



Indiana
Department
of
Health

Public Health Data Collection and Utilization

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Chief Medical Officer

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Department of Health



Our Mission

To promote, protect, and improve the health and safety of all Hoosiers.



Our Vision

Every Hoosier reaches their optimal health regardless of where they live, learn, work, or play.



Our Values

Health Equity

We place equity at the center of our work to ensure every Hoosier, regardless of individual characteristics historically linked to discrimination or exclusion, has access to social and physical supports needed to promote health from birth through end of life.

Communication

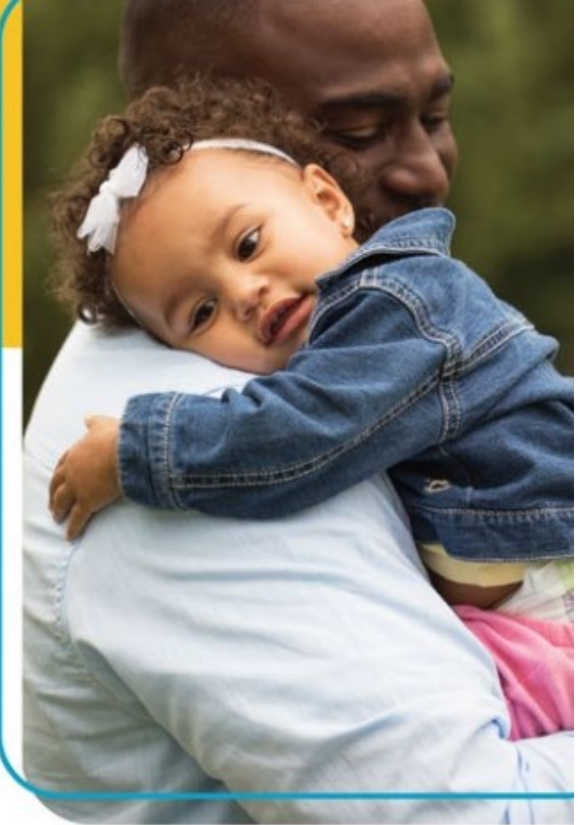
We provide stakeholders and the public accurate and up-to-date scientific data and provide education and resources regarding utilization of evidence-informed practices in a timely manner.

Innovation

We continue to learn, research evidence-informed practices, advance our services, and be open to new methods, ideas, and products that help build and expand upon the services we provide.

Integrity

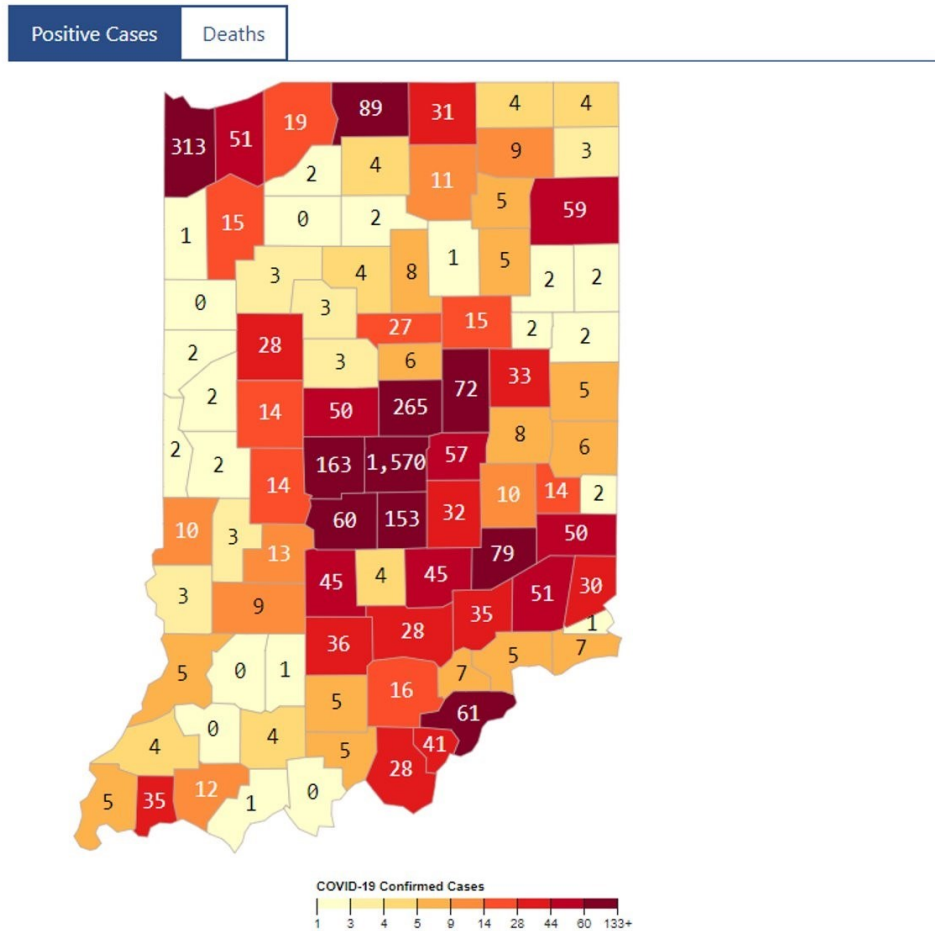
We are honest, trustworthy, and transparent. We uphold our standards and do the right things to achieve the best public health and safety outcomes.





COVID-19 Data Story

IDOH's public reporting of COVID-related data has evolved and expanded since spring 2020



Total Positive Cases

3,953

Positive tests reflect results from ISDH and results submitted by private laboratories

Total Deaths

116

Total Tested

19,800

Number of tests is provisional and reflects only those reported to ISDH. Numbers should not be characterized as a comprehensive total.

Spring 2020 IDOH COVID-19 Dashboard

Surveillance data are crucially important to inform policy changes, guide new program interventions, sharpen public communications, and help agencies assess research investments.

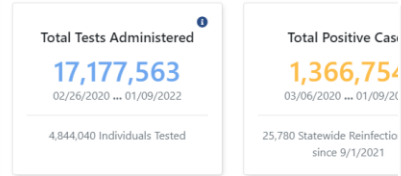
—CDC Improving Surveillance Report

In addition to cases, deaths, and testing, we now track/report hospitalizations, vaccinations, breakthrough cases, and more

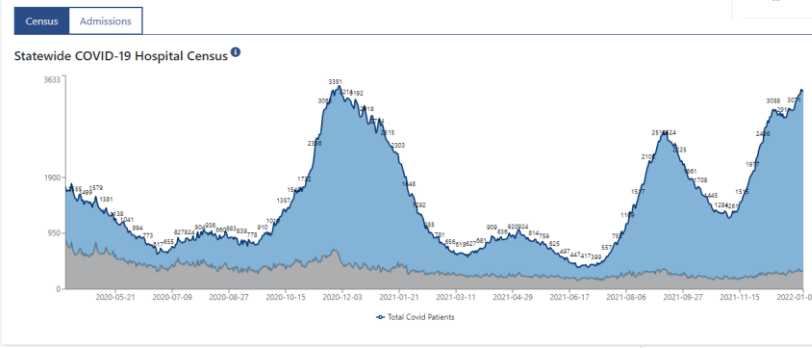
Newly Reported Confirmed COVID-19 Counts



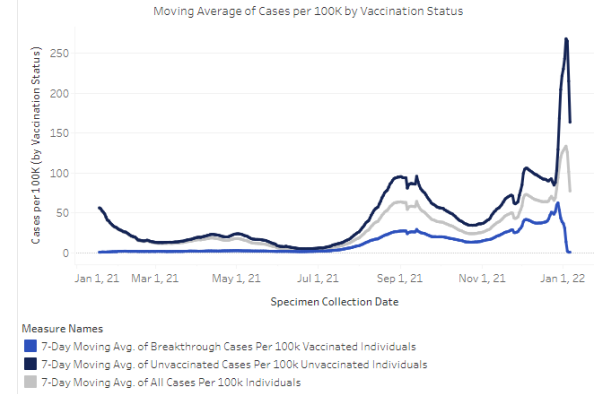
Total Confirmed COVID-19 Counts



Hospitalizations

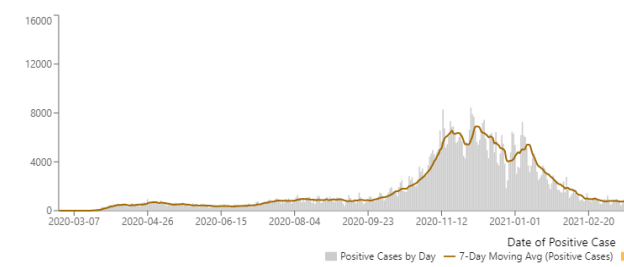


Demographic Distributions



Positive Cases

Statewide Positive Cases by Day



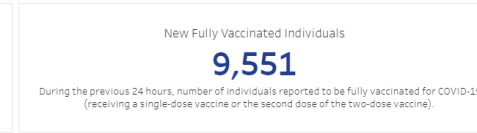
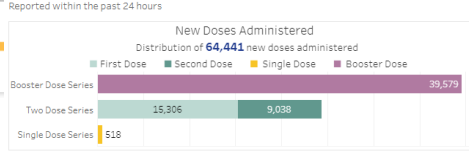
Variants



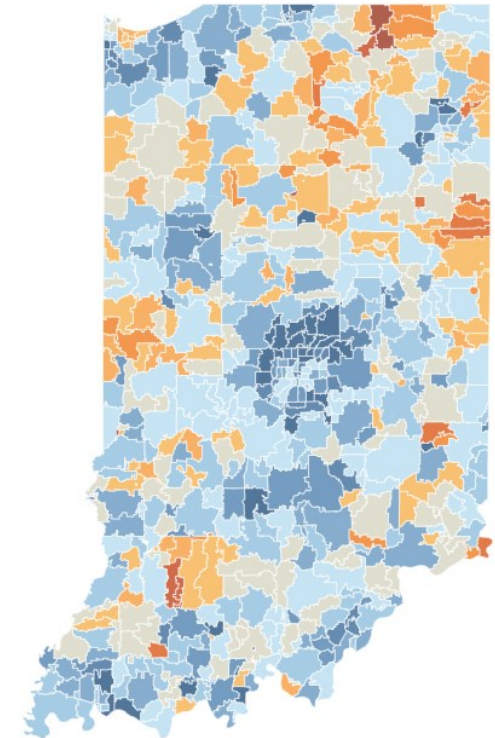
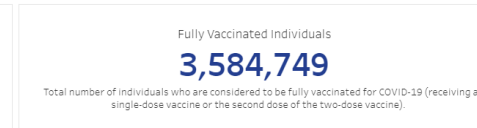
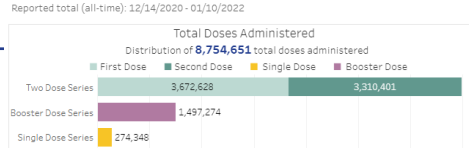
Indiana COVID-19 Vaccination Dashboard

Updated Monday through Friday by 5:00 PM EST. Data current as of 01/10/2022 at 5:00 AM EST.

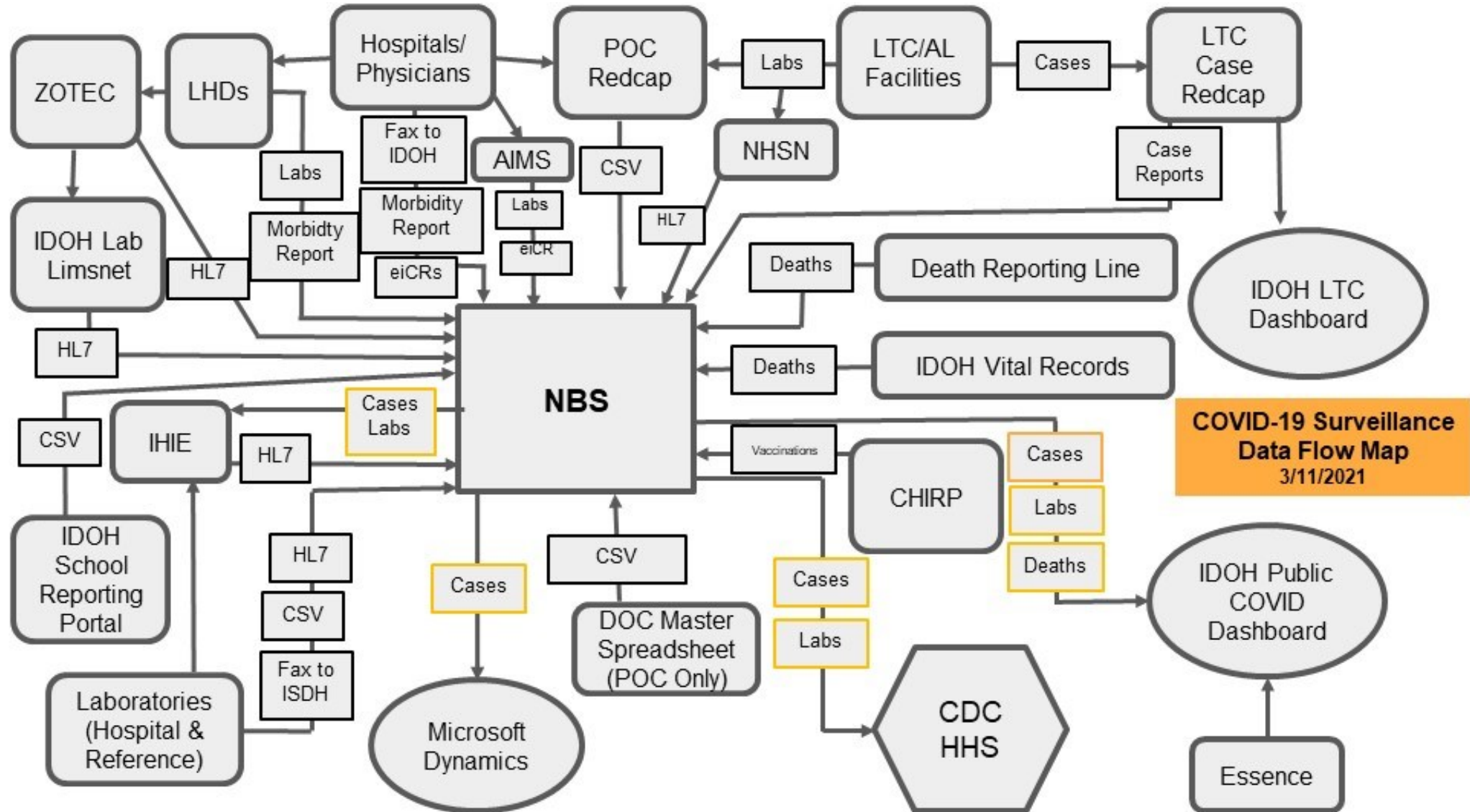
Newly Reported Vaccinations



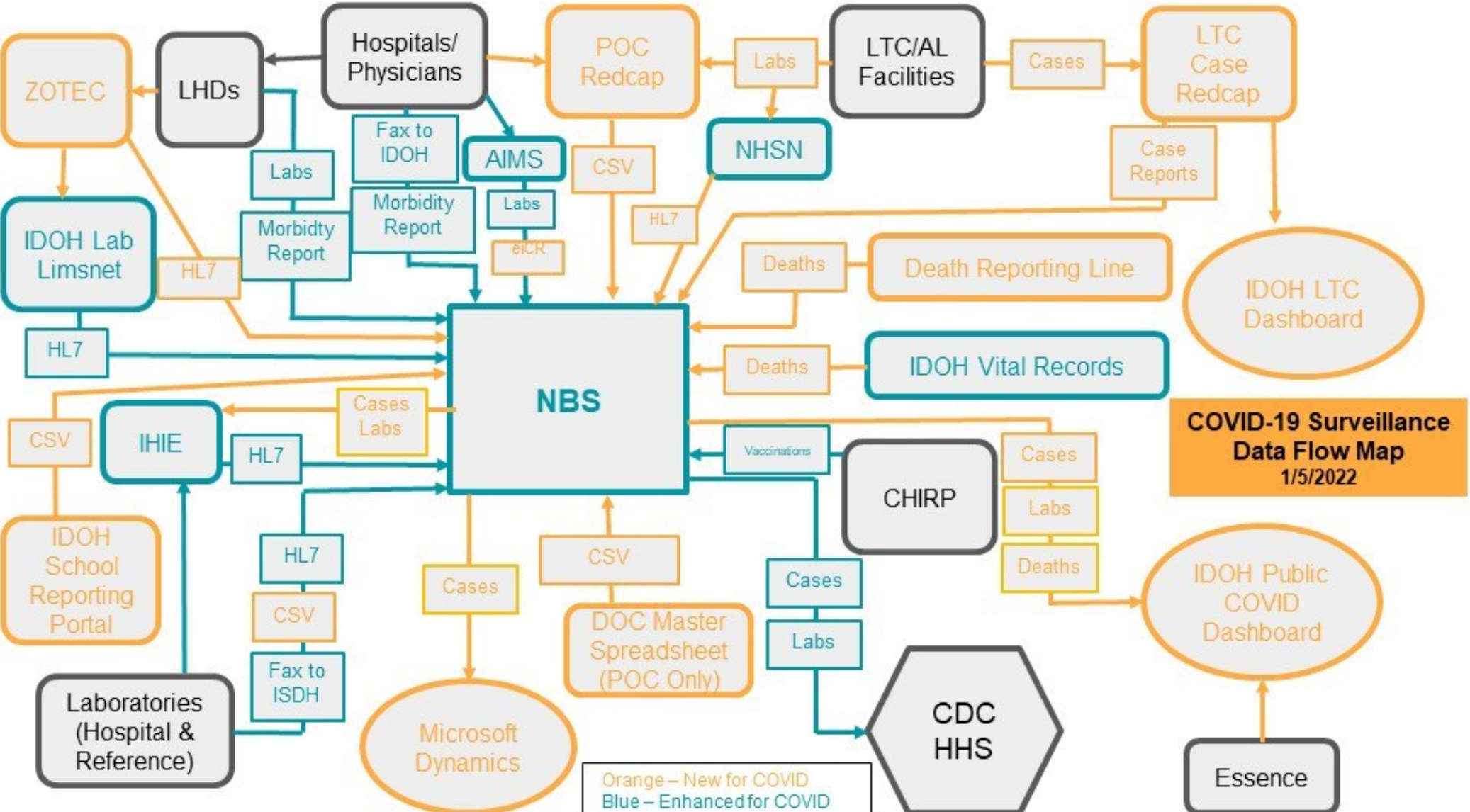
Total Vaccinations



Data required to produce COVID reporting involves numerous health system stakeholders



Covid-19 reporting required establishment new and enhanced data capabilities and connections





Connecting Health Care Data

Clinical Data Use

- Electronic medical records
- CareWeb
- INSPECT
- Do not have consistent access to outpatient clinicians, long term care facilities, up-to-date medications



Data is the backbone of public health

Program Development & Reporting

INDIANA STD PREVENTION

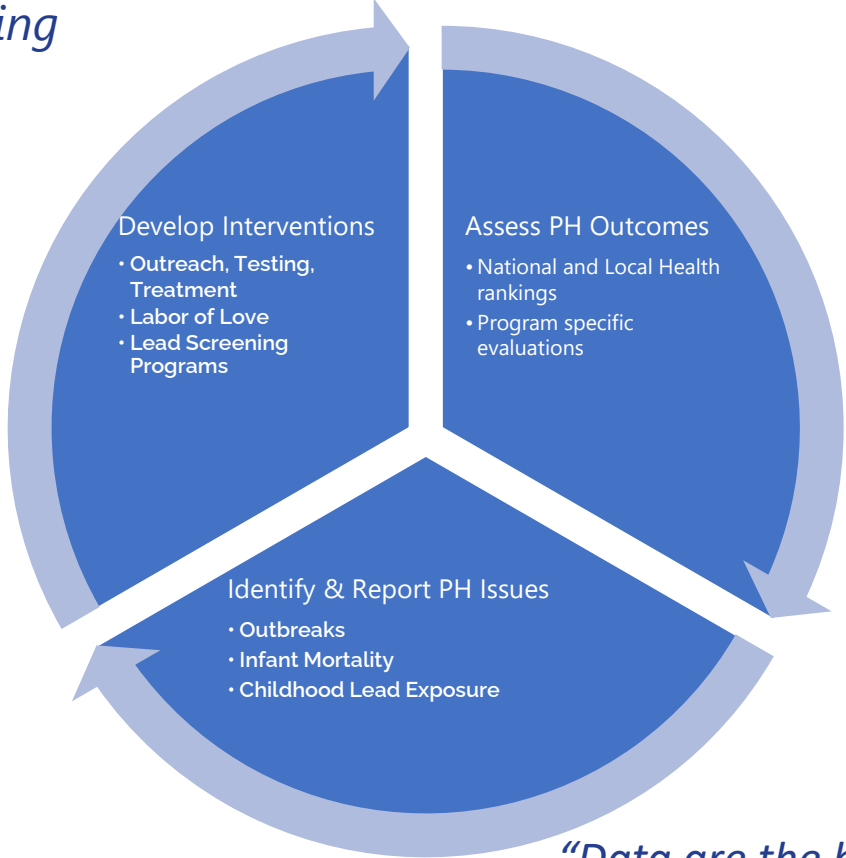
EACH DAY IN 2019, INDIANA HAD **133** POSITIVE TESTS FOR STDS

STDS TESTS INCLUDED: CHLAMYDIA, GONORRHEA & SYPHILIS

IN 2019
 Health care providers and STD program staff prevented **14,834** cases of chlamydia due to their actions in making sure those infected got treated and their sex partners were treated.

Health care providers and STD program staff prevented **327** cases of syphilis due to their actions in making sure those infected got treated and their sex partners were treated.

\$25.6 million in costs were averted due to actions of health care providers and the STD program.



Health Rankings



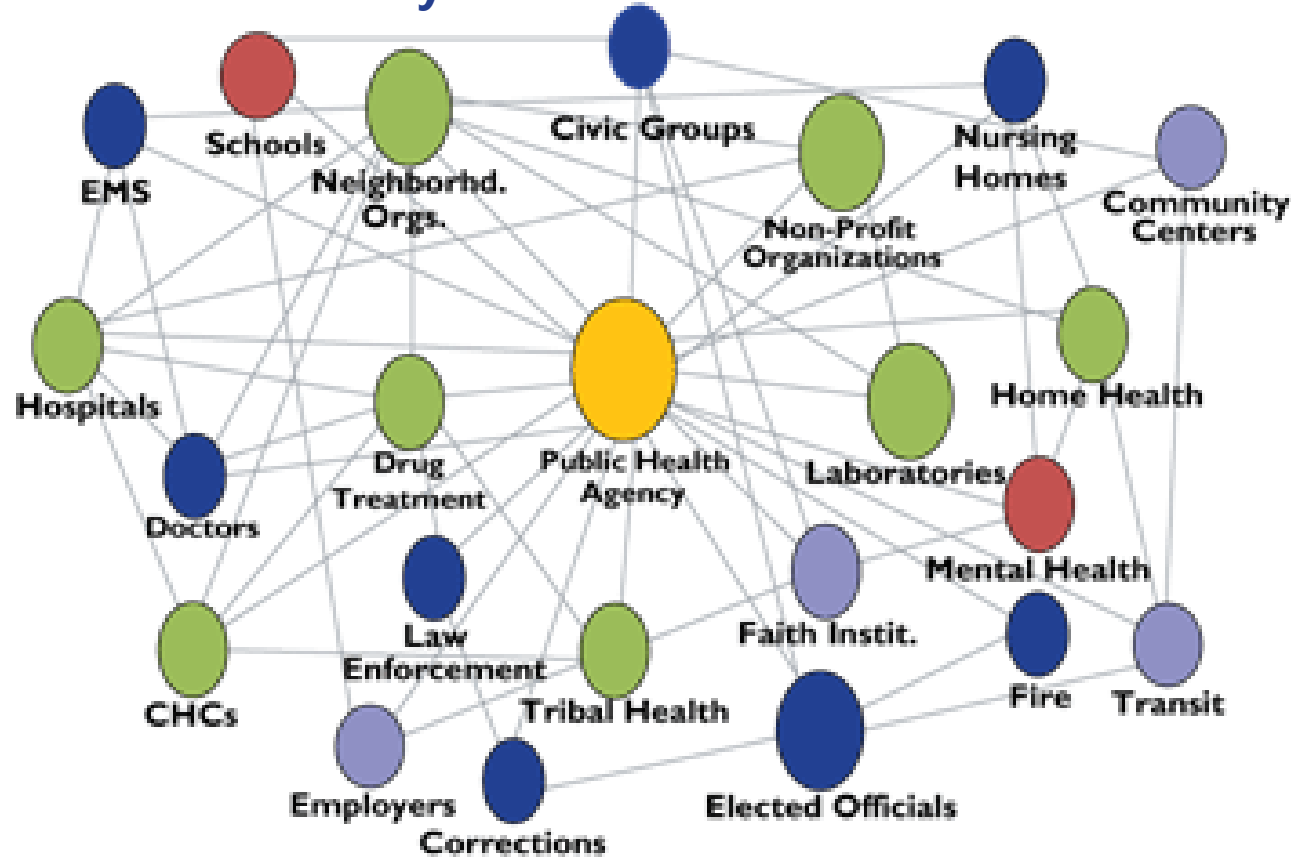
“Data are the building blocks of population health narratives – stories that emerge from data—that help the nation contextualize what drives or impedes health.”¹



¹ Charting a Course for an Equity-centered Data system: Recommendations from the National Commission to Transform Public Health Data Systems, pg. 7

Public Health data encompasses provider and community stakeholders

The Public Health System- 80-90% of the determinants of health are not related to healthcare.



“It's impossible to fix what isn't measured. We have an opportunity now to create data infrastructure that is centered on equity and that creates fair and just opportunities for everyone.”¹

Dr Richard. E Besser

Current systems environment prohibits ability to fully leverage public health data

- Public Health data and systems are historically siloed by disease condition, federal funding source, reporting requirements, or other factors.
- Systematically IDOH Consists of 100 plus applications – 50% of these systems contain crucial public health data.
- There is no centralized data environment to share data or as system or record/source of truth.

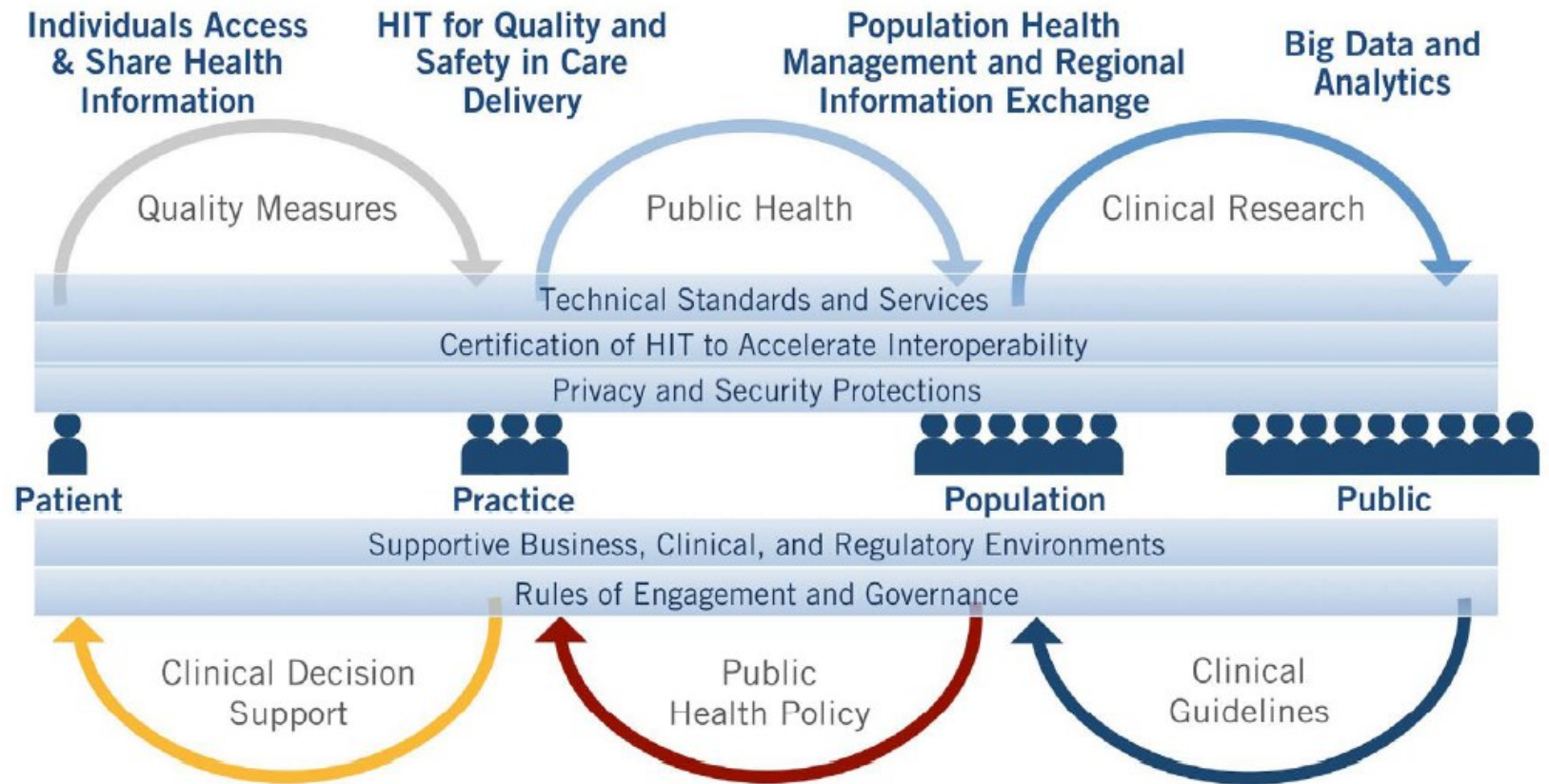
Core Pillars of Public Health Data

- Case Reporting - > eCR electronic reports directly from electronic health records
- Lab Reporting -> ELR electronic reports directly from laboratory management systems
- Syndromic Surveillance
- Electronic Vital Records -> National System birth and death data
- National Notifiable Disease Surveillance System -> 120 diseases & conditions under surveillance

Public Health data links clinical and population data in the health IT ecosystem

The Challenge:

Make Public Health the bridge between clinical service delivery and population research and health improvement initiatives.



States have different levels of involvement in HIEs

Governance

- State Operated
- Public-private partnership
- Independent of State Affiliation*

Funding

- Health system and payer funded tax
- Grants
- Transactional funding, subscription services and participant fees*
- Receives federal Medicaid match dollars
- State general fund

Services

- Clinical Portal*
- Master Patient Index**
- Alerts and notifications*
- Direct Secure Messaging
- Image sharing
- Closed loop referrals
- PDMP
- Etc.

Stared items (*) apply to the Indiana Health Information Exchange (IHIE) (**) indicate where a limited offering is available.

Indiana Health Information Exchange supports clinical and Public Health data needs

IN Overview

- No state designated HIE
- No state funding for HIE, no Medicaid matching dollars applied
- HIE is funded participants

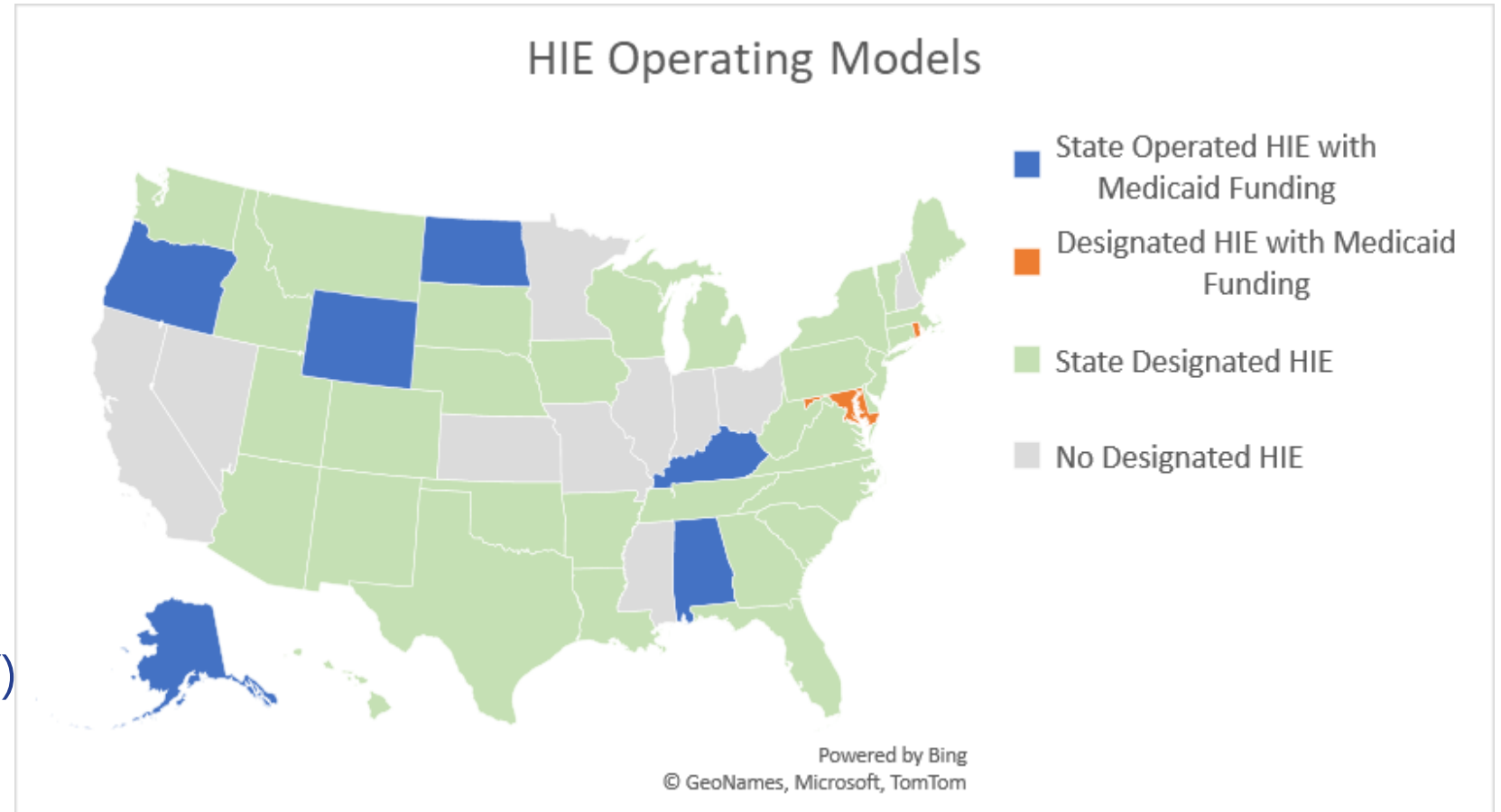


Indiana Health Information Exchange

- The oldest HIE in the US
- IHIE's Network for Patient Care is one of the nation's largest clinical data repository, with data on more than 17 million patients.
- Participation from more than 120 hospitals, 18,000 practices, and 50,000 providers.
- Nationally IN hospitals are the most likely to be able to exchange PH data electronically

Federal funding via Medicaid can be used for HIEs

- HIEs receiving Medicaid funding receive 50-90% matching federal funds.
- Options for state Medicaid matching dollars
 - State general fund
 - Insurer assessment (KY)
 - Hospital assessment (MD)



HIEs are leveraged to promote data connectivity and health initiatives

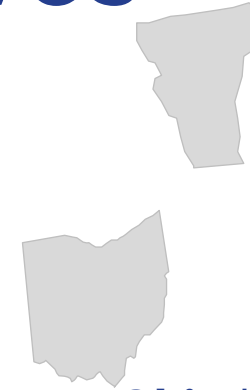


The **Kentucky** Health Information Exchange (KHIE):

- State operated with a '22 budget of \$24M
- All data is free to participants currently but may implement charges
- Medicaid funded (~75% federal dollars)
- Runs federally funded incentive program to connect providers
- Implemented an Image sharing option expected to generate \$17M in savings from avoided duplication over 2-years



Michigan leverages their state designated health information exchange to pay for performance. All payers contribute to the performance pool, but only HIE participants may receive additional value-based payments. This incentivizes HIE participation and awards high quality care.



Vermont has a state IT fund supported by a health claims tax to support the state designed HIE and other health IT initiatives.

Ohio has no state designated HIE. The Health Collaborative (THC) operates in the tri-state area (OH,IN,KY) and serves as the regional disaster responder. THC coordinates health systems and stakeholders, including county health commissioners, from 3 states, and develops timely deep dive dashboarding and analytics. The small geographic region allows for a great depth of services.



Local Health Departments

Local Health Departments (LHDs) have data collection responsibilities

94 LHDs in Indiana

- 91 county-based (including one shared by Fountain and Warren counties)
- 3 city health departments (East Chicago, Gary, and Fishers)

#of LHDs per Population Size Served

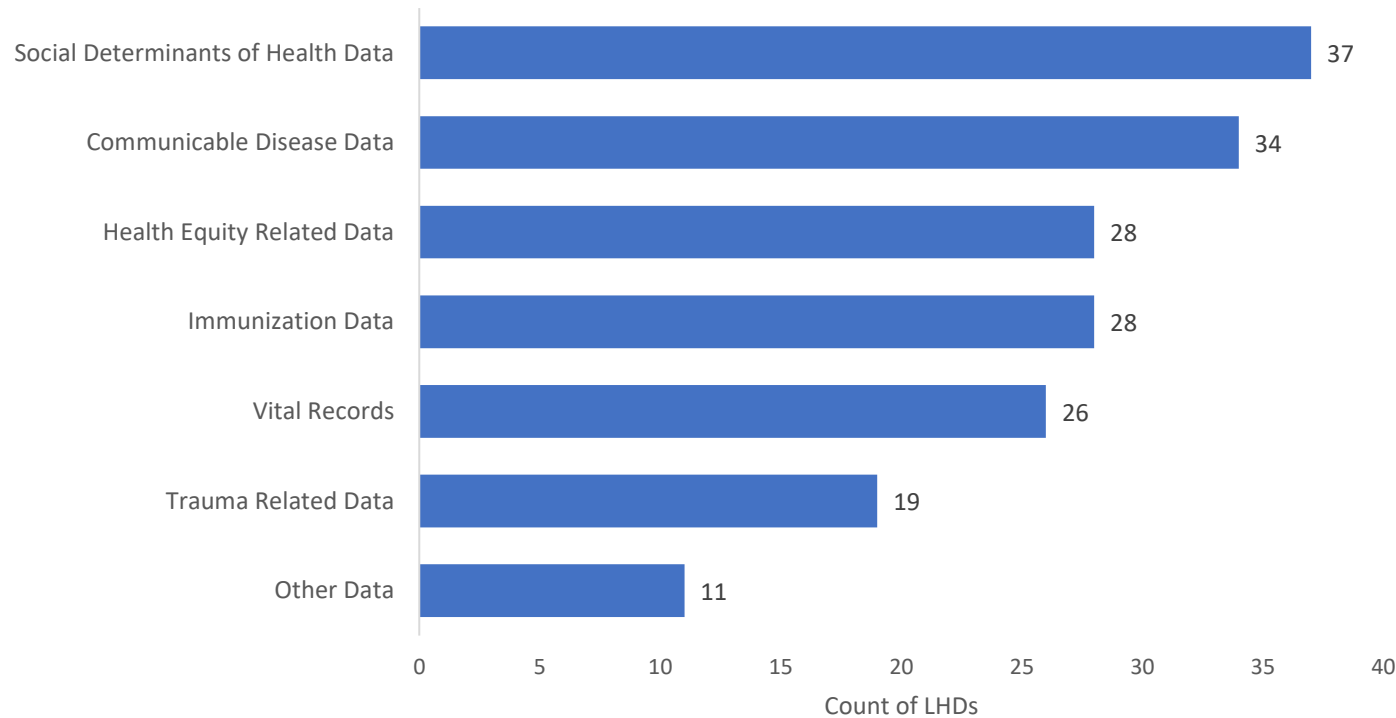
<25K	25K-50K	50K-100K	100K-250K	>250K
30	35	12	12	5

69% of LHDs serve less than 50k Hoosiers

- LHDs are responsible for local PH data reporting
- LHD data reporting is county specific and may miss regional impacts
- LHDs may not have the ability (resources) to analyze data or provide local dashboards to support health action and policy decisions

LHDs do not have access to all needed data

Survey Question: Which of the below data categories would your LHD find useful and would like to access/obtain?



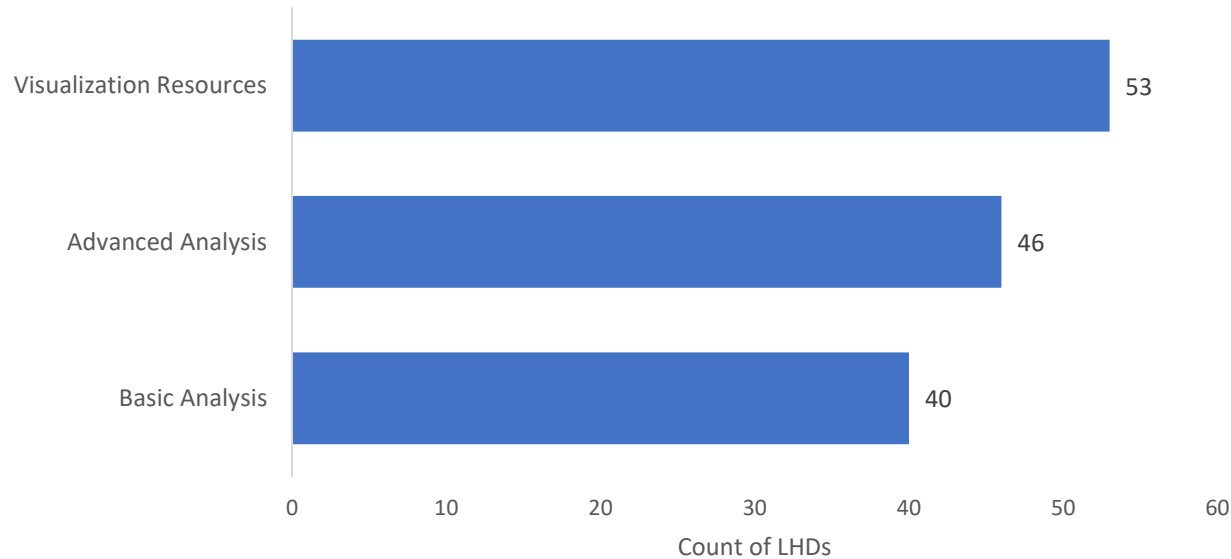
Basically -- we'd like easy access to statewide and local data -- as we have tangible and real-time data needs, requests, and decision-making reliant on timely obtained (not requested and waited on) data. - LHD Respondent

We received access to IHIE to look up patients for case reviews, but could use additional data from it on a regular basis. - LHD Respondent

In a December 2021 survey, 46 of 85 LHDs (54%) responding need additional data access. 37 LHDs (44%) need access to 3 or more sources. SDOH data and communicable disease data were the data sources with the highest needs.

LHDs need support performing data analysis

Survey Question: Does your LHD need assistance in performing any of the following?



I do not know what our training needs are, because I do not know what the possibilities are. Our current level of staffing does not possess the resources to use this right now.. – LHD Respondent

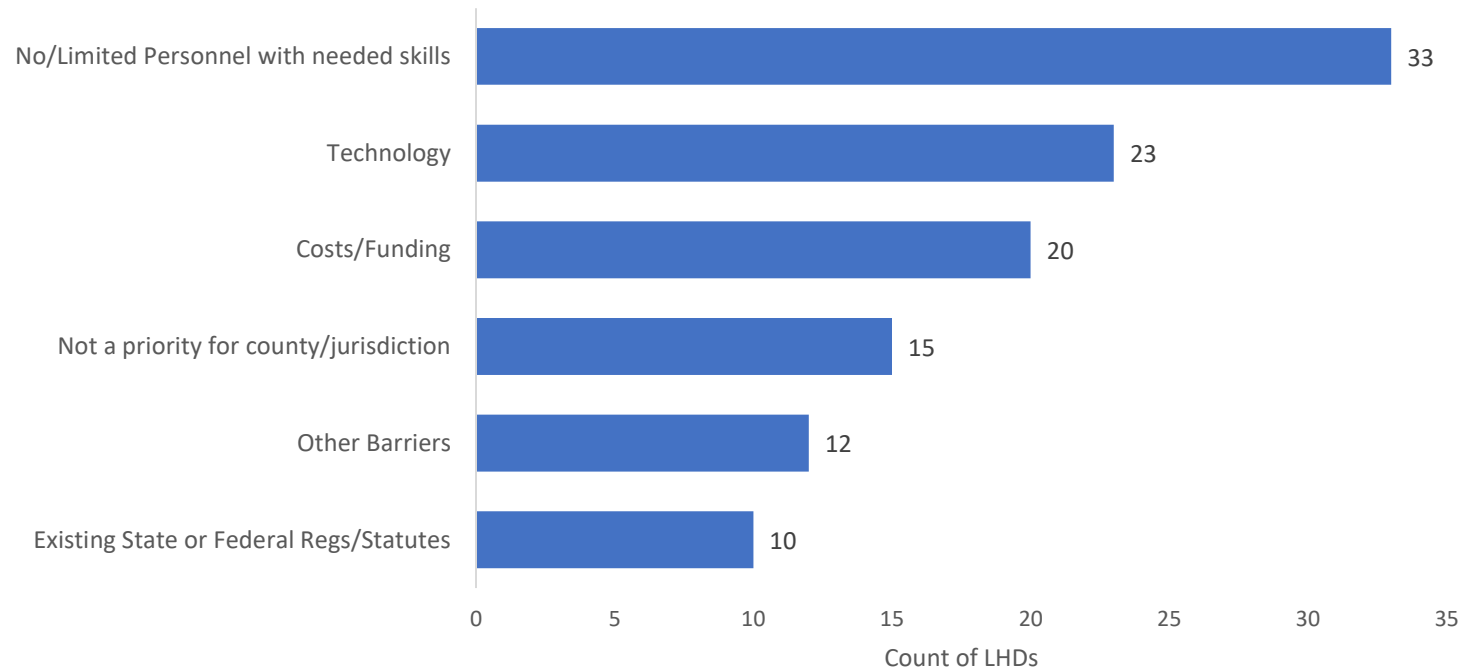
We would like to be able to convert the data shown for our county in a meaningful way for our community. - LHD Respondent

This is a very small health dept, I have not had time to do any analysis/visuals. I would love some training but at this point there is just no time. – LHD Respondent

In a December 2021 survey, 57 of 74 LHDs (77%) responding reported needing assistance performing analysis. 31 LHDs (34%) reporting needing assistance with all types of analysis. Additionally, 51 of 73 LHDs (70%) report interest in data analysis training. 60 LHDs (82%) have access to a secure data environment.

LHDs experience barriers to accessing data

Survey Question: Are there existing barriers to accessing or obtaining the data you have identified as useful for you LHD?



...(It) would be very helpful to have access via one location to larger data set rather than having to request by department via IDOH. ...Need centralization of data availability, and access for local people with some easy canned reports as well as ability to pull out and analyze.-LHD Respondent

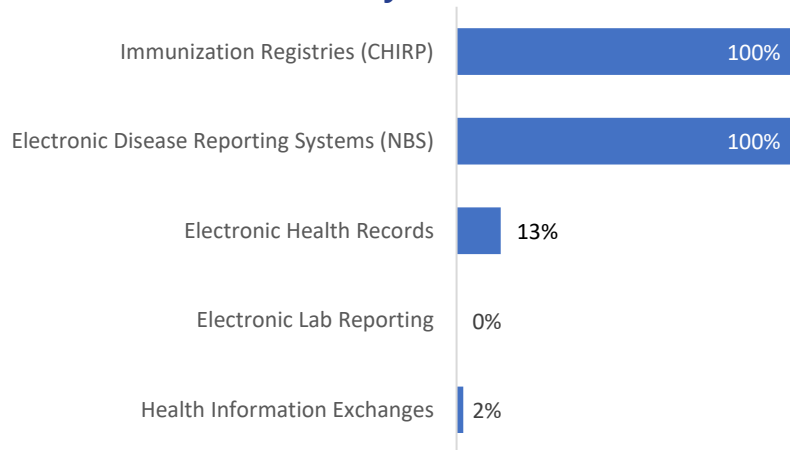
Access, adequate funding to hire qualified candidates. Due to low salaries and lack of funding for additional positions No access to review as needed must put in data request...modeling data would also be helpful. -LHD Respondent

In a December 2021 survey, 45 of 85 LHDs (53%) responding reported barriers to data access. 19 LHDs (22%) report 3 or more barriers. Lack of personnel with needed skills and technology were the most common barriers.

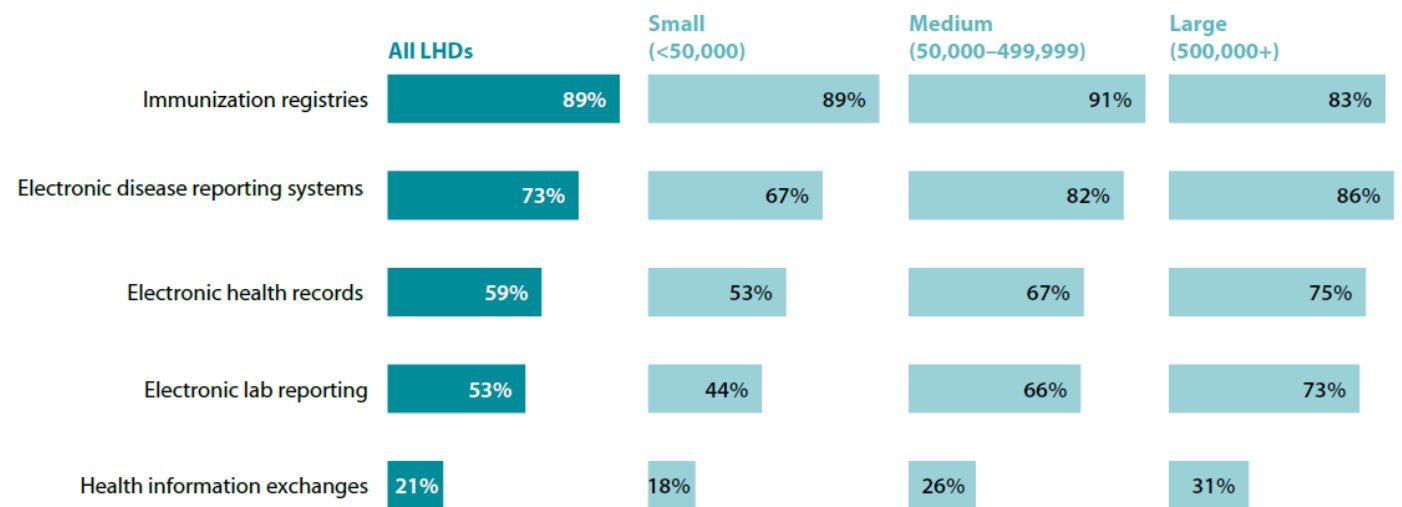
Indiana LHDs do not have connections to all data systems supporting Public Health

Nationally LHDs are likely to implement immunization registries and electronic disease reporting systems and less likely to have connections to health information exchanges or electronic lab reporting.

Indiana LHD System Utilization 2021



National LHD System Utilization 2019



n=400-401

Indiana LHD system utilization based on January '22 survey with 54 LHD respondents. Marion County is only LHD with electronic lab reporting. Only 2 LHDs, Marion County and St. Joe are currently connected to IHIE.





IDOH Digital Transformation

IDOH Initiates Digital Transformation – 2020

Chief Data Officer hired and establishment of Office of Data & Analytics

Discovery and understanding our current state

- Laboratory and public health application
- IT Application portfolio and application health (~105 applications/systems)
- IT/Data project portfolio
- Security assessments (LHDs, IOT, IDOH)

Establishment of External Advisory Committee

- Representatives from organizations and associations throughout the state

Data and Technology Roadmap (strategy document)

IT and Data Governance

Centralized Data & Analytics Platform

Improved/Streamlined Access To Data

Prioritized Updates/Upgrades to Applications/Systems

Enhanced Security



Future of Public Health Data Collection and Utilization

External Advisory Committee provides PH recommendations on HIEs

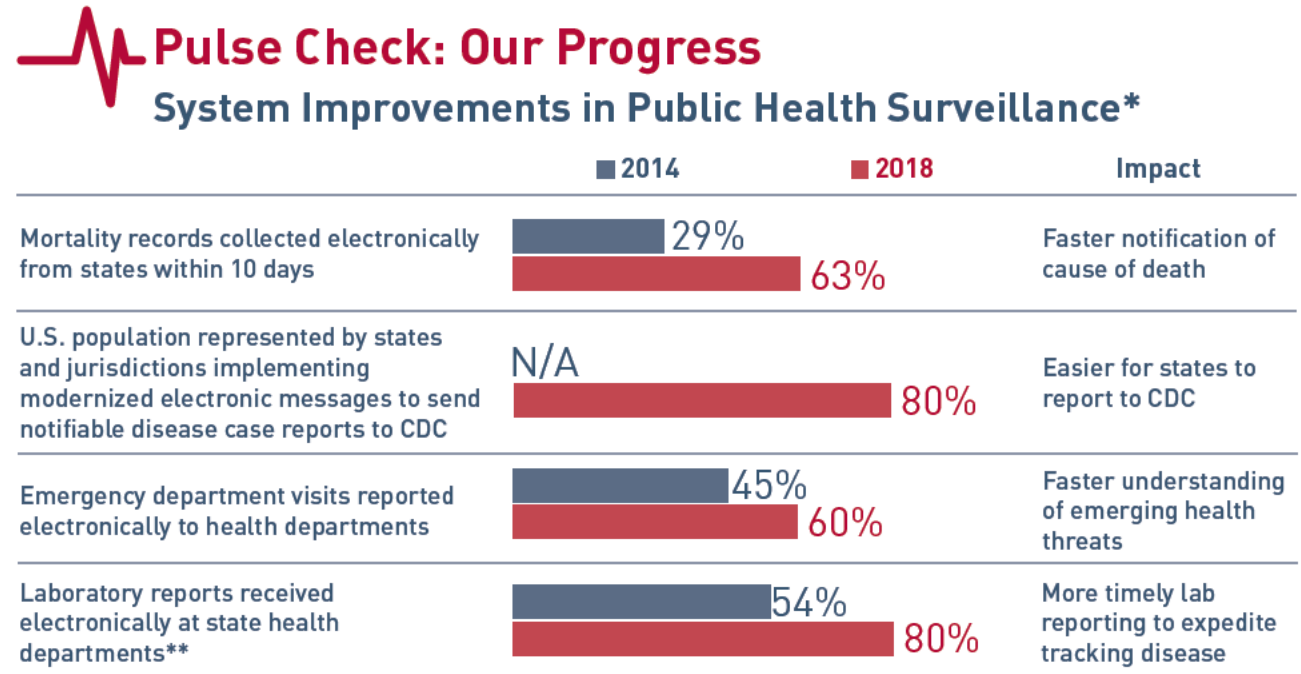
Request	Reasoning	Examples
<p>Expand the HIE infrastructure to include:</p> <ul style="list-style-type: none">• General practitioners• Outpatient clinicians• Long Term Care Facilities• Critical Access Hospitals• Behavioral Health Clinicians*• Prescriptions	<ul style="list-style-type: none">• Rapid access to basic essential information such as vitals, BMI, race and ethnicity, SDOH, discharge summaries, and medical administration records to assist with efficient, accurate, cost-effective medical decision making• Supports value-based payment arrangements• Can prioritize connections to be in line with state goals	<p>Kentucky improved the number of small and independent providers connected to the HIE by promoting and managing federal incentive dollars for connecting and by requiring Medicaid MCOs to have their providers connected to the HIE.</p> <p>Ohio (Clinisync) has post-acute care (long term care facilities) connected to their HIE. HIE uses web-based interfaces to connect with the systems used by these facilities. Most facilities receive data from the HIE and the process to submit data is underway.</p>

External Advisory Committee provides PH data recommendations on IDOH data role

Request	Reasoning	Examples
<p>IDOH leads utilization of meta data to develop actionable reports with a goal to develop predictive analytic models</p>	<ul style="list-style-type: none">• IDOH posted annual reports do not provide timely data for action by the health care system• IDOH has no way to push notifications to providers of critical health issues• No ability for systems to analyze if lab results are a part of a trend due to lack of access to reportable PH data from other systems• Noted comments from external advisory committee that this lack of data transparency is contributing to the STD crisis in Indiana and the lack of adequate response to curbing that epidemic.• Predictive analytics allows recognition of signal prior to an outbreak	<p>Docs for Docs implementation in Marion County- Marion County utilizes IHIE's DOCS4DOCS application to send out messages to physicians when they want to alert them to a timely outbreak in a condition like Gonorrhea, Influenza, etc.</p> <p>Influenza, trauma care, infant mortality- Lead reporting at state, regional and local level to prioritize, focus and organize efforts</p>

Systemwide the trend is towards improved data connections

- American Rescue Plan (June 2021) included \$80M to strengthen Public Health IT
- Washington state is developing an enterprise system for public health to consolidate functionality currently held across 358 applications and 50 systems.
- State based and regional HIEs are developing coordination and data sharing arrangements to improve data availability across state lines



There is national focus on improving PH Data

Centers for Disease Control's Data Modernization Initiative \$1B+ to:

"...move from siloed and brittle public health data systems to connected, resilient, adaptable, and sustainable 'response-ready' systems that can help us solve problems before they happen and reduce the harm caused by the problems that do happen."

#	Priorities of the CDC Data Modernization Initiative
1	Build the Right Foundation: Strengthen and Unify Critical Infrastructure for a Response-Ready Public Health Ecosystem
2	Accelerate Data into Action to Improve Decision-Making and Protect Health
3	Develop a state-of-the-art workforce
4	Support and extend partnerships
5	Manage change and governance to support new ways of thinking and working

Considerations and recommendations for PH data

- Continue IDOH Digital Transformation and development of statewide Data and Technology Roadmap for Public Health
- Formalize partnership and invest in IHIE
- Formalize partnerships with state Public Health schools and research organizations
- Invest in Local Health Departments data access and utilization

Thanks to the following for participation in GPHC Data Activities

External Data Advisory Group- Indiana CTSI, Richard M. Fairbanks School of Public Health at IUPUI (FSPH), Regenstrief Institute, Indiana Health Information Exchange (IHIE), Probari, Inc., BioCrossroads, Indiana Hospital Association (IHA), Indiana Rural Hospital Association (IRHA), Indiana Minority Health Coalition (IMHC), Indiana State Medical Association (ISMA), Indiana Health Care Association (IHCA), Clark County Health Department (CCHD), Marion County Public Health Department (MCPHD), St. Joseph County Department of Health (SJCDH), Deaconess Health System, Indiana University Health (IUH), Parkview Health, HealthLinc Federally Qualified Health Center (FQHC), Purdue College of Pharmacy, Ascension

Local Health Departments

Family and Social Services Administration

External HIEs The Ohio Information Partnership & CliniSync, The Health Collaborative, Kentucky Health Information Exchange