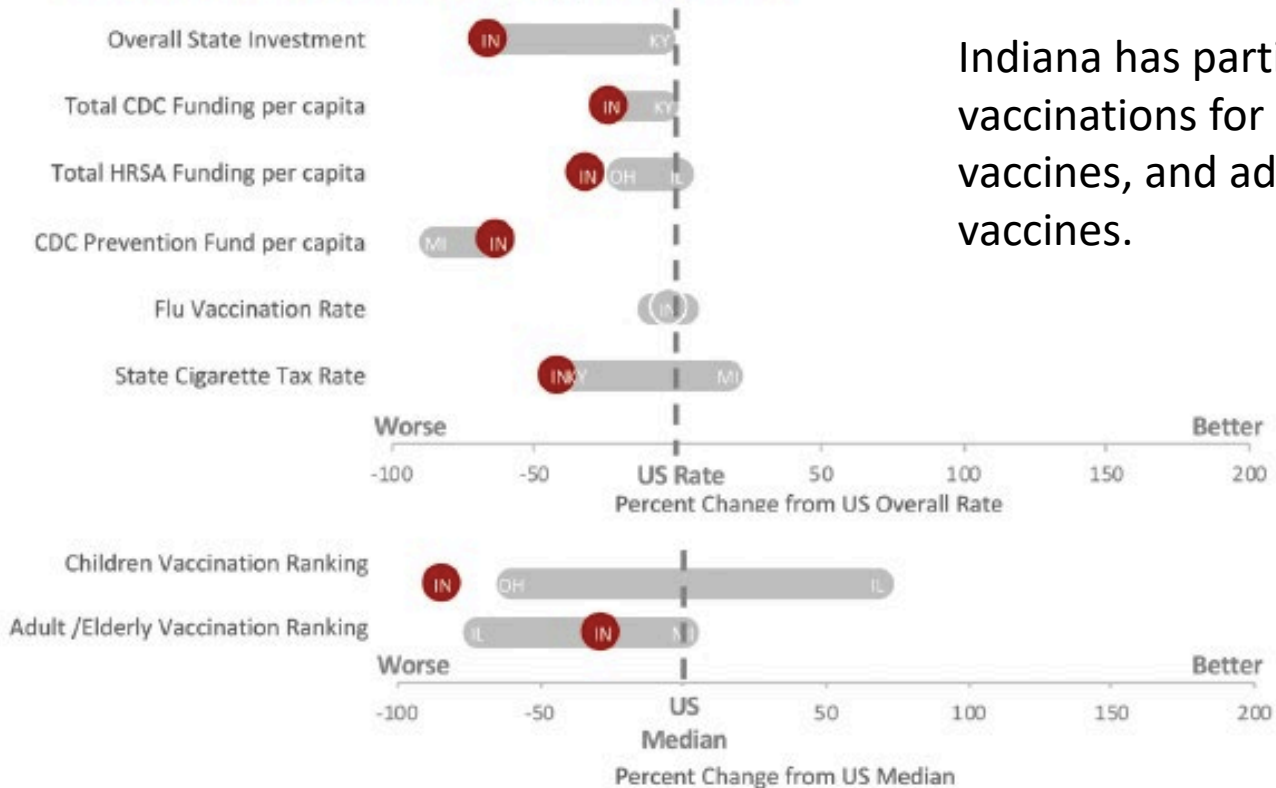
Indiana invests less in public health than neighboring states



Gray bands represent range of comparison states as percent change from the US rate (dotted line). A red dot indicates Indiana is at least 10% worse than the US rate, an orange dot indicates 5% worse, and a green dot indicates 10% better than the rate of the US overall. A grey dot indicates that Indiana is not significantly different from the US rate.

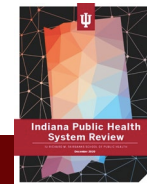


Public Health Investment Across Neighboring States



Indiana has particularly low rates of vaccinations for influenza, childhood vaccines, and adult and elderly vaccines.

Gray bands represent range of comparison states as percent change from the US rate (dotted line). A red dot indicates Indiana is at least 10% worse than the US rate, an orange dot indicates 5% worse, and a green dot indicates 10% better than the rate of the US overall. A grey dot indicates that Indiana is not significantly different from the US rate.

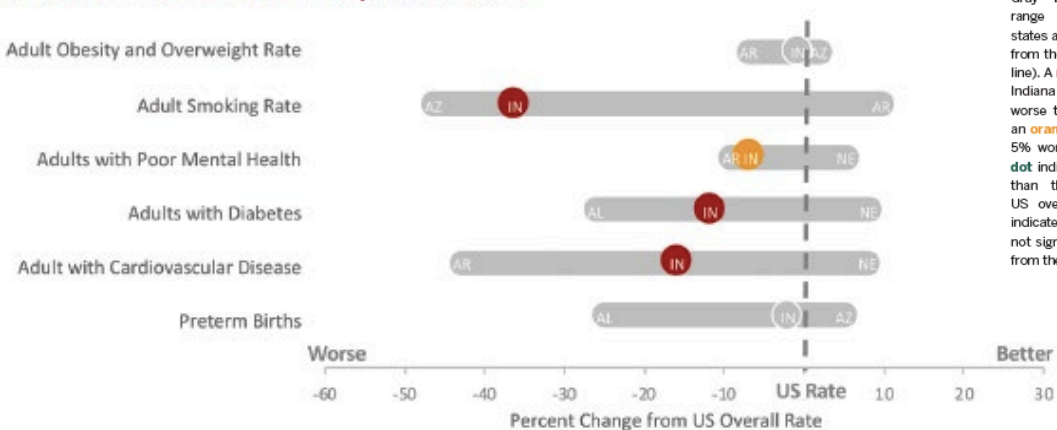


One of the highest rates of adult smokers in the nation

Health Conditions Across Neighboring States



Health Conditions across Companion States



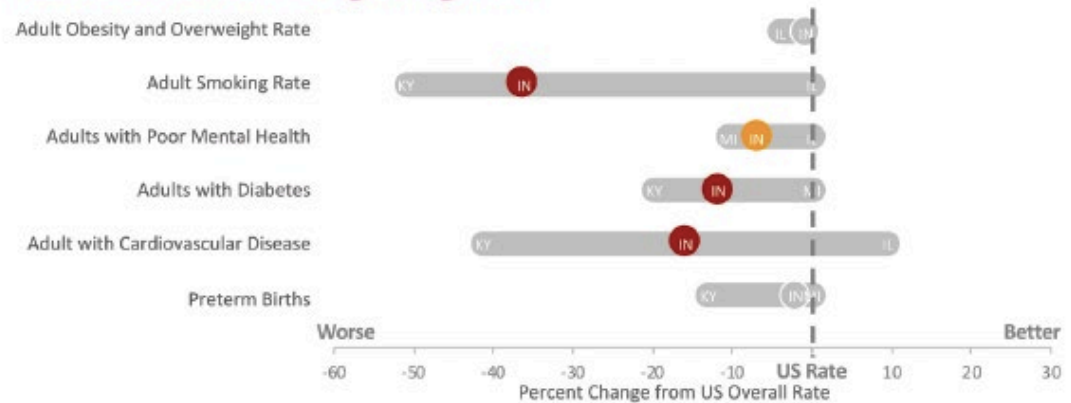
Gray bands represent range of comparison states as percent change from the US rate (dotted line). A red dot indicates Indiana is at least 10% worse than the US rate, an orange dot indicates 5% worse, and a green dot indicates 10% better than the rate of the US overall. A grey dot indicates that Indiana is not significantly different from the US rate.



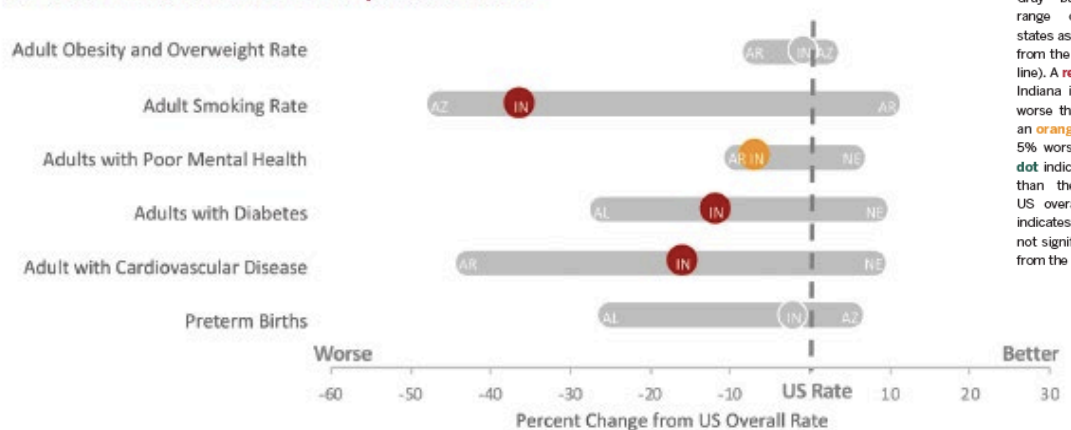
One of the highest rates of adult smokers in the nation

At least 10% below the US average for preventable mortality such as infant deaths, accident deaths, and alcohol, drug, and suicide deaths

Health Conditions Across Neighboring States



Health Conditions across Companion States



Gray bands represent range of comparison states as percent change from the US rate (dotted line). A red dot indicates Indiana is at least 10% worse than the US rate, an orange dot indicates 5% worse, and a green dot indicates 10% better than the rate of the US overall. A grey dot indicates that Indiana is not significantly different from the US rate.

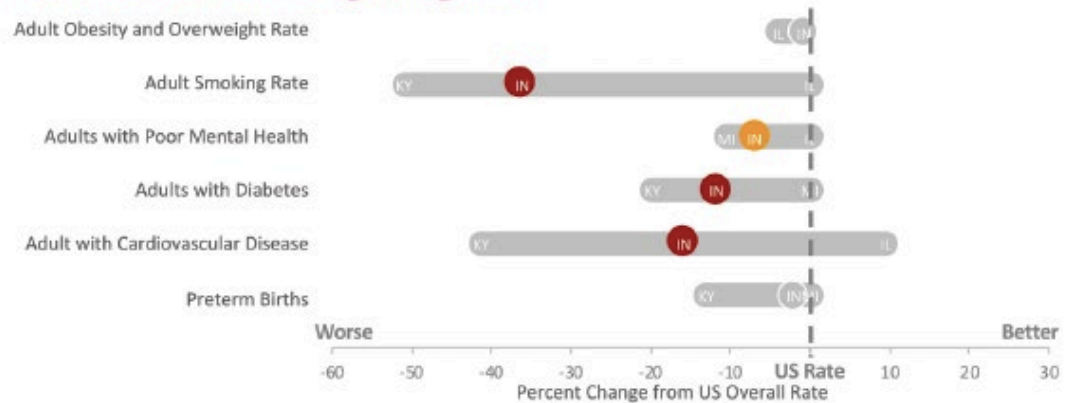


One of the highest rates of adult smokers in the nation

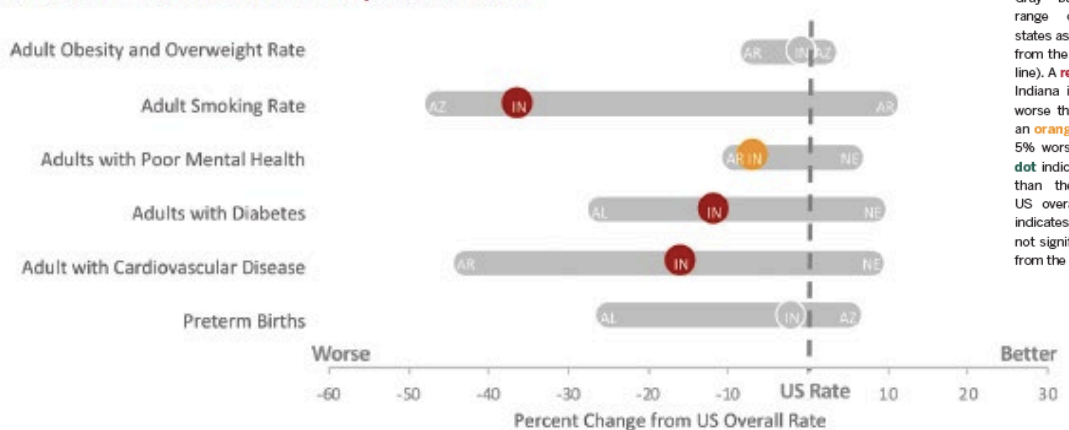
At least 10% below the US average for preventable mortality such as infant deaths, accident deaths, and alcohol, drug, and suicide deaths

Scores in the bottom tier nationally on public health preparedness

Health Conditions Across Neighboring States



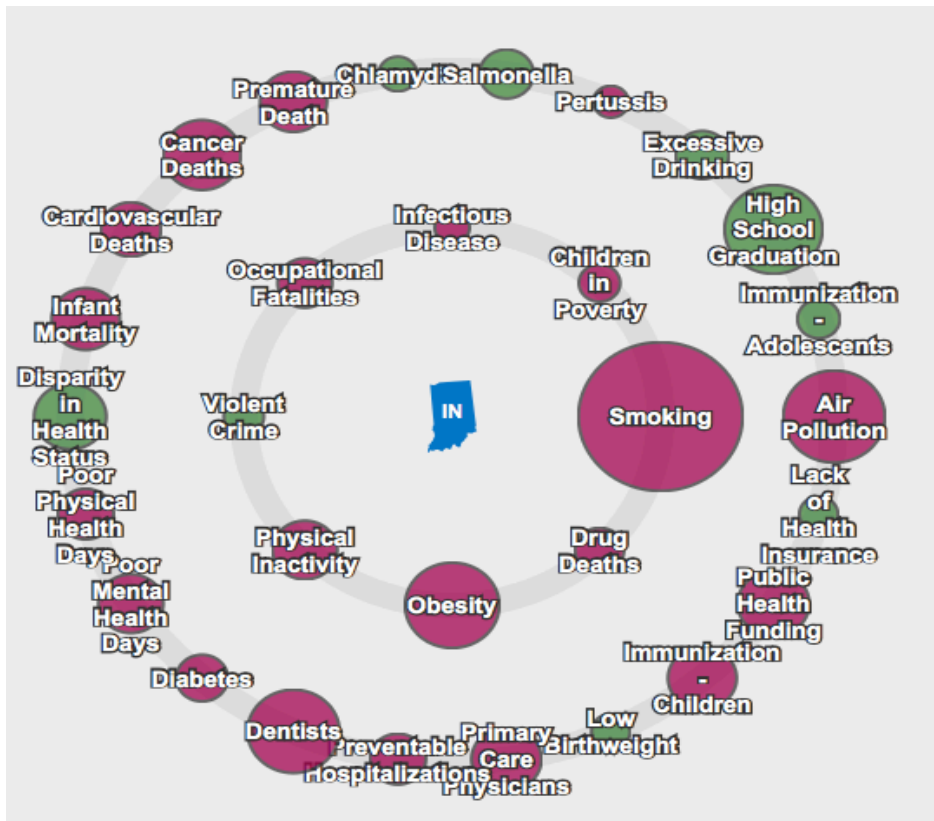
Health Conditions across Companion States



Gray bands represent range of comparison states as percent change from the US rate (dotted line). A red dot indicates Indiana is at least 10% worse than the US rate, an orange dot indicates 5% worse, and a green dot indicates 10% better than the rate of the US overall. A grey dot indicates that Indiana is not significantly different from the US rate.

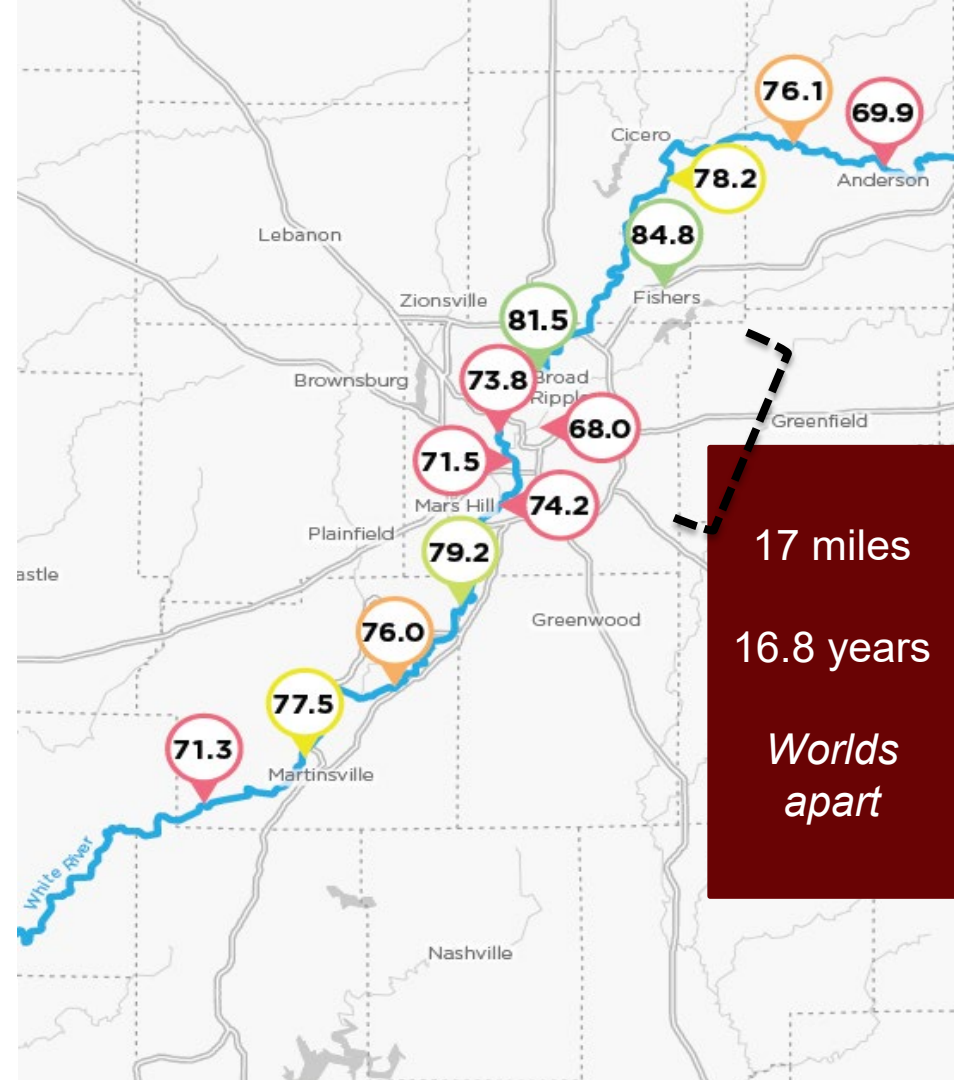


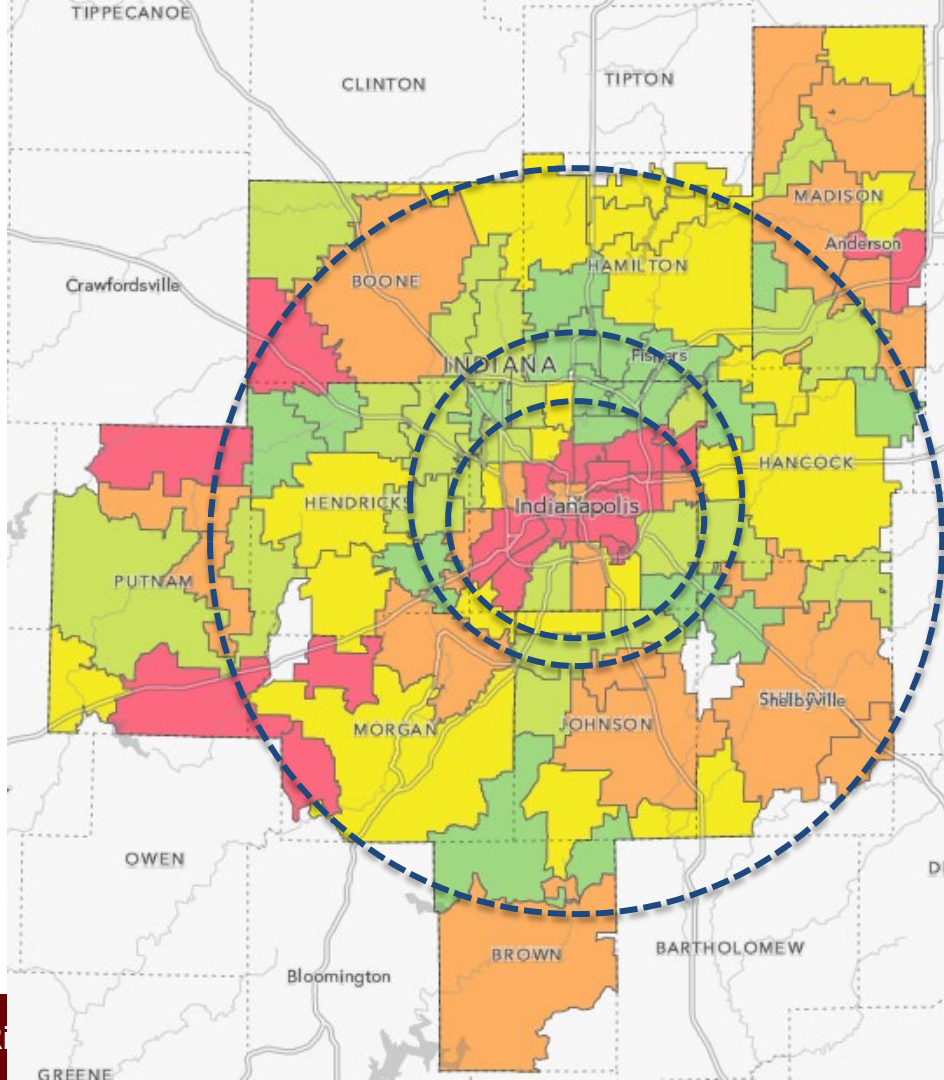
Core Measure Impact



The gap

- Following the White River, we see a pattern in life expectancy that plays out throughout the metro area.
- Though separated by a short distances, life expectancy can be *worlds apart*.
- This gap widened by 3.2 years (23.5%) over the 2013 gap.



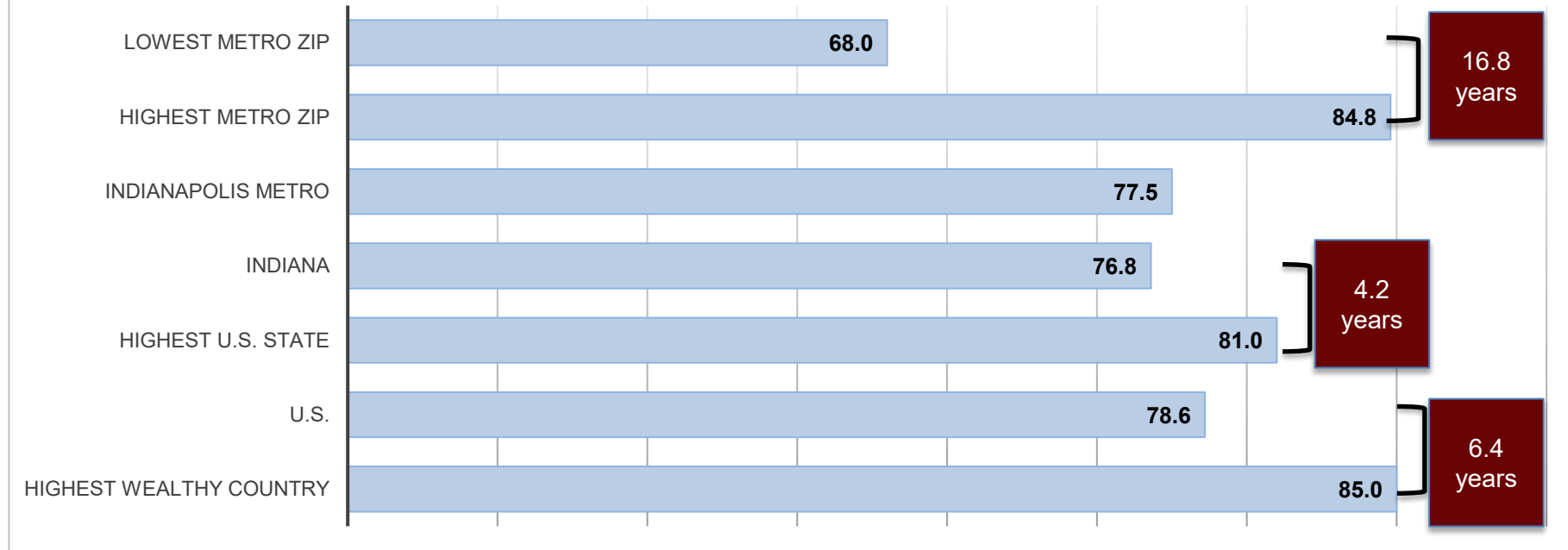


In 2018, a child born in these ZIP Codes could expect to live...

- 75.1 years or lower
- 75.2-76.5
- 76.6-78.5
- 78.6-80.1
- 80.2 or higher



Life Expectancy in Geographic Context (2018*)



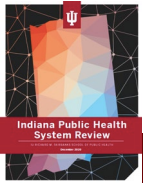
*For ZIP Codes, life expectancy is based on 2014-2018; for states and countries, it is the year 2018.



Evidence shows that when communities invest more in public health, they spend less on health care and live longer.

However, Indiana communities are less likely to be implementing nationally recommended public health activities compared to other states – those Foundational Public Health Services, in particular.

Further, Indiana's communities receive less public health funding compared to neighboring, companion, or exemplar states.

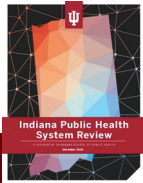


Indiana's local health departments rely on local sources for the majority of their budgets

This is unlike most other US communities that rely equally on state and federal (passthrough) funding in addition to local funding.



It means that less resourced communities that likely have a greater need for the protection and preventive services public health provides also have less funding and less capacity to ensure that they receive them.



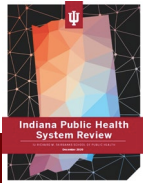
Although there is value in having direct local connections in every county, the current structure ensures that many of the 94 LHDs are able to provide only a fraction of the necessary public health services and expertise that should be available to all people living in Indiana.



Epidemiologic expertise, data analytics to inform education and services relevant to the needs of communities, emergency preparedness capabilities, and an information technology infrastructure that allows for an efficient and effective system are skills and tools that are not present in many of Indiana's local settings.

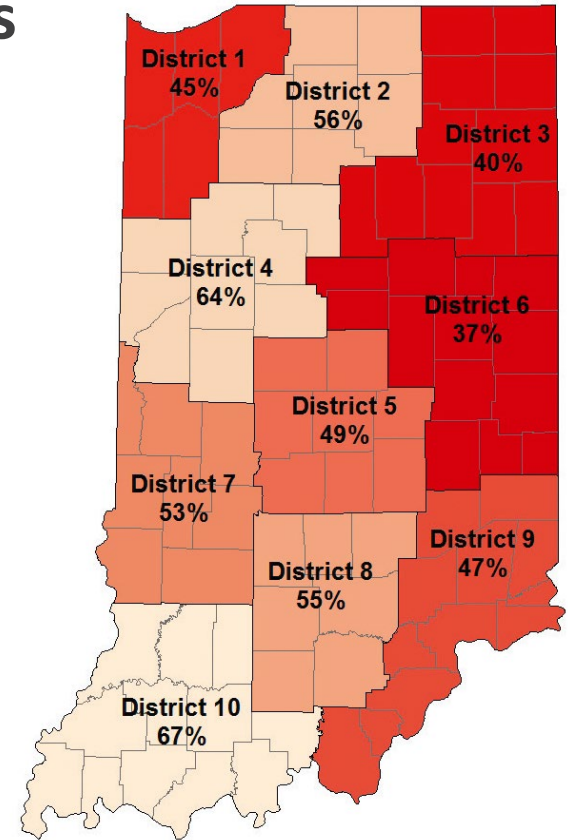


paper-based reporting systems and delays in routine outbreak identification and public health intervention



Evidence shows that when communities invest more in public health, they spend less on health care and live longer.

However, Indiana communities are less likely to be implementing nationally recommended public health activities compared to other states – those Foundational Public Health Services, in particular.



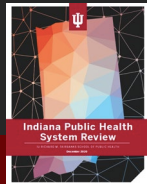
Map shows average proportion of activities completed by LHDs (weighted by population)



Section 4: Insights from Key Indiana Stakeholders

Interviews were conducted with public health and health care experts as well as business and policy leaders across the state of Indiana.

A total of 49 individuals contributed insights about their experiences with the public health system, their vision for improving the public health system, and considerations for creating a path to change.

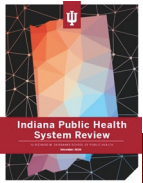


Key Insights from Stakeholders

Participants were asked to provide their perspectives on the current state of the public health system.

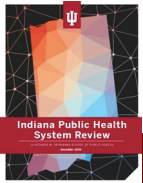
They were also asked if they have specific insight about issues with the public health system either during the COVID-19 pandemic specifically or prior to the pandemic.

Based on feedback from stakeholders, Indiana's communities are ready for change and willing to work together to make improvements to the public health system.



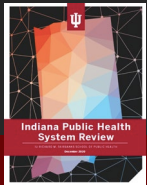
Six Overarching Issues Identified

1. Public health is not well understood and is undervalued
2. Public health does not have sufficient funding to be as effective as needed
3. There is a lack of specific types of public health expertise at the local level
4. There is a lack of connectedness and communication between the state health department (SHD) and local health departments (LHDs)
5. There is insufficient technology and essential infrastructure coupled with inconsistent data for evidence-based decision making
6. The local public health system is not providing the essential public health services consistently across communities.



Section 5: Recommendations for Change

The comprehensive review of Indiana's current public health system along with the review of best practices have informed 4 key recommendations and steps for implementing change.

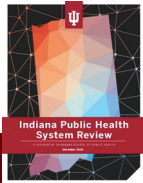


Key Recommendations

1. There needs to be a uniform approach to delivering the Foundational Public Health Services across the state.
2. One way to ensure that all communities, even those supported by small local health departments, are provided the foundational public health services is to **create a district-level mechanism that will enable resource sharing in support of local health departments.**

“So we have a district where we’re going to run out of beds much quicker than we thought we would. What are we going to do to set up a field hospital?

Unfortunately, there’s no one person that we can go to, to rally by district...[the State Health Department] is sending out vaccines to different hospitals, but again this is uncoordinated. I think that having a district approach makes sense.”

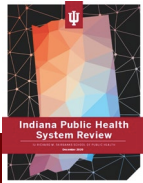


Key Recommendations

3. The State Health Department's oversight capabilities and its capacity to support the local public health delivery system need to be strengthened.

4. Under the auspices of the state health department, a multi-disciplinary state-wide implementation committee should be created and tasked with executing the recommended implementation steps outlined in the report.

“As a state, the best thing would be if we came up with one IT system that connected everything together, and we made sure every local health or every county had a connection.”

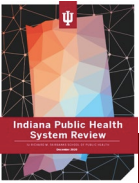


Key Recommendations

Revenue generated from an increased tobacco tax should be dedicated to the public health system and should fund the establishment of an **Indiana Public Health Trust Fund**.

The Public Health Trust Fund should be explicitly limited to ensuring the provision of Foundational Public Health Services and necessary infrastructure for the public health system.

We specifically recommended that **\$50 million** should be dedicated in year one of this work, ultimately building to a \$328 million annual contribution.



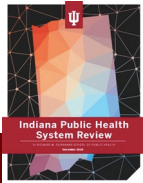
Potential Gains

An additional **\$14** per capita:
(\$81 million investment annually)

- National average level of public health system capacity
- Will reduce annual medical costs \$168 million by the 10th year
- Will prevent 890 deaths annually
- Will add +1 year of life for lower-income populations

An additional **\$55** per capita:
(\$328 million investment annually)

- Comprehensive level of public health system capacity
- Will reduce annual medical costs \$350 million by the 10th year
- Will prevent 3,600 deaths annually
- Will add +4.1 year of life for lower-income populations

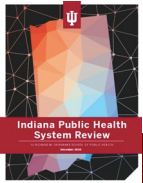


Invest in Keeping People Healthy

There is a **bidirectional relationship between health and wealth** – for individuals and the communities in which they live.

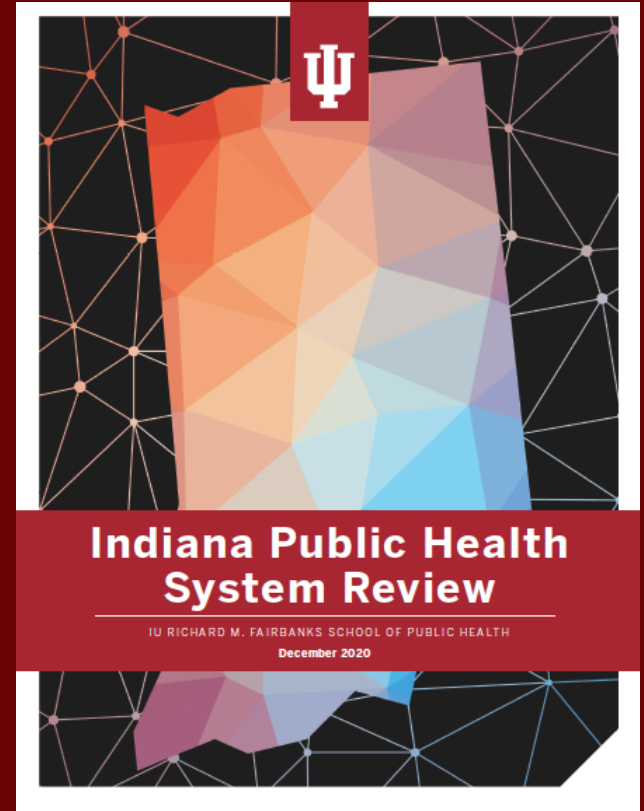
Strategic investments in Indiana's public health system can improve health among all Hoosiers and create opportunities for people and the communities that need it the most.

It costs far less to keep people healthy than to make them well again, but we have to invest in keeping people healthy.



The changes proposed in this report cannot occur if the public health system remains underfunded.

Consistent funding will allow public health agencies to plan strategically for a future where Indiana is among the top states in health outcomes rather than the bottom.



Slide Bank

Public Health Rankings across Neighboring States

| Measure | Indiana | Illinois | Kentucky | Michigan | Ohio |
|--------------------------------------|---------|----------|----------|----------|------|
| State Health Rankings (overall) 2018 | 41 | 26 | 45 | 34 | 40 |
| Mental Health Ranking 2016 | 38 | 7 | 48 | 40 | 35 |
| Infant Mortality Rate 2016 | 42 | 31 | 37 | 34 | 43 |
| Mortality Rate 2017 | 41 | 23 | 48 | 36 | 42 |
| Obesity Rate 2017 | 39 | 23 | 43 | 31 | 40 |
| Smoking Rate 2017 | 44 | 15 | 49 | 38 | 43 |
| Suicide Rate 2017 | 25 | 7 | 28 | 15 | 18 |

Public Health Rankings across Companion States

| Measure | Indiana | Alabama | Arizona | Arkansas | Georgia | Missouri | Nebraska | South Carolina | Tennessee |
|--------------------------------------|---------|---------|---------|----------|---------|----------|----------|----------------|-----------|
| State Health Rankings (overall) 2018 | 41 | 48 | 30 | 46 | 39 | 38 | 15 | 43 | 42 |
| Mental Health Ranking 2016 | 38 | 47 | 25 | 49 | 31 | 39 | 5 | 43 | 42 |
| Infant Mortality Rate 2016 | 42 | 50 | 14 | 48 | 45 | 36 | 26 | 38 | 41 |
| Mortality Rate 2017 | 41 | 47 | 10 | 45 | 38 | 39 | 24 | 40 | 44 |
| Obesity Rate 2017 | 39 | 46 | 20 | 44 | 26 | 33 | 34 | 41 | 35 |
| Smoking Rate 2017 | 44 | 41 | 16 | 46 | 30 | 40 | 14 | 36 | 47 |
| Suicide Rate 2017 | 25 | 27 | 33 | 42 | 12 | 32 | 14 | 26 | 29 |

