



INDIANA

GOVERNOR'S PUBLIC HEALTH COMMISSION



Report to the Governor in fulfillment of Executive Order 21-21
Submitted by the Staff of the Indiana Department of Health

*"An ounce of prevention is worth a pound of cure."
- Benjamin Franklin*



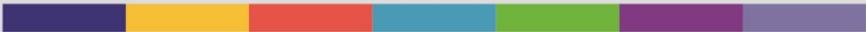


Table of Contents

Letter to the Governor	2
Executive Summary	6
Commission, Charge, and Process	11
Introduction	14
Governance, Infrastructure, and Services Findings	31
Public Health Funding Findings	45
Workforce Findings	56
Data and Information Integration Findings	66
Emergency Preparedness Findings	74
Child and Adolescent Health Findings	88
Conclusion	99
References	100
Appendices (<i>separate</i>)	107



August 1, 2022

The Honorable Eric J. Holcomb, Governor
State House 206
Indianapolis, IN 46204

Dear Governor Holcomb:

It is said that Benjamin Franklin uttered the timeless phrase “An ounce of prevention is worth a pound of cure” in 1736. In that context, he was speaking about preventing deadly fires. More than 285 years later, this wisdom still rings true and applies to our most precious resource: health.

Your Commission on Public Health submits this report as required by Executive Order 21-21, which you issued August 18, 2021. The Commission concluded its final meeting on June 30, 2022, and adopted this report and its findings with instructions to the Indiana Department of Health staff to submit it on behalf of the Commission.

The Commission first met in September 2021 and met monthly thereafter to study the challenges and successes of our public health system. It came as no surprise to learn that Indiana has some of the most dedicated professionals at the state and local levels who are committed to promoting, protecting, and improving our health and safety. We owe it to this group of professionals to build on their successes and prepare Indiana for the future.

It is clear that the COVID-19 pandemic tested our public health system in a way that we have not seen since the 1918 influenza pandemic. Your administration and the public health system rose to the challenge time and again. For that, this Commission commends you, the Indiana Department of Health, Indiana Department of Homeland Security, Indiana National Guard, local health departments, and the myriad partners across Indiana who helped throughout the response. The COVID-19 pandemic also highlighted the diversity of thought and opinions that exist within our state, especially with respect to how best to deliver services and the desire

for local control. Throughout our analysis and discussion, we have sought to take a balanced approach that takes this into account and propose tailored solutions to fit Indiana's needs for a modern public health system.

You will find several themes reiterated throughout this report. It became apparent to us as we dove deeper into this work that funding, governance structure, and workforce would be at the heart of many of the challenges of our public health system. That is why we focused on those three workstreams first and continued to study them through various perspectives. This report is laid out such that the Executive Summary and Background contain essential information about our process and our recommendations. The chapters that follow are aligned to the workstreams we analyzed and go into more depth about our findings.

We surveyed the members of the Commission and asked them why they said yes to the call to serve. We heard two things consistently: public health investment undergirds vibrant communities, and average performance is not the Hoosier way. Communities thrive when they have sufficient resources devoted to public health and citizens reach their optimal health. Our rankings to date have been poor to average, and that simply does not reflect our goal of excellence for Indiana's wellbeing. Thus, it is imperative that we make critical changes to the public health system so that we can help build the communities of the future. Our ounces of prevention today will reap pounds of reward in the years to come.

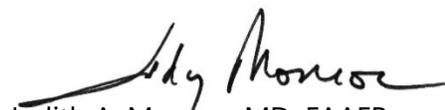
On behalf of the entire Commission, thank you for the opportunity to serve. The work we accomplish here will cement Indiana's future as an economic leader. We remain committed to assisting in any way we can.

Respectfully submitted by the members of the Commission,



Luke Kenley, JD

Co-Chair, Former State Senator



Judith A. Monroe, MD, FAAFP

*Co-Chair, former State Health Commissioner and
President of the CDC Foundation*



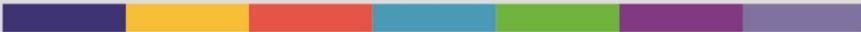
Kristina M. Box, MD, FACOG

Secretary, State Health Commissioner



Susan W. Brooks, JD

Citizen Advisor, former U.S. Representative IN-05



Virginia A. Caine MD
Virginia A. Caine, MD
Marion County Local Health Officer

David J. Welsh MD FACS MBA
David J. Welsh, MD, MBA
Ripley County Local Health Officer

Mindy Waldron
Mindy Waldron, REHS
Allen County Health Administrator

Paul K. Halverson
Paul K. Halverson, DrPH, FACHE
Founding Dean, IU Fairbanks School of Public Health

Hannah L. Maxey
Hannah L. Maxey, PhD, MPH, RDH
Director, IU Bowen Center for Health
Workforce Research and Policy

Carl Ellison
Carl Ellison
President and CEO,
Indiana Minority Health Coalition

Brian C. Tabor
Brian C. Tabor
President, Indiana Hospital Association

Cara Veale
Cara Veale, DHS, OTR, FACHE
CEO, Indiana Rural Health Association

Kimberly L. Irwin
Kimberly L. Irwin, MPH
Administrator,
Indiana Public Health Association

Mark E. Bardsley
Mark E. Bardsley
Grant County Commissioner

Dennis W. Dawes
Dennis W. Dawes, MHA
Hendricks County Commissioner

Bob G. Courtney
Bob G. Courtney, CPA
Mayor, City of Madison



Commission Staff

D. Shane Hatchett, MS, PMP

IDOH Chief of Staff

Tami Barrett

Executive Assistant

Jeni O'Malley

Deputy Chief of Staff &
Chief Communications Officer

Micha Burkert, JD

Director of Legislative and
External Affairs

Designated Policy Advisors

Child and Adolescent Health

Maria Finnell, MD, MS, FAAP

FSSA Chief Medical Officer

Data and Information Integration

Lindsay Weaver, MD, FACEP

IDOH Chief Medical Officer

Emergency Preparedness

Stephen Cox

IDHS Executive Director

Public Health Funding

D. Shane Hatchett, MS, PMP

IDOH Chief of Staff

Governance and Infrastructure

Pamela Pontones, MA

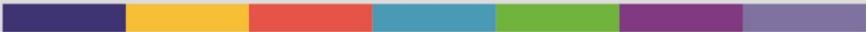
IDOH Deputy Health Commissioner
and State Epidemiologist

Workforce

Hannah Maxey, PhD, MPH, RDH

Bowen Center for Health Workforce
Policy & Research

Project support by Health Management Associates, Inc.



Executive Summary

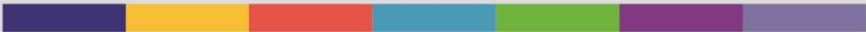
Good health is essential for communities, families, and individuals to thrive; children to learn; adults to maintain employment; and individuals, businesses, and healthcare payors to devote less of their limited resources to the soaring costs of healthcare. While access to care to treat an illness or a disabling condition is crucial to good health, other factors play a larger role in our health outcomes. Research shows that the biggest impacts to our health and wellbeing are outside of the physician's office – they are our behaviors and the environments in which we live and work. The importance of healthy environments and sound health education has never been greater.

These factors are the primary domains of the public health system. In fact, most of the life expectancy gains achieved during the 20th century – approximately 25 of 30 additional years – are attributable to public health programs and interventions focused on preventing people from getting sick or injured in the first place and on promoting wellness by encouraging healthy behaviors.

The longevity gains of the last century, however, are threatened by contemporary public health challenges and the prominence of non-communicable diseases, especially:

- Rising deaths from drugs, alcohol, and suicide
- Rising rates of adult and child obesity
- Persistently high rates of adult tobacco use and teen vaping
- Continuing risks from drug-resistant disease agents and infectious diseases such as measles, hepatitis, tuberculosis, HIV/AIDS, COVID-19, and others – each with the potential to spread rapidly across the state, across the country, and around the world.

In fact, life expectancy in Indiana has been declining since 2010, when it peaked at 77.5 years. Indiana's life expectancy in 2019 was 77 years, almost two years below the U.S. average of 78.8, placing us 40th in the nation.¹ Of even greater concern is that difference between the Indiana county with the highest life expectancy and the county with the lowest life expectancy is almost nine years. This is clear evidence of the health disparities that exist across our state.



While Indiana fares well on other quality-of-life measures, such as our cost of living and K-12 education system, the state persistently ranks among the bottom 20 states, and often the bottom 10, on key public health metrics. The costs to our state from our poor health are substantial, including unnecessary suffering, lost productivity, and weaker communities.

Even before the COVID-19 pandemic, it was clear that Indiana's public health system was struggling to meet our public health challenges. Funding and the ability to deliver the essential public health services equitably across our state are largely dependent on where a Hoosier lives. Indiana statutes place responsibility for funding local health departments on the county or municipal jurisdiction, where it occupies a low priority and competes for finite resources. The pandemic further exposed the system's deficiencies, as well as the geographic, racial, ethnic, and socio-economic disparities in health outcomes that exist across the state. We can and we must do better to meet the public health challenges that already exist and to be prepared for the new challenges that will emerge in the future.

The Governor's Public Health Commission believes Indiana must take action to transform the state's public health system by modernizing our public health services, administrative and data supports, and delivery systems concurrent with the long-overdue investments that will strengthen our public health workforce to ensure that the state is prepared for future public health emergencies. This report summarizes the Commission's findings and recommendations in response to its charge in six subject-matter areas related to public health: (1) governance, infrastructure, and services; (2) public health funding; (3) workforce; (4) data and information integration; (5) emergency preparedness; and (6) child and adolescent health.

Upon submission of this report to the Governor, Executive Order 21-21 requires the Commission to sunset. This work, however, does not end there. The Indiana Department of Health, under direction of the Office of the Governor, will take ownership of implementation of his agenda to advance Indiana's public health system. This implementation work will continue to require multi-sector partnerships to implement, evaluate, and adapt these recommendations to fit the needs of Hoosiers for decades to come. Additional advisory groups may be convened and metrics developed beyond those discussed in this report to further measure system improvement.



Commissioners' Remarks on the Importance of this Work

"Regarding public health, I'm not satisfied with adequate nor average; we need a foundational commitment that all Hoosiers have excellent public health services in every ZIP code throughout Indiana."

Mark Bardsley, Grant County Commissioner

"Public health is critical to addressing people and communities as a whole and closing the inequality gap."

Dr. Cara Veale, Indiana Rural Health Association

"As a rural general surgeon and county health officer, I have seen first-hand some of the gaps in public health service delivery. These last two years, the COVID-19 pandemic has magnified the problems of the delivery of public health services in Indiana. This has especially affected rural communities."

Dr. David Welsh, Ripley County Local Health Officer

"I've dedicated my entire career to bettering the public health delivery system in our area and working toward a more collaborative and sustainable collective workforce across the state. Over the past two years, public health had a light shined upon it across the nation. For Indiana, that light showed us that we have some work to do in order to provide worthwhile public health services to every single Indiana resident in a consistent and meaningful way. The work of the Commission is certain to lead to better public health service delivery for every Hoosier as we build a more well-trained, supported, and robust system poised to provide proactive and preventive services."

Mindy Waldron, Allen County Health Administrator

"Indiana's health workforce is the foundation of the public health system. The Governor's Public Health Commission has prioritized workforce discussions and recognizes the need for formal planning. Knowing and understanding the workforce involved in the delivery of public health services is critical for future planning."

Dr. Hannah Maxey, Indiana University Bowen Center
for Workforce Policy and Research

"Health and the economy are inextricably linked. Indiana is a state that works, and a healthier workforce is a more productive workforce."

Dr. Judy Monroe, Co-Chair



“Public health is what we do collectively to protect and improve the health of our community – it is not only preventive health care for people who can’t afford care, but also what we do as a community to help everyone live longer and have a better quality of life. In Indiana, we don’t have an effective public health system; rather we have a collection of public health departments variably funded primarily by the counties without strong statewide standards or direction. We need a modern public health system in Indiana that focuses on creating the conditions where we live longer and more productive lives.”

Dr. Paul Halverson, Indiana University Fairbanks
School of Public Health

“The COVID-19 pandemic strained hospitals and public health agencies in unimaginable ways. But through the adversity, closer partnerships were developed that gave us models of how we should transform the system. We are all in this work together, and everyone agrees we can’t keep doing public health the way we have in the past.”

Brian Tabor, Indiana Hospital Association

“Public health professionals and medical care professionals need to work together for the public good. The Commission’s plan needs to outline reasons and solutions for public health and medical care to come together for the health of each community. Financing for public health needs to be elevated to a higher priority in each Indiana county. Our plan emphasizes financing as a critical part of our recommendations.”

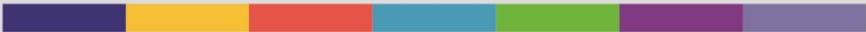
Dennis Dawes, Hendricks County Commissioner

“Our opportunity for health begins long before we are sick – in our homes, at school and work, and in our neighborhoods and communities. It requires the power of prevention and fair opportunities for all people, regardless of age, race, ability, or income. Our public health system is the foundation of this ‘power of prevention,’ and it requires funding, infrastructure, capacity, and expertise on par with the clinical systems that treat injury and illness once they occur.”

Kim Irwin, Indiana Public Health Association

“Indiana ranks very favorably in economics, opportunity, education, and public safety. However, our public health metrics rank us amongst the lowest in the nation. Business and industry require a healthy workforce for our Indiana economy to continue to grow.”

Luke Kenley, Co-Chair



“The Commission was formed with voices from across a broad spectrum of representatives, and the strategy has created greater engagement that will produce intentional outcomes and a healthier state. A healthier state starts with recognizing that a greater investment is needed if we are to grow and prosper. Our data-driven approach has led us to solutions that can be implemented to improve public health.”

Bob Courtney, City of Madison Mayor

“Public health is a vital safety net component for safeguarding and improving the health of disadvantaged populations and communities of color. The common-sense proposed reforms, arrived at by the consensus of the GPHC, provide an important vehicle for serious consideration by the legislature. Indiana’s future success ultimately will be determined by whether the Commission’s recommendations are enacted.”

Carl Ellison, Indiana Minority Health Coalition

“Citizens expect the Commission to assure Indiana is better prepared for the next pandemic or crisis. However, citizens also want the Commission to listen to their concerns regarding finding the balance between too much government intervention and individual responsibility. We, as a state, cannot become complacent and fail to address what went wrong during the pandemic, due in large part to extreme underfunding of our public health system in the state of Indiana. It will hold us back as a state when it comes to attracting and retaining people, especially young people.”

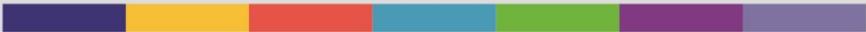
Susan Brooks, Citizen Advisor

“Public health plays an integral role in the health of our youngest and most vulnerable Hoosiers, and their health outcomes often serve as broader indicators of the health of the state as a whole. That’s why we need to make sure our public health system keeps them at the forefront of policymaking and program delivery.”

Dr. Kristina Box, Secretary and State Health Commissioner

“Local health departments are the backbone of efforts to keep our communities safe. As an infectious disease physician and the local health officer for Marion County, I know first-hand how important it is that Indiana ensure every health department has the resources it needs to keep people healthy and safe. The GPHC’s recommendations will help us protect Hoosiers for generations to come.”

Dr. Virginia Caine, Marion County Local Health Officer



Commission, Charge, and Process

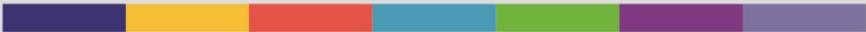
The Governor's Public Health Commission was established by executive order from Governor Eric J. Holcomb on August 18, 2021. The Commission was tasked with advising the Office of the Governor and the Indiana Department of Health on the functioning of Indiana's public health system. The Commission was charged with the following:

- I. Analyzing Indiana's current public health system to identify both strengths and weaknesses;
- II. Analyzing the performance of state and local health departments during the COVID-19 pandemic;
- III. Identifying:
 - a. ways to improve the delivery of public health services throughout the State
 - b. the funding challenge for the State's public health system and ways to address those challenges;
 - c. ways to promote health equity;
 - d. ways to ensure the sustainability of our local health departments; and,
 - e. ways to improve responses to future public health emergencies;
- IV. Identifying legislative proposals to address the Commission's findings and recommendations; and,
- V. Issuing a written report of the Commission's findings and recommendations.

Commission Proceedings

Commission meetings were held monthly from September 2021 through July 2022. Except for one virtual meeting held in January 2022, all proceedings were held in person at the Indiana Government Center and State Library. Each meeting was live-streamed and archived online.

The 15 Commission members and citizen advisor, all appointed by Governor Holcomb, include representatives from public health entities, local government, the Indiana Minority Health Coalition, and healthcare associations.



Commission Workstreams

The Commission’s work was driven through the following six workstreams led by Designated Policy Advisors who conducted research, engaged experts and stakeholders, and developed draft recommendations for the Commission’s consideration.

Workstream	Purpose
Emergency Preparedness	Analyze the State and local health departments’ response to the COVID-19 pandemic; make recommendations for future improvements
Public Health Funding	Review public health funding sources, current levels, and suggestions for standardization
Governance, Infrastructure, and Services	Review public health governance and infrastructure, public health services delivered through LHDs, and shared services models
Workforce	Consider policies to support public health workforce planning and to identify and address workforce shortages
Data and Information Integration	Consider policies to improve the use and integration of public health data to better support public health programming and delivery
Child and Adolescent Health	Review opportunities to improve school-based health education, prevention, and wellness activities and improve access to child and adolescent health care

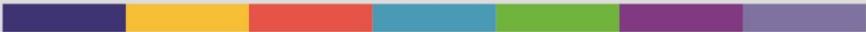
Other Public Input

The Governor's Public Health Commission actively sought other stakeholder input and public comment through multiple modes. This included:

- Maintaining a public website (www.in.gov/gphc) with a form for submitting public comments
- Holding seven “Listening Tour” public meetings at geographically diverse locations across the state in February and March 2022 (Gary, Huntington, Jasper, Monticello, New Castle, Plainfield, and Seymour)
- Conducting more than 30 stakeholder meetings, led by the State Health Commissioner and a Commission Co-Chair, from September 2021 through May 2022

More than 480 comments received from the public comment website were summarized and presented at each Commission meeting. Themes from the Listening Tour meetings were also synthesized and shared with Commission members for review. Updates to the IDOH staff were provided during regular agency meetings, and staff were encouraged to share information with their respective stakeholders. An internal “listening tour” was held April 08, 2022, to solicit feedback from IDOH staff.





Introduction

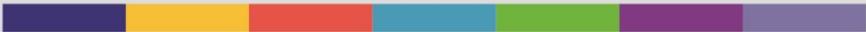
Good health is essential for communities, families, and individuals to thrive. Research shows that individuals who are healthier are generally happier than their peers who are in poor health², and better health also enables better workplace attendance and community engagement. State policymakers have an opportunity through their professional service to support policies that help individuals and families thrive. Improved physical health also benefits Indiana's fiscal health by reducing missed workdays due to poor health, lowering healthcare costs, improving productivity, and making the state an attractive place for businesses to locate.

A key strategy for achieving healthy outcomes in our state is having in place policies that help sustain the health of individuals and families – not just in their own households, but across the community. Successful public health policies employ a community-wide perspective to help improve the health of individuals and families in communities across our great state.

At the core of Indiana's public health system is a network of Hoosiers with strong professional experience who use insights from science and data about dynamics within our state to help protect and improve the health of individuals and their communities. Their public health work is accomplished by promoting healthier lifestyles, understanding disease and injury prevention, and preventing, detecting, and responding to infectious diseases in our state. In contrast to physicians, nurses, and other clinicians who often care for individuals who become sick or injured, Indiana's public health professionals try to prevent problems from happening at a community level by working with state and local partners, implementing educational programs, recommending policies, and conducting research.

In many of the public policy discussions about the cost of health care in Indiana for individuals, families, businesses, and our state, too often, conversations seem to focus on expensive medical care and fixing or curing a condition that could have been prevented in the first place. While that is a necessary public policy focus, Indiana would benefit from greater attention on promoting healthy behaviors that can improve health outcomes for individuals, communities, and the state as a whole.

Indiana's Life Expectancy is Declining
After peaking at 77.5 years in 2010, Indiana's life expectancy declined to 77 years in 2019, nearly two years below the national average of 78.8 years, placing Indiana 40th nationally on this metric.



This report outlines concrete, actionable steps that Indiana can take to help improve the health of its citizens. The report’s findings are a call to state leaders to implement proven, effective measures to help individuals and families across the state live their healthiest, safest, most productive lives. The historical data show state and local public health actions that over the past decades have cumulatively effectuated an estimated 25 additional years of life expectancy. This tremendous success in public health in our state was accomplished by focusing on preventing people from getting sick or injured in the first place, while also promoting wellness through healthy behaviors and personal responsibility.³ⁱⁱ Chronic underfunding and fragmentation of the public health system are now reducing those life expectancy gains.

Ten Great U.S. Public Health Achievements, 1900-1999

Vaccination:	For smallpox, polio, measles, and other infectious diseases
Motor-vehicle safety:	Safer vehicles and roads; less drunk driving; and seatbelt and child safety seat requirements
Safer workplaces:	Fewer injuries and deaths on the job
Infectious diseases control:	By ensuring clean water and improving sanitation
Fewer coronary heart disease and stroke deaths:	From smoking cessation efforts, blood pressure control, early detection, and treatment
Safer and healthier foods:	With less microbial contamination and more nutritional value
Healthier mothers and babies:	From hygiene and nutrition, antibiotics, greater access to health care, and other advances
Family planning:	Leading to fewer infant, child, and maternal deaths
Fluoridation of drinking water:	Preventing tooth decay in adults and children
Tobacco health warnings:	Preventing millions of smoke-related deaths

Despite these advancements, too many Hoosiers still die prematurely. In fact, the disparity in life expectancy between Indiana counties can be stark – the county with the highest life expectancy has nine more years on average than the county with the lowest life expectancy. This is further exacerbated by the fact that this reduced life expectancy is affecting working-age Hoosiers (ages 25-64).⁴

- Virtually no family or community is untouched by the scourge of death of a loved one or friend due to substance use disorder (drugs, alcohol, opioids), or suicide

- Too many of our young people are losing their health and vitality due to increases in teen vaping, which causes permanent lung damage
- Many of even our youngest children are experiencing health problems because they are inactive and are considered clinically obese
- We all know too many adults who are obese and/or use tobacco consistently

At the same time, we know that state borders do not protect us from viruses and infectious diseases. In the 21st century, the outbreak of an infectious disease within our state can occur as the result of a chain of events that ends with just a handshake, a cough, or a sneeze. Our local hospitals and healthcare providers are continuously fighting drug-resistant microbes and the threat of infectious diseases like measles, hepatitis, tuberculosis, HIV/AIDS, COVID-19, and other diseases.

Hoosiers can take pride in the fact that Indiana ranks near the top of the nation compared to other states in many quality-of-life measures, such as our cost of living and pre-K-12 education system. Our business economic system and tax system are both rated in the top 10 states. In many respects, Indiana is a national leader in providing an affordable place to raise a family, grow a business, educate the next generation, and promote opportunities for all. However, when Indiana’s record on health and wellness is compared to the same measures from other states, our outcomes are not as favorable. (Table 1)⁵

Table 1: 2021 US News and World Report “Best States” Rankings

Other Quality of Life Metrics	IN State Ranking	Public Health Metrics	IN State Ranking
Affordability ^a	6	Mental Health	35
Opportunity ^b	7	Infant Mortality	38
Pre-K through Grade 12 Education	9	Early Adult Mortality	41
Growth ^c	19	Obesity	40
Public Safety	25	Smoking	41
Natural Environment ^d	48	Suicide	13
Indiana’s Overall State Ranking:	32	Indiana’s Overall Public Health Ranking:	40

^a Measures cost of living and housing affordability.

^b Measures poverty, housing affordability, and equality for women, minorities, and people with disabilities.

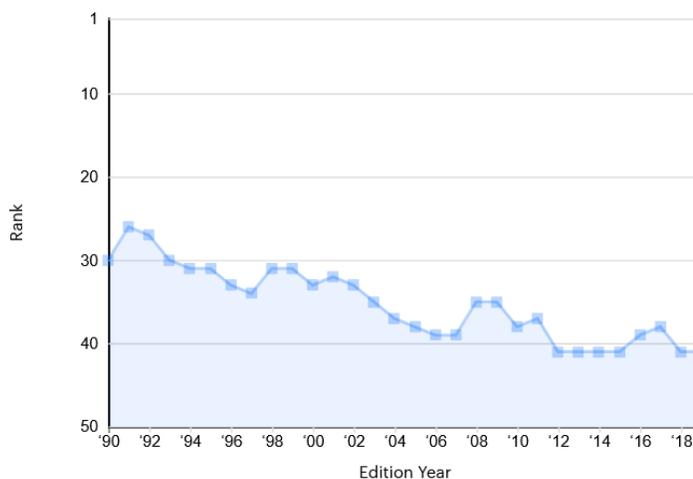
^c Measures growth of the young population, growth through migration, and the GDP growth rate.

^d Measures air and water quality and pollution.

These lower rankings are not just numbers on paper; the realities they convey result in extra costs for individuals, families, businesses, and state government as well. In fact, the costs to Indiana from poor health are substantial. For example:

- Obesity and diabetes account for more than **\$8.4 billion** in productivity losses among employed individuals in Indiana⁶
- Chronic diseases, such as heart disease, cancer, lung disease, stroke, diabetes, and kidney disease, are among the leading causes of death and disability in Indiana with total direct and indirect costs of **\$75.5 billion** per year⁷
- Smoking results in nearly **\$3 billion** in annual healthcare costs for Indiana, including \$590 million in Medicaid costs alone⁸
- Cervical cancer accounts for more than **\$54 million** in estimated direct healthcare costs per year⁹

Before the COVID-19 pandemic, it was clear that Indiana’s public health system needed to be modernized and strengthened to meet the current public health challenges our state faces. The state’s poor health rankings and aging public health infrastructure are not new concerns, as shown by the graph shown to the right. In 1991, America’s Health Rankings placed Indiana 26th in the nation for overall health outcomes. The trend has been downward since that time, with Indiana ranking 41st in 2019, which was the last time they ranked the states like this due to the disruption caused by the COVID-19 pandemic.



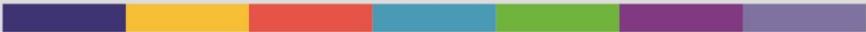
The COVID-19 pandemic further exposed the gaps in our public health system’s ability to predict and respond to the needs of our state and local communities in a timely, targeted, efficient manner. The disruption and problems caused by the pandemic also laid bare long-standing disparities in our state based on where an individual may live, his or her race, and what



level of socio-economic status he or she may have attained. State leaders have a responsibility to protect the most vulnerable and ensure that our state's policies treat individuals with fairness so individuals have equal opportunities regardless of geographic, racial, or socio-economic factors. To accomplish this, we must confront the public health challenges that exist and lay the groundwork to be better prepared for future challenges that will emerge.

The Governor's Public Health Commission was created in 2021 to study Indiana's public health system and has been led since then by Hoosiers who have deep expertise and long records of service in the public and private sectors. The Commission has conducted a careful study and methodical review of Indiana's public health system practices, policies, and precedents over the past many months. This report summarizes the Commission's findings and recommendations in response to its charge in six subject matter areas related to public health: 1) governance, infrastructure, and services, 2) public health funding, 3) workforce, 4) data and information integration, 5) emergency preparedness, and 6) child and adolescent health.

This report presents a distilled set of recommendations that seek to remedy numerous gaps and identified problems and represents an opportunity to take action to transform Indiana's public health system into one that can be a model for the nation. This vision can be accomplished by making cost-effective investments in proven approaches to strengthen our public health workforce, as well as to modernize our public health services, administrative and data supports, and delivery system. Taking these steps will help ensure the state is prepared for future public health emergencies and that every Hoosier has the opportunity to achieve their optimal health.



Governor's Public Health Commission Recommendations and Action Items Governance, Infrastructure, and Services

Goals

- Ensure consistent delivery of public health services across Indiana
- Promote collaboration and increased technical assistance
- Modernize structure of public health
- Enhance engagement with local community partners and elected officials
- Encourage sharing of expertise and skilled professionals
- Promote culture of continuous quality improvement

Recommendation 1: Establish baseline service standards for all local health departments.

Action items:

- A. Define minimum required services with stakeholder engagement.
- B. Provide technical assistance to Local Health Departments (LHDs) to support implementation and shared resources.

Recommendation 2: Expand IDOH resources to support LHDs and interlocal collaboration.

Action items:

- A. Provide staff and resources to support LHDs in a district with epidemiology, data analytics, legal consultation, communications, grant writing, training, and other functions, as necessary.
- B. Encourage partnerships among LHDs for key service areas (e.g., TB, STIs, Lead), including, for example, through the provision of funding.

Recommendation 3: Assist LHDs to engage local businesses, health providers, schools, and other governmental and non-governmental organizations to promote public health in the community.

Action items:

- A. Provide LHDs with guidance and best practices on how to create, convene, and sustain strategic relationships.
- B. Sustain partnerships and collaborations developed during the pandemic.
- C. Partner to promote the importance and value of local public health.



Recommendation 4: Update Local Health Board (LHB) appointments to reflect current public health workforce and key community representation.

Action items:

Amend Indiana law to:

- A. Retain LHB bipartisan structure, but add an option for no more than two independent members (i.e., with no partisan affiliation).
- B. Add to the list of persons knowledgeable in public health eligible to be appointed to an LHB (currently listed in [IC 16-20-2-5\(1\)](#)) a professional from the public health field, such as an epidemiologist or similar professional.
- C. For large counties with populations of 200,000 or greater (excluding Marion County), increase the number of LHB members from seven to nine to allow for increased engagement and representation and to provide for:
 - a. Five members, appointed by the county commissioners, who are knowledgeable in clinical and public health
 - b. One member, appointed by the county commissioners, who represents the general public
 - c. One member, appointed by the county council, who represents the general public or is knowledgeable in public health
 - d. One member appointed by each of the executives of the two most populous cities in the county
- D. For counties with populations under 200,000, provide for:
 - a. Five members, appointed by the county commissioners, who are knowledgeable in public health
 - b. One member appointed by executive of the most populous city in the county
 - c. One member, appointed by the county council, who represents the general public
- E. Repeal [IC 16-20-2-7](#), Appointments of Members in Certain Circumstances.

Recommendation 5: Ensure policy supports sharing of resources or consolidation of LHDs if desired by local partners.

Action items:

- A. Ensure that the creation of a multi-county LHD does not result in lower overall funding for the combined entity.

- 
- B. IDOH will provide technical assistance for requesting counties considering LHD resource sharing or consolidation, including legal consultation, model ordinance language, and a toolkit with other recommendations and guidance.
 - C. For counties choosing to form a multiple-county LHD, amend the statute to require that the resulting multiple-county LHD maintain at least one physical office in each component county that, at a minimum, offers consumer-accessed services, such as vital records, immunizations, and certain environmental inspections and permitting.

Recommendation 6: Promote delivery of public health services at the county level or higher, including allocation of funding.

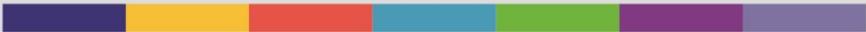
Action items:

- A. Amend [IC 16-20-4](#) to grandfather current municipal LHDs and ensure that local public health services are delivered at a county level or higher going forward.
- B. Allocate new funding for public health to the county, which may choose to subgrant to municipalities and/or establish satellite offices or annexes.

Recommendation 7: Expand personnel eligible to serve as a Local Health Officer and require new appointees to complete public health training.

Action items:

- A. Amend Indiana law to allow an Advanced Practice Registered Nurse (APRN) or Physician's Assistant (PA) with formal public health training (e.g., master's in public health or equivalent) to serve as a local health officer at the Local Health Board's discretion.
 - a. For the purposes of this Recommendation, an APRN is an individual who meets the definition of the Indiana State Board of Nursing and [IC 25-23-1-1\(b\)](#) and holds prescriptive authority.
- B. Require an APRN or PA serving as local health officer to be clinically supervised by a district health officer who is a physician and is from a neighboring county or employed by the IDOH.
- C. An LHB, with approval of local elected officials, may submit to the IDOH Executive Board a request to appoint an LHO who is not a physician, APRN, or PA, provided that individual has at least a master's in public health or equivalent degree and 5 years of experience in the public health field. The request must detail how the jurisdiction plans to ensure appropriate clinical oversight for medical services. The IDOH Executive Board will review the request and render a decision based on the needs of the jurisdiction and qualifications of the individual.

- 
- D. Require newly appointed local health officers to complete a public health foundations training to be developed by IDOH and earn a Certified Public Health (CPH) credential within one (1) year of being eligible to sit for the exam.

Recommendation 8: Provide financial and technical assistance to LHDs pursuing accreditation or reaccreditation.

Action items:

- A. Provide technical assistance to LHDs pursuing accreditation.
- B. Assist with funding to defray the costs of LHDs pursuing accreditation or reaccreditation.
- C. Consider other incentives to encourage LHDs to pursue accreditation.

Public Health Funding

Goals

- Increase public health funding to achieve consistent per capita spending at 2019 national average of \$91 per person as compared to Indiana's \$55 per person¹⁰
- Adjust for inflation and sustain public health investments to ensure long-term improvement in health outcomes through consistent programming
- Maximize all available public health funding sources
- Provide transparency and accountability for public health expenditures

Recommendation 9: Provide local health departments with stable, recurring, and flexible funding to build and sustain their foundational public health capacities.

Action items:

- A. Request an increase in annual appropriations for the 2024-25 biennium and future biennial budgets.
- B. Increase state-funded Local Health Maintenance Fund (LHMF) allocations to support the provision of an essential set of public health services in each county, taking into account county population and district support services.
- C. Condition receipt of additional LHMF allocations at the county level on:
 - (1) a vote by local elected officials' every five years to opt in to expanded services, with education to local elected officials to delineate ramifications of an opt-out vote; a county could rescind its opt-out vote within a year.
 - (2) maintenance of effort for local health budgets of up to 20% local cost-sharing with approval of county fiscal body.

Recommendation 10: Provide LHDs with administrative supports and other flexibilities to leverage all available funding sources.

Action items:

- A. Create an IDOH surge staffing program to increase the capacity of LHDs to maximize grant opportunities.
- B. IDOH will facilitate insurance and Medicaid billing for direct clinical services provided by LHDs that request this support.
- C. Allow consolidated LHDs to operate as Municipal Corporations, subject to the appointment of the Municipal Corporation's governing board by the county executives of each constituent county.

Recommendation 11: Establish consistency in the tracking of the public health resources and calculate the return on investment of additional funding allocations.

Action items:

- A. Track public health revenues and expenditures across IDOH and all LHDs on a consistent basis, in conjunction with the State Board of Accounts and the Department of Local Government Finance. Consider adopting the Public Health Uniform Chart of Accounts.
- B. Offer IDOH-sponsored annual training regarding public health and public health finance for county auditors, commissioners, and councilors.

Workforce

Goals

- Ensure Indiana has sufficient information on the health (public health and health care) workforce to identify shortages and support workforce planning
- Enhance training, recruitment, and retention to ensure workforce capacity and skills are sufficient to support Hoosier health

Recommendation 12: Coordinate current initiatives and provide a framework for the development of a state health workforce plan.

Action items:

- A. Establish a health workforce council co-chaired by the State Health Commissioner and Secretary of FSSA to coordinate and plan health workforce programs and initiatives.

- 
- B. Leverage existing processes and programming to identify clinical healthcare shortages and areas requiring further evaluation.
 - C. Complete a comprehensive local and state public health workforce assessment to collect and analyze job descriptions, salary ranges, full-time equivalent (FTE) counts, training, and services delivered.
 - D. Use these workforce assessments to develop a comprehensive healthcare workforce plan for the state.
 - E. Provide standardized job descriptions in public health and suggested salary ranges for these position to local elected officials for guidance.

Recommendation 13: Ensure representation of public health on Indiana workforce initiatives.

Action items:

- A. Include IDOH representative on the Indiana Graduate Medical Education Board.
- B. Coordinate with the Indiana Governor’s Workforce Cabinet.

Recommendation 14: Through the Health Workforce Council, enhance workforce reporting to understand public health and clinical workforce needs and the status of the talent pipeline.

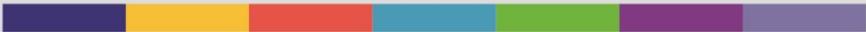
Action items:

- A. Develop a set of standardized workforce reporting measures for state and local health departments.
- B. Work with state and local public health to understand their workforce needs and gaps
- C. Create a central repository for LHD position postings from across the state.
- D. Partner with the Commission for Higher Education and institutions of higher education to quantify and describe Indiana’s health workforce pipeline and retention.

Recommendation 15: Expand health workforce recruitment, training, placement, and retention into areas of need.

Action items:

- A. IDOH and FSSA will collaborate with other state agencies on incentive program strategies (e.g., loan repayment) that target Indiana’s health workforce needs and complement existing federal programs.
- B. Promote experiential learning opportunities in public health through paid internships and fellowships.

- 
- C. Create cross-training opportunities in public health for students in clinical health programs.
 - D. The Office of the Governor, the Indiana Professional Licensing Agency, and IDOH should evaluate whether centralizing licensure functions within IDOH for all healthcare professionals would enhance the state's ability to more efficiently recruit and license healthcare professionals.

Data and Information Integration

Goals

- Ensure coordination of data across health and human services entities at the state level
- Maintain privacy protections and appropriate consents for use of data
- Promote integration of public health data for clinical use by providers to optimize health outcomes
- Provide tools to assist local public health officials to make data-informed decisions.
- Modernize public health systems and processes to increase efficiency and enhance service delivery to Hoosiers

Recommendation 16: Establish a State Public Health Data System Advisory Committee that includes local representation.

Action items:

- A. Develop data governance across entities with appropriate privacy protections and security provisions, including cybersecurity protections.
- B. Develop a strategic plan for public health data initiatives.

Recommendation 17: Formalize and strengthen the state's relationship with a Health Information Exchange (HIE) partner to promote improved clinical outcomes and outbreak management.

Action items:

- A. Codify the state-HIE relationship and leverage funding opportunities (federal and non-profit) to enhance services and promote sustainability.
- B. IDOH will recommend policies and initiatives to increase number of providers connected to HIE partner.
- C. Work with HIE partners to establish dedicated public health focus.

Recommendation 18: Enhance data analytics tools and resources for local public health.

Action items:

- A. Establish district-level data services, integrated with epidemiology assistance, to support LHDs and cross-county analysis.
- B. Ensure bi-directional data flow that allows LHDs to access and analyze all submitted data.
- C. Establish baseline technology, security, and resource requirements for LHDs, with financial and logistical support for LHDs to achieve compliance.
- D. Promote digitization of inspection and permit records to improve access to key public health data.

Recommendation 19: Maintain state-led digital transformation efforts to modernize public health systems and paper-based processes.

Action items:

- A. Dedicate funding to support the IDOH Office of Data and Analytics and its ability to fully implement all GPHC recommendations.
- B. Establish funding to continue digital transformation efforts to support implementation and ongoing operations of GPHC recommendations.

Emergency Preparedness

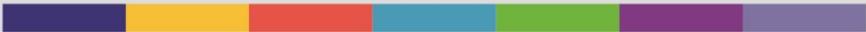
Goals

- Ensure connectivity and facilitate information exchange in preparation for and during public health emergencies
- Enhance LHD, IDOH, and EMS readiness
- Improve the scalability of emergency response efforts beyond the local level
- Ensure state and local agencies have tools to prioritize and maintain responder resilience

Recommendation 20: Increase utilization of IDOH's EMResource tool across all Indiana hospitals, local public health departments, first responders and applicable government agencies.

Action Items:

- A. Secure funding and infrastructure for EMResource, the state's resource tracking and decision support tool for public health emergency preparedness.
- B. Include EMResource participation as a condition of hospital licensure.

- 
- C. Ensure awareness and training on use of EMResource and WebEOC of all relevant partners.
 - D. Require local health departments to utilize EMResource.

Recommendation 21: Require LHDs to participate in the CDC Public Health Emergency Preparedness (PHEP) grant program.

Action items:

- A. Require each LHD to have a PHEP coordinator (0.5 FTE minimum).
- B. Provide technical assistance as needed for grant activities and reporting.

Recommendation 22: Enhance IDOH's emergency services and supplies capacity.

Action items:

- A. Maintain IDOH vendor contracts that can be activated during a public health emergency.
- B. Evaluate the need for a state strategic stockpile to ensure the availability of personal protective equipment and (PPE) and medical counter measures (MCM).
- C. Engage Health Care Coalitions, LHDs, and statewide partners to develop strategies for extending PPE and MCM supplies so that both are available when needed most.
- D. Direct Indiana Department of Homeland Security and IDOH on coordination of public health emergencies through training exercises.

Recommendation 23: Ensure local level EMS readiness through expansion and sustainability of EMS workforce.

Action items:

- A. IDOH in conjunction with the EMS Commission, will conduct a needs assessment of specific EMS gaps in local jurisdictions.
- B. Ensure funding for prioritized recruitment to address EMS workforce shortages and provide mechanisms for cost-sharing related to equipment purchases, particularly in underserved and geographically remote areas of the State.
- C. Establish long-term promotional and retention plans for EMS personnel.
- D. Enhance ongoing higher levels EMS training and expansion of community paramedicine programs.
- E. Improve health outcomes related to preventable injuries and other trauma through enhanced analysis and educational initiatives, increased access to EMS, and other efforts to strengthen the trauma system.

Recommendation 24: Improve regional coordination efforts to ensure a seamless emergency response.

Action items:

- A. Initiate a stakeholder engagement process to redefine the IDOH Emergency Preparedness Districts.
- B. Initiate a stakeholder engagement process to redefine roles, responsibilities and authorities of regional partners to improve public health emergency preparedness coordination.

Child and Adolescent Health

Goals

- Improve student learning by mitigating health barriers
- Enhance early childhood education and school-based health education, prevention, and wellness activities
- Improve access to child and adolescent health care
- Reduce childhood injuries

Recommendation 25: Support policies to increase the availability of school nurses.

Action items:

- A. Implement policies to improve the school nurse to student ratio.
- B. Implement policies to support school nurse recruitment and retention, such as addressing low pay and incentivizing school nurse credentialing.

Recommendation 26: Increase access to services to support whole child wellness.

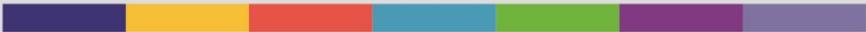
Action items:

- A. Implement policies to improve the school counselor, social worker, and psychologist to student ratio.
- B. Provide technical assistance to schools interested in providing School Based Health Clinics (SBHCs) in partnership with local health systems .

Recommendation 27: Support evidence-based health education, nutrition, and physical activity in schools and early childhood education settings.

Action items:

- A. Make evidence-based curricula on health and oral health matters available for schools and early childhood education settings to access.
- B. Provide technical assistance in implementing curricula.

- 
- C. Support schools and early childhood education settings in identifying opportunities to increase physical activity and healthy nutrition during the school day.

Recommendation 28: Support access to health screenings and services that can be appropriately delivered in school and early childhood education settings while maintaining parental/guardian consent mechanisms.

Action items:

- A. Make best-practices information about screenings and services accessible to schools and early childhood education settings.
- B. Convene a representative workgroup comprised of schools, community-based organizations, clinicians, and public health leadership to identify best-practices.
- C. Support policies to increase the availability of nutritious meals, and reduce the availability of non-nutritious food, in schools and early childhood education settings.
- D. Identify opportunities to provide resources and referrals to children identified during a school screening as requiring a service or supply (e.g., eyeglasses or hearing aids).
- E. Ensure all strategies are equitable for children regardless of demographics and needs.
- F. Explore opportunities to incorporate oral health screenings in school settings, in addition to the vision and hearing tests currently required.

Recommendation 29: Reinforce meaningful implementation of school wellness policies.

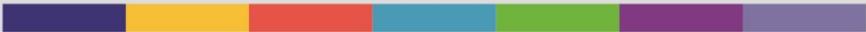
Action items:

- A. Fund and leverage IDOH, IDOE, and community partners to collaborate with school districts regarding the benefits of evidence-based wellness policies.
- B. Fund direct technical assistance to implement evidence-based school wellness policies.
- C. Incentivize school districts to prioritize wellness policy via school grant processes.

Recommendation 30: Support the development of SBHCs.

Action items:

- A. Provide technical assistance to school systems interested in developing a SBHC.
- B. Leverage best practices from established SBHCs and in compliance with parental consent requirements.
- C. Identify opportunities for connecting local health systems with schools interested in implementing SBHCs.
- D. Increase oral health education and awareness and, if desired, oral health screenings in SBHCs.



Recommendation 31: Increase provider awareness of public health initiatives, opportunities, and requirements.

Action items:

- A. Engage relevant community stakeholders in developing technical assistance framework for Indiana healthcare providers on public health best practices and available resources.
- B. Address practice variance across the state on public health matters.

Recommendation 32: Address childhood injury and violence prevention.

Action items:

- A. Establish an interprofessional coalition of experts focused on keeping youth safe from unintentional firearm deaths and suicide.
- B. Fund and leverage IDOH to develop policies to address safety issues and increase equitable access to safety equipment shown to significantly decrease child injuries (such as car seats, bike helmets, cabinet locks, and stair gates).



Governance, Infrastructure, and Services Findings

Under the U.S. Constitution's 10th Amendment, which gives states all powers not specifically given to the federal government, state and local health departments retain the primary responsibility for public health. Indiana's public health system, comprised of the Indiana Department of Health (IDOH) and 94 local health departments (LHDs), operates under a decentralized, "home rule" model, in which local governments retain substantial statutory autonomy to manage public health services and functions, including the structure, financing, size, and activities of LHDs. Examples of other governance classifications can be found in Appendix A.

Indiana Department of Health (IDOH): Indiana's Primary State Public Health Authority

The IDOH is an executive branch agency led by the State Health Commissioner, who is appointed by the Governor and is required by statute to be a physician in good standing with an unrestricted license to practice medicine. The IDOH has four operating commissions:

- The **HEALTH AND HUMAN SERVICES COMMISSION** focuses on primary and secondary prevention strategies through nine divisions: Chronic Disease, Primary Care & Rural Health; Nutrition & Physical Activity; Women's Health; Maternal & Child Health; Children's Special Health Care Services; Trauma & Injury Prevention; Women, Infants, & Children (WIC); Fatality Review & Prevention; and the Center for Deaf & Hard of Hearing Education.
- The **CONSUMER SERVICES AND HEALTHCARE REGULATION COMMISSION** licenses and/or certifies over 9,000 acute and long-term care facilities to operate and receive Medicare and Medicaid funding. The Commission also licenses more than 15,000 radiology professionals, certifies over 50,000 nurse aides and home health aides, and operates the Division of Weights, Measures and Radiology.
- The **PUBLIC HEALTH PROTECTION COMMISSION** works to reduce the public risk of exposure to communicable diseases, foodborne illnesses, and environmental health and safety hazards, prepares for and responds to public health threats, and operates the Division of Vital Records.
- The **LABORATORY SERVICES COMMISSION** includes the IDOH Laboratory that provides critical direct services in the form of environmental and food testing, communicable disease testing, viral and microbial culturing, and surveillance testing.

Other IDOH divisions report directly to IDOH executive staff, including Tobacco Prevention & Cessation, the Office of Minority Health, and Oral Health (all of which report to the chief medical officer), and the Epidemiology Resource Center, Office of Public Health Performance Management, and HIV, STD, and Viral Hepatitis and Health Issues and Challenges divisions (all of which report to the deputy state health commissioner and state epidemiologist). Several operational divisions, including the Office of Public Affairs, Office of Legal Affairs, Office of Data Analytics, Office of Technology and Cybersecurity, and Office of Finance, report to the chief of staff. *An IDOH Organizational Chart is included as Appendix B to this report.*

In 2021, IDOH was awarded accreditation by the [Public Health Accreditation Board \(PHAB\)](#), joining the ranks of 39 other states that have successfully completed this rigorous, multi-year, peer-reviewed process that ensures that a public health department meets or exceeds specified quality standards and measures.

Most Local Health Departments (LHDs) are County-Based

Indiana’s 92 counties are served by 94 LHDs, including: 89 *County-Based LHDs*, each operating as an agency of the county government pursuant to IC 16-20-1-2; one *Multiple County LHD* serving both Fountain County and Warren County (created under IC 16-20-3); one county-based LHD serving Marion County organized as a *Municipal Corporation* under IC 16-22-8; and three *Municipal LHDs* established under IC 16-20-4 serving the cities of East Chicago, Gary and Fishers. Across the country, the majority of LHDs (61%) serve populations of fewer than 50,000.¹¹ Similarly, most Indiana LHDs serve smaller populations: approximately one-third serve populations of fewer than 25,000, and two-thirds serve fewer than 50,000 residents. The majority of LHDs in the state have fewer than 10 total employees, including both part-time and full-time (Table 2).

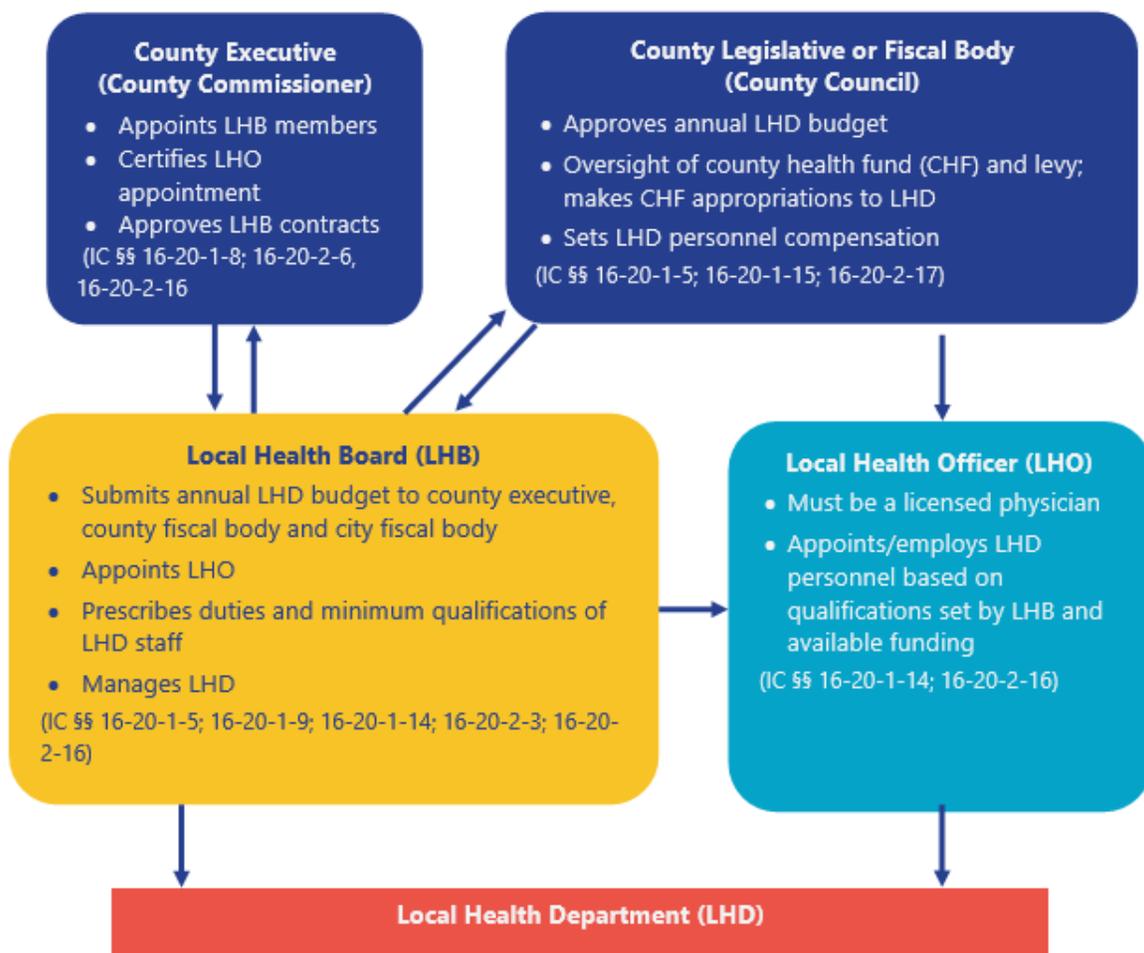
Table 2: Number of LHDs and Average Number of Full and Part Time LHD Employees by Size of Jurisdiction Served¹²

LHD Pop. Size	<25,000	25–50,000	50–100,000	100–250,000	>250,000
# Of LHDs	30	35	12	12	5
Ave. # FT	3.2	6.2	14.9	29.9	194.8
Ave. # PT	2.4	2.6	6.0	6.8	17.0

County Governance of Local Health Departments

The governance structure for most LHDs is illustrated in Figure 1 below. The County Council exercises ultimate decision-making power regarding fiscal affairs, including: approval of the LHD annual budget; establishing LHD staff compensation; fixing tax rates and establishing county property tax levies, including the county health fund levy; and authorizing public fund expenditures. The Board of County Commissioners has a wide range of executive and administrative authority, including appointment of the members of the Local Health Board (LHB), approval of LHD contracts and certifying the appointment of the Local Health Officer (LHO). The LHB appoints the LHO and oversees the management of the LHD, including passage of local health ordinances and setting fees. LHB appointees may receive a modest per diem for their work but are generally uncompensated for their services.

Figure 1: County-Based LHD Governance Structure





Governance of Multiple County Local Health Departments ([IC 16-20-3](#))

With IDOH approval, two or more adjacent counties may form a multiple-county LHD through separate ordinances adopted by the county executive of each participating county. The size and membership of the LHB is determined by agreement of the county executives, but the county executive of each participating county must appoint at least one licensed physician to the LHB. At least seven LHB members must meet the same qualifications required for county-based LHDs. (See *Appendix C for LHB member qualification criteria*.) The appointment of the LHO by the LHB must be certified by the county executive of each participating county, and the county council of each participating county must assess an annual levy to financially support the LHD. Each county council is also required to appropriate sufficient funding from its county health fund to pay the county's relative share of the LHD expenses, based on population.

Municipal LHD Governance ([IC 16-20-4](#))

Indiana law permits the legislative body of a second-class city (population between 35,000 and 600,000) to form a municipal LHD, subject to the approval of the city's fiscal body. The municipal LHD is governed by a seven-member LHB appointed by the city executive; three of these members must be licensed physicians, and one must be a licensed veterinarian. The municipal LHB has the same powers and duties as a county-based LHB but also sets the compensation of the municipal LHD's officer and employees. The appointment of the LHO (who must be a licensed physician) by the LHB is subject to the approval of the city legislative body. The city's fiscal body approves the municipal LHD's annual budget and appropriates revenue to cover the LHD's expenses. The Indiana Commission on Local Government Reform's 2007 report recommended that local public health services be delivered at the county level and municipal functions be transferred.¹³

Marion County Health and Hospital Corporation – Municipal Corporation under [IC 16-22-8](#)

Indiana law creates one LHD to operate as a municipal corporation serving the state's most populous county – the Health and Hospital Corporation of Marion County, or "HHC." As a municipal corporation, HHC has the authority to, in part: sue and be sued; enter into contracts; acquire and dispose of real and personal property; and make and adopt appropriate ordinances and resolutions, including ordinances to establish an annual budget and levy taxes. Indiana law provides for local control, however, through appointment of the HHC's seven governing board members by the Indianapolis Mayor, Marion County Board of Commissioners, and the Indianapolis City-County Council.

Indiana’s Decentralized Public Health Governance Model has Both Strengths and Weaknesses

According to several local public health and county officials who participated in subject matter expert focus group calls to support the governance and infrastructure work stream, Indiana’s decentralized public health governance model has a number of advantages. First and foremost, it ensures that there is a credible and trusted public health resource at the local level. Other advantages cited included: having a local physical public health presence in every county so residents have available access to public health services; a better ability to establish relationships with community stakeholders; and better and more timely responsiveness to local needs. The participants, however, also cited several disadvantages. One commonly cited disadvantage was that county councils, which control LHD budgets and spending authority, often lack a sufficient understanding of public health. Other disadvantages cited are listed in Table 3 below.

Table 3: Strengths and Weaknesses of Indiana’s Decentralized Governance Model

Advantages	Disadvantages
<ul style="list-style-type: none">• Local credibility, trusted resource• Local physical presence• Established relationships with community stakeholders• Able to be more responsive to local public health needs• Potentially quicker response time	<ul style="list-style-type: none">• County councils often lack understanding of public health• Inconsistent availability of resources, expertise, and training• Inconsistent enforcement and messaging• Less ability to respond to emerging or growing needs, e.g., growth in refugee or homeless populations

Public Health Services Provided Vary by LHDs

LHDs across the state vary in the services they offer and the public health functions they perform. While Indiana law and regulations define a wide range of functions and services, some are mandatory for LHDs to perform or provide, while others are non-mandatory. (See Appendix D: *Indiana Local Health Department Duties and Requirements by Indiana Code and Indiana Administrative Code and Figure 2 below*).

Figure 2: Mandatory and Non-Mandatory LHD Functions and Services

Mandatory

- Vital Records services
- Food protection/ inspections
- Safe/sanitary lodging facility bedding
- Disease control/ infectious disease surveillance
- Antitoxins/vaccines (diphtheria, scarlet fever, tetanus, and rabies)
- Childhood lead (reporting, monitoring, case management, prevention)
- Child fatality review teams
- Waste/sewage disposal – monitoring and regulation
- Reporting spills/overflows from underground storage tanks
- Ensure dwellings safe for human habitation
- Pest control/vector abatement
- Public and semi-public pool/spa drain cover compliance (*federal reqmt.*)
- Health-related areas during emergencies/ disasters
- Temporary campgrounds
- Collect information on inspection/clean-up of meth-related contamination of property/vehicles
- Inspect/license railroad camp cars
- Refugee care
- Tattoo and body piercing safety and sanitation

Non-mandatory

- STIs, HIV prevention (testing, treatment, partner services, etc.)
- Mobile homes safety/sanitation
- Syringe service programs
- Youth camps
- Campgrounds and bathing beaches
- Public and semi-public pool/spa compliance

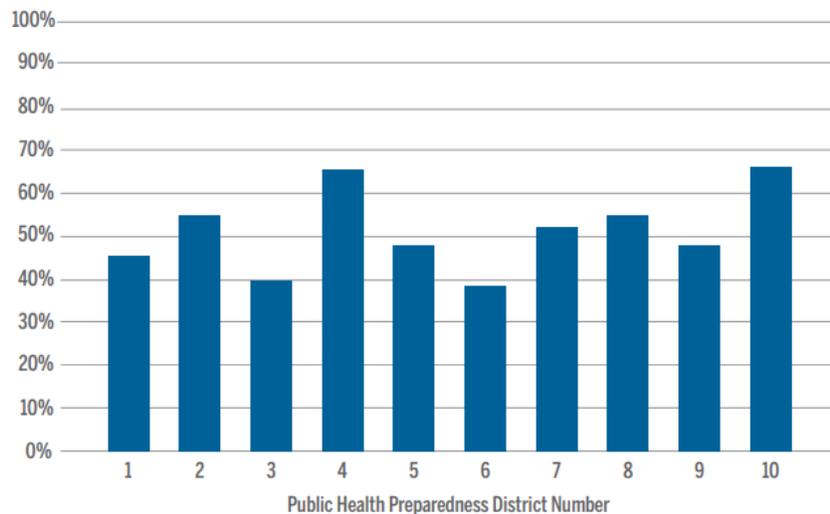
Many Indiana LHDs also choose to provide public health services and functions that are not covered under Indiana laws or regulations, including:

- Women, Infants & Children (WIC) clinics
- Childhood immunizations
- Public nuisance ordinances
- Open burning enforcement
- Lead risk assessments/mold programs
- Massage parlor regulation
- Health promotion and education
- Travel clinics
- Beekeeping
- CPR ordinances
- Patient safety
- Well ordinances

Access to Public Health Services Depends on Where You Live

All Hoosiers do not have comparable access to public health services. According to a December 2020 report from the Indiana University Richard M. Fairbanks School of Public Health, on average across the 10 public health districts in Indiana, LHDs have implemented about half of 20 recommended public health activities, ranging from a low of 40 percent of recommended activities in District 6 to a high of 67 percent in District 10 (Figure 3).¹⁴ The report further noted that while some LHDs do offer comprehensive capabilities, at least half of the LHDs in every district have “limited” capabilities and the majority of LHDs in six of the 10 districts have “limited” capabilities.

Figure 3: Average Proportion of Recommended Activities Completed by LHDs at District Level (weighted by population)¹⁵



When asked to comment on the services and functions that LHDs provide and perform, local public health and county officials participating in focus group calls cited vital records services, food protection inspections, and childhood immunizations as areas of strength for most LHDs. Conversely, these informants identified tattoo and body piercing safety and sanitation, sexually transmitted diseases, HIV (testing, treatment, etc.), and syringe service programs as areas of inconsistency. Some also noted the inconsistent application of enforcement measures by LHDs across the state.

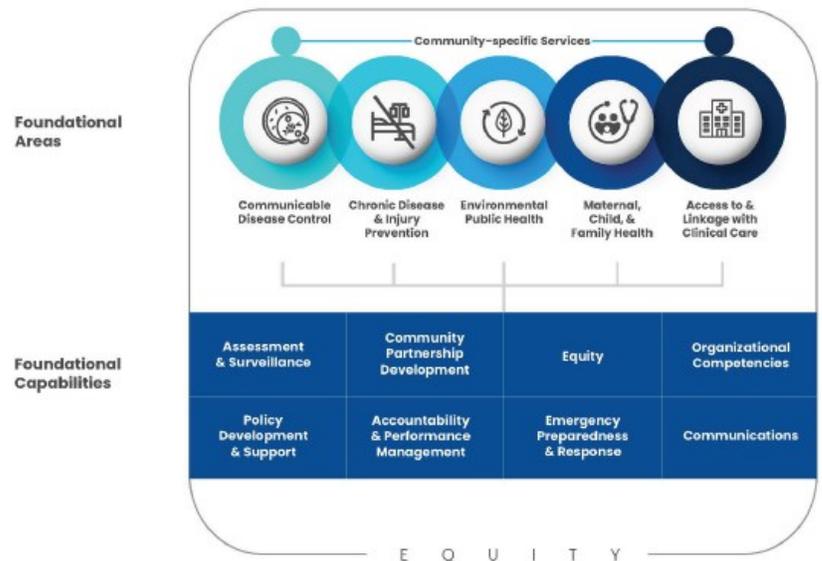
Foundational Public Health Services (FPHS) Framework: A New Approach for Defining Minimum Public Health Service Levels

The FPHS framework,¹⁶ first developed in 2013 through the work of the Public Health Leadership Forum with funding from the Robert Wood Johnson Foundation, outlines the unique responsibilities of governmental public health and defines a minimum set of *foundational capabilities* (cross-cutting skills and capacities) and *foundational areas* (topic-specific programs) that must be available in every community. The FPHS are based on the idea that where a person lives should not determine the level of public health services available. There is growing interest in states across the country in using the FPHS framework as a tool to transform the governmental public health system, as the FPHS framework:

- “Communicates the minimum package of services needed everywhere, focusing on what services need to be delivered, while leaving room for individual communities to decide how to deliver them.
- Provides a common language that can also be used to inform health department structure or service delivery.
- Can be assessed to identify the degree to which the FPHS is being achieved, current investments in the FPHS, and the funding needed to fill identified gaps.
- Can be used as an organizing tool for strategic planning by identifying the capabilities or programs not being fully implemented and that need additional focus and resources.
- Connects clearly to national initiatives, such as public health accreditation.”¹⁷

(See Appendix E: *Foundational Public Health Services Fact Sheet*.)

Figure 4: Foundational Public Health Services Framework



February 2

Public Health Service Delivery Can Be Improved Through Shared Services Approaches

According to researchers, the strongest predictor of a public health agency’s ability to provide the 10 Essential Health Services¹⁸ is the size of the population served by the agency.¹⁹ Agencies with a larger than average staff and higher staff per population served have also been found to perform better.²⁰ Shared services approaches can address the capacity constraints of smaller LHDs by bringing together multiple cities or counties to share resources across their respective boundaries to more efficiently and effectively deliver public health services. An LHD that chooses to enter into a shared service arrangement may pool resources or share staff, expertise or programs to accomplish more than the LHD could accomplish on its own.

According to the Center for Sharing Public Health Services, there are four main types of sharing arrangements, as shown in Figure 5 below. Moving from left to right along the spectrum, “the level of service integration increases, the level of autonomy for the sharing partners decreases, and implementation and governance of sharing agreements may become more complex”:²¹

Figure 5: Spectrum of Sharing Arrangements





Examples of shared services delivery models include mutual aid and interlocal contracts; hub and spoke models; and centers of excellence. For examples of these and other models, see *Appendix F: Characteristics and Examples of Service Delivery Models From Washington State*.

Accreditation Improves the Quality of Public Health Services

The Public Health Accreditation Board (PHAB) serves as the independent accrediting body for state, tribal, local, and territorial health departments. PHAB reports that, as of Nov. 9, 2021, a total of 39 states, 289 local, five Tribal, one statewide integrated local public health department system (Florida), and two Army Installation Departments of Public Health have achieved five-year initial accreditation or reaccreditation, bringing the benefits of PHAB accreditation to 89 percent of the U.S. population.²² The IDOH and three LHDs (in Montgomery, Rush, and Vanderburgh counties) have attained PHAB accreditation.

PHAB accreditation measures health department performance against a set of nationally recognized, practice-focused, and evidence-based standards.²³ An external evaluation of accredited health departments found that a majority believe that accreditation:

- Stimulated quality and performance improvement opportunities
- Improved capacity to provide high quality programs and services
- Helped health departments use equity as a lens for identifying and addressing health priorities²⁴

Similarly, officials from the three accredited LHDs in Indiana reported that becoming accredited: increased their credibility; enhanced accountability; made data-driven decisions part of the culture; facilitated goal setting; strengthened community partnerships; and built staff confidence. The only disadvantages noted were the cost and the initial required investment of staff time and resources.

Recommendations



The governance and infrastructure recommendations and action items that follow address the following overall goals:

- Ensure consistent delivery of public health services across Indiana
- Promote collaboration and increased technical assistance
- Modernize structure of public health
- Enhance engagement with local community partners and elected officials
- Encourage sharing of expertise and skilled professionals
- Promote culture of continuous quality improvement

Recommendation 1: Establish baseline service standards for all local health departments.

Action items:

- A. Define minimum required services with stakeholder engagement.
- B. Provide technical assistance to LHDs to support implementation and shared resources.

Recommendation 2: Expand IDOH resources to support LHDs and interlocal collaboration.

Action items:

- A. Provide staff and resources to support LHDs in a district with epidemiology, data analytics, legal consultation, communications, grant writing, training, and other functions, as necessary.
- B. Encourage partnerships among LHDs for key service areas (e.g., TB, STIs, Lead), including, for example, through the provision of funding.

Recommendation 3: Assist LHDs to engage local businesses, health providers, schools, and other governmental and non-governmental organizations to promote public health in the community.

Action items:

- A. Provide LHDs with guidance and best practices on how to create, convene, and sustain strategic relationships.
- B. Sustain partnerships and collaborations developed during the pandemic.
- C. Partner to promote the importance and value of local public health.

Recommendations



Recommendation 4: Update Local Health Board (LHB) appointments to reflect current public health workforce and key community representation.

Action items:

Amend Indiana law to do the following:

- A. Retain LHB bipartisan structure, but add an option for no more than two independent members (i.e., with no partisan affiliation)
- B. Add to the list of persons knowledgeable in public health eligible to be appointed to an LHB (currently listed in [IC 16-20-2-5\(1\)](#)) a professional from the public health field, such as an epidemiologist or similar professional.
- C. For large counties with populations of 200,000 or greater (excluding Marion County), increase the number of LHB members from seven to nine to allow for increased engagement and representation and provide for:
 - a. Five members, appointed by the county commissioners, who are knowledgeable in public health
 - b. One member, appointed by the county commissioners, who represents the general public
 - c. One member, appointed by the county council, who represents the general public or is knowledgeable in public health
 - d. One member appointed by each of the executives of the two most populous cities in the county
- D. For counties with populations under 200,000, provide for:
 - a. Five members, appointed by the county commissioners, who are knowledgeable in public health
 - b. One member appointed by executive of the most populous city in the county
 - c. One member, appointed by the county council, who represents the general public
- E. Repeal [IC 16-20-2-7](#), Appointments of Members in Certain Circumstances.

Recommendation 5: Ensure policy supports sharing of resources or consolidation of LHDs if desired by local partners.

Action items:

- A. Ensure that the creation of a multi-county LHD does not result in lower overall funding for the combined entity.

Recommendations

- 
- B. IDOH will provide technical assistance for requesting counties considering LHD resource sharing or consolidation, including legal consultation, model ordinance language, and a toolkit with other recommendations and guidance.
 - C. For counties choosing to form a multiple-county LHD, amend the statute to require that the resulting multiple-county LHD maintain at least one physical office in each component county that, at a minimum, offers consumer-accessed services, such as vital records, immunizations and certain environmental inspections and permitting.

Recommendation 6: Promote delivery of public health services at the county level or higher, including allocation of funding.

Action items:

- A. Amend or repeal [IC 16-20-4-5](#) as needed to grandfather current municipal LHDs and:
 - a. Ensure that local public health services are delivered at a county level or higher going forward
 - b. Permit county LHDs to subgrant to municipalities and/or establish municipal annexes.

Recommendation 7: Expand personnel eligible to serve as a Local Health Officer and require new appointees to complete public health training.

Action items:

- A. Amend Indiana law to allow an Advanced Practice Registered Nurse (APRN) or Physician's Assistant (PA) with formal public health training (e.g., master's in public health or equivalent) to serve as a local health officer at the Local Health Board's discretion.
 - a. For the purposes of this recommendation, an APRN is an individual who meets the definition of the Indiana State Board of Nursing and IC 25-23-1-1(b) and holds prescriptive authority.
- B. Require an APRN or PA serving as local health officer to be supported by a district health officer who is a physician and is from a neighboring county or employed by the IDOH.
- C. An LHB, with approval of local elected officials, may submit to the IDOH Executive Board a request to appoint an LHO who is not a physician, APRN, or PA, provided that individual has at least a master's in public health or equivalent degree and 5 years of experience in the public health field. The request must detail how the jurisdiction plans to ensure appropriate clinical oversight for medical services. The IDOH Executive Board will review the request and render a decision based on the needs of the jurisdiction and qualifications of the individual.

Recommendations



- D. Require newly appointed local health officers to complete a public health foundations training to be developed by IDOH and earn a Certified in Public Health (CPH) credential within one (1) year of being eligible to sit for the exam.

Recommendation 8: Provide financial and technical assistance to LHDs pursuing accreditation or reaccreditation

Action items:

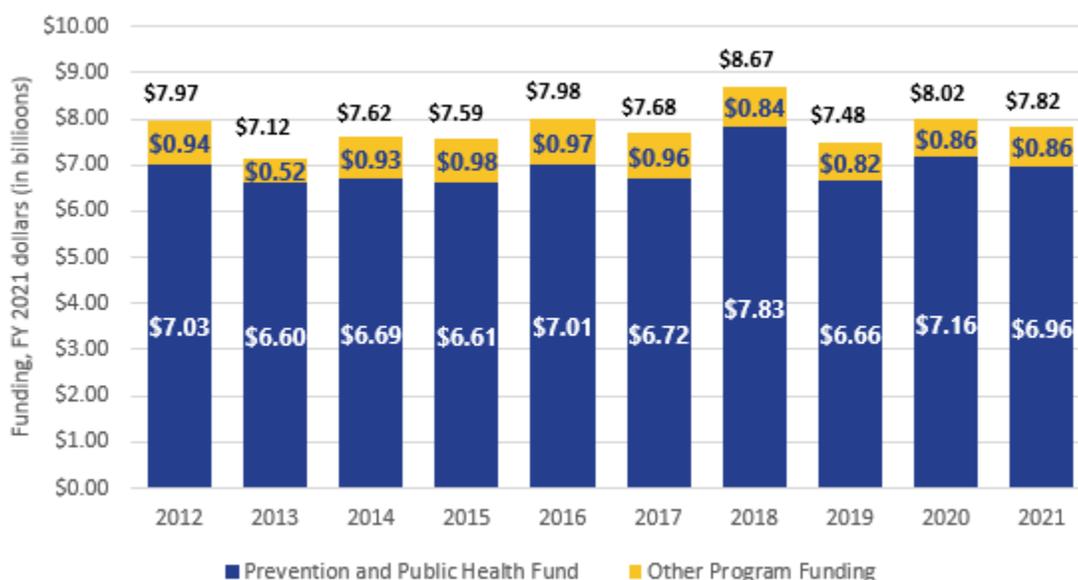
- A. Provide technical assistance to LHDs pursuing accreditation.
- B. Assist with funding to defray the costs of LHDs pursuing accreditation or reaccreditation. Consider other incentives to encourage LHDs to pursue accreditation.

Public Health Funding Findings

Public Health is Chronically Underfunded at All Levels

Public health funding in the United States has long been viewed as inadequate. In 2012, the National Academy of Medicine described public health finance as “a complex and often ad hoc patchwork of funding streams with federal, state, local, and private sources that vary widely among communities and exhibit considerable instability.”²⁵ The Academy also estimated that *\$24 billion of federal investment would be needed* “to build a governmental public health infrastructure that will be able support the type of population health strategies that are needed to improve the health of Americans and limit the growth of expenditures on medical care services.”²⁶ Yet the budget for the federal Centers for Disease Control and Prevention (CDC) – the nation’s leading public health agency and primary funder of state and local health departments – fell by 2 percent over the following decade, after adjusting for inflation.²⁷ (Figure 6)

Figure 6: CDC Program Funding, Adjusted for inflation, FY2012-2021

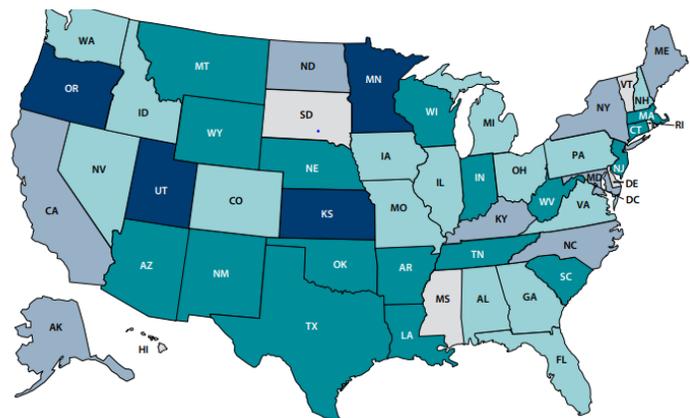


Public health funding levels also vary widely from state to state, with Indiana consistently ranking among the lowest states in per capita expenditures. For example:

- Pre-pandemic state and CDC spending per person in 2018-19 averaged \$55 in Indiana versus \$91 nationally.¹⁰ (Figures from 2018-19 were used to reduce pandemic-related variation.)

- FY 2020 CDC per capita grant funding to states ranged from \$18.11 per person in New Jersey to \$209 per person in the District of Columbia, with *Indiana ranking 50th*, just above New Jersey, at \$18.61 per person (See Appendix G: CDC and HRSA Grant Funding to Indiana).²⁸
- FY 2017 per capita grant funding for selected public health-related programs administered by the Health Resources and Services Administration (HRSA) within the Department of Health and Human Services (HHS) ranged from a high of \$114.78 and \$59.12 in Alaska and Montana, respectively, to a low of \$16.26 and \$17.55 in Nevada and Minnesota, respectively, with *Indiana ranking 40th* at \$23.48 per person (See Appendix G: CDC and HRSA Grant Funding to Indiana).²⁹
- In a recent study using 2018 Census Bureau state expenditure data for 49 of the 50 states (excluding California), *Indiana ranked 45th* for state government public health expenditures.³⁰
- When considering total funding for LHDs (federal, state, and local), the National Association of County & City Health Officials (NACCHO) estimated annual LHD expenditures per capita in 2019 *were less than \$30 in 17 states, including Indiana*, \$30 to \$50 in 15 states, \$50 to \$70 in four states, and more than \$70 in eight states and the District of Columbia.³¹ (Figure 7)

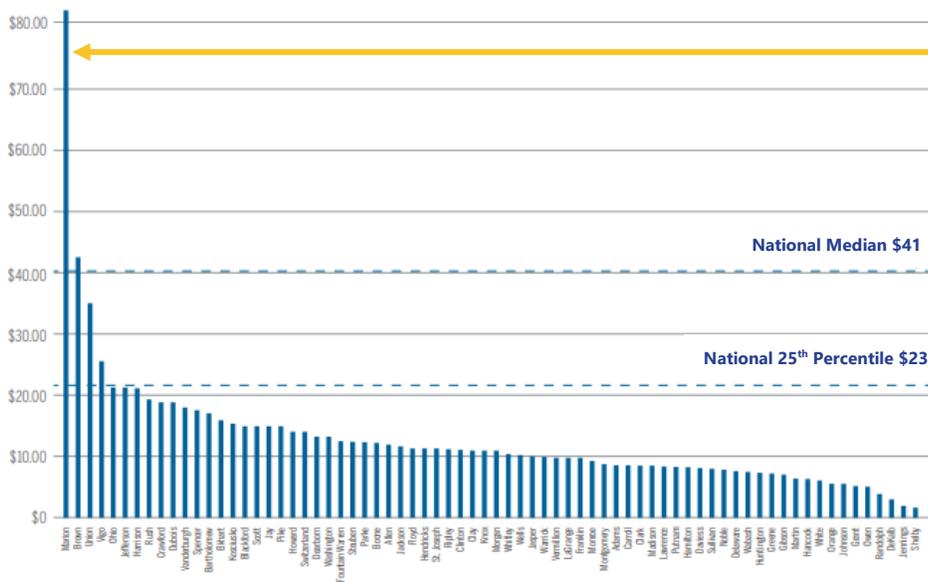
Figure 7: Overall Median Annual LHD Expenditures Per Capita, by State, 2019



Most Indiana LHDs Have Per Capita Funding Levels Below the National Average

According to a 2020 analysis by the IU Richard M. Fairbanks School of Public Health (the “2020 Fairbanks Report”), total per capita revenues vary widely across Indiana’s LHDs, with the vast majority of LHDs well below the NACCHO-reported national median (\$41) and 25th percentile (\$23).³² (Figure 8) The 2020 Fairbanks Report notes that per capita spending ranges from a low of \$1.25 in Shelby County to a high of \$82.71 in Marion County and that at least 37 counties have local public health per capita spending of less than \$10. On the listening tours and through the public comment process, Commission members heard from many respondents about the need for additional financial resources. In particular, we heard the need for flexibility and help navigating the local budget process.

Figure 8: Average Per Capita Local Health Department Revenue (inflation adjusted to 2020 dollars)

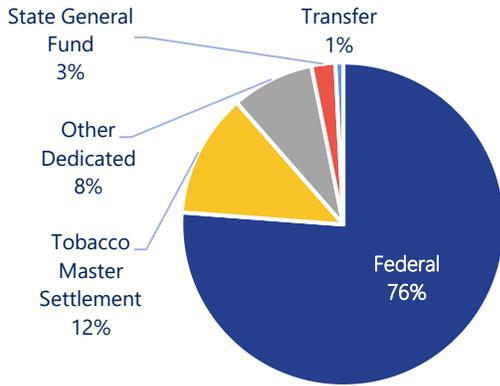


Marion County Health and Hospital Corporation (MCHHC)
MCHHC is currently the only county-based LHD organized, by statute, as a municipal corporation. In addition to operating an LHD, MCHHC operates inpatient and outpatient facilities, long term care facilities, and Indianapolis Emergency Medical Services. (EMS).

The Indiana Department of Health’s Funding is Mostly Siloed

As shown in Figure 9, IDOH is primarily funded through federal grants (76%) and from the state’s Tobacco Master Settlement Fund (12%), with State General Funds comprising only 3 percent of the FY 2022 budget. Also, \$161 million of IDOH’s \$535 million budget for FY 2022 (30%) is non-recurring COVID-19 supplemental funding. In addition to the CDC, other federal grant sources include the Department of Agriculture (Women, Infants, and Children, or “WIC,” program), HRSA (e.g., Maternal and Child Health Block Grant, Ryan White HIV/AIDs Program, etc.), the Office of the Assistant Secretary for Preparedness and Response within HHS (e.g., Hospital Preparedness funding), Department of Homeland Security (bioterrorism preparedness

Figure 9: IDOH FY 2022 Budget, \$534,969,270



and response funding) and others. Prior to the pandemic, the funding split was approximately 68% federally funds.

Much of the Centers for Disease Control and Prevention’s (CDC’s) annual funding is granted to states, localities, tribes, and territories. For FY 2020, per-person CDC funding ranged from \$18.11 per person in New Jersey to \$209 per person in the District of Columbia. Indiana ranked 50th, just above New Jersey, at \$18.61 per person.³³

CDC Program Funding to Indiana, FY 2020

Grant	Amount
Birth Defects, Developmental Disabilities, Disability and Health	\$264,581
CDC-Wide Activities and Program Support	\$2,981,039
Chronic Disease Prevention and Health Promotion	\$8,685,751
Emerging and Zoonotic Infectious Diseases	\$3,097,647
Environmental Health	\$1,427,630
HIV/AIDS, Viral Hepatitis, STI and TB Prevention	\$10,066,808
Immunization and Respiratory Diseases	\$5,334,991
Injury Prevention and Control	\$9,883,317
Occupational Safety and Health	732,282
Public Health Preparedness and Response	\$11,238,343
Public Health Scientific Services (PHSS)	\$182,756
Vaccines for Children	\$71,818,947
Total State Funding	\$125,714,092
Total State Funding, Per Capita	\$18.61
Total State Funding, Per Capita State Ranking	50th

About half of the IDOH funding is passed through or sub-granted to LHDs, WIC providers, health clinics, and other entities. In most cases, this funding is siloed — tied to specific diseases or other categorical purposes, which inhibits the ability of LHDs to use the funds to develop and maintain strong foundational capabilities.³⁴ For example, the increased federal funding provided in FYs 2020 – 2022 to address urgent COVID-19 pandemic response needs is

generally one-time funding and cannot be used to address long-standing weaknesses in preparedness or disease-prevention programs.³⁵

One source of flexible funding within the IDOH budget is the annual distributions to LHDs from the *Local Health Maintenance (LHM) Fund* established by IC 16-46-10. LHM Fund allocations are highly valued by LHDs, as they represent a stable, recurring, and flexible funding source that can be used for a variety of purposes.³⁶ However, the current state budget for the 2021–2023 biennium (P.L. 165-2021) only provides a \$3,915,209 total appropriation for each year of the biennium, which amounts to \$0.57 per person. The LHM fund requires allocations based on the formula in Table 4, below. As shown in the table, smaller counties generally receive higher per capita amounts, with the 40 smallest counties receiving per capita amounts of \$1.00 or more.

Local Health Maintenance (LHM) Fund
 LHM Funds are highly valued by LHDs, as they represent a stable and recurring funding source that can be used for a variety of purposes.

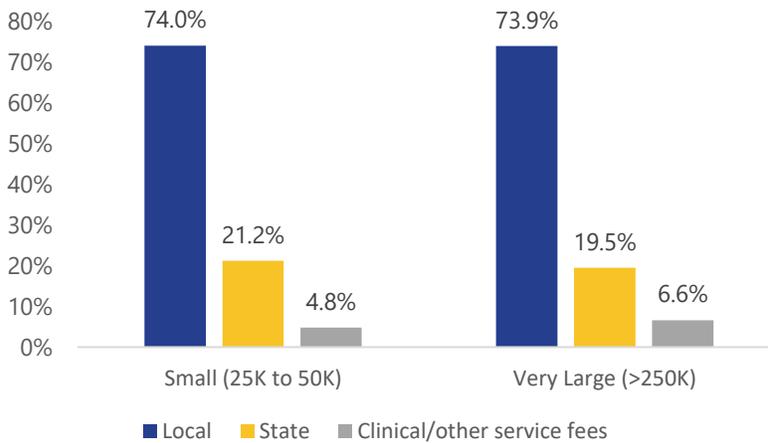
Table 4: FYs 2022 and 2023 Local Health Maintenance Fund Allocations

County Population	Annual Grant Amount	No. of Counties (per 2020 Census)	Per Capita Range (per 2020 Census)
> 499,999	\$94,112	1	\$0.10 (Marion)
100,000 – 499,999	\$72,672	16	\$0.15 (Lake) – \$0.68 (Vigo)
50,000 – 99,999	\$48,859	11	\$0.58 (Howard) – \$0.96 (Dearborn)
< 50,000	\$33,139	64	\$0.68 (Henry) – \$5.58 (Ohio)

LHDs are Heavily Dependent on Local Revenue

Across the country, funding sources for LHDs vary based on the state’s governance model and the scope of clinical services provided at the local level. On average, however, NACCHO reports that the largest source of LHD revenue in 2019 was federal grants and distributions (27%), followed by local revenues (25%), state grants and distributions (21%), Medicare, Medicaid, and private insurance (12%), non-clinical fees and fines (8%) and other sources (7%).³⁷ Similar to other states that have decentralized public health governance models,³⁸ Indiana LHDs are more heavily reliant on property tax funding.³⁹ Although federal funding amounts were not available, the 2020 Fairbanks Report noted that self-reported data from an annual IDOH survey reflects local funding that is more than three times greater than state funding. (Figure 10).

Figure 10: Indiana LHD Average Source of Funding Per Capita (2020 Dollars)



Note: Figure 10 is based on 2016-2018 data self-reported by LHDs in an annual IDOH survey that does not provide information about federal funding and is not available for all LHDs. Data for 7 counties are not included due to missing data or the data are not distinguished by source.

Indiana law requires the fiscal body of each county with an LHD (or the fiscal body of a city for a municipal LHD) to assess a property tax to maintain the LHD and deposit the tax proceeds into a County Health Fund (CHF), which may only be used for public health purposes.⁴⁰ Public health revenues from other sources used to support the LHD (e.g., fee and fine revenues, third-party payments for clinical services, etc.) are also deposited into the CHF. According to the Indiana Department of Local Government Finance (DLGF) – the state agency that certifies local budgets and property tax levies and rates – CHF property tax distributions equate to roughly 60 percent of certified CHF budgets in recent years (Figure 11). (These DLGF data, however, do not include some grant funds [e.g., from state, federal, or private sources] that are held outside the CHF in separate, segregated funds, so it is not a complete picture of all LHD funding sources. DLGF is not required to certify those amounts, and LHDs are not required to report them.) According to DLGF data, 2021 CHF property tax draws ranged from under \$3.00 per capita (using 2020 Census data) to \$43.93 per capita in Marion County. (Table 5)

Figure 11: County Health Fund Certified Budgets and Property Tax Draws (Excluding Marion County) 2013-2020

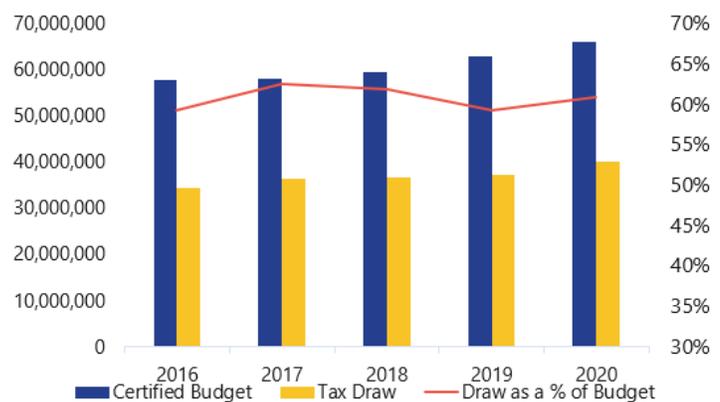


Table 5: CHF Property Tax Draws Per Capita, 2021

Per Capita Range	# of Counties
\$43.93	1 (Marion)
\$19.80	1 (Brown)
\$8.01 -- \$12.50	14
\$5.01 -- \$8.00	29
\$3.01 -- \$5.00	31
< \$3.00	13
Average (excluding Marion) = \$5.46	

*Tippecanoe, Warren, and Wayne counties not reported or NA.

*Municipal LHDs not included

LHDs are Challenged to Maximize Grant-Based Funding

While the National Association of County and City Health Officials (NACHHO) reports that federal funding is the largest source of financial support for LHDs across the country, LHD officials in Indiana report a number of challenges that often prevent them from maximizing federal, state, and other grant opportunities. Many of these challenges relate to local governance approval requirements and associated timelines. For example:⁴¹

- *Grant periods and submission deadlines are often not aligned with the county budget cycle or county approval timelines and processes.* For example, many LHDs must receive permission in advance from the County Council to apply for a grant. County Council meeting schedules vary by county, and some meet only monthly. Some grants also require a County Council appropriation (usually determined by the Fund Ordinance required for each grant, which must be approved by the County Commissioners). This entire approval process can take two weeks to two months.
- *Time-limited grants where long-term sustainability is not assured can be problematic,* as County Councils are often reluctant to approve new staff positions needed to carry out grant activities if the county could be liable for increased unemployment insurance claims when the employment ends.
- *“Cash in hand” requirements slow down grant implementation.* In many counties, grant-related hiring and project work cannot begin until the grant contract is fully executed. In addition to approval delays that occur at the local level, grant contracts are sometimes delayed at the state level, making it difficult or impossible to complete the grant activities within the remaining grant period.

- 
- *Grant expenditure requirements may be very prescriptive and fail to align with perceived or actual county public health needs.* In some cases, LHD officials have reported that County Councils have failed to approve grants that would be used for public health purposes with which they disagree. For example, in September 2021, the Elkhart County Council rejected a \$3 million federal grant sought by its LHD, based on a community health needs assessment, that would have allowed the LHD to hire staff to provide education on chronic diseases to Black, Hispanic and Amish residents over a three-year period. The rejection came after public testimony by grant opponents expressing distrust of the government and health experts and raising fears that the money would lead to forced vaccination.⁴²
 - *Grant reporting requirements and systems can be administratively burdensome.* Individualized and detailed reporting requirements are often duplicative, administratively burdensome, and fail to provide data feedback to the LHD to support program improvements.
 - *New grant awards often lead to funding supplantation.* Rather than increasing an LHD's financial resources to enhance service levels, County Councils often view new grant awards as an opportunity to reallocate other LHD funding for other non-public health priorities.

See Appendix H for additional information on county budget and grant approval processes and timelines.

Opportunity Exists to Enhance Medicaid Reimbursement for LHD Clinical Services

Some LHD services are clinical in nature (e.g., immunizations, STI testing and treatment, etc.) and therefore may be subject to Medicaid reimbursement when the service is provided to a Medicaid-enrolled person. However, according to the Indiana Family and Social Services Administration's Medicaid Office of Policy and Planning, only about half (46) of Indiana's LHDs received Medicaid reimbursement, totaling \$1.24 million between Nov. 1, 2020, and Nov. 1, 2021. Based on the annual IDOH LHD survey, some LHDs report that they are unable to bill all of the Indiana Medicaid managed care organizations (MCOs), and even fewer LHDs report billing Medicare. (Table 6)

**Table 6: 2020 IDOH Annual LHD Survey, Billing for Medical Services
(n = 56 LHDs responding)**

	# of LHDs
Medicaid enrolled	38
Credentialed with all 4 MCOs	28
Actively billing	34
Medicaid reimbursements reported for 2020	21
Medicare reimbursements reported for 2020	9
Other charges for medical services	39

In the 2020 survey, LHDs reported a number of barriers and challenges to Medicaid claiming, including:

- Challenges dealing with multiple payors
- Limitations related to the LHD's current billing software
- Lack of needed training or the need for billing assistance
- MCO staff not trained to deal with a public health entity
- Administrative burden of billing issues and paperwork
- Keeping up with MCO payment policy changes

Recommendations



The public health funding recommendations and action items that follow address the following overall goals:

- Increase public health funding to achieve consistent per capita spending at the 2019 national average of \$91 per person as compared to Indiana’s \$55 per person
- Adjust for inflation and sustain public health investments to ensure long-term improvement in health outcomes through consistent programming
- Maximize all available public health funding sources
- Provide transparency and accountability for public health expenditures

Recommendation 9: Provide local health departments with stable, recurring, and flexible funding to build and sustain their foundational public health capacities.

Action items:

- A. Request an increase in annual appropriations for the 2024-25 biennium and future biennial budgets.
- B. Increase state-funded Local Health Maintenance Fund (LHMF) allocations to support the provision of an essential set of public health services in each county, taking into account county population and district support services.
- C. Condition receipt of additional LHMF allocations at the county level on:
 - (1) a vote by local elected officials’ every five years to opt in to expanded services, with education to local elected officials to delineate ramifications of an opt-out vote; a county could rescind its opt-out vote within a year.
 - (2) maintenance of effort for local health budgets of up to 20% local cost-sharing with approval of county fiscal body.

Recommendation 10: Provide LHDs with administrative supports and other flexibilities to leverage all available funding sources.

Action items:

- A. Create an IDOH surge staffing program to increase the capacity of LHDs to maximize categorical grant opportunities.
- B. IDOH will facilitate insurance and Medicaid billing for direct clinical services provided by LHDs that request this support.
- C. Allow consolidated LHDs to operate as Municipal Corporations, subject to the appointment of the Municipal Corporation’s governing board by the county executives of each constituent county.

Recommendations



Recommendation 11: Establish consistency in the tracking of the public health resources and calculate the return on investment of additional funding allocations.

Action items:

- A. Track public health revenues and expenditures across IDOH and all LHDs on a consistent basis, in conjunction with the State Board of Accounts and the Department of Local Government Finance. Consider adopting the Public Health Uniform Chart of Accounts.
- B. Offer IDOH-sponsored annual training regarding public health and public health finance for county auditors, commissioners, and councilors.

Workforce Findings

More Public Health Workforce Data are Needed to Inform Policy & Planning

Indiana has provisions⁴³ in place to ensure the availability of supply information on the healthcare workforce, including licensed health professionals working in clinical care and/or in public health. However, information on the public health workforce outside of licensed healthcare personnel is limited and insufficient to inform state and local planning. A formal statewide analysis of the governmental public health workforce, to include educational level, salaries, and job description, is needed to understand the current state and to develop and prioritize recommendations. In addition, strategies are needed to ensure Indiana has sufficient data to inform future and ongoing policy and planning related to the health workforce.

Existing data about Indiana's local public health workforce are limited.

Some data sources provide limited information on the public health workforce. As illustrated in Table 7, these sources have limitations, which generally include a small reporting sample and are not likely to be representative of the public health workforce throughout Indiana.

Table 7: Overview of Current Public Health Workforce Datasets

Dataset	Detail	Limitations
Public Health Workforce Interests and Needs Survey (PH WINS)	Individual employees provide information on education, job satisfaction, retention, and competency gaps, as well as individual demographics.	Historically only surveyed Marion County Public Health Department (MCPHD) and IDOH with <=50% response rate. ⁴⁴
Region V 2020 Public Health Training Center Survey	Questions about training needs. Survey completed by health officer or representative about their employees.	First survey conducted in 2020. Only 35 of Indiana's 94 LHDs responded.
Statewide Annual Survey of Local Health Departments (LHD)	Administrator (or rep.) completes survey about staffing (FT/PT) by specific roles and starting salaries by role. Also collects budget/funding data, as well as number of services provided & fees collected.	Workforce gaps/needs, recruitment/retention issues not included in the report. Data not collected by each LHD annually. Information seems to be reported differently across LHDs (e.g., financial data validity/reliability issues).

Developing state capacity to collect information on the public health workforce is critical for public health workforce assessments. Leveraging existing processes or reporting strategies is the most effective means by which states can collect health workforce information. Indiana already does this with licensed health professionals, but many public health professionals are not members of licensed occupations. A strategy to collect information on unlicensed public health professionals, especially those working in governmental public health, is needed to support workforce assessments and inform development initiatives.

Increased Public Health Workforce Capacity Needed

Although a comprehensive assessment of Indiana's public health workforce is needed to identify the state's workforce needs, some shortages can already be enumerated. Indiana has a known workforce capacity issue. According to a recent report,⁴⁵ Indiana communities are less likely to be implementing nationally recommended public health activities compared to other states. This is likely related to the number of employees and their workload, as well as the skills and preparation of the workforce.

Local Health Department Workforce

Among Indiana's 94 LHDs, 70 percent (n=65) are considered small based on the size of the population served. These 65 LHDs have an average of five full-time employees and fewer than 10 total employees. Some small LHDs have as few as zero full-time employees or as many as 11 part-time employees. Additionally, smaller LHDs tend to employ part-time health officials who often serve as a physician in a clinical setting and support the LHD as needed. Among Indiana LHDs, 55 have part-time health officials and 39 have full-time roles in their agencies. Information captured from the licensed health workforce found that 23 physicians⁴⁶ and four dentists⁴⁷ reported a primary practice at a local health department and 536 registered nurses⁴⁸ reported a specialty in public health.

Figure 12: Average Proportion of Activities Completed by LHDs (weighted by population)

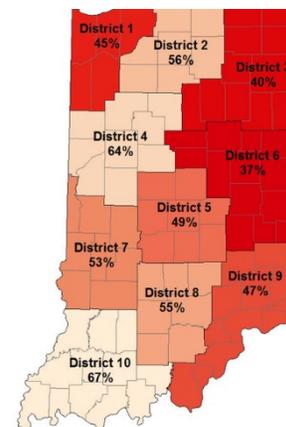


Table 8: LHD Employees by Population Served⁴⁹

Population Served	Number of LHDs (% of 94)	Average Number of Full-Time Employees (range)	Average Number of Part-Time Employees (range)	Average TOTAL Employees (range)
25,000 or less	30 (32%)	4 (0-12)	3 (0-11)	6 (3-14)
25-50,000	35 (37%)	6 (3-12)	2 (0-7)	9 (4-17)
50-100,000	12 (13%)	12 (7-20)	5 (1-7)	17 (8-27)
100-200,000	11 (12%)	25 (13-55)	6 (0-20)	32 (15-75)
200-300,000	2 (2%)	64 (55-73)	13 (1-24)	77 (56-97)
300,000 or more	4 (4%)	204 (25-692)	20 (3-53)	224 (32-745)

Data on training gaps among Indiana’s governmental public health workforce is too limited to be actionable. Nationally, most public health workers (four out of five) do not have formal training in public health.⁵⁰ This impacts the feasibility of cross-training for competencies and the provision of foundational public health services.

Healthcare Workforce

In Indiana, healthcare professionals represent a sizable proportion of the public health workforce. National data on Indiana suggest that at least 25 percent of Indiana’s public health workforce are licensed health professionals.⁵¹ Indiana has recognized health workforce shortages that threaten both clinical care and public health service availability. Some shortages, such as federal health professional shortage areas that assess primary care, mental health and dental workforce shortages in Indiana communities, are more clearly enumerated than others.⁵² Information reported from healthcare professionals and employers demonstrates substantial unmet demand exists among certain healthcare professionals/workers (e.g., nursing, certified nursing aide, dental assistants, respiratory care practitioners, medical assistants, etc.) and in certain healthcare roles (e.g., nursing faculty) and settings (e.g., school health). Developing strategies to address healthcare workforce shortages is important to improve Hoosier health, both at the population and individual level.

Policies to Support Workforce Recruitment and Retention Are Needed

Recent findings from both national and state workforce surveys indicate a wave of retirements and staff losses are on the horizon in public health. Yet recruitment of skilled public health workers remains challenging.⁵³ National findings about governmental public health recruitment barriers include a general lack of awareness of job postings, misalignment between

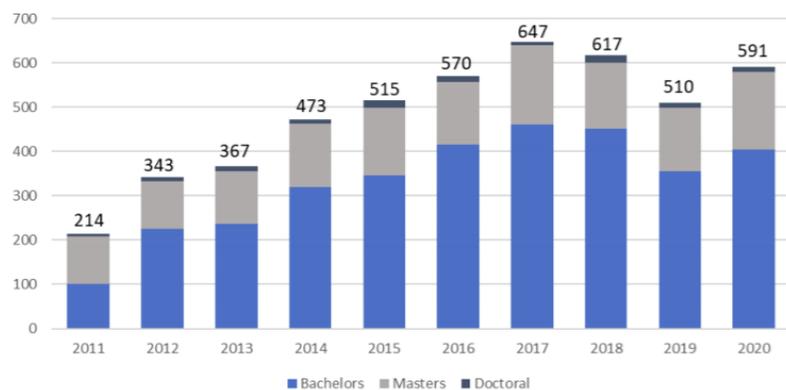
job requirements and the available workforce, and misalignment between openings and salary expectations.^{54, 55, 56} Additionally, the retention of healthcare workforce in certain roles and settings has also been a noted challenge, increasingly so with the COVID-19 public health emergency. Ensuring state policies support the efficient licensing and recruitment of qualified professionals in high demand occupations is critical to workforce development. Training opportunities for healthcare professionals in public health are also critical to ensuring a sufficiently skilled workforce.

Current Public Health Workforce Pipeline and Retention

Although data on the governmental public health workforce is limited, the state can quantify the number of graduates from public health training programs at Indiana’s public institutions.⁵⁷ Over the last decade, Indiana’s public health training capacity has increased significantly (Figure 13).

It is uncertain to what extent graduates from Indiana’s public health training programs are retained in the state and into governmental public health within the state. A formal assessment of public health talent retention in Indiana would be useful to inform and target workforce development initiatives.

Figure 13: Public Health Degrees Conferred by Indiana’s Public Institutions



Additionally, Indiana has not previously conducted a purposeful assessment of the health workforce training pipeline. A pipeline assessment provides valuable information on the number of slots/trainees within a given program and at various stages of training. The number of trainees within a given training pipeline represents the potential future workforce for the state within a given role or occupation.

Supporting Recruitment and Retention Through Incentive Programs

Incentive programs, such as scholarship and loan repayment programs, are common mechanisms by which states support recruitment of workforce into areas and settings of need. These programs typically provide monetary relief of training costs in exchange for periods of service in specific areas or settings. Workforce incentive programs are common in health care.



Currently, Indiana administers a federally supported loan repayment program that is limited to federally defined professions and geographies. Existing programming is insufficient to promote recruitment and retention of healthcare and public health professionals, for whom there is great demand.

Both federal and state government-based workforce incentive programs are available. The most common program administered by the federal government is the National Health Service Corps (NHSC).⁵⁸ Additionally, the National Health Services Corps State Loan Repayment Program (NHSC SLRP) is funded in part by the federal government but administered by states. The federal government has formal guidelines and requirements for both programs, including the qualifying healthcare professionals and settings. The NHSC SLRP program, administered by the IDOH, has made incentives available to healthcare professionals. However, because it is structured as a federal match program, Indiana must structure incentives and qualifying professionals in alignment with federal guidelines. As such, non-clinical public health professionals and public health settings (such as state or local public health departments) do not qualify for loan repayment. In addition to the NHSC SLRP program, Indiana has several other health workforce incentive initiatives currently in operation.⁵⁹ There is limited coordination across these initiatives.

As highlighted in Table 9, in response to their need for state-based workforce planning and development, some states have created state-sovereign incentive programs for health professionals beyond traditional clinical care workforce incentive programming.

Indiana does not have a health workforce incentive program that supports recruitment of public health or healthcare professionals outside of those already targeted through federal programs (example: nursing faculty). Coordination across the various health workforce incentive programs and development of state capacity to support targeted recruitment among professions and settings of need would provide much needed workforce development support.

Table 9: Examples of State-Sovereign Incentive Programs

State	Incentive Program
California	Allied Healthcare Loan Repayment program offers up to \$16,000 toward professional loans, including some public health roles (such as health educators, clinical laboratory scientists, community health workers, among others).
Illinois	Offers nurse educators loan repayment on eligible loans taken to achieve education requirements toward becoming a registered nurse and/or nurse educator. Award amounts are based on an applicant's balance of eligible loans but will not exceed \$5,000 per year.
Louisiana	Established the Small Town Health Professional Tax Credit Program (up to \$3,600) to provide income tax credit for professionals practicing in health professional shortage areas in rural Louisiana.
Minnesota	Established a state-sovereign loan repayment program (\$6,000 per year) for RNs and licensed practice nurses who serve in nursing homes or intermediate care facilities for persons with developmental disabilities.
New Mexico	Established the Rural Health Care Practitioner Tax Credit to provide up to \$5,000 tax credit for certain practitioners who practice in rural or underserved areas.

Promoting Experiential Learning in Public Health

Indiana's schools of public health and community health programs are the major pipeline for its public health workforce. While a comprehensive health workforce assessment is needed to identify shortages, the available information suggests the number of individuals with formal public health training employed in governmental public health within Indiana's local jurisdictions is insufficient. Determining the extent to which graduates from Indiana's public institutions' public health training programs are employed at governmental public health would help inform strategies to enhance recruitment into governmental public health. In advance of such assessment, opportunities to enhance knowledge and experience of public health students with governmental public health could be explored. Experiential learning and service experiences represent such strategies.

Applied practice experiences are accreditation requirements for Master of Public Health degree programs.⁶⁰ These practice experiences may include a practicum or internship experience, which may or may not involve governmental public health. The extent to which students enrolled in Indiana's public health training programs engage in practice experiences in governmental public health is not known; however, given reports of governmental public health



workforce shortages, such opportunities could be explored as a strategy to develop student skills and promote workforce development.

In addition to formal applied practice experiences, accredited Master of Public Health degree programs provide opportunities for student involvement in community and professional service.⁶¹ Such opportunities in governmental public health would increase knowledge and awareness of governmental public health as an employment sector and may support recruitment.

Supporting Recruitment Through Fellowships

In addition to providing short-term experiential learning opportunities for public health students prior to becoming a public health professional, public health fellowships may provide an opportunity to recruit public health professionals in high-priority areas. Fellowships are funded, competitive training opportunities that enable students or recent graduates to advance, synthesize or increase their skills in their fields. Fellowships are often completed after a degree has been conferred and are often pursued in place of full-time employment, often for a fixed duration of one to two years. In the public health space, the CDC has developed an extensive portfolio of fellowships within various public health specialty areas. Fellowships are available at the national level for public health graduates at the bachelor's, master's, and doctoral levels, as well as available opportunities for clinicians.

Fellowships may be an excellent opportunity for the State to develop highly skilled public health professionals in specialties and areas of need such as epidemiology, health information technology, laboratory, etc. If development of fellowship opportunities is pursued by the state, the strategy could be combined with others (such as retention bonuses or loan repayment programming) to support retention of fellows in-state.

Providing Public Health Exposure and Experience to Healthcare Students and Professionals

Over the past few decades, healthcare curriculum has begun to integrate public health topics and considerations within student academics. However, the COVID-19 pandemic demonstrated the need for a closer relationship and deeper understanding of public health within health care. Cross-training Indiana healthcare professions students with public health knowledge, skills, and experience is a top priority for public health. Cross-training could be achieved through bi-directional interprofessional education experiences among public health students and clinicians.



Informal information from Indiana’s health professions programs demonstrates that great strides have been made to incorporate the social determinants of health and health equity into and across curriculum. In some cases, targeted public, and community health content and/or experiences are woven into the degree requirements. While Indiana’s health professionals training programs have implemented various strategies to incorporate public health information into the curriculum of learners, a state-level review of these strategies has not been performed previously.

Health Workforce Policy and Planning Coordination is Needed

No entity is formally charged with the development and oversight of a state plan for Indiana’s health workforce, and no formalized coordination for health workforce conversations occurs across existing initiatives. Indiana has many formal and informal entities that are engaged in policy and programmatic work that is related, either directly or indirectly, to the health workforce.⁶² Each of these initiatives has a unique focus area, and some have overlapping membership or representation. Coordination across these initiatives would enhance state-level health workforce planning, support greater alignment, enable the identification and leveraging of synergies, and potentially minimize duplication of effort.

Over the last five years, Indiana has developed informal capacity for health workforce policy coordination in the Governor’s Health Workforce Council. This Council was informally charged with coordinating health workforce-related policies, programs, and initiatives within Indiana to reduce cost, improve access and enhance quality within Indiana’s health system. It brings together state agencies, legislators, healthcare experts and industry leaders. To date, the Council has primarily focused its work on the healthcare workforce.

Additionally, numerous initiatives in Indiana support specific aspects of workforce development in the health sector or in general. Ensuring public health and/or healthcare workforce perspective representation in existing initiatives is a critical strategy to support alignment, as is ensuring workforce development is involved in key health sector workforce discussions. For example, the Indiana Graduate Medical Education (GME) board is responsible for decision-making regarding the allocation of state funds for expansion of medical residencies. As such, the GME Board has a significant role in determining funding and skill mix for the future physician workforce, including potential future state and local health officers. The Board’s current composition does not include dedicated public health representation.

Recommendations



The workforce recommendations and action items that follow address the following overall goals:

- Ensure Indiana has sufficient information on the health (public health and health care) workforce to identify shortages and support workforce planning.
- Enhance training, recruitment, and retention to ensure workforce capacity and skills are sufficient to support Hoosier health.

Recommendation 12: Coordinate current initiatives and provide a framework for the development of a state health workforce plan.

Action items:

- A. Establish a health workforce council co-chaired by the State Health Commissioner and Secretary of FSSA to coordinate and plan health workforce programs and initiatives.
- B. Leverage existing processes and programming to identify clinical healthcare shortages and areas requiring further evaluation.
- C. Complete a comprehensive local and state public health workforce assessment to collect and analyze job descriptions, salary ranges, FTE counts, training, and services delivered.
- D. Use these workforce assessments to develop a comprehensive healthcare workforce plan for the state.
- E. Provide standardized job descriptions in public health and suggested salary ranges for these position to local elected officials for guidance.

Recommendation 13: Ensure representation of public health on Indiana workforce initiatives.

Action items:

- A. Include IDOH representative on the Indiana Graduate Medical Education Board.
- B. Coordinate with the Indiana Governor's Workforce Cabinet.

Recommendation 14: Through the Health Workforce Council, enhance workforce reporting to understand public health and clinical workforce needs and the status of the talent pipeline.

Action items:

- A. Develop a set of standardized workforce reporting measures for state and local health departments.
- B. Work with state and local public health to understand their workforce needs and gaps
- C. Create a central repository for LHD position postings from across the state.

Recommendations



- D. Partner with Commission for Higher Education and institutions of higher education to quantify and describe Indiana’s health workforce pipeline and retention.

Recommendation 15: Expand health workforce recruitment, training, placement, and retention into areas of need.

Action items:

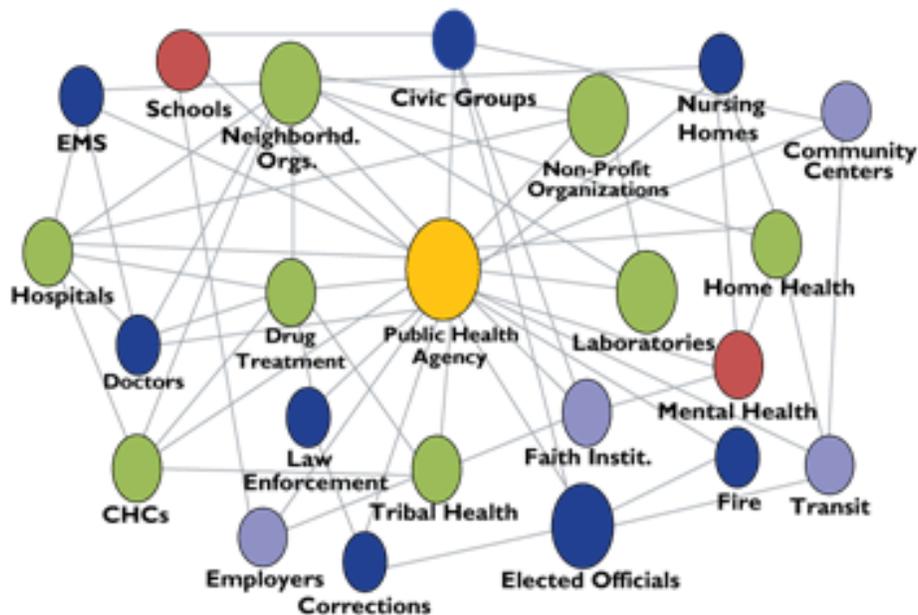
- A. IDOH and FSSA will collaborate with other state agencies on incentive program strategies (e.g., loan repayment) that target Indiana’s health workforce needs and complement existing federal programs.
- B. Promote experiential learning opportunities in public health through paid internships and fellowships.
- C. Create cross-training opportunities in public health for students in clinical health programs.
- D. The Office of the Governor, the Indiana Professional Licensing Agency, and IDOH should evaluate whether centralizing licensure functions within IDOH for all healthcare professionals would enhance the state’s ability to more efficiently recruit and license healthcare professionals.

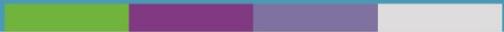
Data and Information Integration Findings

Siloed Public Health Data Systems Limit Policymakers' Access to Actionable Information

The ability to collect, report, analyze, and access data across the public health system is critical to risk identification and development of actionable plans to improve population health. Public health data encompasses a wide range of data sources, including health system data and disease incidence, population behavior data (e.g., smoking status, exercise patterns, diet, etc.), and environmental data (e.g., lead, drinking water pollution, restaurant safety, and septic system compliance). It is historically siloed by disease condition, environmental factor, funding source, and reporting requirements. This structure results in numerous systems that lack the ability to interface or provide meaningful data to support local, regional, and state level analysis and policy making. In addition, ongoing paper-based processes create a void in the ability to monitor, track, and compare outcomes across counties and regions. National efforts are underway to improve the interoperability and utility of data and systems that promote public health and specific actions can be taken at a state level to support the unique public health data and systems needs in Indiana.

Figure 14: Public Health System- Data Owners and Utilizers⁶³





Coordination Across Data Owners is Lacking

In Indiana, public health data has multiple data owners across the health system. Hospitals, local health departments, state agencies including IDOH, FSSA, the Indiana Department of Corrections, and others, own key data elements and have key data needs that are important to understanding and identifying emerging public health issues and improving the health of Hoosiers. In the current environment, there is little coordination between the entities, and data are stored and transferred in different formats with different privacy and security protections and access and use restrictions. The systems and processes used to aggregate and store data vary from manual paper-based processes, to antiquated legacy systems, to some modernized systems and interfaces. Coordination across these entities has little overarching direction, and there is no process to build consensus for priorities for investment in public health data and resources. At the same time, we have heard from Hoosiers through the Commission Listening Tours and the public comment submission form that protection of data and maintenance of confidentiality are paramount. Our work in this area needs to keep this feedback in mind.

Indiana Can Build on COVID-19 Response Enhancements

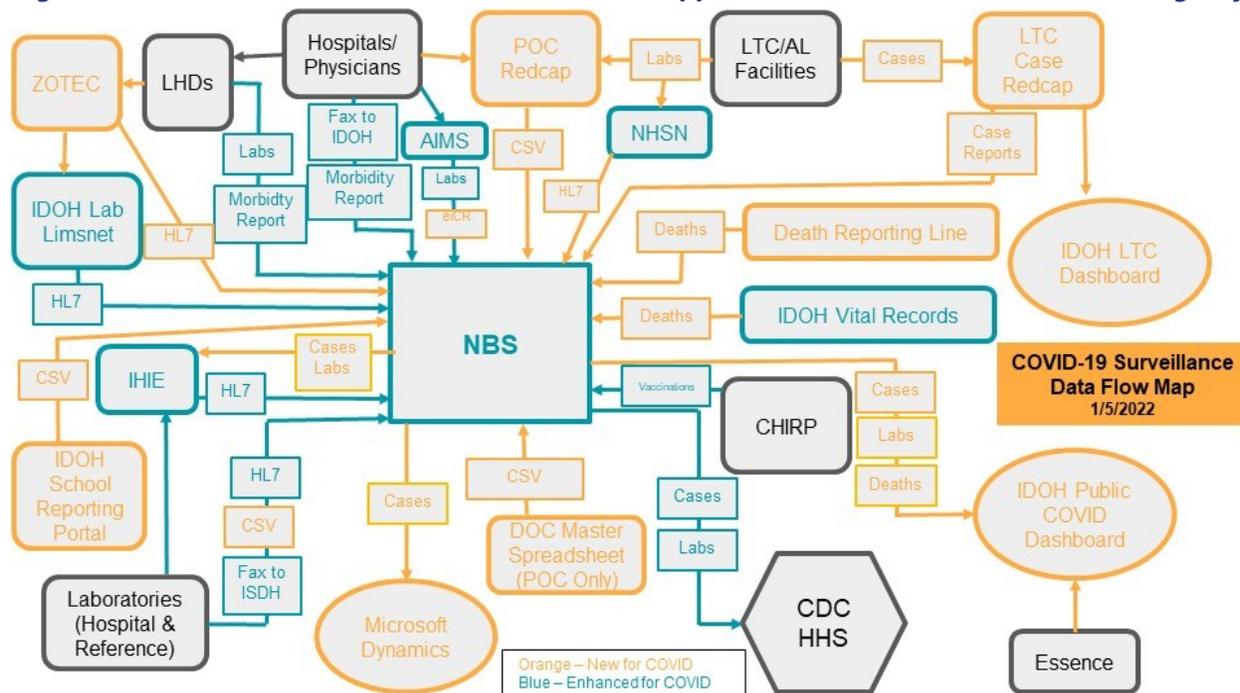
The fragmented nature of the current data systems and the benefit of improving coordination and priorities became apparent over the course of the COVID-19 public health emergency. To meet the need for timely reporting to identify and monitor infection rates, locations, and hospital capacity and vaccination rates, the IDOH led a group to rapidly develop new and enhanced connections between public health system data owners and continually improved COVID-19 data timeliness and quality during the public health emergency. The establishment of new data connections and enhancement of existing data connections provided timely data to inform policy making and supported the development and continual improvement of actionable public-facing dashboards. The convening of public health systems stakeholders to support the process to develop new connections, the priorities established by the IDOH and stakeholder input, and the establishment of near real-time public dashboarding during a rapidly evolving public health crisis demonstrate the value of increasing coordination and prioritization of data and systems across public health system stakeholders.

In addition, the dashboard's ability to provide near real-time metrics on the status of the COVID-19 public health emergency represented a shift in the dissemination of public health data in Indiana. Prior to the development of COVID-19 dashboarding, data dissemination did not occur in near-real time but occurred after validation and finalization of required reporting

on public health data metrics if the data was made available or accessible to the public. The improved connections, supporting better reporting and timeliness and public access to data, provide a case study of the value of establishing public health system stakeholder buy-in on data priorities. It also supports making information available to the public on a statewide basis versus having data available only at the local health department level.

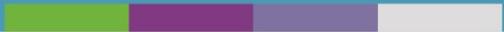
A formal entity charged with the advancement of health and public health data and investment, oversight of health data governance and data privacy, and security could build on the progress made during the COVID-19 public health emergency in enhancing data connections and reducing manual reporting.

Figure 15: New and Enhanced Data Connections to support the COVID-19 Public Health Emergency



Greater State Coordination with Health Information Exchanges Would Promote Data Integration Goals

One of the key stakeholders in the Indiana health and public health data system is the Indiana Health Information Exchange (IHIE). IHIE is a private not-for-profit entity that aggregates health data and facilitates health system connections between enrolled providers, state agencies, and insurance companies. As a point of service function, data available to providers via health information exchange connections can reduce provision of duplicate care or



procedures and potential complications or adverse reactions. IHIE also supports disease surveillance and required reporting to the IDOH.

Experience during the COVID-19 pandemic demonstrated the value of Health Information Exchanges as key stakeholders in providing timely information that supports public health decision making. However, it also identified gaps and challenges related to the lack of a formal state relationship with the health information exchange, including:

- The ability to coordinate and prioritize improvements across Health Information Exchange stakeholders, including multiple state agency engagements
- Achieving cross-stakeholder buy-in on overall enhancements and initiatives that benefit the public health and health system, such as increasing the providers connected, specifically long-term care and mental health providers, allowing for bi-directional communication back to connected providers, and ensuring data such as race and ethnicity are standardized.
- A lack of ability to capture federal funding available via Medicaid and grant opportunities

Establishment of a formal relationship between the state and a health information exchange partner would support the ability to coordinate and prioritize state data needs and data enhancement among state stakeholders and improve the ability to capture federal funding to support health information exchange activities.

Most Local Health Departments Report Data-Related Needs and Barriers

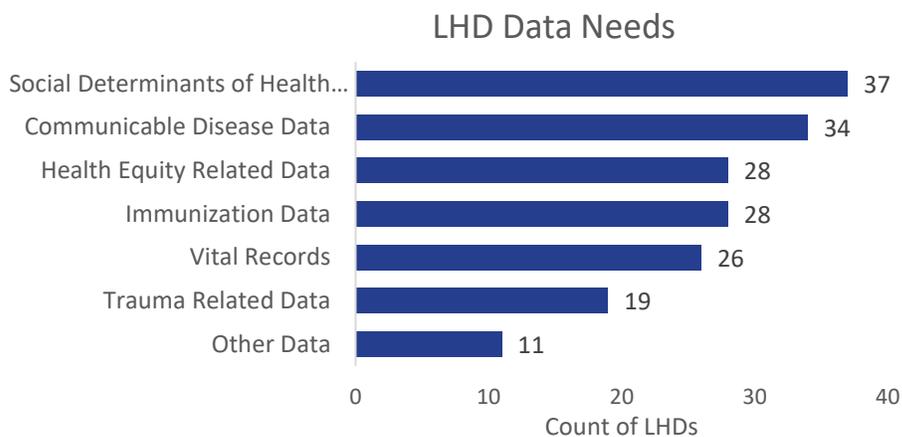
LHDs play a key role in the public health data environment and are responsible for monitoring and reporting data at a local level. LHDs have varying levels of technology to support the collection and submission of data and varying levels of staff expertise to support local data analysis and interpretation. This results in varying level of data analysis and monitoring and ability to identify local public health issues depending on county.

A survey completed as a component of research on this report shows that over half (54%) of LHD respondents (1) do not have the ability to access all the data that would be useful and (2) have barriers to obtaining data due mainly to personnel, limited technology resources, and funding. LHDs also reported needing support with data analysis (77%) and were interested

in training on data analysis (70%). Comments submitted on the survey had themes such as needing to be able to access data once it was submitted for required reporting to the IDOH, challenges with dedicating personnel to data analysis and projects, and challenges with manual processes and reporting.

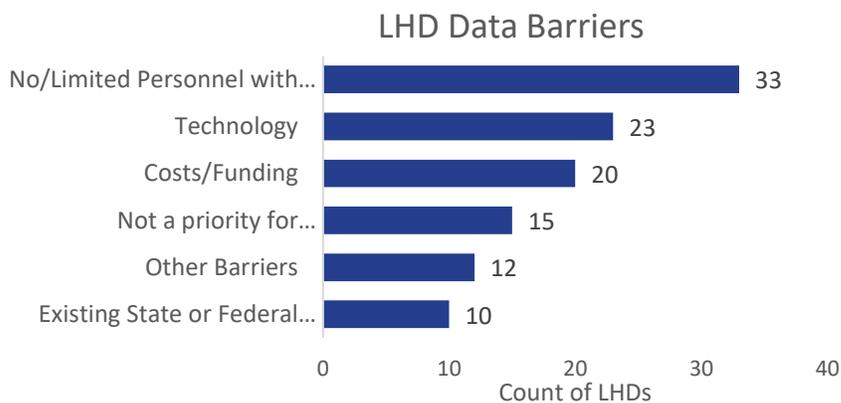
The wide variation in the capacity and systems available at the LHDs and the LHD needs for access to additional data and support with analysis suggest that additional funding and district level support for data analysis and development would increase the ability to complete local and regional data analysis and the accessibility of public health data to support community decision making.

Figure 16: Chart of LHD data needs.



Source: IDOH Survey December 2021

Figure 17: Chart of LHD Data barriers



Source: IDOH Survey December 2021



IDOH's Health Digital Transformation Project is Critical to Advancing Public Health in Indiana

Efforts to modernize public health systems and data policies are underway at the national and state level. IDOH began a digital transformation project of its existing public health systems in 2020. In the current state, IDOH operates 105 systems, 54 of which contain critical health data. The systems are siloed, and no enterprise public health system supports data collection and analysis across all IDOH programs. The goals of the digital transformation project are to develop a data and technology roadmap, establish technology and data governance, create a centralized data and analytics platform, and improve data access. In addition, system updates and upgrades will be prioritized, and security will be enhanced. This project is critical to advancing public health in Indiana and growing IDOH systems and analytical support capabilities.

Recommendations

The data and information and integration recommendations and action items that follow address the following overall goals:

- Ensure coordination of data across health and human services entities at the state level.
- Maintain privacy protections and appropriate consents for use of data.
- Promote integration of public health data for clinical use by providers to optimize health outcomes.
- Provide tools to assist local public health officials to make data-informed decisions.
- Modernize public health systems and processes to increase efficiency and enhance service delivery to Hoosiers.

Recommendation 16: Establish a State Public Health Data System Advisory Committee that includes local representation.

Action items:

- A. Develop data governance across entities with appropriate privacy protections and security provisions, including cybersecurity protections.
- B. Develop a strategic plan for public health data initiatives.

Recommendation 17: Formalize and strengthen the state's relationship with a Health Information Exchange (HIE) partner to promote improved clinical outcomes and outbreak management.

Action items:

- A. Codify the state-HIE relationship and leverage funding opportunities (federal and non-profit) to enhance services and promote sustainability.
- B. IDOH will recommend policies and initiatives to increase number of providers connected to HIE partner.
- C. Work with HIE partners to establish dedicated public health focus.

Recommendation 18: Enhance data analytics tools and resources for local public health.

Action items:

- A. Establishing district-level data services to support Local Health Departments, support cross-county analysis and allow bi-directional data flow, allowing county departments to access and analyze all submitted data.
- B. Establish baseline technology, security, and resource requirements for local health departments, with financial and logistical support for LHDs to achieve compliance.

Recommendations



- C. Promote digitization of inspection and permit records to improve access to key public health data.

Recommendation 19: Maintain state-led digital transformation efforts to modernize public health systems and paper-based processes.

Action items:

- A. Dedicate funding to support the IDOH Office of Data and Analytics and its ability to fully implement all GPHC recommendations.
- B. Establish funding to continue digital transformation efforts to support implementation and ongoing operations of GPHC recommendations.

Emergency Preparedness Findings

Emergency Preparedness Response Approaches Have Adapted Over Time to Address Evolving Threats

The United States has a long history of response to emergencies and disasters, including active civil defense (in preparation for nuclear war) and emergency management organizations at the local, state, and federal levels. The focus of emergency management and response organizations has changed over time as new risks were identified and methods for handling the various risks were developed. The increasingly harmful impacts of natural disasters such as earthquakes, hurricanes, and tornadoes were the catalyst for legislation and augmented targeted funding specifically for natural disasters. The need to consolidate and organize responses soon became apparent, resulting in the establishment of the Federal Emergency Management Agency (FEMA), from which was developed the Integrated Emergency Management System (IEMS).

IEMS focused on an all-hazards approach of preparedness, response, recovery, and mitigation. As such, emergency responses were streamlined with the development and maintenance of credible emergency management capabilities accomplished by integrating activities along functional lines of all levels of government and across all hazards. Figure 18 depicts the history of events that have necessitated a more coordinated and capabilities-based approach to emergency response.⁶⁴

Figure 18: Emergency Response History of Events, 2001 – 2018



Community Engagement Focus Arose After 9/11

The terrorist attacks of September 11, 2001, and subsequent anthrax scares in that same year incited dramatic changes in emergency management. Emergency management shifted to a

more proactive emergency preparedness approach, with priorities, funding and practices re-evaluated. While the all-hazards approach remained central to emergency preparedness, *a signature shift was the engagement of the entire community*, with the intention of involving the private sector, community groups and individual citizens in disaster preparedness. This approach leveraged community resilience and shifted to local leadership and coordination.

CDC Has Established National Standards for Public Health Emergency Preparedness and Response

CDC created the Public Health Preparedness Capabilities to assist state and local health departments with their strategic planning. As shown in Table 10, the 15 capabilities span six domains: Community Resilience, Incident Management, Information Management, Countermeasures and Mitigation, Surge Management and Bio-surveillance.

Table 10: CDC Public Health Emergency Preparedness and Response Capabilities⁶⁵

Domain	Capabilities
Community Resilience	#1 Community Preparedness #2 Community Recovery
Incident Management	#3 Emergency Operation Coordination
Information Management	#4 Emergency Public Information and Warning #6 Information Sharing
Countermeasures and Mitigation	#8 Medical Countermeasure Dispensing and Administration #9 Medical Material Management and Distribution #11 Nonpharmaceutical Interventions #14 Responder Safety and Health
Surge Management	#5 Fatality Management #7 Mass Care #10 Medical Surge #15 Volunteer Management
Bio-surveillance	#12 Public Health Laboratory Testing #13 Public Health Surveillance and Epidemiological Investigation

This set of capabilities creates a national standard for public health preparedness capability-based planning and assists state and local planners in identifying gaps in preparedness, determining the specific jurisdictional priorities, and developing plans for building and sustaining capabilities.

Emergency Response in Indiana is Primarily Federally Funded

The overarching goals of emergency preparedness are to ensure safety from natural and man-made hazardous incidents and reduce/mitigate the loss of life through education and planning for any possible hazard at any time. Emergency response in Indiana is primarily funded through federal grants from the Federal Emergency Management Agency (FEMA), the Assistant Secretary for Preparedness and Response within the U.S. Department of Health and Human Services (ASPR) and CDC. (Table 11).

Table 11: Federal Emergency Preparedness Grants

State Agency	Federal Agency	Grant Name
IDOH	CDC	Public Health Emergency Preparedness (PHEP)
	ASPR	Hospital Preparedness Program (HPP)
Indiana Department of Homeland Security	FEMA	Emergency Management Performance Grant (EMPG)
		State Homeland Security Program (SHSP)
		Hazard Mitigation Grant Program (HMGP)
		Hazardous Materials Emergency Preparedness (HMEP)
		Individual Assistance

Each of these funding sources is critical to the process of preparedness (Figure 19), which is supported by the CDC’s Public Health Emergency Preparedness and Response Capabilities. For example, the CDC’s Community Resilience domain corresponds with “Recovery” in Figure 19 and the Incident Management domain corresponds with “Response,” as does the Information Management domain. The Countermeasures and Mitigation domain corresponds to “Mitigation,” and the Surge Management domain corresponds to both “Preparedness” and “Response.” Lastly, the Biosurveillance domain corresponds with “Prevention,” as early detection and prevention efforts can reduce the spread of disease threats.

Figure 19: Emergency Preparedness Process





IDOH Division of Emergency Preparedness Leads Indiana's Public Health Emergency Preparedness Response

The IDOH Division of Emergency Preparedness (DEP) is primarily charged with promoting the overall preparedness, readiness, and resilience for public health and health care across Indiana. DEP prepares for and responds to public health emergencies and events throughout Indiana's 10 Public Health Preparedness Districts through four sections: (1) District and Local Readiness, (2) Logistics, (3) Planning and Preparedness, and (4) Mobile Response.

The CDC PHEP Grant Promotes Seamless Coordination Across the State

The DEP administers the CDC Public Health Emergency Preparedness (PHEP) Cooperative Agreement, which provides public health emergency preparedness grant funding to LHDs, although not all LHDs apply for this funding. PHEP grants include funding for a local 0.5 full-time equivalent (FTE) emergency preparedness coordinator to ensure seamless coordination across the state. The grant also funds training and technical assistance to build local capacity to lead response efforts and facilitate statewide support for coordinated preparedness and response.

EMResource Maximizes Connectivity During Public Health Emergencies

EMResource is a web-based tool that provides cross-sector communication during a disaster or disease outbreak, allowing for better resource management. The data housed in EMResource is used to provide real-time updates of healthcare capabilities on a local, regional, and statewide level. For example, using EMResource, IDOH and other users can:

- Send time-sensitive alerts
- Review hospital diversion statuses
- Determine bed availability
- Share available resources to assist hospitals in need

During the COVID-19 pandemic, IDOH has also used EMResource to ensure that hospitals and physicians receive the personal protective equipment (PPE) and testing supplies that they needed. For example, early in the pandemic, when hospitals, local health departments, and long-term care facilities updated EMResource with information regarding their current PPE supplies, IDOH was able to deploy its PPE stockpile resources to the areas of greatest need.



To optimize the value of the EMResource tool for resource management and connectivity during emergencies, however, the tool must be widely adopted by LHDs, hospitals, long-term care facilities, and other providers and first responders.

IDOH Readiness Depends on its Ability to Rapidly Scale Up Resources During Emergencies

Having Pre-Approved Vendor Scopes of Work in Place Would Improve Readiness

The ability to scale up during a public health emergency quickly and efficiently depends greatly on the level of preparedness. Preparedness may include staff and contracted vendors, standing at the ready for deployment or contract implementation when the need is determined, avoiding delays with hiring or procurement processes. Having pre-approved vendors and contracted staff (e.g., emergency medical staff) through memoranda of understanding (MOUs), predefined scopes of work, and other pre-negotiated arrangements will increase the speed and time by which response measures can be utilized.

Establishing a State Strategic Stockpile Would Improve Readiness

The Strategic National Stockpile (SNS) is a national repository of antibiotics, antivirals, vaccines, chemical antidotes, antitoxins, and other medical supplies intended to be used as a short-term, stopgap buffer when immediate supplies are not available or sufficient at a state or local level.⁶⁶ During the initial wave of the COVID-19 pandemic, however, the SNS was unable to meet the demand for ventilators and PPE for healthcare workers (e.g., N95 masks, surgical masks, gloves, face shields). Creating a Strategic State Stockpile, along with appropriate inventory management processes and procedures, would reduce Indiana's reliance on the SNS and improve the state's public health emergency readiness. Training exercises to practice efficient dissemination of countermeasures, PPE, or other resources will also require the engagement of the Indiana Department of Homeland Security (IDHS).

Gaps Remain in the State's Trauma Care System

Traumatic injury is the leading cause of death for individuals between the ages of 1-44 years in the United States. Traumatic injury results in more years of potential life lost than any other disease process, including cancer and heart disease. Injury is America's most expensive disease process, costing nearly \$180 million per year. In Indiana, the leading causes of death for individuals aged 1-44 are preventable injuries.⁶⁷

A trauma system is an organized approach to facilitating and coordinating a multidisciplinary system response to severely injured patients. The trauma system continuum of care includes injury prevention, emergency medical services field intervention, emergency department care, surgical interventions, intensive and general surgical in-hospital care, rehabilitative services, social services, and support groups to enable both patients and their families to return to society at the most productive level possible. Multiple studies have shown that implementation of an organized trauma system results in a 50 to 80 percent reduction in preventable deaths.

While the focus is on trauma care, it is important to note that many of the issues discussed also affect access to other time-sensitive emergency care, including myocardial infarctions (heart attacks) and strokes. Until March 2006, Indiana was among a handful of states with no laws or regulations granting oversight authority for trauma care. Proper oversight is a necessary element of any trauma system. Public Law 155-2006, with support from resolutions by the Indiana State Medical Association and the Indiana Emergency Nurses Association, changed that. Indiana now has 22 designated trauma centers (Table 12) and an active state trauma committee. However, there is more to be done to improve access to trauma care and coordination around the state. Indiana has not received an American College of Surgeons statewide assessment since 2008. The goal is to accomplish this within the next year, and there no doubt will be opportunities identified.

Table 12: Number of IN Trauma Centers by Level and Location

Level	Number	Location
I	4 + 1 Prov.	Marion County
II	5	Evansville, Fort Wayne, South Bend
III	13 + 1 Prov	Anderson, Bloomington, Crown Point, Elkhart, Indianapolis, Jasper, Lafayette, Muncie, Richmond, Terre Haute, Vincennes

Access to a trauma center, a hospital that has been verified to be equipped and staffed to provide care for patients suffering from major traumatic injuries such as falls, motor vehicle collisions, or gunshot wounds, is considered essential for trauma care. A review of Indiana's current designated trauma centers shows large areas of rural Indiana are more than 45 minutes away from of a trauma center. Three hospitals within those areas have been identified to target

to become Level III hospitals, but achieving this goal will require immediate and ongoing funding.

Additionally, coordination and participation in regional trauma care varies across the state. All hospitals, both designated trauma centers and non-trauma centers, need to be trained in trauma care. However, it is essential that critical trauma patients are taken to a facility with specific trauma resources no more than two hours after arrival to the lower level of care facility. In 2021, less than half of the patients from Non-Trauma Center (NTC) hospitals were transferred in fewer than two hours.

Looking at all hospitals, NTC hospitals (mostly in rural areas) experienced 91% of the reported delays in transfer. “EMS issue” was the number one reason given for the delay, and 50% of those were further defined as “EMS shortage.”

Indiana EMS runs have almost doubled, from 758,115 in 2018 to 1,258,158 in 2021. However, the number of ambulances and EMS providers has decreased in that same time. For example, in 2020, there were 1,789 emergency ambulances in the state, down from over 2,000 in 2018.⁶⁸ Total EMS personnel (Emergency Medical Responders, Emergency Medical Technicians, Advanced Emergency Medical Technicians, and Paramedics) have also declined, from 24,145 in 2018 to 23,070 in 2021. This was especially evident during the pandemic, when patients were forced to stay at lower level of care facilities for hours to days due to the lack of EMS transport availability. This led IDOH and IDHS to develop a state-supported EMS program that transferred 2,898 Hoosiers, from September 2021- March 2022, after all other options had been exhausted.

Figure 20: Indiana Trauma Center 45 Minute Access Map

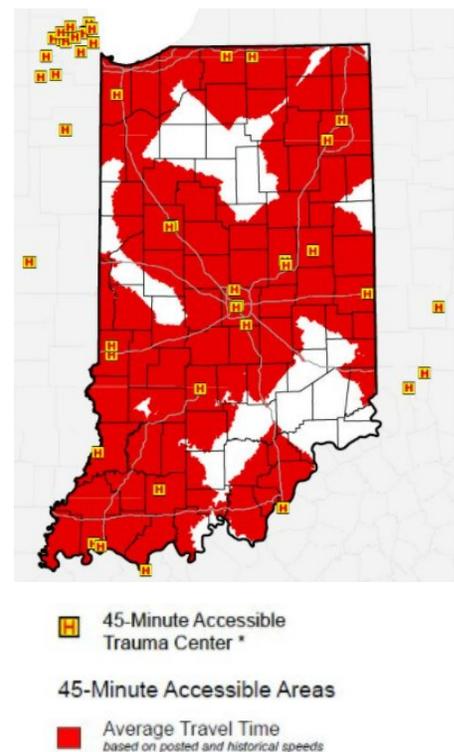
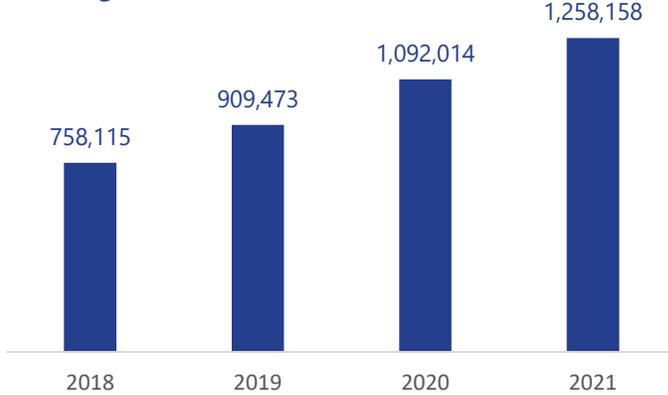


Figure 21: EMS Run Volume, 2018 - 2021



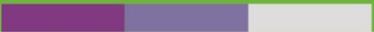
The lack of available EMS has also led to counties denying requests for assistance in neighboring counties despite having mutual aid agreements. It used to be the norm for rural EMS and healthcare providers to share that assistance across county lines, but it is now every county for themselves. EMS providers shared that they need to be available for 911 response within

their county, so transferring a critically ill patient 5-6 hours round trip is not an option. In the past, more ambulances were available to support the transport. Non-trauma center hospitals shared that the most reliable means of transport for critically ill patients is air ambulance, even when that level of care and time is not necessary. When weather does not allow air transport, small hospitals that are not fully equipped to care for the critically ill patient are left caring for the patient until transport becomes available.

Emergency medical services is listed as an essential service in statute, similar to fire and law enforcement. However, statute does not define who is ultimately responsible to provide the service. EMS providers vary across the state, in order from most to least: volunteer fire service, career fire service, governmental (example; city or county service), private, hospital based, volunteer ambulance, and industrial.

Communication with EMS providers and healthcare and local leaders has discovered several reasons for the lack of available EMS:

- Lack of EMS providers is due to various reasons, but often due to reimbursement rates and training barriers, leaving emergency medical services for other jobs both within health care (pipeline position, for example going into nursing) and outside of health care (pay); difficulty recruiting due to extensive training requirements upfront without the ability to work during training; and, a large proportion of EMS providers are volunteer and have jobs outside of EMS

- 
- No one required to provide the essential service, so entities have decreased or stopped EMS services
 - Lack of resource sharing, as each county has a singular EMS response plan and no coordination across counties to provide care. Providers shared instances in which a patient was on the border of a county, but EMS would not respond due to being responsible only for their county.
 - Changes in property tax caps have led to decreased funding being available to counties to invest in EMS services
 - Reimbursement for 911 transport based on mileage, not on the services provided
 - Inadequate or no reimbursement for transport between facilities, leading EMS providers to decline transport
 - Agencies and the entities that host the EMS agencies list lack of funding as the number one reason for decrease in EMS providers despite the increase in EMS runs

The IDOH Division of Trauma and Injury Prevention, IDHS and EMS are committed to working to improve trauma care in Indiana. This work requires the review and analysis of data, program implementation, and system education.

With respect to data, all hospitals in Indiana, including non-trauma hospitals, are required to input data into the trauma registry. These data help recognize variances in trauma care across the state, including the data on transfer delay. For example, trauma registry data showed a threefold difference in trauma mortality rates among Indiana's NTC hospitals. However, not all hospitals consistently participate in reporting the data and cite lack of funding to support data registry personnel.

As an example of program implementation, IDOH and IDHS are interested in investing in a pediatric pre-hospital care improvement plan utilizing a pediatric resuscitation system proven to save lives. Children made up 5.1% of all EMS incidents in Indiana in 2019. The infrequency of incidents and the unique care required for children allows opportunity for error. Implementation has proven to decrease error, improve pain management, and improve survival.

Updated American College of Surgeons Trauma Center Standards require a specific number of FTEs based on the number of trauma patients received at a facility. There is concern hospitals may no longer want to participate as designated trauma centers due to this

requirement and the associated cost. The IDOH Division of Trauma and Injury Prevention has limited staff to support the current trauma system data and analysis needs. Future quality improvement work will require increased funding for the trauma and injury prevention division.

Funding and Policy Needs to Improve Trauma Care in Indiana

- Funding to support the development of additional Level III trauma centers to improve trauma coverage in rural Indiana
- Funding to support education and training for non-trauma centers on the identification and stabilization of traumatic patients
- Funding to support data collection from trauma and non-trauma centers that is necessary for quality care initiatives and regional coordination
- Reorganization of Indiana State Trauma Committee and subcommittees to better support coordination at the local level
- Funding for IDOH staff in the Division of Trauma and Injury Prevention, that is not reliant on grants, to provide support for state and regional trauma committees, to ensure data quality, and to provide data analysis for the trauma and non-trauma centers as well as for Hoosiers
- Conduct needs assessment of specific EMS gaps in local jurisdictions
- Establish long-term promotional and retention plans for EMS personnel
- Ensure funding and prioritized recruitment to address workforce shortages in EMS
- Review current EMS training availability, address gaps and explore opportunities for standardization, identify opportunities to support on-the-job training
- Explore ongoing training and expansion of community paramedicine programs
- Evaluate stakeholder engagement process to redefine the IDOH emergency preparedness districts
- Evaluate stakeholder engagement process to redefine roles, responsibilities, and authorities of regional partners

Recognizing the current challenges and gaps in the state's trauma care system, legislation passed by the 2022 Indiana General Assembly⁶⁹ required the IDHS, IDOH, the Integrated Public Safety Commission, and the Statewide 911 Board to collaborate and make recommendations to the General Assembly before October 31, 2022. The recommendations

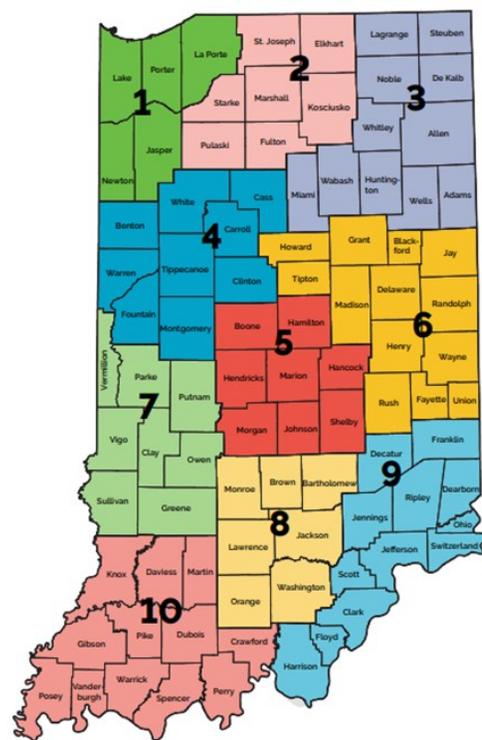
must address: (1) improving EMS response through increased interoperability of the 911 system and (2) the effectiveness of regionalized trauma systems and the systems' impact on patient care. House Enrolled Act 1314-2022 was also adopted by the legislature to address multiple public safety and EMS-related matters. IDOH is building on these efforts through the Statewide Trauma Care Committee and has arranged for an assessment of the State Trauma System to be completed in November 2022 by the American College of Surgeons.

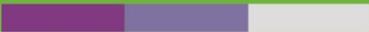
Current Public Health Preparedness District Boundaries Are Not Consistent with Organic Health Care and Emergency Response Referral Patterns

The Commission finds that improved district coordination efforts would help ensure a more seamless emergency response. Public Health Preparedness District boundaries align with the IDHS preparedness districts but are not always consistent with organic healthcare and emergency response referral patterns, and therefore may not work consistently for purposes of emergency response and emergency medicine/trauma care. (Figure 22) For example, Kokomo is a city that is located on the edge of two districts and where training efforts do not align with response models. It is also important to note that some healthcare system areas cross state borders, such as in the northwest and southeast parts of the state, where Chicago, Cincinnati, Louisville have more infrastructure than the local communities. The reverse is true in the Evansville and South Bend areas, where out-of-state residents may seek services at Indiana facilities. Enhanced district-level emergency preparedness coordination would allow Indiana to address those cross-state line planning needs. A reconsideration of the current boundaries should note that:

- Different districts have different needs and vary in their proximity to a Level 1 trauma facility
- Emergencies often cross state or county lines
- Training and messaging need to go beyond district boundaries

Figure 22: IDOH Public Health Preparedness Districts





Also, revised district boundaries must take into consideration the roles and responsibilities of the following IDHS and IDOH regional partners:

- **COUNTY EMERGENCY MANAGEMENT AGENCIES (EMAs).** As the first line of response, EMAs work with local public safety partners and organizations to prepare for, mitigate, respond to, and recover from emergencies and liaise with other counties and the state. Across the state, 91 of 92 Indiana counties have a designated EMA.
- **DISTRICT PLANNING COUNCILS (DPCs).** DPCs are comprised of local emergency responders, emergency managers, and representatives from other key agencies. They are responsible for developing emergency response strategies and plans and procedures for their District Planning Councils.
- **DISTRICT PLANNING OVERSIGHT COMMITTEES (DPOCs).** DPOCs are comprised of EMA directors, the presidents of each component county's County Commissioners, and the mayor of the largest city in each component county. A DPOC is responsible for formally appointing the members of the DPC and providing executive oversight, support, and guidance for their activities.
- **HEALTHCARE COALITION (HCC):** An HCC serves as a multiagency coordinating group that supports and integrates with emergency response within a geographic region. An HCC must include representatives from at least two acute care hospitals, one LHD, one EMA and one EMS provider, but some also include long-term care facilities, mental health providers, ambulatory surgical centers, rural health clinics, and others.

Recommendations



The emergency preparedness recommendations that follow address the following overall goals:

- Ensure connectivity and facilitate information exchange in preparation for and during public health emergencies
- Enhance LHD, IDOH, and EMS readiness
- Improve the scalability of emergency response efforts beyond the local level
- Ensure state and local agencies have tools to prioritize and maintain responder resilience

Recommendation 20: Increase utilization of IDOH’s EMResource tool across all Indiana hospitals, LHDs, first responders, healthcare facilities, and applicable government agencies.

Action Items:

- A. Secure funding and infrastructure for EMResource management, the state’s resource tracking and decision support tool for public health emergency preparedness.
- B. Include EMResource participation as a condition of hospital licensure.
- C. Ensure awareness and training on use of EMResource and WebEOC of all relevant partners.
- D. Require local health departments to utilize EMResource.

Recommendation 21: Require LHDs to participate in the CDC Public Health Emergency Preparedness (PHEP) grant program. Action items:

- A. Promote PHEP grant participation, which provides \$25,000 annually in support of 0.5 FTE for PHEP Coordinator.
- B. Provide technical assistance as needed for grant activities and reporting.

Recommendation 22: Enhance IDOH’s emergency services and supplies capacity.

Action items:

- A. Maintain IDOH vendor contracts that can be activated during a public health emergency.
- B. Evaluate the need for a state strategic stockpile to ensure the availability of personal protective equipment and (PPE) and medical counter measures (MCM).
- C. Engage Health Care Coalitions, LHDs, and statewide partners to develop strategies for extending PPE and MCM supplies so that both are available when needed most.
- D. Direct IDHS and IDOH on coordination of public health emergencies through training exercises.

Recommendations



Recommendation 23: Ensure local level EMS readiness through expansion and sustainability of EMS workforce.

Action items:

- A. IDOH in conjunction with the EMS Commission, will conduct a needs assessment of specific EMS gaps in local jurisdictions.
- B. Ensure funding for prioritized recruitment to address EMS workforce shortages and provide mechanisms for cost-sharing related to equipment purchases, particularly in underserved and geographically remote areas of the State.
- C. Establish long-term promotional and retention plans for EMS personnel.
- D. Enhance ongoing higher-level EMS training and expansion of community paramedicine programs.
- E. Improve health outcomes related to preventable injuries and other trauma through enhanced analysis and educational initiatives, increased access to EMS, and other efforts to strengthen the trauma system.

Recommendation 24: Improve regional coordination efforts to ensure a seamless emergency response.

Action items:

- A. Initiate a stakeholder engagement process to redefine the IDOH Emergency Preparedness Districts.
- B. Initiate a stakeholder engagement process to redefine roles, responsibilities, and authorities of regional partners to improve public health emergency preparedness coordination.

Child and Adolescent Health Findings

Opportunity to Improve Health Outcomes for Children and Adolescents

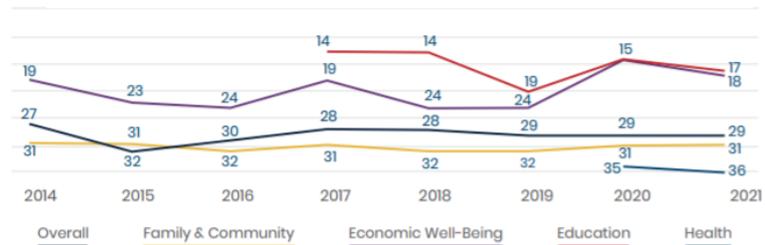
Indiana has ranked 29th in the nation since 2019 for overall child well-being.⁷⁰ The state is ranked 36th for health, dropping from its position as 35th in 2020.

Additionally, Indiana's health ranking is last among our neighboring states: Illinois (20th), Michigan (22nd), Ohio (29th), and Kentucky (35th). The leading cause of death among Hoosier children ages 1-19 years is accidents.

Suicide is the second-leading

cause of death for Indiana youth ages 10-14 years and the third-leading cause of death for youth ages 15-19 years.⁷¹ Overall, these data point to significant opportunities to improve adolescent and child health outcomes and informed the focus of the GPHC and recommendation development process.

Figure 23: Child Overall Well-Being and Domain Rankings; Indiana: 2014-2021



Source: Annie E. Casey Foundation

Schools Play a Crucial Role in Supporting Public Health

Throughout the stakeholder engagement process, the critical role of schools in supporting public health was a consistent theme. This informed the focus of GPHC work in

exploring opportunities to improve childhood and adolescent health integration and support schools in the delivery of critical public health services.

There is a close relationship between health and education. Healthy students are better learners.

There is a close relationship between health and education. Studies have demonstrated the link between health and academic success. For example, health-risk behaviors are linked to poor grades, low test scores, and lower educational

attainment. Schools play a crucial role in promoting the health of children and adolescents and assisting students in developing lifelong healthy behaviors. Research demonstrates the potential for school health programs to reduce youth health risk behaviors and positively impact academic performance.⁷² Studies further suggest physical activity and fitness improve children's academic and health performance.⁷³

Indiana statute and regulation currently establish a series of requirements surrounding the role of schools in public health-related activities. For example, school corporations are required to provide health services at the elementary and secondary levels, including prevention, assessment, intervention, and referral.⁷⁴

Table 13: Indiana Administrative Code School Health Services Requirements

Prevention	<ul style="list-style-type: none"> • Creating a safe and healthful school environment through a continuous health program • Employing principles of learning and appropriate teaching in the delivery of health education • Acting as a resource to students, families, staff, and the community regarding health services, health education, and a healthy environment
Assessment	<ul style="list-style-type: none"> • Maintaining a continuous health program for all students through implementing and monitoring health services • Using the nursing process to collect, interpret, and record information about the health, developmental, and educational status of students to determine a nursing diagnosis and develop healthcare plans
Intervention	<ul style="list-style-type: none"> • Implementing and monitoring a system for the provision of health services and emergency care • Providing individual and group counseling to students and staff in health-related matters • Communicating with parents and collaborating with others to facilitate the continuity of services and care
Referral	<ul style="list-style-type: none"> • Utilizing appropriate healthcare personnel and resources to meet individual student needs • Evaluating student and family responses to nursing actions and referrals • Coordinating health services with families, other school programs, in-school professionals, school-based and community-based resources

Additionally, state statute establishes a series of required school curriculum content on health-related topics. Some, but not all, required curriculum content must be evidence- or research-based. For example, bullying prevention must be research-based, and instruction on child abuse and child sexual abuse must be research- and/or evidence-based. Statutory requirements for schools are intended to address nutrition and physical activity. Each school corporation must provide daily physical activity for students in elementary school; this may include the use of recess.⁷⁵ Additionally, all school meals must meet or exceed USDA nutrition

requirements.⁷⁶ State statute also establishes requirements for schools to conduct vision and hearing tests.⁷⁷

Further, in accordance with federal law, each local education agency (LEA) that participates in the National School Lunch Program or other federal child nutrition program is required to establish a local school wellness policy for all schools under its jurisdiction. Local wellness policies can be an important tool for parents, LEAs, and school districts in promoting student wellness, preventing, and reducing childhood obesity, and providing assurance that school meal nutrition guidelines meet the minimum federal school meal standards. Stakeholders noted that these policies are not meaningfully or consistently implemented across the state due to competing priorities, no enforcement mechanisms, and a lack of resources to address the multiple facets of wellness required in the policy.

School Health Service Delivery Models

Health services in Indiana schools are primarily delivered through two complementary mechanisms, school nurses and school-based health centers (SBHC). Table 14 provides an overview of the key features of each service delivery model.

Table 14: Overview of School Health Service Delivery Model ^{78,79}

	School Nurses	SBHCs
Overview	Leads the school health services team to address barriers to student health and academic success. Serves as public health sentinel within and across school populations and is an advisory resource to teachers and staff.	Health clinic located in or near school and organized through school, community, and health provider relationships. Can serve the school population and surrounding community.
Funding	Employed or contracted by the school district and primarily funded with education dollars	Insurance reimbursement, foundations, healthcare systems, and community health center funding
Potential Available Services	<ul style="list-style-type: none"> Identifying and addressing behavioral health issues Leveling the field on health disparities and promoting healthy behaviors 	<ul style="list-style-type: none"> Primary care Prevention and early intervention Behavioral health counseling Oral health services Health education and nutrition counseling Lab work and prescriptions

	School Nurses	SBHCs
	<ul style="list-style-type: none"> Enrolling children in health insurance and connecting families to healthcare providers Handling medical emergencies 	
Location	Practice within the school; currently in Indiana, RN may be shared across schools within a district	<p><u>Traditional</u>: Fixed site on a school campus</p> <p><u>School-Linked</u>: Fixed site near a school campus through formal or informal linkages with schools</p> <p><u>Mobile</u>: Specially equipped van or bus parked on or near a school campus</p> <p><u>Telehealth-Exclusive</u>: Patients access care at a fixed site on a school campus and providers are available remotely using telehealth</p>
Parental Consent	Required to share information with a healthcare provider or for referral to a provider	Parental consent for treatment required
Medical Home Coordination	School nurse technology platforms exist but are not currently being utilized broadly across the state	May be facilitated via electronic health record, providing potential for broader health record access and coordination

School Nurses Positively Impact Both Health-Related and Educational Outcomes

The American Academy of Pediatrics (AAP) and the National Association of School Nurses (NASN) both recommend a registered nurse (RN) in every school. Studies have demonstrated the positive impact of school nurses in areas such as cost savings, reduced absenteeism, and improved vaccination rates. For example, in one study, for each dollar spent on school nurses, \$2.20 was saved in parent loss of work time, teacher time, and procedures performed in school rather than a more costly healthcare setting.⁸⁰ School nurse interventions have been associated with decreased rates of student absenteeism and early dismissals of students due to health concerns.⁸¹ Research has also shown a correlation between use of school nurses and vaccination rates.⁸² School nurses also play a critical role for students with disabilities and special healthcare needs in areas such as individualized education programs (IEP),⁸³ 504 Plans,⁸⁴ and medication administration.

Indiana School Nurse Requirements

In Indiana, school corporations are required to employ at least one bachelor's level RN, and one RN for every 750 students is recommended.^{85,86} There is no formal data collection mechanism to quantify the availability of school nurses; however, it is known that not all school corporations meet these standards. According to licensure renewal data, 2.1 percent of all Indiana licensed healthcare professionals reported practicing in school settings, including: 1,708 RNs, 359 LPNs, and 53 APRNs.⁸⁷

School Nurse Salaries

School nurses are typically classified by school corporations as support versus certified staff. This contributes to low pay, further exacerbating school nursing shortages, as pay for nurses in other settings is higher. Additionally, when classified as certified staff, pay is lower than teachers, school nurses' bachelor's-trained counterparts.

Indiana Does Not Have a Dedicated Funding Source for School Nurses

There is no dedicated funding source to support school nurse positions; positions are funded primarily through school district budgets. Some schools also partner with hospital systems to staff school nurse positions. Additionally, in response to COVID-19, temporary grants were made available to LHDs to boost connectivity between LHDs and schools, with 77 of 94 LHDs participating.

Two Medicaid reimbursement methodologies are available to support school health services and school nurses. Administrative claiming allows school corporations to recover federal matching funds for state and locally funded administrative activities that school staff perform to assist students with unmet health care needs.⁸⁸ Schools may also receive claims reimbursement for certain services rendered by a school-based nurse (RN or LPN licensed under IC 25-23-1), or other licensed provider employed by or contracted with a school corporation. House Enrolled Act (HEA) 1192, passed during the 2022 legislative session, clarified and expanded the scope of school-based services eligible for Medicaid claims reimbursement to include:

- An individualized education program (as defined in IC 20-18-2-9)
- A plan developed under Section 504 of the federal Rehabilitation Act, 29 U.S.C. 794
- A behavioral intervention plan (as defined in IC 20-20-40-1)
- A service plan developed under 511 IAC 7-34
- An individualized healthcare plan

LEAs that participate in Medicaid claims reimbursement retain the federal share of Medicaid reimbursements and restore the state-funded portion to state tuition support. LEAs may use their unrestricted federal Medicaid funds as they choose. Not all schools are currently seeking Medicaid reimbursement.⁸⁹ Stakeholders described the process as confusing and requiring school resources to administer, making larger schools better positioned to claim and widening disparities among schools. Additionally, some schools may have lower Medicaid enrollment, reducing incentives to implement the infrastructure necessary to seek reimbursement.

There is no dedicated funding source to support school nurses. School corporations are held accountable for educational outcomes, creating challenges for prioritization of funding school nurse positions among competing priorities.

Indiana's methodology for funding school nurses is generally aligned with national trends.

Nationally, public school nurses are funded primarily through local education dollars, with some studies citing this as high as 76.7 percent. Additional funding sources, in order of prevalence, include state, federal, health departments, hospital systems, and foundations.⁹⁰

While other states also rely primarily on education dollars, as a component of this model some states have explicitly accounted for nurses in their school funding formulas, either through a separate funding formula, or within the larger funding formula. These models provide the benefit of funding permanency. Additionally, by dedicating funds to school nurses, there is recognition of the myriad services schools must otherwise fund and the lack of incentives to otherwise prioritize nurse funding as primary accountability is tied to educational outcomes.

School-Based Health Centers (SBHC) Improve Educational and Health-Related Outcomes

Research has found SBHCs effective in improving educational and health-related outcomes. Increased effectiveness was associated with extended hours of availability and increased range of offered services.⁹¹ The development and operation of SBHCs in Indiana have been supported through a variety of initiatives. For example, HRSA grant funding was awarded in 2016 for telehealth equipment in participating Indiana Rural Schools Clinic Network (IRSCN) schools. Additionally, Medicaid managed care organizations (MCOs) have provided sponsorship and "Adopt-A-School" programs.

Indiana had 48 SBHCs (including 3 telehealth-exclusive) as of a 2016-2017 national survey. An additional 38 telehealth SBHCs were launched by the IRSCN, and five more are in process.

Some schools partner with health systems or have SBHCs operated by a federally qualified health center (FQHC) or a FQHC look-alike.

Indiana Law and Regulations Require a Number of Student Assistance Services in Schools

As outlined in Table 16 below, Indiana statute and administrative code establish a series of requirements to support whole child wellness in schools.

Table 15: Current Requirements Supporting Whole Child Wellness in Schools

Statutory Requirements	Regulatory Requirements
<ul style="list-style-type: none"> Schools must adopt policies to increase child suicide awareness and prevention Schools must provide annual instruction on bullying prevention for students in grades 1-12 School corporations & charter schools must enter a memorandum of understanding (MOU) with a Community Mental Health Center (CMHC) or mental health provider to provide behavioral health services. Written parental/guardian consent is required for referral. 	<ul style="list-style-type: none"> School corporations must provide student assistance services⁹² coordinated by a school counselor, psychologist, or social worker. Required services include prevention, assessment, intervention, and referral. A ratio of one school counselor, psychologist, or social worker for every 700 students in the school corporation is <i>recommended</i> for student assistance services.

Stakeholders stressed the importance of supporting access to student assistance services in schools and noted access variance across the state. This feedback is aligned with research that demonstrates the positive impact of school counselors, social workers, and psychologists on

National associations recommend a 1:250 school counselor or social worker to student ratio. Indiana recommends 1:700 via administrative code.

areas such as academic achievement, school attendance, dropout rates, and classroom behavior.⁹³

The American School Counselor Association (ASCA) recommends schools maintain a ratio of 250 students per school counselor, and that counselors spend at least 80 percent of their time work directly with or indirectly for students.⁹⁴ Additionally, the National Association of Social Workers (NASW) recommends a ratio of one school social worker to 250 students, or 1:50 when providing services to students with intensive needs.⁹⁵ Further, the National Association of School Psychologists (NASP) recommends a 1:500 psychologist-to-student ratio.⁹⁶ These



recommendations provide for a significantly lower ratio than Indiana's current recommendation of 1:700. According to data compiled by the ASCA, in 2020-21, the national student-to-school counselor ratio was 1:415 and in Indiana was 1:475.⁹⁷

Currently, there is no dedicated funding mechanism for student assistance services positions. School corporations are held accountable for educational outcomes, creating challenges for prioritization of funding school counselor, social worker, or psychologist positions within their overall budgets.

Recommendations



The child and adolescent health recommendations that follow address the following overall goals:

- Improve student learning by mitigating health barriers
- Enhance early childhood education and school-based health education, prevention, and wellness activities
- Improve access to child and adolescent health care
- Reduce childhood injuries

Recommendation 25: Support policies to increase the availability of school nurses.

Action items:

- A. Implement policies to improve the school nurse to student ratio.
- B. Implement policies to support school nurse recruitment and retention, such as addressing low pay and incentivizing school nurse credentialing.

Recommendation 26: Increase access to services to support whole child wellness.

Action items:

- A. Implement policies to improve the school counselor, social worker, and psychologist to student ratio.
- B. Provide technical assistance to schools interested in providing SBHCs in partnership with local health systems.

Recommendation 27: Support evidence-based health education, nutrition, and physical activity in schools and early childhood education settings.

Action items:

- A. Make evidence-based curricula on health and oral health matters available for schools and early childhood education settings to access.
- B. Provide technical assistance in implementing curricula.
- C. Support schools and early childhood education settings in identifying opportunities to increase physical activity and healthy nutrition during the school day.

Recommendations



Recommendation 28: Support access to health screenings and services that can be appropriately delivered in school and early childhood education settings while maintaining parental/guardian consent mechanisms.

Action items:

- A. Make best-practices information about screenings and services accessible to schools and early childhood education settings.
- B. Convene a representative workgroup comprised of schools, community-based organizations, clinicians, and public health leadership to identify best-practices.
- C. Support policies to increase the availability of nutritious meals, and reduce the availability of non-nutritious food, in schools and early childhood education settings.
- D. Identify opportunities to provide resources and referrals to children identified during a school screening as requiring a service or supply (e.g., eyeglasses or hearing aids).
- E. Ensure all strategies are equitable for children regardless of demographics and needs.
- F. Explore opportunities to incorporate oral health screenings in school settings, in addition to the vision and hearing tests currently required.

Recommendation 29: Reinforce meaningful implementation of school wellness policies

Action items:

- A. Fund and leverage IDOH, IDOE, and community partners to collaborate with school districts regarding the benefits of evidence-based wellness policies.
- B. Fund direct technical assistance to implement evidence-based school wellness policies.
- C. Incentivize school districts to prioritize wellness policy via school grant processes.

Recommendation 30: Support the development of school-based health centers

Action items:

- A. Provide technical assistance to school systems interested in developing a SBHC
- B. Leverage best practices from established SBHCs and in compliance with parental consent requirements.
- C. Identify opportunities for connecting local health systems with schools interested in implementing SBHCs.
- D. Increase oral health education and awareness, and if desired, oral health screenings in SBHCs.

Recommendations



Recommendation 31: Increase provider awareness of public health initiatives, opportunities, and requirements.

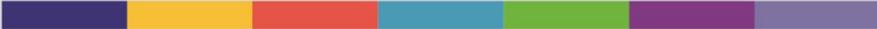
Action items:

- A. Engage relevant community stakeholders in developing technical assistance framework for Indiana healthcare providers on public health best practices and available resources.
- B. Address practice variance across the state on public health matters.

Recommendation 32: Address childhood injury and violence prevention

Action items:

- A. Establish an inter-professional coalition of experts focused on keeping youth safe from unintentional firearm deaths and suicide.
- B. Fund and leverage IDOH to develop policies to address safety issues and increase equitable access to safety equipment shown to significantly decrease child injuries (such as car seats, bike helmets, cabinet locks, and stair gates).

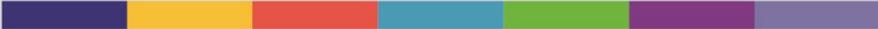


Conclusion

Indiana fares well on a number of economic and educational measures but ranks low among all the states on many health outcomes. Our poor health inhibits our economic performance, weakens our communities, and shortens the lives of too many Hoosiers. This Commission believes that we can and must do better.

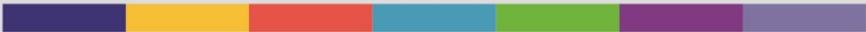
The recommendations we set forth in this report will transform Indiana's public health system to improve the health and safety of Hoosiers while strengthening communities. We strongly urge state leaders to adopt the recommendations and related action items in their entirety, as each recommendation reinforces and magnifies the impact of the others. The COVID-19 pandemic – the worst public health emergency in over 100 years – had a devastating impact on our communities, our state, and our nation, and highlighted the fragility of Indiana's current public health system. We must act now to apply the lessons that we have learned and prepare the state for the public health challenges of the future. If we do that, we will not only leave a legacy of good health for future Hoosier generations, but also economic prosperity.

Benjamin Disraeli remarked in 1877 that “the health of the people is really the foundation upon which all their happiness and all their powers as a state depend.” This report has demonstrated the public health issues that need to be addressed in order to secure Indiana's future. While the issues might seem great, and even daunting, the solutions we propose are thoughtful and realistic actions that can be taken.



References

- ¹ CDC National Center for Health Statistics. (2022, February). Accessed <https://www.cdc.gov/nchs/pressroom/states/indiana/in.htm>
- ² Susan Krauss Whitbourne, PhD., Can Being Happy Really Be a Matter of Being Healthy?, Psychology Today, December 7, 2019; accessed at <https://www.psychologytoday.com/us/blog/fulfillment-any-age/201912/can-being-happy-really-be-matter-being-healthy>.
- ³ Centers for Disease Control and Prevention, April 2, 1999, "Ten Great Achievements – United States, 1900-1999; <https://www.cdc.gov/mmwr/preview/mmwrhtml/00056796.htm>.
- ⁴ Kinghorn, M. (2022). The growing divide in life expectancy among Indiana counties. InContext, publication of the Indiana Business Research Center at Indiana University's Kelley School of Business. Retrieved from <https://www.incontext.indiana.edu/2022/mar-apr/article1.asp>.
- ⁵ US News and World Report State Public Health Rankings; <https://www.usnews.com/news/best-states/rankings/health-care/public-health>.
- ⁶ Lewin Group on behalf of the Indiana Hospital Association. (2019). The Economic Impact of Health Promotion in Indiana. (page 19) Accessed at https://www.ihaconnect.org/Documents/Economic_Impact_of_Health_Promotion_in_IN_Final%20Report.pdf
- ⁷ Milkin Institute (2018), The Costs of Chronic Disease in the U.S. 2018. (table 5). <https://milkeninstitute.org/sites/default/files/reports-pdf/ChronicDiseases-HighRes-FINAL.pdf>
- ⁸ Multiple primary sources cited in Table 4 of the Smoking-Caused Monetary Costs in Indiana at Campaign for Tobacco-free Kids <https://www.tobaccofreekids.org/problem/toll-us/indiana>
- ⁹ Indiana Cervical Cancer Strategic Plan, 2019-2028 (n.d.). (page 17). Accessed at <https://www.in.gov/health/files/Indiana-Cervical-Cancer-Strategic-Plan.pdf>.
- ¹⁰ America's Health Rankings. (2021). Explore public health funding in Indiana | 2021 annual report | AHR. https://www.americashealthrankings.org/explore/annual/measure/PH_funding/state/IN
- ¹¹ National Association of County & City Health Officers (NACCHO), 2019 National Profile of Local Health Departments; accessed at https://www.naccho.org/uploads/downloadable-resources/Programs/Public-Health-Infrastructure/NACCHO_2019_Profile_final.pdf.
- ¹² Indiana University Richard M. Fairbanks School of Public Health, Indiana Public Health System Review, December 2020; accessed at <https://fsph.iupui.edu/doc/research-centers/indiana-public-health-system-review-fnl5-web.pdf>.
- ¹³ Indiana Commission on Local Government Reform. (2007). Streamlining Local Government: We've got to stop governing like this. Retrieved from the Indiana University Public Policy Institute at <https://ppidb.iu.edu/project/details/336>. [Recommendation 17, p. 14]
- ¹⁴ ibid.



¹⁵ ibid.

¹⁶ Public Health National Center for Innovations (PHCNI), Foundational Public Health Services Fact Sheet, February 2022.

¹⁷ Public Health National Center for Innovations (PHCNI), FPHS Planning Guide: Using Foundation Public Health Services to Transform Public Health, January 2019. Accessed at <https://phnci.org/uploads/resource-files/FPHS-Planning-Guide-Using-Foundational-Public-Health-Services-to-Transform-Public-Health.pdf>

¹⁸ Originally released in 1994, the 10 Essential Public Health Services (EPHS) framework describes the public health activities that all communities should undertake. See: CDC, <https://www.cdc.gov/publichealthgateway/publichealthservices/essentialhealthservices.html>.

¹⁹ Hyde, J.K., & Shortell, S.M. (2012). The structure and organization of local and state public health agencies in the U.S.: a systematic review. *American Journal of Preventive Medicine*, 42(5 Suppl 1), S29–S41.

²⁰ ibid.

²¹ Center for Sharing Public Health Services, A Roadmap to Develop Sharing Initiatives in Public Health, updated in 2021; accessed at <https://phsharing.org/wp-content/uploads/2021/04/CSPHS-Roadmap-v4.pdf>.

²² Public Health Accreditation Board (PHAB), National Voluntary Accreditation for Public Health Departments website; accessed at <https://phaboard.org/who-is-accredited/>.

²³ PHAB, What is Public Health Department Accreditation? website; accessed at <https://phaboard.org/what-is-public-health-department-accreditation/>.

²⁴ PHAB, 2021 Impact Report, accessed at https://phaboard.org/wp-content/uploads/FINAL_PHAB-IMPACT-2021.pdf.

²⁵ National Academy of Medicine, For the Public's Health: Investing in a Healthier Future, 2012 (NAM, 2012); accessed at <https://nap.nationalacademies.org/catalog/13268/for-the-publics-health-investing-in-a-healthier-future>.

²⁶ Institute of Medicine (U.S.) Committee on Public Health Strategies to Improve Health. (2012). For the Public's Health: Investing in a healthier future. National Academies Press: Washington, DC.

²⁷ Ready or Not: Protecting the Public's Health from Diseases, Disasters, and Bioterrorism, 2022, Trust for America's Health, Issue Report, March 2022; accessed at https://www.tfah.org/wp-content/uploads/2022/03/2022_ReadyOrNot_Fnl.pdf.

²⁸ The Impact of Chronic Underfunding on America's Public Health System: Trends, Risks, and Recommendations, 2021, Trust for America's Health; accessed at https://www.tfah.org/wp-content/uploads/2021/05/2021_PHFunding_Fnl.pdf.

-
- ²⁹ A Funding Crisis for Public Health and Safety, Trust for America's Health, Issue Report, March 2018; accessed at <https://www.tfah.org/report-details/a-funding-crisis-for-public-health-and-safety-state-by-state-and-federal-public-health-funding-facts-and-recommendations/>.
- ³⁰ Y. Natalia Alfonso et al, US Public Health Neglected: Flat or Declining Spending Left States Ill Equipped to Respond to COVID-19, *Health Affairs*, Vol. 40 No. 4; March 25, 2021; accessed at <https://www.healthaffairs.org/doi/abs/10.1377/hlthaff.2020.01084>.
- ³¹ National Association of County & City Health Officials (NACCHO), National Profile of Local Health Departments, 2019; accessed at https://www.naccho.org/uploads/downloadable-resources/Programs/Public-Health-Infrastructure/NACCHO_2019_Profile_final.pdf.
- ³² IU Richard M. Fairbanks School of Public Health, Indiana Public Health System Review, December 2020; accessed at <https://fsph.iupui.edu/doc/research-centers/indiana-public-health-system-review-fnl5-web.pdf>.
- ³³ The Impact of Chronic Underfunding on America's Public Health System: Trends, Risks, and Recommendations, 2021, Trust for America's Health; accessed at https://www.tfah.org/wp-content/uploads/2021/05/2021_PHFunding_Fnl.pdf.
- ³⁴ Ready or Not: Protecting the Public's Health from Diseases, Disasters, and Bioterrorism, 2022, Trust for America's Health, Issue Report, March 2022; accessed at https://www.tfah.org/wp-content/uploads/2022/03/2022_ReadyOrNot_Fnl.pdf.
- ³⁵ The Impact of Chronic Underfunding on America's Public Health System: Trends, Risks, and Recommendations, 2021, Trust for America's Health; accessed at https://www.tfah.org/wp-content/uploads/2021/05/2021_PHFunding_Fnl.pdf.
- ³⁶ IC 16-46-10-3 limits the uses of LHM Fund grant funds to one or more of the following services: (1) animal and vector control; (2) communicable disease control, including immunizations; (3) food sanitation; (4) environmental health; (5) health education; (6) laboratory services; (7) maternal and child health services, including prenatal clinics and well-child clinics; (8) nutrition services; (9) public health nursing, including home nursing visitation and vision and hearing screening; and (10) vital records.
- ³⁷ National Association of County & City Health Officials (NACCHO), National Profile of Local Health Departments, 2019; accessed at https://www.naccho.org/uploads/downloadable-resources/Programs/Public-Health-Infrastructure/NACCHO_2019_Profile_final.pdf.
- ³⁸ Abigail Viall, Betty Bekemeier, Valerie Yeager, and Thomas Carton, Local Health Department Revenue Diversification and Revenue Volatility: Can One be Used to Manage the Other?, *Journal of Public Health Management & Practice*, January/February 2021; accessed at <https://pubmed.ncbi.nlm.nih.gov/34173815/>.
- ³⁹ IU Richard M. Fairbanks School of Public Health, Indiana Public Health System Review, December 2020; accessed at <https://fsph.iupui.edu/doc/research-centers/indiana-public-health-system-review-fnl5-web.pdf>.
- ⁴⁰ IC 16-20-2-17.

-
- ⁴¹ LHD stakeholder interviews, October and November 2021; Virtual call with Mindy Waldron, Department Administrator, Fort Wayne-Allen County Department of Health, April 5, 2022.
- ⁴² Indiana county rejects health grant amid COVID-19 complaints, *WLFJ News*, September 19, 2021, updated January 12, 2022; accessed at https://www.wlfi.com/news/indiana/indiana-county-rejects-health-grant-amid-covid-19-complaints/article_fd3bdffa-27b6-564e-9271-3aec3baf39d1.html.
- ⁴³ Indiana Senate Enrolled Act 223-2018. Available at: <http://iga.in.gov/legislative/2018/bills/senate/223#document-b0603ddf>
- ⁴⁴ Anticipate response from 12 LHDs in Indiana for 2021 survey.
- ⁴⁵ Indiana Public Health System Review. 2020. Available at: <https://fsph.iupui.edu/doc/research-centers/indiana-public-health-system-review-fnl5-web.pdf>
- ⁴⁶ Data Report: Indiana Physician Workforce. (2022). Bowen Center for Health Workforce Research and Policy. Indiana University School of Medicine. Available at: <https://scholarworks.iupui.edu/bitstream/handle/1805/28950/2021%20Physician%20Data%20Report%20Final%2005.19.2022.pdf?sequence=5&isAllowed=y>
- ⁴⁷ Data Report: Indiana Oral Health Workforce. (2020). Bowen Center for Health Workforce Research and Policy. Indiana University School of Medicine. Available at: <https://scholarworks.iupui.edu/bitstream/handle/1805/25123/2020%20ORAL%20HEALTH%20Data%20Report%20-%2012162020.pdf?sequence=1&isAllowed=y>
- ⁴⁸ Data Report: Indiana Registered Nurse Workforce. (2020). Bowen Center for Health Workforce Research and Policy. Indiana University School of Medicine. Available at: <https://scholarworks.iupui.edu/bitstream/handle/1805/22865/2019%20RN%20Data%20Report%20-%20Final%2001062021%20v3.pdf?sequence=8&isAllowed=y>
- ⁴⁹ IDOH Annual LHD Surveys
- ⁵⁰ Leider JP, Harper E, Bharthapudi K, Castrucci BC. Educational Attainment of the Public Health Workforce and Its Implications for Workforce Development. *Journal of Public Health Management and Practice*. 2015;21(S6): S56-S68.
- ⁵¹ Association of State and Territorial Health Officials retrieved from <https://www.astho.org/Profile/#openModal3>
- ⁵² HRSA – HPSA Find List. Available at: <https://data.hrsa.gov/tools/shortage-area/hpsa-find>
- ⁵³ Sellers K, Leider JP, Gould E, Castrucci BC, Beck A, Bogaert K, Coronado F, Shah G, Yeager VA, Beitsch LM., Erwin P.C. The State of the US Governmental Public Health Workforce, 2014-2017. *American Journal of Public Health*. 2019;109(5):674-680. PMID: 30896986
- ⁵⁴ Krasner H and Fried L. Generation Public Health: Fixing the Broken Bridge Between Public Health Education and the Governmental Workforce. *American Journal of Public Health*. 2021;11(8):1413-1417.

-
- ⁵⁵ Castrucci BC, Leider JP, Liss-Levison R, Sellers K. Does Money Matter: Earnings Patterns Among a National Sample of the US State Governmental Public Agency Workforce. *Journal of Public Health Management and Practice*. 2015;21(6 Supp): S69-S79.
- ⁵⁶ Sellers K, Leider JP, Gould E, Castrucci BC, Beck A, Bogaert K, Coronado F, Shah G, Yeager VA, Beitsch LM., Erwin P.C. The State of the US Governmental Public Health Workforce, 2014-2017. *American Journal of Public Health*. 2019;109(5):674-680. PMID: 30896986
- ⁵⁷ Indiana Commission for Higher Education. Available at: <https://www.in.gov/che/>
- ⁵⁸ Information on the National Health Service Corps program can be accessed at: <https://nhsc.hrsa.gov/>
- ⁵⁹ Available on the Bowen portal at <https://bowenportal.org/index.php/governors-health-workforce-council/>
- ⁶⁰ See CEPH accreditation D5: <https://media.ceph.org/documents/2021.Criteria.pdf>
- ⁶¹ CEPH Accreditation F2: <https://media.ceph.org/documents/2021.Criteria.pdf>
- ⁶² Inventory of Indiana Health Workforce Policy & Programming can be found at: <https://bowenportal.org/index.php/governors-health-workforce-council/>
- SOURCE: Functions of the Public Health System <https://courses.lumenlearning.com/atd-clinton-hsm111/chapter/functions-of-the-public-health-system/>
- ⁶⁴ CDC Center for Emergency Preparedness and Response, March 2019.
- ⁶⁵ CDC, Public Health Emergency and Preparedness and Response Capabilities, October 2018; accessed at https://www.in.gov/health/emergency-preparedness/files/CDC_PreparednesResponseCapabilities_October2018_Final_508.pdf.
- ⁶⁶ ASPR, Strategic National Stockpile webpage; accessed at <https://www.phe.gov/about/sns/Pages/default.aspx>.
- ⁶⁷ Centers for Disease Control and Prevention, Injury Prevention and Control (2022, July 21). Leading Causes of Death Visualization Tool – Indiana 2020. <https://wisqars.cdc.gov/data/lcd/home>
- ⁶⁸ Indiana State Trauma Care Committee slide deck, May 20, 2022; accessed at https://www.in.gov/health/trauma-system/files/ISTCC-Meeting-Presentation-May-20-2022_FINAL.pdf.
- ⁶⁹ Senate Enrolled Act 247-2022.
- ⁷⁰ Overall child well-being is derived as a composite index by combining data across: (1) family and community; (2) health; (3) economic well-being; and (4) education. The health domain ranking is based on low-birth-weight babies, children without health insurance, child/teen deaths per 100,000, and children and teens who are overweight or obese.
- ⁷¹ Indiana Youth Institute, 2022 Indiana KIDS COUNT Data Book Executive Summary, 28th Edition of a profile of Hoosier youth; accessed at https://www.iyi.org/wpcontent/uploads/2022/01/IYI_22ExecSummary.pdf

-
- ⁷² Murray NG, Low BJ, Hollis C, Cross AW, Davis SM, Coordinated school health programs and academic achievement: A systematic review of the literature. *J Sch Health* 2007; 77:589-600.
- ⁷³ Active Living Research, Active Education: Growing Evidence on Physical Activity and Academic Performance, accessed at https://activelivingresearch.org/sites/activelivingresearch.org/files/ALR_Brief_ActiveEducation_Jan2015.pdf
- ⁷⁴ 511 IAC 4-1.5-6
- ⁷⁵ IC 20-30-5-7.5
- ⁷⁶ IC 20-26-9-18.5
- ⁷⁷ IC 20-34-3-14 and IC 20-34-3-12
- ⁷⁸ National Association of School Nurses and School-Based Health Alliance, School Nursing & School-Based Health Centers in the United States, Working Together for Student Success; accessed at https://www.sbh4all.org/wp-content/uploads/2021/05/SBHA_JOINT_STATEMENT_FINAL_F.pdf
- ⁷⁹ IU School of Medicine Bowen Center for Health Workforce Research and Policy, Indiana's School- Based Health Workforce, December 2020; accessed at https://scholarworks.iupui.edu/bitstream/handle/1805/24871/SchoolBasedHealth_1.16.21.pdf?sequence=1&isAllowed=y
- ⁸⁰ Wang LY, Vernon-Smiley M, Gapinski MA, Desisto M, Maughan E, Sheetz A. Cost-benefit study of school nursing services. *JAMA Pediatr.* 2014;168(7):642-648; accessed at <https://jamanetwork.com/journals/jamapediatrics/article-abstract/1872779>
- ⁸¹ Pennington N, Delaney E. The number of students sent home by school nurses compared to unlicensed personnel. *J Sch Nurs.* 2008 Oct;24(5):290-7. doi: 10.1177/1059840508322382. PMID: 18941153.
- ⁸² Salmon DA, Moulton LH, Omer SB, Chace LM, Klassen A, Talebian P, Halsey NA. Knowledge, attitudes, and beliefs of school nurses and personnel and associations with nonmedical immunization exemptions. *Pediatrics.* 2004 Jun;113(6): e552-9. doi: 10.1542/peds.113.6.e552. PMID: 15173536.
- ⁸³ IEPs are for children who qualify for special education which describe the services and accommodations made available to meet their educational needs.
- ⁸⁴ 504 plans document accommodations made for children with disabilities to ensure their academic success.
- ⁸⁵ 511 IAC 4-1.5-6
- ⁸⁶ 511 IAC 4-1.5-2
- ⁸⁷ IU School of Medicine Bowen Center for Health Workforce Research and Policy, Indiana's School-Based Health Workforce, December 2020; accessed at https://scholarworks.iupui.edu/bitstream/handle/1805/24871/SchoolBasedHealth_1.16.21.pdf?sequence=1&isAllowed=y

-
- ⁸⁸ Includes services such as providing information on health coverage options; translation for health services; referrals and appointment scheduling; coordinating or attending meetings or trainings on health services; and developing plans and strategies to improve student health service delivery.
- ⁸⁹ Indiana Department of Education SFY 2021 data accessed at https://www.in.gov/doe/files/2021_06-30-SFY21_FINAL-rev.pdf
- ⁹⁰ National Association of School Nurses, retrieved from https://higherlogicdownload.s3.amazonaws.com/NASN/3870c72d-fff9-4ed7-833f-215de278d256/UploadedImages/PDFs/Advocacy/2017_Workforce_Study_Infographic_Funding.pdf
- ⁹¹ Knopf JA, Finnie RK, Peng Y, Hahn RA, Truman BI, Vernon-Smiley Met al. School-based health centers to advance health equity: a Community Guide systematic review. *Am J Prev Med.* 2016;51(1):114–26.
- ⁹² Defined in 511 IAC 4-1.5-1 as services that prevent or alleviate problems that interfere with student learning.
- ⁹³ Bastian KC, Akos P, Domina T, Griffard M. Understanding the Allocation of Student Support Personnel in Public Schools. *AERA Open.* October 2019. doi:10.1177/2332858419890322 <https://journals.sagepub.com/doi/full/10.1177/2332858419890322>
- ⁹⁴ American School Counselor Association, accessed at <https://www.schoolcounselor.org/getmedia/b079d17d-6265-4166-a120-3b1f56077649/School-Counselors-Matter.pdf>
- ⁹⁵ NASW Standards for School Social Work Services, accessed at <https://www.socialworkers.org/LinkClick.aspx?fileticket=1Ze4-9-Os7E%3d&portalid=0>
- ⁹⁶ National Association of School Psychologists, accessed at <https://www.nasponline.org/research-and-policy/policy-priorities/critical-policy-issues/shortage-of-school-psychologists#:~:text=NASP%20recommends%20a%20ratio%20of,a%20ratio%20of%201%3A5000>
- ⁹⁷ American School Counselor Association, accessed at <https://www.schoolcounselor.org/getmedia/238f136e-ec52-4bf2-94b6-f24c39447022/Ratios-20-21-Alpha.pdf>