



BioCrossroads®

BOOK OF DATA AND ORGANIZATIONS

A census of major health and health related data, capabilities, and talent in Indiana



PROLOGUE

The use of data in innovative ways is driving and transforming healthcare and life sciences more than ever. In healthcare, advanced analytics are improving clinical support, value-based care, population health, and management of at-risk populations. In life sciences, big data and advanced analytics are transforming clinical trials, precision health, diagnostics, and the drug development process, among a myriad of other areas. The availability of health and health related data assets is foundational to this advancement in health information technology (HIT).

Indiana's history of leadership in HIT spans more than 50 years. Many milestones and unique initiatives underscore this leadership, including:

- In the 1960's, Indiana entrepreneur Sam Regenstrief invented the front-loading dishwasher, and then became the first to install digital controls on these appliances. Regenstrief reasoned that the use of digital information could drive even more stunning advances in healthcare to improve care and reduce cost. Accordingly, in 1969, the Regenstrief Institute was established by Sam and Myrtie Regenstrief to improve quality of care, increase efficiency of healthcare delivery, prevent medical errors, and enhance patient safety.
- In 1994, the Indiana Network for Patient Care (INPC), was established by the Regenstrief Institute to exchange health information. In 2004, five premier and highly competitive primary and specialty care health systems in Central Indiana expanded the INPC to improve communication between the systems and facilitate the delivery of better healthcare. In cooperation with Regenstrief and through the generous participation of leading philanthropic organizations, the Indiana Health Information Exchange (IHIE) was formed to manage the growing INPC. The INPC today is the nation's largest interorganizational clinical data repository.
- In 2017, the State of Indiana passed House Bill 1470 to establish the Management Performance Hub (MPH), the role of the Chief Data Officer, and formally codify the open sharing of information between state agencies, including public health data and statistics. Also known as the Open Data Bill, it formalized data-driven decision making to drive informed policy decisions as well as improve services and programs. This bill also tasked the MPH to reduce the technology and legal barriers for "unlocking" state data and sharing with community partners to improve outcomes, including public health outcomes.

Based on the data resources available within industry, government, health systems, academia, and digital health startups, Indiana has a potentially unique opportunity to anchor the state as the crossroads of data/analytics and healthcare/life sciences. However, the health data community must work together to ensure awareness of the data, talent, and technology resources available and build where there are gaps.

The COVID-19 pandemic created a unique opportunity to demonstrate the value of the health data community working together. From the start of this pandemic, a broad contingent of professionals across government, health systems, university, life sciences industry, and non-profit sectors came together to form the Indiana Pandemic Information Collaborative (IPIC). IPIC has allowed the health data organizations the ability to maximize the impact of their collective efforts and to better inform key leaders about the health of our shared community. Public facing

dashboards, predictive models for the state and hospital systems, accessibility of data for non-profit leaders, improved coordination around national collaborations, and connectivity to novel solutions from the for-profit sector have all been part of the platform. IPIC's goal is to work together to share data, information, and knowledge to beat COVID-19 and keep Indiana healthy and safe.

IPIC is one example of the community working together to tackle a major healthcare challenge, but there are other initiatives working on diabetes, Alzheimer's, and more. Still, there may be additional opportunities to extend this kind of collaboration to other disease states such as kidney disease and neurological disorders. BioCrossroads developed the Book of Data and Organizations based on this opportunity and its role as convener, since it does not directly own or analyze data.

There are numerous audiences for this resource, each of which will likely utilize it in a slightly different way. A few examples include:

- Health and health-related data organizations: to improve partnerships based on a heightened awareness of each other's assets and capabilities
- Community Based Organizations (i.e., community nonprofits): to improve coalition building (e.g., Monon Collaborative)
- Academic scientists: to improve awareness of data assets that can improve disease understanding, process improvements, or assessing new technologies and methods
- Industry partners: to better understand who has what data, what the data is used for, how to access the data, and where the talent and technology capabilities exists to analyze the data

Ideally, this resource reduces the need to seek health data assets elsewhere, establish more ideal partnerships locally, and attract outside organizations to collaborate with Indiana based organizations. Improved coordination across the health-data intersection can improve recruiting and retention, leverage investments, and drive economic growth for the state. The key to maximizing value is improving intentionality with collaborations, executing cross-organizational projects where partners can improve or accelerate efforts, and building in the "grey space", adjacent areas where the collective community lacks capacity. This document is one resource to support this opportunity.

ABOUT BIOCROSSROADS

BioCrossroads advances Indiana's life sciences industry by connecting with corporate, academic, and philanthropic partners; facilitating investments in promising startups and building new enterprises; and educating through conferences, reports and market development knowledge. By collaborating with Indiana's research institutions, global companies, philanthropic organizations, and government to advance growth and innovation, we make connections for all of Indiana's life sciences community and work to accelerate its success. We are promoting and growing this critical sector for both the health of patients around the world as well as the economic health of Indiana.

EXECUTIVE SUMMARY

There are tremendous data, talent, and technology resources available within Indiana's industry, government, health systems, academia, and digital health startups, giving Indiana a unique opportunity to innovate and collaborate together for better health outcomes and life sciences research.

This *Book of Data and Organizations* has been created to chronicle the assets Indiana has at the health-data intersection to help improve the coordination of these organizations and those that work with them. This resource is not an assessment, but a directory for some of our resources. There are extensive activities occurring here in Indiana that should be highlighted and promoted so that valuable relationships can be forged, and partnerships can be intentional.

This draft includes snapshots of organizations who control data assets – data sets, data talent, and/or data technology – as well as cross-organizational initiatives. It also includes how these assets can be accessed. The organization profiles include:

- Who has what data? How can this data be accessed?
- Where does the data analysis talent reside?
- What data technologies and capabilities exist?
- What are the key projects currently in process?
- What are the future projects and opportunities for engagement?

This document will continue to expand both in number of organizations represented as well as depth of information for each organization. It will also grow to describe additional cross-organizational initiatives where partnerships are critical to success. This document will be fully refreshed annually, with additional organizations and initiatives added on a rolling basis. The most recent version is available at www.biocrossroads.com. If you are interested in having your organization or initiative included, please contact Darshan Shah at dshah@biocrossroads.com.

ORGANIZATION PROFILES

These organizations manage numerous data assets including clinical, lab, and pharmacy as well as social determinant data, demonstrating the breadth and depth of data assets available. These organizations are listed alphabetically within four groupings: Government, Nonprofit/Academia, For-profit, and Hospital System.



Government

Family and Social Services Administration (FSSA) – [Full profile on page 14](#)

- Agency within the State of Indiana which manages healthcare and social services programs including Medicaid and SNAP. Includes a dedicated Data & Analytics team to ensure secure availability of high-quality data to enable data-informed decision making. Data includes Medicaid claims, enrollment, provider data, and recently added Indiana 211.

Management Performance Hub (MPH) – [Full profile on page 17](#)

- Agency within the State of Indiana codified into law in July 2017. Supports agencies within state government with data and analytics solutions. Also, “unlocks” state agency data to make it available to community entities to drive value. MPH reduces the technology and legal barriers to share state agency data within state government, and externally with community partners.



Nonprofit/Academia

Datalys Center – [Full profile on page 19](#)

- Independent, non-profit organization that collects and translates sport injury and treatment data and specializes in epidemiological research in sport and other physically active populations. Primary programs are with the NCAA, NAIA, and high schools as well as through concussion assessment, research, and education. Data collection is project-specific, and include areas such as athlete demographics, injury information, injury event information, and sport-specific information.

Indiana Biobank – [Full profile on page 21](#)

- Formed in 2010 within the Indiana Clinical and Translational Sciences Institute (CTSI). Aids discovery research including academic, nonprofit, and commercial research entities to treat and prevent diseases. DNA is banked from patients with over 50,000 samples banked to date and growing. Other sample types such as serum, plasma, RNA, PBMC, urine, saliva and tissues are collected by request. All samples are linked to the INPC, and de-identified data linked to samples can be provided to researchers.

Indiana Biosciences Research Institute (IBRI) – [Full profile on page 23](#)

- Nonprofit, discovery science and applied research institute targeting diabetes, metabolic disease, poor nutrition, and related health data science. IBRI exists to bring together companies and universities to work collaboratively on interrelated health issues.

Indiana Business Research Center (IBRC) – [Full profile on page 25](#)

- Data/Analytics center at the Kelley School within Indiana University. Forty billion data records, including historical and current census, vital statistics, economics, population, demographics, industry, real estate, property tax, local government finance, school finance, innovation metrics, occupation data, and opportunity zones. Data available through MPH data hub, STATS Indiana, StatsAmerica, Indiana Indicators, Hoosiers by the Numbers, Indiana Economic Digest, and Child Care Data Center.

Indiana CTSI Monon Collaborative Data Team – [Full profile on page 28](#)

- Data team within the statewide Indiana Clinical and Translational Sciences Institute investigating social determinants of health, patterns of healthcare and social service utilization, justice involvement, and residential mobility to identify opportunities for intervention and improve health equity in Indiana. Leveraging clinical, justice, public health, and community-based organizational data in Marion County, representing 14 data sources and about 28 million individuals.

Indiana Health Information Exchange (IHIE) – [Full profile on page 30](#)

- Nonprofit founded by healthcare, business, and academic stakeholders to manage the Indiana Network for Patient Care (INPC), the nation's largest interorganizational clinical data repository. IHIE enables access to the INPC data to support hospitals, physicians, laboratories, payers, and other health service providers avoid redundancy and deliver faster, more efficient, higher quality healthcare to patients in Indiana. The INPC includes 20+ years of clinical data across health systems and physician practices.

The Polis Center at IUPUI (Polis) – [Full profile on page 33](#)

- University applied research center at IUPUI building capacity to understand and address population health and its social and environmental determinants through community research, collaboration, and application of geoinformatics, mapping, and spatial analysis. Leverages data from over 40 data sources to provide neighborhood level data for the SAVI Community Information System.

Regenstrief Center for Health Engineering (RCHE) – [Full profile on page 36](#)

- Academic Center within Discovery Park at Purdue University. RCHE performs research in three strategic areas: i) developing data science-based approaches to personalized care, ii) using a systems approach to matching health resources to need, and iii) improving access to care for vulnerable populations. National data includes Cerner Health Facts, which is made up of the electronic health records of approximately 70M patients for a 15-year period and MIMIC III, an ICU database from Beth Israel Deaconess Medical Center.

Regenstrief Institute – [Full profile on page 38](#)

- Nonprofit, research organization founded in 1969. Innovation is driven through three interrelated research centers: Biomedical Informatics, Health Services, and Aging; one development unit: LOINC; and one unit focused on research data management and services – Regenstrief Data Services. Key data sources include: i) Indiana Network Patient Care for Research (INPCR), ii) Electronic Health Record Systems for IU Health and Eskenazi Health, and iii) Research Networks - Patient Centered Outcomes Research Network (PCORnet), Accrual to Clinical Trials (ACT).



For-profit

hc1 – [Full profile on page 41](#)

- Private, for-profit company focused on precision testing and prescribing. Solution identifies bioinformatics signals within data sets from >50% of the diagnostic labs in the US. Data sources include live, transactional integrations to 20,000+ health systems and independent labs, data lake of 20B diagnostic results (increasing >500M per month), and 160 million unique patient profiles with longitudinal lab testing records.

LifeOmic – [Full profile on page 43](#)

- Private, for-profit company focused on precision health. Provides informatics platform supporting the statewide Precision Health Initiative. Leverages cloud and mobile

technologies to serve healthcare providers, academic research institutions, and consumers.

Springbuk – [Full profile on page 45](#)

- Private, for-profit company focused on employee health. Health Intelligence platform intakes data from insurance carriers, TPAs, wellness vendors, disease management companies, ancillary benefits, vision, dental, etc. Provides employers with population health analytics and intelligence to reduce cost and improve population health.



Hospital Systems

Ascension St. Vincent – [Full profile on page 47](#)

- Nonprofit health system. Ascension Data Science Institute and Data Discovery and Governance departments provide system-wide ETL, data science, business intelligence, statistics, data architecture, and actuarial services. Indiana has additional local analytics resources and data teams that leverage national data sources while responding to custom state-level reporting and analytics needs.

Community Health Network – [Full profile on page 48](#)

- Nonprofit health system. Community Health Network Dept. of Network Analytics is a 45-person team dedicated to analytics delivery (ETL, Data Science, BI, Infrastructure) with additional deployed analysts dedicated within specific business units.



CROSS-ORGANIZATION INITIATIVE PROFILES

The following are cross-organizational initiatives where partnerships are critical to their success. Roles and responsibilities for the partner organizations vary. Some may bring data, some may analyze the data, and others may drive outcomes by leveraging the data. These initiatives are listed alphabetically.

Diabetes Data Linkage Pilot – [Full profile on page 50](#)

- IBRI has a focus in diabetes and factors related to its risk and progression. This project is linking clinical data with Social Determinants of Health (SDoH), which are critical to identify key risk factors and interventions. Key partners include IHIE, IU Health, MPH, and Regenstrief Institute.

Diabetes Impact Project, Indianapolis Neighborhoods (DIP-IN) – [Full profile on page 52](#)

- DIP-IN is an initiative designed to build resources and connections within communities of Indianapolis with the goal of preventing diabetes, or better managing it, so that people can live long and healthy lives. Key partners include Eskenazi, Marion County Public Health Dept, LISC, Polis, Regenstrief Institute, and three community organizations.

Indiana Data Partnership (IDP) – [Full profile on page 54](#)

- IDP’s goal is to empower collaboration among government, non-profit and private sector entities to drive positive change in key challenges impacting Hoosiers. IDP is an enhancement to the state’s MPH to improve partnerships and minimize duplication of efforts through sharing common data and visualizing organization service networks. Key partners include MPH and three data centers within IU/IUPUI: IBRC, Polis, and PPI (Public Policy Institute).

Indiana Pandemic Information Collaborative – [Full profile on page 57](#)

- Members of IPIC are committed to working together to share data, information, and knowledge and coordinate efforts in order to beat COVID-19 and keep Indiana healthy and safe). Numerous parties engaged include: ISDH, FSSA, MPH, IHIE, Regenstrief, KSM Consulting, IHA (Indiana Hospital Assoc.), Fairbanks School of Public Health, Lilly Endowment, BioCrossroads, major hospital systems, and multiple community-based organizations.

The remainder of this document contains brief (two to four page) profiles for each of the organizations focusing on the following characteristics:

Role(s)	Key roles & responsibilities in Indiana's data/analytics ecosystem
Mission	Mission/Vision
History	Key historical milestones leading to current structure and mission
Organization	Organizational details including leadership, number/types of employees
Board	Board membership
Finance	Key funding sources and amounts
Data Sources	Key data assets (and sources) responsible for managing
Data Access	Mechanism and process for accessing data sources listed above
Tech Capabilities	Core technologies and capabilities unique to the organization in Indiana's data landscape
Projects	Top projects demonstrating focus areas, capabilities and uses of data. Includes key customers, and grants
Future Focus	Next areas organization is likely heading
Talent Development	Talent development programs
Data Sharing Agreements	Key data sharing agreements currently in place with partners
Programs/ Publications	Key programs, events, and publications hosted by the organization

DATA SOURCES AND ACCESSIBILITY

Data sources and accessibility of these data sources are foundational to all health data analytics initiatives. Realizing that a substantial audience for this document will be seeking access to data sources, the following table has summarized the shareable data sources and methods to access these data sources. Organizations that do not have data sources that can be readily shared are not included in this table.

Organization	Data Sources	Data Access
Indiana Family & Social Services Administration	<ul style="list-style-type: none"> FSSA's data is generated by six Care Programs: Aging, Disability and Rehabilitative Services, Early Childhood and Out of School Learning, Family Resources, Medicaid Policy and Planning, and Mental Health and Addiction. FSSA's data includes Medicaid claims, enrollment, and provider data. Information on 540 publicly available fields of FSSA data from 71 areas in 30 categories can be found within the MPH Data Catalog: https://datavizpublic.in.gov/views/MPHDataCatalog/MPHDataCatalog FSSA now includes Indiana 211, which manages databases that include thousands of health and human services agencies and resources for local community connections. Information on available resources by category are available at: https://in211.communityos.org/. Weekly 211 Community Impact data reports, glossary, and request forms are available at: https://in211.communityos.org/community-data. 	<ul style="list-style-type: none"> FSSA publishes 71 de-identified data sets on Indiana's Management Performance Hub: https://hub.mph.in.gov/dataset?organization=indiana-family-and-social-services-administration Data access and provisioning is governed by State and Federal law in addition to the FSSA Privacy & Security Policies. FSSA data access or data extracts can be requested by contacting Data.Analytics@fssa.IN.gov. An online data request form will be available later in 2020. A data sharing agreement, professional services contract, business associate agreement, or data use agreement may be required in certain cases. FSSA shares data with other state agencies through Memorandums of Understanding (MOUs).
Management Performance Hub (MPH)	<ul style="list-style-type: none"> Wide ranging data from the State of Indiana including education (K-12, higher ed), workforce (wages, industries), public safety (ISP, crashes, EMS runs), and health (Medicaid, DCS, ER discharge, vital records) Searchable data dictionary and metadata located at https://www.in.gov/mph/1225.htm 	<ul style="list-style-type: none"> Open data hub freely available to all at http://hub.mph.in.gov Sensitive data requests require data sharing agreements and security review. Formal process documented and data request forms available at https://www.in.gov/mph/935.htm New data request portal shows progress back to the requestor for any data request made: https://request.mph.in.gov/ Data is limited to upstream state agency providing approval to share data. Pre-approved data agreements exist for education, workforce, and Medicaid data
Indiana Biobank	<ul style="list-style-type: none"> To date, 50,000 DNA samples (and growing) available for broad sharing Precision Health Consent collaboration with IU Health and IUSM in progress to sample 300,000 IU Health patients over the next five5 years Other sample types such as serum, plasma, RNA, PBMC, urine, saliva and tissues are collected by request 	<ul style="list-style-type: none"> To gain approval for the use of de-identified samples and data, researchers must submit a proposal describing the planned use of the samples and data All samples are linked to the INPC, and thus, de-identified data linked to samples can be provided to approved academic, commercial, and Nonprofit researchers
Indiana Business Research Center (IBRC)	<ul style="list-style-type: none"> Wide and deep, with a combination of warehouses and databases combining to 40 billion records, including historical and current census data, economic measures, demographics, industry, real estate, property tax, local government finance, school finance, innovation metrics, occupation data, opportunity 	<ul style="list-style-type: none"> Provides data to MPH Open data hub freely available to all via http://hub.mph.in.gov STATS Indiana (http://www.stats.indiana.edu/), known as Indiana's data utility, has 200,000+ users and serves up key metrics via its city,

	<p>zones, patents, and government records. Deep data for Indiana while curating nationwide data.</p> <ul style="list-style-type: none"> • Creators of Indiana's State Population Projections (age, race, sex for all counties and state); State Labor Force Projections (working age projections for counties and Economic Growth Regions); quarterly Economic Forecasts for Indiana and Metro areas; The Innovation Index; Measures 4 Development. 	<p>town, county and regional profiles and interactive tools and visualizations to more than 200K users each year.</p> <ul style="list-style-type: none"> • StatsAmerica (http://www.statsamerica.org/) grew out of a regional innovation project with Purdue in 2006 and has grown to include an array of measuring tools for counties, cities and economic development districts nationwide. • Indiana Indicators (http://indianaindicators.org/) gives hospitals, communities and health departments the measures they need for community health assessments. • Additional access sites listed in IBRC full profile here.
<p>Indiana Health Information Exchange (IHIE)</p>	<ul style="list-style-type: none"> • Indiana Network for Patient Care (INPC), the nation's largest interorganizational clinical data repository, includes clinical information from Indiana hospitals, Accountable Care Organizations (ACOs), laboratories and imaging centers, payers, ambulatory practices (Federally Qualified Health Centers, Community Health Centers, clinics, physicians), government agencies, and employers. A list of participants can be found here: https://www.ihie.org/participant-list/ • Clinical data Includes observations and results (e.g., discharge summaries, vitals, lab results), encounters (ambulatory, obstetrics, referrals), and pharmacy orders (placed orders, filled orders). Additional details can be found here in IHIE's full profile 	<ul style="list-style-type: none"> • To access data, the requesting entity must sign an INPC subscription agreement • Member organizations may access CareWeb application (OneCare) to view longitudinal data on one patient or request a CCD to electronically collect data on one patient • To access data on patient populations, IHIE offers population health products and services such as its Clinical Value Report (PopCare), a customized report that assists organizations in care management for specific populations and quality metrics • More information on IHIE's products and services: https://www.ihie.org/products-overview • Data Requests: Participants in the INPC can access INPC data for use cases within the following permitted purposes: Treatment, Payment, Healthcare Operations, Public Health, and Research. Treatment, payment, healthcare operations and public health data requests are managed by IHIE. Data requests for research are managed by the Regenstrief Institute. Data access rules are governed by the INPC Management Committee, which is comprised of representatives of INPC participating organizations, IHIE, and Regenstrief. The INPC Management Committee has the authority to approve new use cases and access rules.
<p>The Polis Center at IUPUI (Polis)</p>	<ul style="list-style-type: none"> • Polis uses data from a large number and variety of national, state, and local sources as listed in Polis's profile here, including over 40 data sources for SAVI (savi.org/support-training/data-sources/). In addition to the numerous datasets that Polis makes readily available via SAVI and its other public websites (see Data Access), Polis collects and maintains a wealth of data "behind the scenes" for the research and analysis work of Polis and its public, non-profit and private sector partners. When feasible, Polis collects location attributes at the smallest geographic scale available in support of mapping and spatial analysis. 	<ul style="list-style-type: none"> • The SAVI Community Information System provides comprehensive, neighborhood level data for community assessments and asset mapping, clinical and public health research on social determinants of health (SDOH), grant writing, strategic planning, and community planning. (www.savi.org) • The Domestic Violence Dashboard provides information about the extent and context of domestic violence in Indianapolis and the populations affected. (https://indydvdata.org/)

		<ul style="list-style-type: none"> • The Digital Atlas of American Religion provides access to resources for the study and teaching of American religious history within a geographical and multimedia framework. (religionatlas.org) • IndyVitals measures the long-term impact of Indianapolis Plan 2020 at the neighborhood level. It helps planners and policymakers ensure that neighborhoods of all types are improving by making comparative neighborhood-level data transparent. (indyvitals.org). • The Indiana United Ways Community Report Card provides a quick snapshot of how Indiana communities are doing in the areas of health, education, and income. Users can view 35 indicators to learn: if a community has gotten better or worse over time and how it compares to the state's trend. (indianaimpact.org) • In addition to our publicly available datasets, we design datasets to meet research and community partners' specific needs. Contact: polis@iupui.edu or (317) 274-2455.
Regenstrief Center for Health Engineering (RCHE)	<ul style="list-style-type: none"> • National data includes: • Cerner Health Facts, which is made up of the electronic health records of approximately 70M patients for a 15-year period • MIMIC III, an Intensive Care Unit database from Beth Israel Deaconess Medical Center, which includes matched waveform data • Sources from State of Indiana including Medicaid claims, Minimum Data Set (MDS), and Purdue claims data • REMEDI data includes medical device data from over 400 hospitals in 32 states 	<ul style="list-style-type: none"> • Data goes through a process including a data sharing agreement and security review. The formal process documented at https://www.purdue.edu/discoverypark/rche/resources/hipaa.php
Regenstrief Institute	<ul style="list-style-type: none"> • Indiana Network Patient Care for Research (INPCR) • See IHIE description above for additional Information about INPC. INPCR is a replicate of the INPC for research purposes • Electronic Health Record (EHR) data for research • IU Health and Eskenazi Health • Research Networks • Patient Centered Outcomes Research Network (PCORnet) • Accrual to Clinical Trials (ACT) • Open Health Data Sciences and Informatics Collaborative (OHDSI) • Various health/healthcare and non-traditional data sources (e.g., claims, cancer registries, social determinants of health) 	<ul style="list-style-type: none"> • Regenstrief Data Services is the mechanism for accessing data sources. Services include feasibility requests, custom data sets and data integration • Regenstrief Institute is the Honest Broker for INPCR and EHR data from Eskenazi Health and IU Health. Its team of analysts can extract data from those sources and deliver to researchers following appropriate compliance for privacy and bioethics • Access to all of these data sets for research purposes are through the following access request forms • https://www.regenstrief.org/feasibility-request/ • https://www.regenstrief.org/data-request/

SCOPE OF THE *BOOK OF DATA AND ORGANIZATIONS*

- This document is not comprehensive of all organizations that are involved with health data/analytics nor is it comprehensive of each organization's capabilities/assets. This resource is intended to capture primary assets for the organizations listed
- Included organizations may not solely be focused on healthcare/life sciences; however, they are included as their data assets support social determinants of health (SDoH)
- Information has been crowdsourced from the various organizations and will continue to improve with feedback. This resource will always be a work in progress, and will continue to evolve based on input from health data organizations
- Profiles will hyperlink to as many resources as possible as opposed to redocumenting what has already been documented elsewhere

By clarifying and outlining the organizations included in this directory, we hope that new partnerships and improved natural collisions occur within our ecosystem. A key component of BioCrossroads is being a connector and facilitator of collaborations, and we encourage health-related data organizations, community-based organizations, academia and industry partners to utilize this resource to find new partnerships, novel data sets, and talent and technology capabilities to drive their organizations forward.

ORGANIZATION PROFILES



Indiana Family & Social Services Administration (FSSA)

402 W. Washington St., PO Box 7083, Indianapolis, IN 46207
 IN.gov/fssa
 Contact: Data.Analytics@fssa.IN.gov
 Twitter: @FSSAIndiana

Government



Role(s)	<ul style="list-style-type: none"> FSSA is the state agency which manages healthcare and social services programs including Medicaid and SNAP. FSSA Data & Analytics team ensures secure availability of high-quality data to enable integrated data-informed decision making with measurable outcomes. Additional information about FSSA's programs and services can be found at: https://secure.in.gov/apps/fssa/providersearch/home and at: https://www.in.gov/fssa/2406.htm
Mission	<ul style="list-style-type: none"> To compassionately serve the diverse community of Hoosiers by dismantling long-standing, persistent inequity through deliberate human services system improvement. Additional information available at: https://www.in.gov/fssa/4839.htm
History	<ul style="list-style-type: none"> FSSA was established by the Indiana General Assembly in 1991 to consolidate and better integrate the delivery of human services by state government. FSSA is a healthcare and social services funding agency. Ninety-four percent of the agency's total budget is paid to thousands of service providers ranging from major medical centers to a physical therapist working with a child or adult with a developmental disability. The six care divisions in FSSA administer services to more than 1.5 million Hoosiers. Office of Medicaid Policy and Planning (OMPP) – Administers Medicaid programs including the managed care system for Healthy Indiana Plan, Hoosier Care Connect and Hoosier Health Wise participants. OMPP performs medical review of Medicaid disability claims. Additional information available at: https://www.in.gov/fssa/2406.htm
Org	<ul style="list-style-type: none"> FSSA is organized into six business divisions or care programs supported by administrative divisions. The Secretary of FSSA serves as the Head of Agency. Technology leadership Includes Chief Information Officer, Chief Technology Officer, Chief Data Officer, and Chief Privacy & Security Officer. FSSA's current organizational chart can be found at: https://www.in.gov/fssa/4829.htm and FSSA's list of key contacts can be found at: https://www.in.gov/fssa/3441.htm (Key Data and Analytics contacts are listed on this site) FSSA employs more than 3,700 full-time state employees in addition to contractors and consultants. FSSA employs more than 60 full-time state employees in technology roles including data & analytics, systems engineering, privacy & security, and project management. FSSA is also supported by major world-class technology vendors. FSSA Care Programs are: Division of Aging, Division of Disability and Rehabilitative Services, Division of Family Resources, Division of Mental Health and Addiction, Office of Medicaid Policy and Planning, and Office of Early Childhood and Out-of-School Learning.
Board	<ul style="list-style-type: none"> The Secretary of FSSA, who is a member of the State of Indiana Governor's Cabinet, leads the agency. FSSA does not have a formal board of directors.
Finance	<ul style="list-style-type: none"> FSSA's total expenditures in State Fiscal Year 2020 were ~\$20.5 billion. FSSA receives federal matching funds. More information about federal matching can be found at: https://aspe.hhs.gov/federal-medical-assistance-percentages-or-federal-financial-participation-state-assistance-expenditures Additional information about FSSA's finances can be found at: https://www.in.gov/itp/1090.htm

Data Sources	<ul style="list-style-type: none"> FSSA's data is generated by the six Care Programs and is stored in the FSSA Enterprise Data Warehouse using state-of-the-art Teradata servers. The six Care Programs are the following: <ul style="list-style-type: none"> Aging Disability and Rehabilitative Services Early Childhood and Out of School Learning Family Resources Medicaid Policy and Planning Mental Health and Addiction FSSA's data includes Medicaid claims, enrollment, and provider data. Information on 540 publicly available fields of FSSA data from 71 areas in 30 categories can be found within the MPH Data Catalog: https://datavizpublic.in.gov/views/MPHDataCatalog/MPHDataCatalog FSSA now includes Indiana 211, which manages databases that include thousands of health and human services agencies and resources for local community connections. Information on available resources by category are available at: https://in211.communityos.org/ Weekly 211 Community Impact data reports, glossary, and request forms are available at: https://in211.communityos.org/community-data
Data Access	<ul style="list-style-type: none"> FSSA publishes 71 de-identified data sets on Indiana's Management Performance Hub: https://hub.mph.in.gov/dataset?organization=indiana-family-and-social-services-administration Data access and provisioning is governed by State and Federal law in addition to the FSSA Privacy & Security Policies. FSSA data access or data extracts can be requested by contacting Data.Analytics@fssa.IN.gov. An online data request form will be available later in 2020. A data sharing agreement, professional services contract, business associate agreement, or data use agreement may be required in certain cases. FSSA shares data with other state agencies through Memorandums of Understanding (MOUs).
Tech Capabilities	<ul style="list-style-type: none"> Advanced data analytics: data strategy and governance, data science and engineering, data warehousing, business intelligence, data mining, dashboard tools, data acquisition and automation, metadata, etc. Information technology: Project management, systems engineering, application development, cybersecurity, Independent Verification & Validation (IV&V), cloud strategy and infrastructure, IT managed services, etc. Vendor-provided tech capabilities include: CMS-certified Management and Administrative Reporting System (IMARS), Symmetry Episode Treatment Groups (ETGs), Medicaid Management Information System (MMIS), Pharmacy Benefit Management (PBM), Integrated Case Management Solution (ICMS), Symmetry Evidence Based Medicine (EBM) Connect, Performance Analytics for HHS.
Projects	<ul style="list-style-type: none"> Optum Performance Analytics for HHS: Analytic platform blends data from across Health and Human Services to provide a comprehensive view of individuals and the enterprise. Indiana Eligibility Determination Services System (IEDSS): new eligibility system that will replace the Indiana Client Eligibility System (ICES). Care Management for Social Services (CaMSS) Support Services: Indiana new case management system. HIP Workforce Bridge: As the economy changes and people re-train, go back to school and go back to work, the assistance of HIP Workforce Bridge will make that transition from HIP to marketplace insurance or employer-based coverage easier to navigate and afford. Long-Term Care Transformation Project redesign project has two goals: (1) rebalancing the current system to increase the number of Medicaid members receiving long-term care in the home/community setting rather than in facilities; and (2) creating equity of access across the continuum of care ensuring individuals can access needed services within 48 hours of hospital discharge. FSSA partnered with Regenstrief Institute to develop a data dashboard to support the State of Indiana in the effort to track and respond to the COVID-19 outbreak.

Future Focus	<ul style="list-style-type: none"> • Increase the awareness and understanding of the role both data and analytics plays in achieving FSSA's vision. • Define what the future data and analytics-enabled workforce looks like at FSSA. • Increase consistent utilization of FSSA data and available analytical tools through improved end-user experience. • Ensures secure availability of data to enable integrated data-driven decision making. • Tell the story of FSSA's populations and programs by uncovering the stories within the data. 		
Talent Development	<ul style="list-style-type: none"> • FSSA Data & Analytics holds formal on-site and virtual training sessions which include data warehousing concepts and architecture, SQL, business Intelligence tools and methodologies. 		
Data Sharing Agreements	<p>FSSA has multiple data sharing partners including:</p> <table border="0" data-bbox="367 554 1482 903"> <tr> <td data-bbox="367 554 906 903"> <ul style="list-style-type: none"> • Boston University (HRSA COIINs project) • Centers for Medicare & Medicaid Services • Food and Nutrition Service • Indiana Department of Child Services • Indiana Department of Corrections • Indiana Department of Workforce Development • Indiana Health Information Exchange • Indiana Management Performance Hub </td> <td data-bbox="912 554 1482 903"> <ul style="list-style-type: none"> • Indiana Office of Technology • Indiana State Department of Health • Indiana University Fairbanks School of Public Health • Indiana University Ostrom Workshop • Indiana University School of Medicine • Purdue College of Health and Human Sciences • Purdue Healthcare Advisors • Regenstrief Institute </td> </tr> </table>	<ul style="list-style-type: none"> • Boston University (HRSA COIINs project) • Centers for Medicare & Medicaid Services • Food and Nutrition Service • Indiana Department of Child Services • Indiana Department of Corrections • Indiana Department of Workforce Development • Indiana Health Information Exchange • Indiana Management Performance Hub 	<ul style="list-style-type: none"> • Indiana Office of Technology • Indiana State Department of Health • Indiana University Fairbanks School of Public Health • Indiana University Ostrom Workshop • Indiana University School of Medicine • Purdue College of Health and Human Sciences • Purdue Healthcare Advisors • Regenstrief Institute
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Programs/ Publications	<ul style="list-style-type: none"> • Indiana Medicaid publications can be found at: https://www.in.gov/medicaid/providers/index.html 		

Management Performance Hub (MPH)	
200 W. Washington St., Indianapolis, IN 46204 MPH.IN.gov Contact: info@mph.in.gov Twitter: @IndianaMPH	Government



Role(s)	<ul style="list-style-type: none"> Agency within the State of Indiana. Supports agencies within state government with data and analytics solutions, as well as “unlocks” state agency data to make it available to community entities to drive value for the state and its citizens MPH reduces technology and legal barriers to share state agency data with community partners 				
Mission	<ul style="list-style-type: none"> MPH provides analytics solutions tailored to address complex management and policy questions enabling improved outcomes for Hoosiers. MPH empowers partners to leverage data in innovative ways, facilitating data-driven decision making and data-informed policy making 				
History	<ul style="list-style-type: none"> 2014 – Executive Order from Gov. Pence created MPH as a department under OMB (Office of Management and Budget) 2016 – Key demonstration projects regarding infant mortality and recidivism January 2017 – Executive Order renewed under Gov. Holcomb July 2017 – HEA 1470 codifies MPH Link to codified bill: http://iga.in.gov/legislative/2017/bills/house/1470 Summary from TechPoint: https://techpoint.org/2017/07/house-bill-1470/ 				
Org	<ul style="list-style-type: none"> 30-person team. 75% on technology side (ETL, Data Science, BI, Infrastructure) and 25% on engagement side (PM, Partner Engagement, solution consulting) Formally codified in 2017 via HEA 1470. Established MPH, CDO and CPO roles Leadership: <ul style="list-style-type: none"> Josh Martin: Chief Data Officer Ted Cotterill: Chief Privacy Officer Ashley Hungate: Communications Director 				
Board	<p>Formal board not required; however, MPH sustains an informal advisory board:</p> <table border="0"> <tr> <td>State agencies:</td> <td>Non-state organizations:</td> </tr> <tr> <td> <ul style="list-style-type: none"> Management Performance Hub Office of Management and Budget Indiana Office of Technology Family and Social Services Department of Education Indiana Economic Development Corporation </td> <td> <ul style="list-style-type: none"> Lilly Endowment Inc. (LEI) Indiana Chamber of Commerce Central Indiana Corporate Partnership (CICP) AT&T Regenstrief Institute City of Fishers </td> </tr> </table>	State agencies:	Non-state organizations:	<ul style="list-style-type: none"> Management Performance Hub Office of Management and Budget Indiana Office of Technology Family and Social Services Department of Education Indiana Economic Development Corporation 	<ul style="list-style-type: none"> Lilly Endowment Inc. (LEI) Indiana Chamber of Commerce Central Indiana Corporate Partnership (CICP) AT&T Regenstrief Institute City of Fishers
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Finance	<ul style="list-style-type: none"> \$8.3M annually from state general budget Additional \$3M grant from LEI for 2018-2019 to improve external data sharing Match grants (~\$10M over 4 years 2019-2023) from CMS (90% or 75% reimbursed) 				
Data Sources	<ul style="list-style-type: none"> Wide ranging data from the State of Indiana including education (K-12, higher ed), workforce (wages, industries), public safety (ISP, crashes, EMS runs), health (Medicaid, DCS, ER discharge, vital records) Searchable data dictionary and metadata at https://www.in.gov/mph/1225.htm Open data hub freely available to all via http://hub.mph.in.gov 				

Data Access	<ul style="list-style-type: none"> Open data hub freely available to all via http://hub.mph.in.gov More sensitive data goes through a process including a data sharing agreement and security review. Formal process documented and data request forms available at https://www.in.gov/mph/935.htm New data request portal shows progress back to the requestor for any data request made: https://request.mph.in.gov/ Data is limited to upstream state agency providing “green light” to MPH to share data. Pre-approved data agreements exist for education, workforce, and Medicaid data 		
Tech Capabilities	<ul style="list-style-type: none"> Enhanced ability to link individuals across various data sets External entities can share PII to MPH. MPH can link to those individuals to state data and share information back in an aggregate fashion, while ensuring security privacy are held to the fullest. This is primarily used for program evaluation (e.g., are workforce programs truly improving wages) Enhanced Research Environment (ERE) is a secure virtual environment whereby users can access industry leading data transformation/visualization tools to conduct research. Users will be enabled to conduct research on their own datasets as well as those that have been provided by the state. 		
Projects	<ul style="list-style-type: none"> Opioids – Data linked at the individual level across 10+ state agencies. External researchers integrated into MPH team on \$0 contracts for mutual benefit Education/Workforce – Longitudinal record between K-12, higher ed, and workforce supporting state and external CBOs Government transparency – Broad BI skillset transforming government PeopleSoft financials into citizen facing dashboards 		
Future Focus	<ul style="list-style-type: none"> Opportunity to demonstrate linkage of State SDoH data (Education/Workforce) with clinical data to drive insights into population health 		
Talent Development	<ul style="list-style-type: none"> No direct training/education programs MPH does host multiple interns and fellows every year Unique “Employee Interchange” program allows for Indiana state employees (includes public university employees) to join MPH for \$0 contract for mutual benefit 		
Data Sharing Agreements	<p>Many agreements in place; however, they are use case specific</p> <table border="0"> <tr> <td> <ul style="list-style-type: none"> Regenstrief Institute IBRI (<i>in process</i>) United Way Indiana Business Research Center Polis </td> <td> <ul style="list-style-type: none"> EmployIndy Goodwill Notre Dame/Lab for Economic Opportunities ...dozens of additional one-to-one relationships </td> </tr> </table>	<ul style="list-style-type: none"> Regenstrief Institute IBRI (<i>in process</i>) United Way Indiana Business Research Center Polis 	<ul style="list-style-type: none"> EmployIndy Goodwill Notre Dame/Lab for Economic Opportunities ...dozens of additional one-to-one relationships
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Programs/ Publications	<ul style="list-style-type: none"> MPH Data Day: Jan/Feb each year Annual report: https://www.in.gov/mph/files/MPH-2018-Annual-Report.pdf 		

Datalys Center for Sports Injury Research and Prevention, Inc.	
401 W. Michigan Street, Suite 500, Indianapolis, IN 46202 www.datalyscenter.org Contact: info@datalyscenter.org Twitter: @DatalysCenter	Nonprofit



Role(s)	<ul style="list-style-type: none"> The Datalys Center is an independent, non-profit organization that furthers the efforts of researchers, public health officials, associations, policy makers, and the public by collecting and translating sport injury and treatment data Specializes in epidemiological research in sport and other physically active populations including, but not limited to, study design and execution, database and application design and management, and data analysis and reporting
Mission	<ul style="list-style-type: none"> To collect and translate, often in collaboration with others, sports participation, injury and treatment data into more effective programs, policies, rules, and education aimed at preventing, mitigating, and treating sports injuries more effectively To be the trusted leader in making sports and physical activity safer through data-driven research
History	<ul style="list-style-type: none"> 2006 - The Center for Sports Injury Research and Prevention, Inc. is incorporated through a collaborative effort between the National Collegiate Athletic Association (NCAA), BioCrossroads, and the American College of Sports Medicine (ACSM) 2008 - Renamed the Datalys Center for Sports Injury Research and Prevention, Inc. 2014 - Legal restructuring to a supporting organization of ACSM and American Orthopedic Society for Sports Medicine (AOSSM)
Org	<ul style="list-style-type: none"> Seven employees Leadership: Christy Collins, PhD, President Scientific Advisory Board which includes leaders in the sports epidemiology field
Board	<ul style="list-style-type: none"> Six of the seven Board of Director seats are currently filled: <ul style="list-style-type: none"> Greg Dummer, CAE, Chair, AOSSM Marje Albohm, MS, ATC, LAT, Secretary, Ossur Americas Kathleen McNeely, Treasurer, NCAA Brian Hainline, MD, NCAA Lynette Craft, PhD, FACSM, ACSM Stephanie Kliethermes, PhD, American Medical Society for Sports Medicine (AMSSM)
Finance	<ul style="list-style-type: none"> Supported by grants and contracts
Data Sources	<ul style="list-style-type: none"> Project-specific primary data collection for the projects listed in the Projects section below. For example, for High School RIO, the data collected includes the following categories: <ul style="list-style-type: none"> Athlete-exposures, athlete demographics (e.g., year in school, sex, age, etc.) Injury information (e.g., injured body part, diagnosis, need for surgery, outcome, etc.) Injury event information (e.g., level of sport, type of exposure, injury mechanism, etc.) Sport-specific information (e.g., player position, specific injury mechanism, field location, etc.) Secondary data analysis of publicly available data related to illnesses and injuries (e.g., dew point and humidity used to evaluate impact of heat/humidity on injury rates)
Data Access	<ul style="list-style-type: none"> Varies by project. Performed with appropriate agreements, IRB approval, and DUAs as outlined at the following link: https://www.datalyscenter.org/requesting-data/
Tech Capabilities	<ul style="list-style-type: none"> Database and application design and management Injury Surveillance Tool (IST), a free web-based EMR system for participating schools

Projects	<ul style="list-style-type: none"> • NCAA Injury Surveillance Program • National Association of Intercollegiate Athletics (NAIA) Injury Surveillance Program • High School National Athletic Treatment, Injury, and Outcomes Network (NATION) • National High School Sports-Related Injury Surveillance Study (High School Reporting Information Online (RIO)) • Concussion Assessment, Research and Education (CARE)
Future Focus	<ul style="list-style-type: none"> • Injury surveillance in other populations such as emergency responders, military service members, elite athletes, etc. • Providing research services to local and national organizations • Keeping athletes healthy across the life span
Talent Development	<ul style="list-style-type: none"> • Intern opportunities for students interested in injury surveillance and sports epidemiology
Data Sharing Agreements	<ul style="list-style-type: none"> • Data Injury Statistics Clearinghouse (DISC) • Trusted Partner Data Use Agreements with researchers in both academic and industry settings
Programs/ Publications	<ul style="list-style-type: none"> • Publications can be found at https://www.datalyscenter.org/publications

Indiana Biobank	
351 W. 10th Street, Indianapolis, IN 46202 Indianabiobank.org Contact: inbiobnk@iu.edu	Academic



Role(s)	<ul style="list-style-type: none"> Formed In 2010 and supported by funds from the Lilly Endowment and the Indiana CTSI Support discovery research including academic, nonprofit, and commercial research entities
Mission	<ul style="list-style-type: none"> Aid discovery research that may lead to better ways to treat and prevent diseases. The Indiana Biobank works towards this goal by providing researchers with the tools and resources they need to advance their research. These tools and resources include providing researchers with banked biospecimens, custom prospective collections of samples to meet a researcher's specific needs, specimen collection kits, and repository infrastructure to support a larger coordinated collection.
History	<ul style="list-style-type: none"> 2010 formed Indiana Biobank 2014 started custom collections 2015 began infrastructure support services 2016 started kit production core 2019 began Precision Health Consent Initiative
Org	<ul style="list-style-type: none"> Four-person management team with support from lab and IT teams Leadership: <ul style="list-style-type: none"> Tatiana Foroud: Scientific Director Brooke Patz: Program Manager
Board	<ul style="list-style-type: none"> Formal board is not required; however, the Indiana Biobank maintains a scientific advisory board to review requests for sample/data and services
Finance	<ul style="list-style-type: none"> Supported by funds from the Lilly Endowment and the Indiana CTSI Funded by grants to researchers using the Indiana Biobank Infrastructure Recharge for services also supports the funding of the Biobank
Data Sources	<ul style="list-style-type: none"> Wide ranging data from the Indiana Network for Patient Care including over 8,000 variables encompassing clinical, laboratory, and outcomes data, mined in collaboration with Regenstrief Data Services DNA is regularly banked from patients with over 50,000 samples banked to date and growing Other sample types such as serum, plasma, RNA, PBMC, urine, saliva and tissues are collected by request. All samples are linked to the INPC, and thus, de-identified data linked to samples can be provided to approved academic, commercial, and nonprofit researchers
Data Access	<ul style="list-style-type: none"> De-Identified EMR data linked to biological samples is provided to approved researchers Data sets are designed to meet a researcher's specific needs; retrospective and prospective data from the time of sample collection is available Samples and data go through a review process before access is approved To gain approval for the use of de-identified samples and data, researchers must submit a proposal describing the planned use of the samples and data.
Tech Capabilities	<ul style="list-style-type: none"> Enhanced ability to link individuals across various data sets

Projects	<ul style="list-style-type: none"> • Precision Health Consent- collaboration with IU Health and IUSM to sample 300,000 IU Health patients over the next five years. To date, there have been over 10,000 samples collected in a year through this collaboration, which puts the Indiana Biobank at just over 50,000 (and growing) DNA samples available for broad sharing. • Provide infrastructure support to over 30 projects including multiple NIH, ISDH and DoD grants • Support more than 30 custom, prospective collections of samples each year for numerous commercial, academic, and nonprofit entities
Future Focus	<ul style="list-style-type: none"> • Opportunity to link biological samples to electronic medical record data to support research to better understand the causes of disease • Utilizing telehealth and video consent along with the use of remnant samples to obtain large numbers of samples available for future research
Talent Development	<ul style="list-style-type: none"> • No direct training/education programs • IB does host multiple interns every year
Data Sharing Agreements	<ul style="list-style-type: none"> • Many agreements in place; however, they are use case specific
Programs/ Publications	<ul style="list-style-type: none"> • Reports are mostly internal, specific to the companies that work with the Indiana Biobank

Indiana Biosciences Research Institute (IBRI)	
1210 Waterway Blvd., Ste. 2000, Indianapolis, IN 46202 www.indianabiosciences.org Contact: Dan Robertson @ drobertson@indianabiosciences.org Twitter: @INBiosciences	Nonprofit



Role(s)	<ul style="list-style-type: none"> The IBRI is an independent, discovery science, and applied research institute currently targeting diabetes, metabolic disease, poor nutrition, and related health data science. The IBRI exists to bring together companies and universities to work collaboratively on interrelated health issues that are of both global significance and have a disproportionate impact on Hoosiers. 		
Mission Vision	<ul style="list-style-type: none"> To become the leading independent, industry-inspired applied research institute in the discovery and development of innovative solutions to improve health, targeting diabetes, metabolic disease, and poor nutrition. 		
Key Events	<ul style="list-style-type: none"> 2012 – Indiana state, civic, corporate, and academic leaders called for creating an independent applied research institute 2015 – The IBRI finds its temporary home in the BRTC and starts staffing 2016 – Additional funding provided through Lilly Endowment and matching funds 2018 – The IBRI aligns around three centers: The IBRI Diabetes Center, (IDC) The Applied Data Sciences Center (ADSC), and The Pharmaceutical Biotechnology Center (PBC) 2020 – IBRI moves to permanent home in Building One in 16Tech Innovation District 		
Org	<ul style="list-style-type: none"> Approximately 35 (2019) split into multiple centers and principle investigators CEO search underway Leadership: <ul style="list-style-type: none"> Alan Palkowitz: President and CEO Jay McGill: Chief Operating Officer Mark Andersen: Chief Financial Officer Stephanie Grinage: VP for Advancement Dan Robertson: VP Digital Technology & Director of Applied Data Sciences 		
Board	<p>The IBRI has board membership that spans its stakeholder organizations:</p> <table border="0"> <tr> <td> <ul style="list-style-type: none"> Dan Evans, Chairman Fmr CEO, IU Health Dr, Kristina Box ISDH Commissioner Wayne Burris Fmr SVP & CFO, Roche Diagnostics John C. Lechleiter, PhD Fmr CEO, Eli Lilly and Company </td> <td> <ul style="list-style-type: none"> Dan Peterson VP, Cook Group Inc. Bill Stephan VP, Indiana University Jon Serbousek Mid-Tech Industry Advisor Patricia Martin Pres. & CEO, BioCrossroads, Inc. </td> </tr> </table>	<ul style="list-style-type: none"> Dan Evans, Chairman Fmr CEO, IU Health Dr, Kristina Box ISDH Commissioner Wayne Burris Fmr SVP & CFO, Roche Diagnostics John C. Lechleiter, PhD Fmr CEO, Eli Lilly and Company 	<ul style="list-style-type: none"> Dan Peterson VP, Cook Group Inc. Bill Stephan VP, Indiana University Jon Serbousek Mid-Tech Industry Advisor Patricia Martin Pres. & CEO, BioCrossroads, Inc.
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Finance	<ul style="list-style-type: none"> \$50M funding commitment from State + Industry matching funds (2014) \$100M from Lilly Endowment and Lilly Foundation (2016) \$20M State Funds (2017) IBRI Foundation holds key funding (\$126M – 2018 Form 990) 		
Data	<ul style="list-style-type: none"> Limited IBRI specific data sources – although growing in the IBRI Diabetes Center Applied Data Sciences Center (ADSC) works through data use agreements with partner organizations based on problem space Public Data Repository at https://data.indianabiosciences.org 		

Access	<ul style="list-style-type: none"> All data access and collaborations are performed with appropriate Research Agreements, IRBs, and DUAs in place. The IBRI facility is designed to be an open collaborative environment facilitating research and innovation across industrial, academic, government, entrepreneurial, and other nonprofits. Security processes and measures in place to facilitate secure access and collaboration. 		
Tech Capabilities	<ul style="list-style-type: none"> Secure-cloud based (vendor-agnostic) technologies in place to facilitate secure collaborations. Expertise at defining applied problems and driving implementation across data and technology to support applied multi-organizational collaborations. Skills, software, expertise, and software for working across and integrating multiple types of data: EHR, deep biology, socio-economic, and electronic data. 		
Projects	<ul style="list-style-type: none"> ISDH Diabetes Strategy (Regenstrief Institute-MPH-IHIE-IBRI) Corteva-Lilly Toxicogenomic Collaboration Lilly-Roche-Regenstrief Institute Type 2 Diabetes Collaboration ISDH-MPH-IBRI-IHIE Obesity State-wide Prevalence and Data Availability 		
Future Focus	<ul style="list-style-type: none"> Building a population-diverse diabetes data set integrated with SDoH, biology, and digital data (wearables, CGSM...) to drive research and innovation. Working on specific public-health projects where data integration/exchange and evaluation are critical components to success. 		
Talent Development	<ul style="list-style-type: none"> Community-outreach in neighboring areas to 16Tech (High School) Summer HS and College Intern Research Programs Research partnerships with academic partners (college, graduate school) 		
Data Sharing Agreements	<p>Many agreements in place; however, they are use case specific</p> <table border="0"> <tr> <td> <ul style="list-style-type: none"> Regenstrief Institute MPH (<i>in process</i>) Indiana Health Information Exchange IPHCA (<i>in discussion</i>) Indiana University Health </td> <td> <ul style="list-style-type: none"> PCORI CAPriCORN (Chicago-area) Eli Lilly and Company FUSE by Cardinal Health ...dozens of additional one-to-one relationships </td> </tr> </table>	<ul style="list-style-type: none"> Regenstrief Institute MPH (<i>in process</i>) Indiana Health Information Exchange IPHCA (<i>in discussion</i>) Indiana University Health 	<ul style="list-style-type: none"> PCORI CAPriCORN (Chicago-area) Eli Lilly and Company FUSE by Cardinal Health ...dozens of additional one-to-one relationships
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Programs/ Publications	<ul style="list-style-type: none"> Annual report: https://www.indianabiosciences.org/annual-reports/ 		

Indiana Business Research Center (IBRC) at Indiana University	
777 Indiana Avenue, Indianapolis, IN 46202; Hodge Hall, Kelley School of Business, Bloomington www.ibrc.indiana.edu Contact: Carol Rogers @ rogersc@iu.edu Twitter: @IUibrc	University applied research center



Role(s)	<ul style="list-style-type: none"> Provide metric-intensive, research-powered reports, analytics, and data through partnerships, collaborations and multiple websites, dashboards, and analytical tools to the people of Indiana. 		
Mission	<ul style="list-style-type: none"> The IBRC provides innovative research-powered analysis and data to all Hoosiers seeking to understand their communities and economies, making it all available via its custom-built STATS platform while we strive to empower organizations to make informed decisions 		
History	<ul style="list-style-type: none"> Established in 1925 as one of the first research centers at Indiana University, as part of the Kelley School of Business 1969 established a second office on the IUPUI campus 1975 began providing digital (dial-up) access to its database to Indiana's Lt. Governor which became STATS Indiana 1995 developed web-based access to its reports and databases 2006 created the first Indiana state administrative record linkage system with CHE and DWD and support from Lilly Endowment, Lumina Foundation, and Joyce Foundation. 2006 began a (still) running partnership with U.S. Economic Development Administration. Released StatsAmerica for use by communities across the nation 2007 began to focus on metric-creation for understanding Innovation 2015 celebrated 90 years and 20 billion record strong database platform 2018 helped establish the Indiana Data Partnership with MPH and IU 		
Org	<ul style="list-style-type: none"> 30+ person team of analysts, programmers, data scientists plus graduate assistants and post-docs. Leadership: Carol O. Rogers and Timothy F. Slaper, Co-directors 		
Board	<p>Formal board not required; however, IBRC sustains the following network of advisors:</p> <table border="0"> <tr> <td> <ul style="list-style-type: none"> AIM BioCrossroads CHE Central Indiana Corporate Partnership DOE DWD Early Learning Indiana, Inc. Economic Development Coalition EDA FSSA Governor (office of) </td> <td> <ul style="list-style-type: none"> IEDC IN Economic Development Assoc. IN Association of Realtors Indy Partnership ISDH ISL Lilly Endowment Marion County Health Department MPH Radius Indiana United Way of Central Indiana </td> </tr> </table>	<ul style="list-style-type: none"> AIM BioCrossroads CHE Central Indiana Corporate Partnership DOE DWD Early Learning Indiana, Inc. Economic Development Coalition EDA FSSA Governor (office of) 	<ul style="list-style-type: none"> IEDC IN Economic Development Assoc. IN Association of Realtors Indy Partnership ISDH ISL Lilly Endowment Marion County Health Department MPH Radius Indiana United Way of Central Indiana
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Finance	<ul style="list-style-type: none"> Supported by grants and contracts 		

Data Source	<ul style="list-style-type: none"> • Wide and deep, with a combination of warehouses and databases combining to 40 billion records, including historical and current census data, economic measures, demographics, industry, real estate, property tax, local government finance, school finance, innovation metrics, occupation data, opportunity zones, patents, and government records. Deep data for Indiana while curating nationwide data. • Creators of Indiana's State Population Projections (age, race, sex for all counties and state); State Labor Force Projections (working age projections for counties and Economic Growth Regions); quarterly Economic Forecasts for Indiana and Metro areas; The Innovation Index; Measures 4 Development. • Provides data to MPH Open data hub freely available to all via http://hub.mph.in.gov
Data Access	<ul style="list-style-type: none"> • The IBRC has been providing open, digital, easy access to its data since the 1970s. • STATS Indiana (http://www.stats.indiana.edu/), known as Indiana's data utility, has 200,000+ users and serves up key metrics via its city, town, county and regional profiles and interactive tools and visualizations to more than 200K users each year. • StatsAmerica (http://www.statsamerica.org/) grew out of a regional innovation project with Purdue in 2006 and has grown to include an array of measuring tools for counties, cities and economic development districts nationwide. • Indiana Indicators (http://indianaindicators.org/) gives hospitals, communities and health departments the measures they need for community health assessments. • Hoosiers by the Numbers (http://www.hoosierdata.in.gov/), in partnership with DWD, focuses on workforce and the workforce economy in our counties and regions with specialized outputs, tools and visualizations. • Indiana Economic Digest (https://indianaeconomicdigest.com/) puts the news behind the numbers, a daily curation of news articles from 60+ newspapers in Indiana. • Child Care Data Center (http://datacenter.earlylearningin.org/) in partnership with Early Learning Indiana, provides critical information on child care centers and providers throughout Indiana, with an emphasis on quality programs and closing the gap for child care deserts. • Customized databases, warehousing, data and spatial data management with geodatabases and geocoding services • Partnership agreements included access to raw data for specialized uses • APIs are embedded in multiple sites and dashboards
Tech Capabilities	<ul style="list-style-type: none"> • Warehouse and database architecture; website development and hosting • Record linkage, data science, visualization • Custom tool builds to match the data and the project • Custom analysis by our economists and demographers, social scientists
Selected Projects	<ul style="list-style-type: none"> • Metrics for economic and community development • Creation of unconventional metrics for development • Data mining for economic intelligence • Workforce and education alignment • Census 2020 liaison for Indiana
Future Focus	<ul style="list-style-type: none"> • Mining federal grants data for social networking analysis; measuring economic and social injury due to Covid-19 • Charting pathways to economic resilience
Talent Development	<ul style="list-style-type: none"> • Empowerment training for our partners and clients to learn to use data science, networking analysis and query tools on their own • Consultations on data use and interpretation
Data Sharing Agreements	<ul style="list-style-type: none"> • MPH, State Dept. of Health, Marion County Health Department, EmployIndy

**Programs/
Publications**

- [Economic Outlook for Indiana](#) - 12 locations throughout Indiana, a panel of economists share their "next year" Insights with the business community
- [Indiana Business Review](#)
- [IN Context](#)
- [Census IN Indiana](#) and serve as [Governor's Census Liaison](#)
- [Federal-State Cooperative](#) with Census Bureau
- [State Data Center Program](#)

Indiana CTSI Monon Collaborative Data Team	
410 W. 10th St., HS 2000, Indianapolis, IN 46202 Contact: ictsi@indianactsi.org	Academic



Role(s)	<ul style="list-style-type: none"> Investigate social determinants of health, patterns of healthcare and social service utilization, justice involvement and residential mobility to identify opportunities for intervention and improve health equity in Indiana. Engage community stakeholders in order to offer data-related needs assessment and evaluation resources (as part of the Monon Collaborative 'science in service to the community').
Mission	<ul style="list-style-type: none"> Address health inequity in Indiana through linking existing individual-level clinical and non-clinical data.
History	<ul style="list-style-type: none"> >10 years of partnerships with justice, public health, and community agencies to establish trusted data-sharing agreements for the purpose of grant-funded research Recent shift to share aggregated (de-identified) data in response to community-driven questions, thereby deepening existing partnerships and establishing new ones
Org	<ul style="list-style-type: none"> Consortium of academic investigators (13), community partners (many), trainees (doctoral/post-doctoral students), and staff (4). Data use agreements managed by Indiana University and data reside on secure server maintained by Indiana University.
Board	<ul style="list-style-type: none"> There is no board of directors. Our team, however, has frequent engagement with our data-sharing partners to seek opportunities for collaboration, to disseminate findings, and to offer direct value back to each organization.
Finance	<ul style="list-style-type: none"> Extramural grant funding (NIH/AHRQ: ~\$1M/year) and intramural grant funding (e.g., IU Addictions Grand Challenge and IU Health: ~\$100K/year)
Data Sources	<ul style="list-style-type: none"> Clinical, justice, public health, community-based organizational data in collaboration with many community partners, primarily focused on Marion County, Indiana, representing 14 data sources (see data sharing agreements section below for specific agencies with whom we are collaborating) and about 28 million individuals (based on cumulative person-level identifiers from each data source). Most data sources include longitudinal person-level and event-level (such as encounter, test, or justice interaction) records from 2000 to 2019, with periodic data refreshes performed as allowed by funding/other resources and as indicated by community and/or research need.
Data Access	<ul style="list-style-type: none"> No data access available to any individual without approval by the IU IRB which necessitates completion of CITI training, a Conflict of Interest statement, and server security training.
Tech Capabilities	<ul style="list-style-type: none"> Identified a population health identifier across multiple data sets using individual-level data elements (name, date of birth, social security number, other) and 19 deterministic matching algorithms and 24 probabilistic matching algorithms over multiple rounds. All output was reviewed by three individuals to identify thresholds above which were considered true matches. Post linkage quality checks performed to assess match validity. For the current data set of 28 million person-level identifiers, ~4.2 million unique population health identifiers were defined using this process. All data geocoded and geotagged at multiple geographies Definition of multiple clinical phenotypes both based on established metrics (e.g., Charlson Co-Morbidity Index domains) and as developed by our team (e.g., mental health measures based on DSM criteria)

Projects	<ul style="list-style-type: none"> • Assess care management and clinical care outcomes for people living with HIV (PLWH), including offenders and recidivists diagnosed with HIV before, during and following interaction with the justice system. • Describe if, when, where, at what frequency, and for what purposes (e.g., mental illness, substance use disorder or overdose, violent injury) individuals utilize clinical care and social services, including individuals from vulnerable populations such as PLWH, recent offenders and recidivists, or individuals with violent injury, trauma, mental illness and/or substance misuse. • Assess whether migration, contextual determinants, or community events relate to clinical care or social service utilization and clinical care outcomes among individuals including vulnerable populations such as PLWH, recent offenders and recidivists, or individuals with violent injury, trauma, mental illness and/or substance misuse. • Investigate healthcare and social service utilization and opportunities for intervention among women with an opioid use disorder and/or opioid use during pregnancy and their child(ren). • Identify school-, justice-, and clinically-based individual-level and social network factors associated with firearm violence perpetrator and violence outcomes among adolescents and young adults. • Map and describe area level social determinants of health and health outcomes (various use cases; Marion County). 		
Future Focus	<ul style="list-style-type: none"> • Expand collaboration with additional community stakeholders in Marion County and across Indiana. • Explore whether a broader use of data by community stakeholders might be acceptable outside of the scope of grant-funded research (in order to be even more responsive to community needs and for use by trainees and junior faculty who often do not have funding to compile and link data resources such as used by our team). 		
Talent Development	<ul style="list-style-type: none"> • Mentor and work with multiple doctoral, post-doc, and junior faculty members 		
Data Sharing Agreements	<p>Many agreements are in place, some of which are specific to individual grants:</p> <table border="0" data-bbox="367 1014 1479 1484"> <tr> <td data-bbox="367 1014 935 1484"> <ul style="list-style-type: none"> • Regenstrief Institute (INPC, IU Health EDW, Eskenazi Health WISH-P/Epic) • Marion County Public Health Department (eHARS, RISE, SWIMMS, Insight, IPHIS-DC, birth certificates, death certificates) • Indiana Department of Corrections • Marion County Sheriff's Office • Indianapolis Metropolitan Police Department and City of Lawrence Police Department • Marion County Courts, Juvenile Division and Indiana Supreme Court (QUEST) • 911 call data for Marion County </td> <td data-bbox="941 1014 1479 1484"> <ul style="list-style-type: none"> • Contextual data from Census and elsewhere that are publicly available • Indiana Medicaid • Indianapolis Emergency Medical Systems • Marion County Coroner • IU Health Trauma Registry • Shepherd Community Center (Indianapolis) • <i>Department of Education (in development)</i> • <i>Management Performance Hub and Indiana Family and Social Services Agency (in development)</i> • <i>Coalition for Homelessness Intervention & Prevention (in development)</i> </td> </tr> </table>	<ul style="list-style-type: none"> • Regenstrief Institute (INPC, IU Health EDW, Eskenazi Health WISH-P/Epic) • Marion County Public Health Department (eHARS, RISE, SWIMMS, Insight, IPHIS-DC, birth certificates, death certificates) • Indiana Department of Corrections • Marion County Sheriff's Office • Indianapolis Metropolitan Police Department and City of Lawrence Police Department • Marion County Courts, Juvenile Division and Indiana Supreme Court (QUEST) • 911 call data for Marion County 	<ul style="list-style-type: none"> • Contextual data from Census and elsewhere that are publicly available • Indiana Medicaid • Indianapolis Emergency Medical Systems • Marion County Coroner • IU Health Trauma Registry • Shepherd Community Center (Indianapolis) • <i>Department of Education (in development)</i> • <i>Management Performance Hub and Indiana Family and Social Services Agency (in development)</i> • <i>Coalition for Homelessness Intervention & Prevention (in development)</i>
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Programs/ Publications	<ul style="list-style-type: none"> • Regularly publish in peer-reviewed literature. Please see the following link for a paper describing our data-sharing partnership approach: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6108450/ 		

Indiana Health Information Exchange (IHIE)	
846 N. Senate Avenue, Indianapolis, IN 46202 200 W. Colfax Avenue, South Bend, IN 46601 www.ihie.org Contact: info@ihie.org Twitter: @IndianaHIE	Nonprofit



Role(s)	<ul style="list-style-type: none"> IHIE was founded as a not-for-profit organization in 2004 to support the Charter Hospital Systems (IU Health, Community Health Network, Health & Hospital Corp. of Marion County, St. Vincent Health, Franciscan Health); Healthcare Provider Associations (Indiana Hospital Assoc., Indiana State Medical Assoc., Indianapolis Medical Society); State and Local Public Health Agencies (Indiana State Dept. of Health, Marion Co. Public Health Dept.); and other key stakeholders such as Indiana University and Central Indiana Corp. Partnership, Inc. (BioCrossroads) IHIE enables hospitals, physicians, laboratories, payers, and other health service providers to avoid redundancy and deliver faster, more efficient, higher quality healthcare to patients in Indiana 		
Mission	<ul style="list-style-type: none"> Through information exchange, we improve health and healthcare. 		
History	<ul style="list-style-type: none"> 1994: Indiana Network for Patient Care (INPC), now the nation's largest interorganizational clinical data repository, was established by the Regenstrief Institute 2004: IHIE was founded by healthcare, business, and academic stakeholders with the charge to manage the INPC 2010: ONC awards IHIE \$16M Beacon grant 2015: IHIE joins Strategic Health Information Exchange Collaborative (SHIEC) as founding member 2020: IHIE and Michiana Health Information Network (MHIN) consolidate under IHIE's name to become Indiana's sole HIE 		
Org	<ul style="list-style-type: none"> 104 employees; 25 developers Founded in 2004 Organizational functions include: Business Development, Client Experience, Solution Engineering, Architecture, Analytics, Planning and Administration, Legal, Privacy and Compliance, and Finance and Accounting Leadership: John Kansky: President and Chief Executive Officer, Keith Kelley: Chief Operating Officer, Shaun Grannis: Chief Medical Information Officer, Jeff Good: Chief Financial Officer, Drew Richardson: VP, Business Development, Becky Learn: VP, Client Experience, Brian Lawson: VP, Solution Engineering, Laura Orcutt: VP, Planning & Administration, Kelly Hahaj: VP, Consolidation, Ammon Fillmore: General Counsel 		
Board	<p>IHIE's Board of Directors includes the following organizations:</p> <table border="0"> <tr> <td> <ul style="list-style-type: none"> Indiana University Health St. Vincent Health Franciscan Health Community Health Network Health & Hospital Corp (Eskenazi) Regenstrief Institute Indiana Hospital Association </td> <td> <ul style="list-style-type: none"> Indiana State Dept of Health Marion County Public Health Dept Indianapolis Medical Society IU School of Medicine Indiana State Medical Association BioCrossroads Anthem </td> </tr> </table>	<ul style="list-style-type: none"> Indiana University Health St. Vincent Health Franciscan Health Community Health Network Health & Hospital Corp (Eskenazi) Regenstrief Institute Indiana Hospital Association 	<ul style="list-style-type: none"> Indiana State Dept of Health Marion County Public Health Dept Indianapolis Medical Society IU School of Medicine Indiana State Medical Association BioCrossroads Anthem
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Finance	<ul style="list-style-type: none"> \$16M annually 		
Data Source	<p>Data sources include hospitals, Accountable Care Organizations (ACOs), laboratories and imaging centers, payers, ambulatory practices (Federally Qualified Health Centers, Community Health Centers, clinics, physicians, etc.), government agencies, and employers. A list of our participants can be found here: https://www.ihie.org/participant-list/</p> <p>The following list provides a breakdown of IHIE's INPC data.</p>		

	<p>Observations & Results</p> <ul style="list-style-type: none"> • Pathology Reports • Admission Notes • Discharge Summary • Visit Note • Radiology Report • Nuclear Med. Report • Operative Report • Vitals • Chemistry Studies • Hematology Studies • Urine Studies • Microbiology Studies • Serology Studies • Chromosome & Molecular Pathology • TDM & Toxicology Studies • Surgical Pathology & Cytology • Cardiology Studies • Gastroenterology Studies • Neurology Studies • Pulmonary Studies • Radiology & Nuclear Medicine • Encounter Data • Psychiatric Data • OB/GYN/Perinatal • Eye & Ear Studies • Preventive Care • Provider Notes • Questionnaires • Associated Data: Medical Orders, Binary Documents 	<p>Encounters</p> <ul style="list-style-type: none"> • Obstetrics • Recurring • Outpatient • ER • Observation • Ambulatory • Pre-admit • Series (Unlimited) • Series (Limited) • Inpatient • Doctor Referral • Associated Data: • Diagnoses • Procedures • Charges • Insurance • Participating Providers • Medical Orders <p>Pharmacy Orders</p> <ul style="list-style-type: none"> • Placed Orders • Filled Orders • Associated Data: • Medical Orders
<p>Data Access</p>	<ul style="list-style-type: none"> • IHIE has formal systems for managing data access within rules set by data contributors, agreements, and applicable laws. To access data, the requesting entity must sign an INPC subscription agreement that describes the terms and conditions of participation and membership. IHIE's products are organized into two suites: OneCare, which offers solutions to improve the health of the individual patient; and PopCare, which provides insight into population health. Member organizations may access IHIE's CareWeb application (OneCare) to view longitudinal data on one patient or request a CCD to electronically collect data on one patient. To access data on a population of patients, IHIE offers population health products and services such as its Clinical Value Report (PopCare), a customized report that assists organizations in care management for specific populations and quality metric efforts. More information on IHIE's products and services can be found here: https://www.ihie.org/products-overview/. • Participants in the INPC can access INPC data for use cases within the following permitted purposes: Treatment, Payment, Healthcare Operations, Public Health, and Research. Most organizations access and use INPC data via various services offered by IHIE. Data requests for research are managed by the Regenstrief Institute. Data access rules are governed by the INPC Management Committee, which is comprised of representatives of INPC participating organizations, IHIE, and Regenstrief Institute. The INPC Management Committee has the authority to approve new use cases and access rules. 	

Tech Capabilities	<p>The following are the primary systems that we operate for managing data:</p> <ul style="list-style-type: none"> • Repository Management: Clinical data management systems for normalizing, storing, and retrieving data from discrete and document repositories • Patient Matching: Systems for matching patients across all data sources to support extracting data through the governance system • Master Data Management: Systems for managing code set lists, demographics mappings, provider lists, and other data from outside the organization • Data Quality: Processes and systems for classifying incoming data quality and perform repairs where needed
Projects	<ul style="list-style-type: none"> • CareWeb: A secure and robust application that displays billions of data elements from the clinical data repository, the Indiana Network for Patient Care (INPC). It includes Single Sign On capability and a search feature to help users find specific data, including locating terms within free text and PDFs. • Patient Centered Data Home (PCDH): SHIEC's PCDH is a national initiative that enables HIEs to exchange patient data across state lines and across health systems, improving the patient experience by making their health information available whenever and wherever their care occurs. IHIE serves as one of five regional gateway connections through which bidirectional ADTs and CCDs flow. • Multi-Condition FHIR Application: In 2017, IHIE completed a collaborative project with Regenstrief Institute and IU Health to create a FHIR exchange for a list of the most common ER complaints. The product integrates with hospital EHRs to return clinically relevant information to ER physicians who do not have time to search for data in an outside application. • Other IHIE products, including Population Health products, can be found here: https://www.ihie.org/products-overview/
Future Focus	<p>In addition to continuing to offer new and enhanced products and services to our state and regional customers, IHIE is well educated in new and upcoming national interoperability approaches that will impact the health IT industry and IHIE customers. Examples include, but are not limited to:</p> <ul style="list-style-type: none"> • ONC's Information Blocking Rule: released in March 2020, effective in early 2021; purpose is to make sure patient's information is not withheld when it is supposed to be shared • ONC's Trusted Exchange Framework and Common Agreement (TEFCA): anticipated release is early 2021; hospitals, HIEs, health plans, etc. must decide whether to participate; purpose is to enable nationwide exchange of electronic health information across disparate health information networks
Talent Development	<ul style="list-style-type: none"> • No direct training/education programs • IHIE does host several fellows, interns, and/or externs each year
Data Sharing Agreements	<p>IHIE maintains data sharing agreements with all INPC members and business associates. Our data sharing agreements are governed by the INPC Management Committee.</p>
Programs/ Publications	<p>Not applicable</p>

The Polis Center at IUPUI (Polis)	
535 W. Michigan St, Indianapolis, IN 46202 polis.iupui.edu Contact: polis@iupui.edu Twitter: @polisiupui, @SAVlonline	University applied research center



Role(s)	<ul style="list-style-type: none"> The Polis Center at IUPUI (Polis) collaborates with the public health, healthcare, social service, government, and academic sectors to enhance the use of place-based information for the improvement of health and resiliency in Indiana and beyond. We build local capacity to understand and address population health and its social and environmental determinants through community research, collaboration, and application of advanced information technologies.
Mission	<ul style="list-style-type: none"> Polis works with its partners to define, measure, and actively improve community health, wellbeing, and resiliency.
History	<ul style="list-style-type: none"> 1989: Established by IUPUI as soft-funded center to link academic and community expertise 1994: <ul style="list-style-type: none"> Published The Encyclopedia of Indianapolis (polis.iupui.edu/encyclopedia-of-indianapolis/), providing a comprehensive social, cultural, economic, historical, political, and physical description of Indianapolis Began development of the Social Assets and Vulnerabilities Indicators (SAVI) database project under auspices of United Way of Central Indiana/Community Service Council 1996: Published first version of SAVI Community Information System (savi.org), which went online in 1998 2008: Established IUPUI Signature Center for Health Geographics 2010: Developed geocoded web service for Indiana Network for Patient Care with Regenstrief Institute, as part of CDC-funded Indiana Center of Excellence in Public Health Informatics 2012: Began partnering with hospital systems on community health needs assessments 2016: Published IndyVitals (indyvitals.org/) in partnership with the Greater Indianapolis Progress Committee and City of Indianapolis 2018: Helped establish Indiana Data Partnership (in.gov/idp) with MPH and IU 2019: Commenced work on Digital Encyclopedia of Indianapolis (polis.iupui.edu/about/community-culture/the-digital-encyclopedia-of-indianapolis/), to be published in 2021 for Indianapolis bicentennial. July 2020: Joined the IUPUI School of Informatics and Computing to extend our collaborative, community-based work via informatics-enhanced solutions.
Org	<ul style="list-style-type: none"> Polis has 24 full time staff including research analysts, GIS analysts, data scientists, developers, and project managers, plus part-time staff and graduate assistants Leadership: <ul style="list-style-type: none"> David Bodenhamer - Executive Director Sharon Kandris - Associate Director Karen Comer - Director, Community Health Informatics and Collaborative Research Jim Sparks - Director, Geoinformatics Neil Devadasan - Lead System Engineer Kevin Mickey - Director, Professional Development
Board	<ul style="list-style-type: none"> Formal board is not required. Polis maintains advisory committees for major projects including SAVI, State of Aging in Central Indiana Report (SoAR), and Digital Encyclopedia of Indianapolis (DEOI).
Finance	<ul style="list-style-type: none"> Supported by grants and contracts, with an annual budget of \$3 million.

<p>Data Sources</p>	<ul style="list-style-type: none"> Polis uses data from a large number and variety of national, state, and local sources as listed below, including over 40 data sources for SAVI (savi.org/support-training/data-sources/). In addition to the numerous datasets that Polis makes readily available via SAVI and its other public websites (see Data Access), Polis collects and maintains a wealth of data “behind the scenes” for the research and analysis work of Polis and its public, non-profit and private sector partners. When feasible, Polis collects location attributes at the smallest geographic scale available in support of mapping and spatial analysis. The best way to learn whether Polis has data to support a particular research question or application is to contact Polis and speak to one of our directors or senior data analysts. <p>National Sources</p> <ul style="list-style-type: none"> US Census Bureau, US Department of Housing and Urban Development (HUD), Agency for Health Research and Quality (AHRQ), US Department of Justice (DOJ), National Housing Preservation Database, US Bureau of Labor Statistics, Centers for Disease Control and Prevention (CDC), Federal Financial Institution Examination Council (FFIEC), Federal Deposit Insurance Corporation (FDIC), US Environmental Protection Agency (EPA), Atmospheric Composition Analysis Group, Federal Emergency Management Agency (FEMA), Pew Research Center, US Department of Homeland Security (DHS), National Archive of Criminal Justice Data (NACJD) at ICPSR, US Department of Agriculture (USDA), Administrative Office of the US Courts, National Archive of Criminal Justice Data, International Trade Administration, Urban Institute, University of Wisconsin, United Way, WalkScore.com <p>State Sources</p> <ul style="list-style-type: none"> Indiana State Management Performance Hub (MPH), Indiana Department of Local Government Finance (IDLGF), Indiana State Department of Education (DOE), Indiana State Department of Health (ISDH), Indiana State Library, Indiana Family and Social Services Administration (FSSA), Indiana Department of Natural Resources (DNR), Indiana State Police, IN 211, Indiana Commission for Higher Education, Indiana Youth Institute, Indiana Business Research Center, Indiana Department of Workforce Development, Indiana Supreme Court <p>Local Sources</p> <ul style="list-style-type: none"> Indianapolis Department of Public Works, Marion County Public Health Department, indy.gov, Marion County Juvenile Division, United Way of Central Indiana, United Way of Madison County, Shelby County United Fund, United Way of Johnson County, Keep Indianapolis Beautiful, Indianapolis Public Library, Marion County Treasurer’s Office, IU Public Policy Institute, IndyGo, Indianapolis Center for Congregations, Encyclopedia of Indianapolis, Indianapolis Metropolitan Police Department, Lawrence Police Department, Beech Grove Police Department, Marion County Superior Court, Marion County Prosecutor’s Office, The Julian Center, Domestic Violence Network, Indianapolis Neighborhood Housing Partnership, Metropolitan Indianapolis Board of Realtors, Regenstrief Institute
<p>Data Access</p>	<ul style="list-style-type: none"> The SAVI Community Information System provides comprehensive, neighborhood level data for community assessments and asset mapping, clinical and public health research on social determinants of health (SDOH), grant writing, strategic planning, and community planning. (www.savi.org) The Domestic Violence Dashboard provides information about the extent and context of domestic violence in Indianapolis and the populations affected. (https://indydvdata.org/) The Digital Atlas of American Religion provides access to resources for the study and teaching of American religious history within a geographical and multimedia framework. (religionatlas.org) IndyVitals measures the long-term impact of Indianapolis Plan 2020 at the neighborhood level. It helps planners and policymakers ensure that neighborhoods of all types are improving by making comparative neighborhood-level data transparent. (indyvitals.org) The Indiana United Ways Community Report Card provides a quick snapshot of how Indiana communities are doing in the areas of health, education, and income. Users can view 35 indicators to learn: if a community has gotten better or worse over time and how it compares to the state's trend. (indianaimpact.org) In addition to our publicly available datasets, we design datasets to meet research and community partners’ specific needs. Contact: polis@iupui.edu or (317) 274-2455.

<p>Tech Capabilities</p>	<ul style="list-style-type: none"> Polis curates community data, spatially-enables and integrates clinical data, generates descriptive and inferential statistics, builds spatial information infrastructure, and develops information systems and decision support tools. Core technology capabilities include: Geo-spatial data warehousing, geo-referencing and geo-processing Data linkage and integration Data visualization and dissemination in the World Wide Web System integration, software development, and management Development of tools for community health planning, population health management, and patient-centered decision support (polis.iupui.edu/wp-content/uploads/2019/10/health-geo-small-flap-Brochure-update.pdf) 		
<p>Projects</p>	<ul style="list-style-type: none"> In partnership with the Central Indiana Senior Fund (CISF), Polis is developing the State of Aging in Central Indiana Report to provide sustainable, online access to information needed for programming, funding, and policymaking to ensure Central Indiana seniors have equal opportunity for a healthy, dignified, and enjoyable life. In collaboration with the IU School of Medicine, IU School of Science, and Indiana Poison Control Center, Polis is creating an online dashboard for the Chemical Surveillance System for the Synthetic Drug Crisis to allow clinicians, researchers, public safety professionals, and policymakers to monitor the drug compounds causing emergency department overdose visits. Other key community health initiatives: polis.iupui.edu/wp-content/uploads/2019/10/health-geoinformatics-flyer-FINAL.pdf 		
<p>Future Focus</p>	<ul style="list-style-type: none"> Predictive modeling and advanced spatial analysis of health outcomes and risk factors Expanded development of information for small scale geographies Advanced data visualization and computational analysis using artificial intelligence Expansion of community research infrastructure 		
<p>Talent Development</p>	<ul style="list-style-type: none"> Train individuals and organizations to access and use place-based information to better understand their communities and social and environmental determinants of health, wellbeing, and resiliency Consult on the development and use of evidence-based methods for assessing the needs of individuals, organizations, and communities (polis.iupui.edu/wp-content/uploads/2019/10/CHNA-brochure-FINAL.pdf) Host multiple interns and research assistants each year SAVI Data Literacy Training (www.savi.org/support-training/savi-training/) 		
<p>Data Sharing Agreements</p>	<p>Many agreements in place; however, they are use case specific</p> <table border="0" data-bbox="358 1314 1487 1686"> <tr> <td data-bbox="358 1314 938 1686"> <ul style="list-style-type: none"> Regenstrief Institute IN Management Performance Hub Indiana State Department of Health Indiana 211 Marion County Public Health Department Indiana Department of Education Indiana Supreme Court Indianapolis Metropolitan Police Department Marion County Prosecutor's Office </td> <td data-bbox="938 1314 1487 1686"> <ul style="list-style-type: none"> Lawrence Police Department Beech Grove Police Department Marion County Superior Court The Julian Center Domestic Violence Network Center for Congregations Indianapolis Public Library ...dozens of additional one-to-one relationships </td> </tr> </table>	<ul style="list-style-type: none"> Regenstrief Institute IN Management Performance Hub Indiana State Department of Health Indiana 211 Marion County Public Health Department Indiana Department of Education Indiana Supreme Court Indianapolis Metropolitan Police Department Marion County Prosecutor's Office 	<ul style="list-style-type: none"> Lawrence Police Department Beech Grove Police Department Marion County Superior Court The Julian Center Domestic Violence Network Center for Congregations Indianapolis Public Library ...dozens of additional one-to-one relationships
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<p>Programs/ Publications</p>	<ul style="list-style-type: none"> The Polis annual report and other Polis publications may be found here: polis.iupui.edu/resources/reports/ SAVI Talks: Data-informed public conversations about pressing issues in our community: www.savi.org/savi-talks/ Community-friendly reports on topics such as poverty, education, equity, crime and safety, and health: www.savi.org/reports/ 		

Regenstrief Center for Healthcare Engineering (RCHE)	
203 S. Martin Jischke Drive, West Lafayette, IN 47907 www.purdue.edu/discoverypark/rche/ Contact: Mohammad Adibuzzaman @ madibuzz@purdue.edu Twitter: @PURDUE_RCHE	Education and Research

RCHE

Role(s)	<ul style="list-style-type: none"> Located in Discovery Park at Purdue University, the Regenstrief Center for Healthcare Engineering (RCHE) brings together researchers and practitioners from multiple disciplines to collaboratively improve healthcare delivery and empower individuals to live their highest quality of life. Purdue Healthcare Advisors (PHA) serves as the not for profit outreach arm for RCHE with service lines in process improvement, quality services, and health IT security. https://pha.purdue.edu/ RCHE performs research in three strategic areas: i) developing data science-based approaches to personalized care, ii) using a systems approach to matching health resources to need, and iii) improving access to care for vulnerable populations
Mission	<ul style="list-style-type: none"> RCHE pursues a proactive, patient-centered, and wellness-focused healthcare delivery system by conducting impactful research that leverages collaborative partnerships.
History	<ul style="list-style-type: none"> 2005 – Created as a center in Purdue’s Discovery Park based on funding from the Regenstrief Foundation 2015 – Purdue Healthcare Advisors (PHA) becomes part of RCHE 2017 – Renewed with commensurate funding from the Regenstrief Foundation
Org	<ul style="list-style-type: none"> Staff of 11 managers, research scientists, and IT specialists at RCHE Staff of 34 across the three service lines at PHA Group of 53 Faculty and Clinical Affiliates (across all colleges at Purdue) Leadership: <ul style="list-style-type: none"> Randy Hountz: PHA Director (rhountz@purdue.edu) Maralee Hayworth: RCHE Managing Director (mhaywort@purdue.edu) Mohammad (Adib) Adibuzzaman: RCHE Director of Data and Computing (madibuzz@purdue.edu)
Board	<p>RCHE sustains an advisory board which includes the following individuals (https://www.purdue.edu/discoverypark/rche/people/advisory-board.php):</p> <ul style="list-style-type: none"> D. Craig Brater, MD Joanne Burns, RN Robert Dittus, MD, MPH Steve Dumbauld, MD Al Gatmaitan, DSc Jennifer Sullivan, MD, MPH Tim Vanderveen, PharmD
Finance	<ul style="list-style-type: none"> Annual support from the Regenstrief Foundation Funding of \$14M to \$20M annually from a variety of sources including AHRQ, CMS, FFSA, HHS, NIH, and NSF
Data Source	<ul style="list-style-type: none"> National data includes Cerner Health Facts, which is made up of the electronic health records of approximately 70M patients for a 15-year period and Intensive Care Unit data base from Beth Israel Deaconess Medical Center, MIMIC III (including matched waveform data) Several sources from the state of Indiana including Medicaid claims, Minimum Data Set (MDS), and Purdue claims data. REMED1 data includes medical device data from over 400 hospitals in 32 states. Other specific data sources from a variety of providers for specific research questions.

Data Access	<ul style="list-style-type: none"> Data goes through a process including a data sharing agreement and security review. The formal process documented at https://www.purdue.edu/discoverypark/rche/resources/hipaa.php
Tech Capabilities	<ul style="list-style-type: none"> Ability to de-identify data and store in HIPAA compliant environment. External entities can share PHI to RCHE and have access to computational environment. IT support staff can help researchers design and perform analysis
Projects	<ul style="list-style-type: none"> Opioids – Data linked at the individual level for researchers that are part of the IRB. Long Term Care – Medicaid and MDS data used to help reduce Medicaid costs and improve care coordination. Access to individuals added to the IRB Artificial Intelligence Methods – Broad computer science and engineering skillset to construct artificial intelligence and machine learning methods on retrospective data.
Future Focus	Opportunity to demonstrate linkage of State Social Determinants of Health (SDoH) data (Education/Workforce) with clinical data to drive population health research and improve outcome
Talent Development	<ul style="list-style-type: none"> PHA offers various training programs RCHE does host multiple interns and fellows every year
Data Sharing Agreements	<p>Many agreements in place; however, they are use case specific</p> <ul style="list-style-type: none"> Geisinger Health St. Vincent Heath IU Health MIT IU School of Medicine Northwestern School of Medicine ...dozens of additional one-to-one relationships
Programs/ Publications	<p>Annual reports: https://www.purdue.edu/discoverypark/rche/</p> <p>Newsletters: https://www.purdue.edu/research/life-sciences/news/newsletter-archive.php</p>

Regenstrief Institute	
1101 W 10th St, Indianapolis, IN 46202 Regenstrief.org Contact: Joyce Hertko @ jhertko@regenstrief.org Twitter: @Regenstrief	Nonprofit Research



Role(s)	<ul style="list-style-type: none"> Regenstrief Institute, through Its advanced Informatics and data capabilities/services, drives innovation in healthcare, accelerates clinical translational research and enables learning health systems and development of real-world evidence to improve health.
Mission	<ul style="list-style-type: none"> Founded in 1969 in Indianapolis, the Regenstrief Institute is a local, national, and global leader dedicated to a world where better information empowers people to end disease and realize true health.
History	<ul style="list-style-type: none"> The Regenstrief Institute was established by Sam and Myrtie Regenstrief and the Regenstrief Foundation to improve quality of care, increase efficiency of healthcare delivery, prevent medical errors, and enhance patient safety. The Institute, a key research partner to Indiana University, and its researchers are responsible for a growing number of major healthcare innovations and studies. Milestones include the development of global health information technology standards that enable the use and interoperability of electronic health records, improvement of patient-physician communications and creation of models of care that inform practice and improve the lives of patients around the globe.
Org	<ul style="list-style-type: none"> As of May 2020: 62 Investigators, 90 Affiliate Researchers and 175 Staff Members including Research Specialists, Data Analysts, Informaticians, System and Technical Engineers, and Project Managers Senior Leaders: <ul style="list-style-type: none"> Peter Embi, MD, MS, President and CEO Umberto Tachinardi, MD, Chief Information Officer Aaron Carroll, MD, VP Faculty Development Eneida Mendonca, MD, PhD, VP Research and Interim Director, Center for Biomedical Informatics Shaun Grannis, MD, MS, VP Data and Analytics Susan Hickman, PhD, Director, Center for Aging Research David Haggstrom, MD, MAS, Interim Director, Center for Health Services Research Todd Saxton, PhD, VP Business Development Thane Peterson, COO, VP Finance and Administration Joyce Hertko, PhD, Chief of Staff
Board	<ul style="list-style-type: none"> The Institute's Board of Directors has 11 members total; 3 appointed by the Regenstrief Foundation; 6 appointed by the IU School of Medicine; 2 appointed jointly. Current directors represent the Regenstrief Foundation, IU School of Medicine, IU Health, Eskenazi Health, Fairbanks Foundation, Indiana Health Information Exchange, and Indiana Family and Social Services Administration (FSSA).
Finance	<p>Key funding sources:</p> <ul style="list-style-type: none"> External Grants/Contracts - \$15.1M Regenstrief Foundation - \$3.5M Licensing - \$500K IU School of Medicine - \$500K

Data Source	<ul style="list-style-type: none"> • Indiana Network Patient Care for Research (INPCR) • Electronic Health Record Systems (EHR) data for IU Health and Eskenazi Health • Various health/healthcare and non-traditional data (e.g. claims, cancer registries, social determinants of health) • Research Networks - Patient Centered Outcomes Research Network (PCORnet), Accrual to Clinical Trials (ACT), Open Health Data Sciences and Informatics Collaborative (OHDSI)
Data Access	<ul style="list-style-type: none"> • Regenstrief Data Services is the mechanism for accessing data sources listed above. Services include feasibility requests, custom data sets and data integration. • Access request forms can be found: https://www.regenstrief.org/feasibility-request/ and https://www.regenstrief.org/data-request/ • Regenstrief Institute is the Honest Broker for INPCR and EHR data from Eskenazi Health and IU Health. Its team of analysts is able to extract data from those sources and deliver to researchers following appropriate compliance for privacy and bioethics.
Tech Capabilities	<ul style="list-style-type: none"> • Database, Data Lake, Security and Privacy (e.g. HIPAA, OMOP, i2b2, Hadoop/Spark, REDCap) • Software development methods and tools (e.g. Agile, Python, R) • Healthcare standards (e.g. LOINC, FHIR/HL7) • Data synthetization, patient matching and de-identification processes • Data integration, augmentation, and harmonization (e.g. linkage, de-duplication, data cleansing, natural language processing) • Analytics and bioinformatics (e.g., genomics, machine learning, artificial intelligence, biostatistics)
Projects	<ul style="list-style-type: none"> • COVID-19 Data Sharing Collaboration - Indiana State Department of Health (ISDH), FSSA, Indiana Management Performance Hub (MPH), IHIE, IU School of Medicine, IU Richard M. Fairbanks School of Public Health at IUPUI • LOINC and Health Data Standards (universal codes to identify and track lab results related to COVID-19) - US Centers for Disease Control and Prevention • Indiana Addictions Data Commons (IADC) - IHIE, the Polis Center, MPH • Precision Health Initiative (PHI) - Indiana University • Informatics core leadership and support for the CTSI • Optimizing Patient Transfers, Impacting Medical Quality, and Improving Symptoms: Transforming Institutional Care (OPTIMISTIC) - IU School of Medicine, IU School of Nursing, ISDH • Learning Health Systems - IU Health • Global Health Initiative - OpenMRS, OpenHIE
Future Focus	<ul style="list-style-type: none"> • Regenstrief Institute is poised to fundamentally change the way we combat today's healthcare issues. We have experienced a productive and rich history of significant research accomplishments contributing a great deal to the fields of informatics, aging and health services research. Future directions include further advances in AI, data science, implementation science, enabling real-world evidence generation, and the creation of learning health systems.
Talent Development	<ul style="list-style-type: none"> • Support of IU School of Medicine and Indiana University graduate programs in data sciences, analytics, and informatics • Training in LOINC and Health Data Standards • Internships for high school and post-secondary students
Data Sharing Agreements	<ul style="list-style-type: none"> • See Data Sources above

Programs/ Publications

- Artificial Intelligence: Applying Research and Engineering Solutions for Emergent Needs in Healthcare Conference
- Social Determinants of Health Conference
- Regenstrief Entrepreneurial Ecosystem Forum
- Informatics Programs for Public Health, Global Health, Dental Health, and Cancer
- Over 300 publications annually with Regenstrief Institute Authors (i.e., 333 from July 1, 2018-June 30, 2019)
- 2018-2019 Annual Report: <https://www.regenstrief.org/annual-report-18-19/>
- The Problem, a podcast from Regenstrief Institute: <https://theproblem.regenstrief.org/>

hc1	
6100 Technology Center Drive Indianapolis, IN 46278 hc1.com Contact: info@hc1.com Twitter: @hc1dotcom	For-profit



Role(s)	<ul style="list-style-type: none"> hc1 is a bioinformatics leader in precision testing and prescribing. hc1 enables healthcare providers to deliver personalized healthcare to every patient, efficiently and profitably, at scale, by identifying bioinformatics signals within vast data sets in real-time. hc1 drives action for patients to get precise diagnostic tests and prescription regimens needed to improve outcomes while lowering costs. Who hc1 serves: Diagnostic laboratories, health systems, health plans, and employers
Mission	<ul style="list-style-type: none"> Vision: Improving Lives with High-Value Care® Mission: Right Patient. Right Test. Right Prescription®
History	<ul style="list-style-type: none"> 2011: hc1 is founded with the belief that transforming lab data into personalized healthcare insights at scale could bring precision medicine to all patients. 2013: Sonic Healthcare, the largest international lab and third-largest commercial lab in the US, adopts hc1 CRM™ to power its US division, driving hc1 platform and development process improvements. 2016: Amazon Web Services certifies hc1 as an APN Advanced Technology Partner with AWS Healthcare Competency Status. 2017: Based on client feedback, KLAS Research rates hc1 CRM™ as the highest-scoring Healthcare CRM platform. 2017: The hc1 Opioid Dashboard delivers national insights aimed at decreasing opioid abuse. 2019: hc1 purchases assets of GeneAlign, LLC to accelerate the development of precision prescribing solutions. 2019: Quest Diagnostics, the largest provider of lab testing in the US, partners with hc1 to offer Quest® Lab Stewardship™ to optimize laboratory test utilization. 2020: In response to the COVID-19 pandemic, hc1 builds the free public health CV19 Lab Testing Dashboard™ to show the prevalence of SARS-CoV-2 in communities nationwide and hc1 Workforce Advisor™ to support safe return-to-work programs.
Org	<ul style="list-style-type: none"> 62 full-time team members in Indiana, 10 full-time team members in other states, and 20+ contractors (67% engineering and technical services). Plus, more than 200 quota-carrying sales representatives dedicated to marketing and selling hc1's solutions via distribution partners. Leadership: Brad Bostic, Founder, Chairman, and CEO, Chris Brown, COO, Charlie Clarke, SVP Technology, Michael Braverman, SVP Service Delivery
Board	<ul style="list-style-type: none"> Brad Bostic, Chairman, John Baker, Dr. John Mills, & Mark Shary
Finance	<ul style="list-style-type: none"> Approximate Institutional Equity Funding Raised To-Date: ~\$44M Key Funding Sources: Health Cloud Capital, NWS Holdings, Elevate Ventures
Data Source	<ul style="list-style-type: none"> Live, transactional integrations to over 20,000 health system and independent lab testing locations nationally. Massively Parallel Processing (MPP) cloud data lake of over 20 billion diagnostic results, increasing by >500M results per month, which are organized into a rich health matrix and enriched via hc1 machine learning (ML) models 160 Million unique patient profiles with longitudinal lab testing records
Data Access	<ul style="list-style-type: none"> The hc1 Connect® integration engine can ingest data from EMRs, LIS, and other systems via any data format and protocol. Most integrations are via live HL7 feeds or real-time APIs. File-based integrations are used in less sophisticated client settings.

Tech Capabilities	<ul style="list-style-type: none"> • Software architecture takes full advantage of AWS HIPAA-compliant offerings, providing a secure, scalable, and performant environment for enterprise workloads. • hc1 Connect® combined with the data refinery can ingest, normalize, and organize live data from disparate sources and feed it into user-friendly analytics and services. • The hc1 platform can be modified to meet differing organizational needs, such as authentication, automation, user interface customization, and notification.
Projects	<ul style="list-style-type: none"> • hc1 CRM™ combines clinical and business data in a HIPAA-compliant environment to provide analytics to manage client, provider, and patient relationships. • hc1 Test Utilization™ analyzes test orders for adherence to clinical guidelines to reduce clinical variation in testing, which in turn reduces costs and improves patient outcomes. • hc1 PGx Advisor® combines medication therapy management, pharmacogenomics, clinical lab data, and patient engagement and monitoring to help ensure patients are taking effective medication and eliminate unnecessary prescription costs.
Future Focus	<ul style="list-style-type: none"> • Strengthening bioinformatics solutions that support precision prescribing, safe workplaces via systematic testing programs, and information services to accelerate clinical research and trials.
Talent Development	<ul style="list-style-type: none"> • N/A
Data Sharing Agreements	<ul style="list-style-type: none"> • Standard client agreements enable aggregation of normalized, enriched, de-identified, longitudinal data to power insights for benchmarking, local risk analysis, and research. • Appriss Health agreement to integrate with their live PDMP data to deliver hc1 Opioid Advisor®, which compares toxicology drug test results to prescription data to ensure patients are complying with safe medication programs.
Programs/ Publications	<ul style="list-style-type: none"> • hc1-led coalition links more than 20K lab testing locations to deliver the CV19 Lab Testing Dashboard™ (cv19dashboard.org) for free to healthcare organizations. It includes the real-time Local Risk Index™, a hyperlocal measurement of COVID-19 infection exposure risk across more than 90% of all US counties.

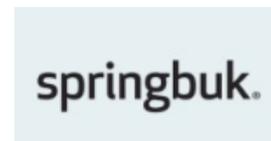
LifeOmic	
Emerging Technology Center, 351, W 10th St, Indianapolis, IN 46202 www.lifeomic.com Contact: info@lifeomic.com Twitter: @LifeOmic	Private, For-profit



Role(s)	<ul style="list-style-type: none"> LifeOmic was founded in late 2016 by Indianapolis based, serial entrepreneur Dr. Don Brown to realize the promise of precision health. First customer was Indiana University School of Medicine. Started by providing the informatics platform supporting the statewide Precision Health Initiative. Grown to support many organizations both inside and outside of Indiana.
Mission	<ul style="list-style-type: none"> To activate the promise of precision health by leveraging cloud and mobile technologies to help people live longer and healthier. Serve a broad range of customers from the largest healthcare providers and academic research institutions to consumers.
History	<ul style="list-style-type: none"> Founded in late 2016 by Dr. Don Brown and several other key leaders from his prior company, Interactive Intelligence. September 2017, announced our collaboration with Indiana University and the Regenstrief Institute on a broad intellectual property agreement in exchange for a minority equity stake in LifeOmic. November 2017, publicly disclosed that our Precision Health Cloud was the bioinformatics platform supporting the Indiana Precision Health Initiative – an initiative to cure two types of cancer as well as preventing a pediatric cancer, Alzheimer’s disease and diabetes. May 2018, launched first consumer mobile application after identifying that a patient facing tentacle was critical to fulfill the promise of precision health. September 2018, launched our consumer health content site, LIFE Apps and JupiterOne, a productized version of the security automation and operations framework developed to secure our Precision Health Cloud platform. December 2018, announced 100,000 downloads of our first mobile application. July 2019, launched second mobile app in partnership with the All IN initiative supported by the Clinical Translational Sciences Institute (CTSI), a collaboration between Indiana University, Purdue and Notre Dame. All IN’s goal is to improve health literacy and outcome for all Indiana residents. August 2019, selected by Fast Company as one of the top 50 workplaces for innovators. October 2019, announced 1 million downloads of our mobile apps. November 2019, named by Outside Magazine as one of the top 50 workplaces. April 2020, announced 2 million downloads of our mobile apps. June 2020, named by ClinicalOMICs as one of the Precision Medicine Companies Making Their Mark in 2020.
Org	<ul style="list-style-type: none"> 95 employees. >80% in engineering, science, bioinformatics or technical roles. Leadership: <ul style="list-style-type: none"> Dr. Don Brown: Chief Executive Officer, Founder Jeff Swartz: Chief Operating Officer, Co-Founder Tom Barber: Chief Science Officer Jesse Kinser: Chief Information Security Officer Justin Helmig: Chief Marketing Officer Ed Simcox: Chief Strategy Officer
Board	<ul style="list-style-type: none"> No Board of Directors. Advisory board consists of leaders from medical, science and healthcare IT
Finance	<ul style="list-style-type: none"> Self-Funded

Data Source	<ul style="list-style-type: none"> Precision Health Cloud is a data aggregation and analytics platform. Customers bring, and maintain ownership, of their own data assets.
Data Access	<ul style="list-style-type: none"> Precision Health Cloud is an open API platform. Data is accessible via standards-based APIs including comprehensive support for FHIR (Fast Healthcare Interoperability Resources) and GA4GH (Global Alliance for Genomics and Health) genomics APIs.
Tech Capabilities	<ul style="list-style-type: none"> Core team of cloud software developers at LifeOmic built real-time, secure, globally distributed cloud platform on Amazon Web Services. Has both an extremely scalable, secure cloud platform for multimodal analysis and over 2 million consumer app users.
Projects	<ul style="list-style-type: none"> Supporting the Indiana Precision Health Initiative which has made incredible strides in precision health treatments. The All IN initiative has thousands of users in the state. Collaborated on several content pieces that address critical health issues like vaping & COVID-19 Recently started a project with Community Health to streamline the evaluation of electrophysiology patients by combining information from the implanted device's home monitoring server, patient reported outcomes via the mobile app and clinical data. Developed several Lifeology courses to educate these patients
Future Focus	<ul style="list-style-type: none"> Continuing to aggressively invest in R&D to enrich product portfolio. Recently launched SkillSpring, an application to connect healthcare providers, coaches, etc. with patients. Currently launching a health literacy platform called Lifeology and have received tens-of-thousands of views for the first 'courses' Actively working on a corporate wellness solution based on our Precision Health Cloud platform and the LIFE Extend mobile application. Started development on a personal wellness solution to help people improve their healthspans
Talent Development	<ul style="list-style-type: none"> Continued education and learnings for the LifeOmic team, including topics like genomics, epigenetics, stress, etc.
Data Sharing Agreements	<ul style="list-style-type: none"> LifeOmic customers provide their own data. We provide the storage and analysis, tooling, and the ability to securely share data between organizations as well as managing informed consent, enrollment and revocation.
Programs/ Publications	<ul style="list-style-type: none"> Host many meetups around technology topics (e.g. machine learning, devops)

Springbuk	
525 S Meridian St #1b, Indianapolis, IN 46225 www.springbuk.com Contact: info@springbuk.com Twitter: @SpringbukHealth	For-profit



Role(s)	<ul style="list-style-type: none"> • Provide employers with population health analytics and intelligence that reduces cost and improves health of their population • Work with employers, insurance brokers/advisors, onsite clinics, wellness vendors, disease management companies, insurance carriers, TPAs etc. • Springbuk is a Health Intelligence platform that delivers intelligent actionable strategies, backed by data, empowering employers and consultants to make smarter health management decisions.
Mission	<ul style="list-style-type: none"> • Vision – to prevent disease with data
History	<ul style="list-style-type: none"> • Formation of Healthiest Employers LLC and Healthiest Employers Program
Org	<ul style="list-style-type: none"> • 110 employees - 50% of the organization are focused on sales, marketing, and customer service. 40% of the organization are focused on product development, technology development, data science, and subject matter experts. 10% of the organization are focused on general and administrative activities.
Board	<ul style="list-style-type: none"> • Rod Reasen, Springbuk (Chairman) • Phil Daniels, Springbuk • Randy Scott, Healthquest Capital • Kurt Sheline, Echo Health Ventures • Brian Hopcraft, Lewis & Clark Ventures • Kristi Savacool, Independent Director
Finance	<ul style="list-style-type: none"> • Raised \$45M in capital from institutional, angel, and individual investors
Data Source	<ul style="list-style-type: none"> • Employer health benefits and clinical data • Data given from insurance carriers, TPAs, wellness vendors, disease management companies, ancillary benefits, vision, dental, etc.
Data Access	<ul style="list-style-type: none"> • Springbuk’s data pipeline and health intelligence engine support the receipt, normalization, quality, and enrichment of all data
Tech Capabilities	<ul style="list-style-type: none"> • Solutions empower customers to look retrospectively and ahead to predict future healthcare risk. • Springbuk provides curated content through the easy to navigate user interface, allowing a novice to feel like a data scientist. • Springbuk provides professional specialized services called Health Strategy Services (HSS) to assist customers with understanding their data and how to take action, as well as creating reports
Projects	<ul style="list-style-type: none"> • Being a B2B SaaS platform, we evaluate and entertain projects on a case by case basis. These projects are typically performed with organizations looking to better understand population health patterns and trends in our vast data landscape • Additionally, we provide a lot of thought leadership in the industry around population health, analytics, and intelligence. Currently, we are pouring a great deal into COVID thought leadership, outreach, and tools for our clients
Future Focus	<ul style="list-style-type: none"> • Continue to support employers on their health benefits journey and connect new data sources together that provide new insights
Talent Development	<ul style="list-style-type: none"> • n/a

Data Sharing Agreements	<ul style="list-style-type: none">• We have data use agreement, master services agreements, business associate agreements, and all the other legal and privacy agreements required with all the entities in our ecosystem (our data partners, and our customers)
Programs/ Publications	<ul style="list-style-type: none">• White papers, case studies, webinars

Ascension St. Vincent	
250 W. 96th St, Indianapolis, IN 46260 Healthcare.ascension.org Contact: TBD Twitter: @StVincentIN	Nonprofit Health System



Health System Mission and Organization	<ul style="list-style-type: none"> Ascension is a faith-based healthcare organization dedicated to transformation through innovation across the continuum of care. As one of the leading non-profit and Catholic health systems in the U.S., Ascension is committed to delivering compassionate, personalized care to all, with special attention to persons living in poverty and those most vulnerable. In FY2019, Ascension provided \$2 billion in care of persons living in poverty and other community benefit programs. Ascension includes more than 150,000 associates and 40,000 aligned providers. Mission Statement: Rooted in the loving ministry of Jesus as healer, we commit ourselves to serving all persons with special attention to those who are poor and vulnerable. Our Catholic health ministry is dedicated to spiritually centered, holistic care, which sustains and improves the health of individuals and communities. We are advocates for a compassionate and just society through our actions and our words.
Data/Analytics Organization Structure	<ul style="list-style-type: none"> Ascension Data Science Institute (ADSI, national analytics) and Ascension Data Discovery and Governance (ADDG) created in 2019. <ul style="list-style-type: none"> Leadership: Karthik Raja MS, Chief Data Science Officer and Gagan Singh, Chief Data Officer System-wide data science, data governance, and data management teams providing resources to support acute-care, ambulatory, telehealth, and claims data and analytics with expertise in ETL, data science, business intelligence, statistics, data architecture, and actuarial services Indiana has additional local analytics resources and data teams that leverage national data sources while responding to custom state-level reporting and analytics needs.
Data/Analytics Roles and Responsibilities	<ul style="list-style-type: none"> National analytics available from ADSI include enterprise analytic products, supporting our insight into quality, safety, health economic, clinical effectiveness, operations, financial, actuarial, and managed care analytics. ADSI Vision: To support Ascension in achieving its Quadruple Aim, this uniquely skilled, high-performing team will develop analyses, models and applications and aid in the strategic decision making process. Ascension’s analytics team provides data integration and analytic insight designed to address clinical, economic, and operational inquiries supporting Ascension’s acute-care, ambulatory, telehealth, and insurance divisions. Data plays a critical foundational role in the transformation of care delivery, quality and financial outcomes as well as research endeavors. Advanced analytics and data science enable us to provide a competitive advantage.
EMR and Key Data Systems	<ul style="list-style-type: none"> EMR – Athena (outpatient, installed in 2013), Allscripts (inpatient, installed in 2014) Tableau – Primary BI tool Enterprise Data Warehouse – Google Bigquery
Data Access	<ul style="list-style-type: none"> Founding Member and contributor to Indiana Health Information Exchange (IHIE) CommonWell Health Alliance
In-house Tech Capabilities/ Analytics Partners	<ul style="list-style-type: none"> Key Analytic Partnerships <ul style="list-style-type: none"> Optum Performance Analytics Google Cloud Platform
Key Ongoing Projects/ Initiatives	<ul style="list-style-type: none"> Improving clinical process reliability to deliver higher value patient care Reducing admissions among COPD/asthma patients Improving HbA1c control among our diabetic patients, with an emphasis on reducing the disparity in diabetes management for minority populations

Community Health Network	
1400 N. Ritter Ave #351, Indianapolis, IN 46219 ecomunity.com Contact: Patrick McGill @ PMcGill@ecomunity.com Twitter: @CHNw	Nonprofit Health System



Health System Mission and Organization	<ul style="list-style-type: none"> Community Health Network was created 60 years ago as a non-profit health system and has grown to more than 200 sites of care and affiliates throughout Central Indiana, Community's full continuum of care integrates hundreds of physicians, specialty and acute care hospitals, surgery centers, home care services, MedChecks, behavioral health and employer health services. Mission Statement: Deeply committed to enhancing the health and well-being of the communities we serve.
Data/Analytics Organization Structure	<ul style="list-style-type: none"> Department of Network Analytics created in 2018 45-person team, (Analytics Center of Excellence) dedicated to analytics delivery (ETL, Data Science, BI, Infrastructure) with additional deployed analysts dedicated within specific business units Leadership: <ul style="list-style-type: none"> Patrick McGill, MD, Chief Analytics Officer Amy Heleine, Vice President of Network Analytics
Data/Analytics Roles and Responsibilities	<ul style="list-style-type: none"> Network Analytics includes all network analytic functions, excluding financial analytics. CAO also oversees all Information Technology (CIO reporting), Informatics and Performance Improvement activities. Analytics Vision: The CHNw workforce has efficient access to mature data and analytics capabilities which leads to key network outcomes and the promise of Exceptional Care, Simply Delivered Network Analytics provides analytics solutions designed to address clinical, operational, and business needs. Responsible for data governance, master data management, data aggregation and dashboard management to present data in innovative ways and facilitate data-driven decision making.
EMR and Key Data Systems	<ul style="list-style-type: none"> EMR – Epic Enterprise, Installed In 2012 Enterprise Data Warehouse and BI – Health Catalyst, Installed In 2015 Financial Data Reporting – EPSi, Installed in 2018
Data Access	<ul style="list-style-type: none"> Founding Member and contributor to Indiana Health Information Exchange (IHIE) Epic Cosmos contributor. Epic's data sharing platform; deidentified benchmarking data accessible to Epic customers Health Catalyst Touchstone contributor. Health Catalyst data sharing platform, deidentified benchmarking data accessible to Health Catalyst customers with CMS claims data
In-house Tech Capabilities/ Analytics Partners	<ul style="list-style-type: none"> Key Analytic Partnerships <ul style="list-style-type: none"> Epic Health Catalyst Stanson. Clinical Decision Support content partner at the point of clinical decision making. For example, Stanson provides EMR alert content related to Choosing Wisely (choosingwisely.org) initiatives
Key Ongoing Projects/ Initiatives	<ul style="list-style-type: none"> Employer health benefits and clinical data Data given from insurance carriers, TPAs, wellness vendors, disease management companies, ancillary benefits, vision, dental, etc.

CROSS-ORGANIZATION INITIATIVES



Diabetes Data-Linkage Pilot

Contact: drobertson@indianabiosciences.org

IBRI has a focus in diabetes and factors related to its risk and progression. This project is linking clinical data with Social Determinants of Health (SDoH), which are critical to identify key risk factors and interventions

**INDIANA
BIOSCIENCES
RESEARCH
INSTITUTE**

Overview	<ul style="list-style-type: none"> This project will set the framework for securely linking data from clinical sources (Indiana Health Information Exchange - IHIE, IU Health - IUH, and Regenstrief Institute) with state sources (Management Performance Hub - MPH) for future non-profit, commercial, and public health efforts. The specific project outcomes are: <ul style="list-style-type: none"> Prove that we can cross-link clinical and SDoH (education/workforce) data securely Understand data coverage between IHIE/IUH that are critical for diabetes risk factors Create specific low-risk SDoH categories from real-world MPH data related to household income and education that correlate with risk of poor health outcomes and validate against standard measures Leverage this cross-link between clinical and SDoH data to further support the statewide diabetes strategy led by Indiana State Dept. of Health (ISDH). This project will enable a broader understanding of SDoH factors driving diabetes in Indiana Plan future efforts to make these SDoH measures available to other projects. Additionally, plan future efforts of additional SDoH measures from other state data sources managed by MPH
Lead Org	<ul style="list-style-type: none"> Indiana Biosciences Research Institute (IBRI)
Participating Orgs and Roles	<ul style="list-style-type: none"> Indiana Health Information Exchange (IHIE): Clinical data access expertise from the Indiana Network of Patient Care (INPC) Indiana University Health: Potential data access and expertise around the IUH enterprise data warehouse Management Performance Hub (MPH): Access of social determinants data from Education and Workforce database enabled by Dept of Education (DOE), Commission for Higher Education (CHE), and Dept. of Workforce Development (DWD). Additionally, usage of enhanced research environment (ERE) for linkage and analysis Regenstrief Institute: Data access (as needed) and expertise around the Indiana Network of Patient Care (INPC) and linkage to MPH data
History/ Funding	<ul style="list-style-type: none"> Initial work linking SDoH with clinical data done by Regenstrief and MPH around opioids in 2019 Project conceptualized early 2020 and approved by INPC Management Committee in May2020 Currently self-funded by the participating organizations

<p>Data Leveraged (primary and secondary)</p>	<ul style="list-style-type: none"> Clinical data related to diabetes patient electronic health records (EHRs) from the Indiana Network for Patient Care (INPC) and the Indiana University Health enterprise data warehouse (EDW) Data from the “Indiana’s Workforce” and “Complete High Ed Enrollment/Degree Records” (categories within MPH’s data dictionary) to define socio-economics factors/categories and correlate them with clinical health data outcomes Please see following data schematic for additional details of data being leveraged and linked: <div data-bbox="370 378 1481 688" style="text-align: center;"> <p><i>Data (schematic)</i></p> <p>Clinical Data</p> <table border="1"> <tr><td>ID</td><td>De-identified C_ID (PK)</td></tr> <tr><td>Demographics</td><td>age, gender, race</td></tr> <tr><td>Vitals</td><td>height, weight, BMI, blood pressure, temperature</td></tr> <tr><td>Diagnoses</td><td>ICD-10 of all diagnoses in the inclusion period</td></tr> </table> <p>Inclusion Criteria</p> <ul style="list-style-type: none"> Juvenile or Adult (16+) T1D or T2D Diagnosis Timeframe: 2018-2019 (2 year) <p>Crosswalk Table</p> <table border="1"> <tr><td>ID1</td><td>De-identified M_ID (PK)</td></tr> <tr><td>ID2</td><td>De-identified M_ID (PK)</td></tr> </table> <p>MPH Data</p> <table border="1"> <tr><td>ID</td><td>De-identified M_ID (PK)</td></tr> <tr><td>Demographics</td><td>age, gender, race</td></tr> <tr><td>Education</td><td>Degrees and years</td></tr> <tr><td>Workforce</td><td>Job-type, salary range</td></tr> </table> </div>	ID	De-identified C_ID (PK)	Demographics	age, gender, race	Vitals	height, weight, BMI, blood pressure, temperature	Diagnoses	ICD-10 of all diagnoses in the inclusion period	ID1	De-identified M_ID (PK)	ID2	De-identified M_ID (PK)	ID	De-identified M_ID (PK)	Demographics	age, gender, race	Education	Degrees and years	Workforce	Job-type, salary range
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Education	Degrees and years																				
Workforce	Job-type, salary range																				
<p>Community Impact</p>	<ul style="list-style-type: none"> This project will set the framework for securely linking data from clinical sources with state sources (MPH) for future non-profit, commercial, and public health efforts This will enable to both assess and monitor factors that are critical to improving the health of Indiana citizens and optimizing policies, interventions, and improvements in an individual’s environment for improved health outcomes 																				
<p>Future Focus Areas</p>	<ul style="list-style-type: none"> Identify additional organizations that need this data to support their research or community-based efforts to improve health outcomes Locate additional funding to productionize these capabilities to support additional resource efforts 																				
<p>Resources</p>	<ul style="list-style-type: none"> Please contact Dan Robertson at drobertson@indianabiosciences.org to learn more and/or understand how your organization can follow these processes to support your efforts 																				

Diabetes Impact Project, Indianapolis Neighborhoods (DIP-IN)

Contact: dipin@iupui.edu

DIP-IN is an initiative designed to build resources and connections within communities of Indianapolis with the goal of preventing diabetes, or better managing it, so that people can live long and healthy lives. DIP-IN believes that where you live shouldn't determine how long you live.



Overview	<ul style="list-style-type: none"> The Goals of DIP-IN are to: <ul style="list-style-type: none"> reduce complications and improve quality of life of people living with diabetes increase awareness of risk factors for diabetes and encourage people at high risk to be screened so they can take action foster an environment (physical and social) that supports greater health and well-being for all residents DIP-IN is currently focused on three Indianapolis areas with high prevalence of diabetes: Near Northwest community, Near West community, and Northeast community.
Lead Org	<ul style="list-style-type: none"> IU Richard M. Fairbanks School of Public Health at IUPUI
Participating Orgs and Roles	<ul style="list-style-type: none"> Eskenazi Health: Manages clinic-based DIP-IN Community Health Workers (CHWs); provides EMR data for evaluation Marion County Public Health Department (MCPHD): Provides community liaison support and contributes to data analysis and evaluation Local Initiatives Support Corporation (LISC): Oversees contractual relationships with community-based organizational homes of neighborhood CHWs The Polis Center at IUPUI: Created and maintains the DIP-IN Community Data Dashboards; contributes to evaluation Regenstrief Data Services: Provides clinical data for evaluation from the Indiana Network for Patient Care (INPC) Westside Community Development Corporation, Flanner House/Centers of Wellness for Urban Women, and United Northeast Community Development Corporation - Organizational homes for neighborhood CHWs
History/ Funding	<ul style="list-style-type: none"> Initiated in May 2018 with five-year support from the Eli Lilly and Company, Lilly Global Health Partnership (LGHP) This project is the first US-based program for the LGHP Eskenazi Health contributes support for three community health workers
Data Leveraged (primary and secondary)	<ul style="list-style-type: none"> Primary data were collected via a baseline DIP-IN Community Survey in 2019. This will be repeated before the project ends in 2023 Secondary data leveraged for evaluation of the project are electronic medical record data secured from Eskenazi Health as well as the Indiana Network for Patient Care (INPC) Secondary data compiled by The Polis Center regarding each community's social context are utilized in the project dashboard and as contextual variables in evaluation

Community Impact	<ul style="list-style-type: none"> • This project is a unique multi-sector partnership that aims to reduce the high burden of diabetes in three communities of Indianapolis with an integrated approach that brings clinical care, social resources, and resident voices to bear. Each DIP-IN community has a team of Community Health Workers (CHWs), two who are Eskenazi clinic-based and one that is housed within a local neighborhood organization. CHWs focus on connecting individuals to medical and social resources as well as providing social support while also working to positively change the neighborhood environment to promote healthier living. • This program is built upon the principle that community residents are those best able to decide what initiatives are most likely to be effective in their community. For the prevention component of this project, a team of local residents along with CHWs and organizational representatives guide decision-making about evidence-based resources or programs to fund and implement through the project.
Future Focus Areas	<ul style="list-style-type: none"> • Each DIP-IN community has chosen a focus area based on data collected by the team where the overall aim is to implement systems, policy, and environmental changes for better community health. Over the next several years each community will expand upon evidence-based practices to address the following topic areas: food access and knowledge on healthy eating (Northeast), stress (Near West), physical activity and access (Near Northwest).
Resources	<ul style="list-style-type: none"> • Diabetes.iupui.edu • DIP-IN Community Dashboards: savi.org/apps/dipin

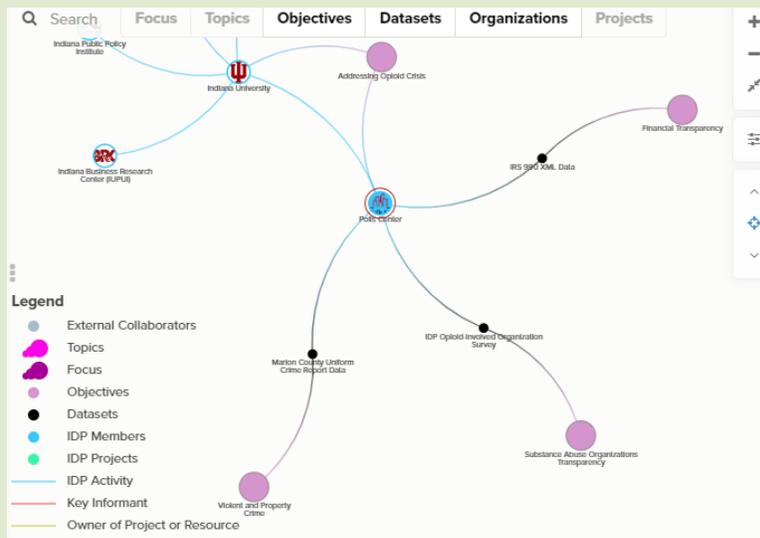
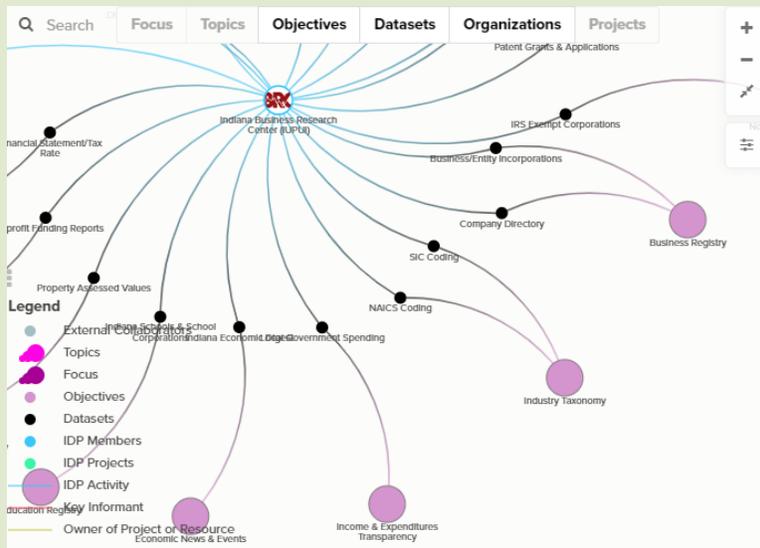
Indiana Data Partnership (IDP)

Engage through: IN.gov/IDP

Goal to empower collaboration among government, non-profit and private sector entities to drive positive change in key challenges impacting Hoosiers



<p>Overview</p>	<ul style="list-style-type: none"> IDP is an enhancement to the State of Indiana’s Management Performance Hub (MPH), which provides data analytics solutions tailored to address management and policy questions enabling improved outcomes for Hoosiers. Formed in partnership with Indiana University (IU), this enhancement expands MPH’s mission by creating a secure, replicable, and sustainable framework that helps organizations successfully partner to maximize holistic solutions and minimize duplication of efforts through sharing and viewing common data. Another benefit is the creation of better visualizations of organizations’ service networks. Current focus areas include the opioid epidemic, improving education and workforce development, and diabetes research. The partnership serves these vital community needs by developing an integrated, scalable and collaborative decision-driving framework designed to increase the availability and utility of existing data among participating partners.
<p>Lead Org</p>	<ul style="list-style-type: none"> State of Indiana's Management Performance Hub (MPH)
<p>Participating Orgs and Roles</p>	<ul style="list-style-type: none"> Initially established with three major data centers within Indiana University <ul style="list-style-type: none"> IBRC - Indiana Business Research Center Polis Center PPI - Public Policy Institute Notre Dame – All research organizations Currently expanding to include Purdue Center for Regional Development
<p>History/ Funding</p>	<ul style="list-style-type: none"> Two-year initiative began in January 2017 with generous support from Lilly Endowment Inc. Extended for seven months in December 2019. Initial phase of the partnership to concluded in August 2020; however, key relationships and projects initiated by this partnership continue ~\$3M from LEI shared between MPH and the three IU centers
<p>Data Leveraged (primary and secondary)</p>	<ul style="list-style-type: none"> State opioid, education, and workforce related data Polis Center - SAVI database IBRC - Gateway, Census The following images are examples of the cluster maps depicting datasets available by organization. Contact IDP to become involved and obtain access



Community Impact

- Enhanced ability to link organizational data across various data sets (IBRC/Polis)
- Enhanced ability to link individuals across various data sets (MPH)
- External entities can share PII to MPH. MPH can link to those individuals to state data and share information back in an aggregate fashion, while ensuring security privacy are held to the fullest. This is primarily used for program evaluation (e.g., are workforce programs truly improving wages)
- Enhanced Research Environment available to improve analysis of more sensitive data sets in a secure environment
- IDP Portal (Teams and Ecosystem Map) available to improve awareness of data community partners and create a forum for communication

Future Focus Areas	<ul style="list-style-type: none"> Continued growth of the partnership leveraging assets that are available at the participating organizations Opioid related projects were successful based on state data assets being leveraged along with SAVI data through the Polis Center Education/Workforce projects were successful based on leveraging state longitudinal record between K-12, higher ed, and workforce along with key census and community related assets from IBRC Future initiatives will look to leverage the strengths of the partners, and utilize the IDP platform to highlight/promote key projects Diabetes focused research leveraging the multiple stakeholder dataset to include state data
Resources	<ul style="list-style-type: none"> IDP Portal is an online platform for IDP Partners where they can discover projects and datasets of interest and connect with organizations who are willing to collaborate on projects by sharing data Website (IN.gov/IDP) highlights initial cluster mapping projects that were created through this initiative

Indiana Pandemic Information Collaborative (IPIC)

Engage through: www.pandemiccollaborative.org/

Members of IPIC are committed to working together to share data, information, and knowledge and coordinate our efforts to make the necessary data available to attack COVID-19 and keep Indiana healthy and safe

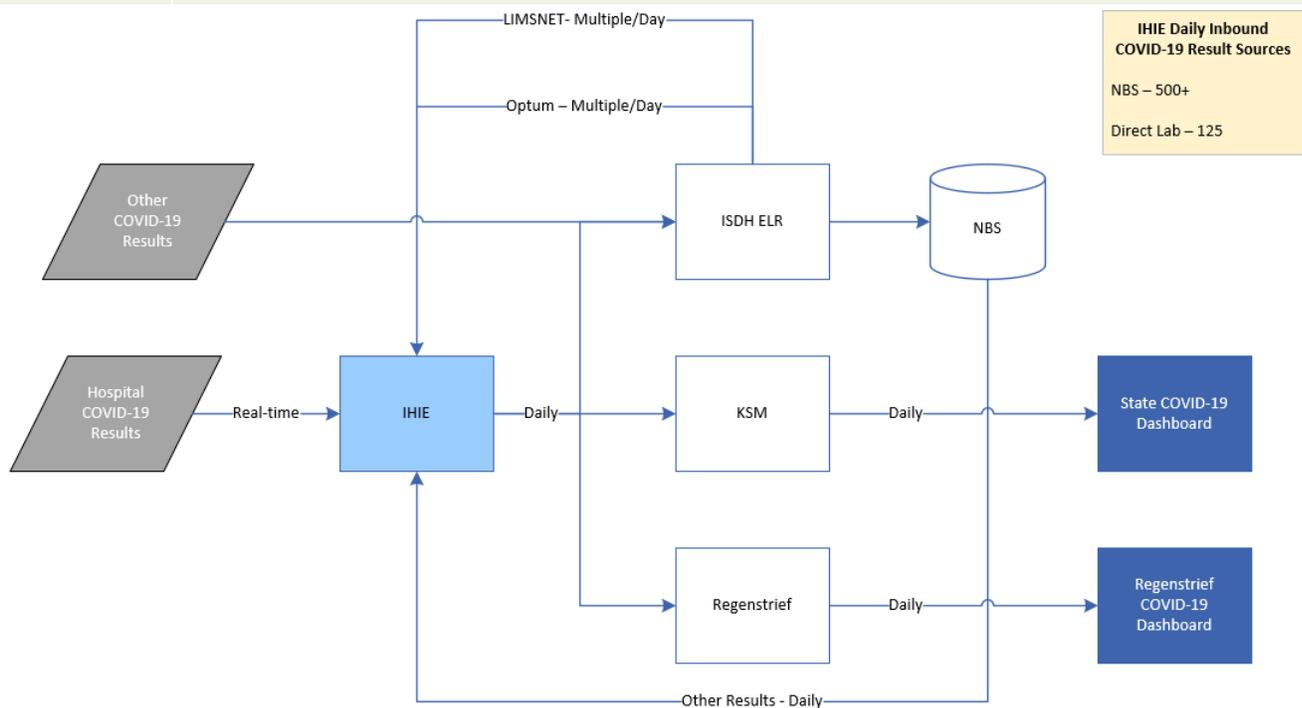


IPIC

Indiana Pandemic Information Collaborative

<p>Overview</p>	<ul style="list-style-type: none"> • Combating the COVID-19 pandemic requires all of us to work together to protect our families, communities, and the residents of our state. • From the start of this pandemic, Indiana's professionals across government, health systems, university, biosciences industry, and non-profit sectors have been working to address the crisis. • Recognizing that we must respond quickly and coordinate our efforts for greater impact, we formed IPIC to maximize the impact of our collective efforts and ensure the health of our community.
<p>Lead Org</p>	<ul style="list-style-type: none"> • Regenstrief Institute – Peter Embi (Regenstrief/IU School of Medicine)
<p>Participating Orgs and Roles</p>	<ul style="list-style-type: none"> • Seven primary workstreams: three are focused on technical roles, and four are focused on engagement • Data Modeling (e.g., predictive models around COVID). Led by Brian Dixon (Regenstrief/Fairbanks School of Public Health) and Patrick McGill (Community Health) • Data Visualization (e.g., COVID dashboards). Led by Shaun Grannis (Regenstrief/IUSM) and Tony Pastorino (IU Health) • Data Interchange (e.g., data movement and exchange). Led by John Kansky (IHIE) and John Roach (KSM Consulting) • State Government. Led by Connor Norwood (FSSA) and Josh Martin (MPH) • BioSciences. Led by Darshan Shah (BioCrossroads) • Health Systems. Led by Matt Browning (Indiana Hospital Association) • Community-facing organizations. Led by Sarah Wiehe (Indiana CTSI/IUSM) and Jackie Dowd (Lilly Endowment)
<p>History/ Funding</p>	<ul style="list-style-type: none"> • Initiated in March 2020 to create a collective data presence across Indiana to attack COVID-19 • This collaborative is a coalition of the willing and interested. Formal entity and funding do not exist.
<p>Data Leveraged (primary and secondary)</p>	<ul style="list-style-type: none"> • Data is provided, shared, and consumed by numerous parties including ISDH, FSSA, MPH, IHIE, Regenstrief, KSM Consulting, IHA, Fairbanks School of Public Health, and numerous hospital systems and testing sites. • The full breadth of this data sharing cannot be captured in brief; however, key data sharing occurs via the partner organizations, enabled by this initiative. • Key examples of the data leveraged include those that power state-wide COVID-19 dashboards and are enabled by collaborative data flows such as those depicted in the figure on the following page.
<p>Community Impact</p>	<ul style="list-style-type: none"> • Data, Information, and Knowledge: While there is critical work to be done across many domains, impacting the COVID-19 pandemic requires access, sharing, and expert analysis of up-to-date data, information, and knowledge. We strive to enable the best data-driven decisions by our governmental, healthcare, industry, academic, and non-profit communities as we all work to beat this pandemic. • More Effective Together: Our IPIC groups bring together the best and the brightest minds across Indiana to coordinate activities related to data-driven decisions and actions. Our teams bring their unique perspectives and expertise to bear to overcome barriers, apply state-of-the-art expertise, and ensure that the best information is put in the hands of decisions makers each day.

Future Focus Areas	<ul style="list-style-type: none"> • IPIC is a virtual organization that brings together organizations to combat COVID. The future of IPIC will be dependent on the direction the membership chooses and has not yet been determined. However, it is anticipated that this group's activities will evolve to remain of value such that it will likely survive the pandemic and serve as a useful convener for data-related activities for future health-needs across Indiana. • Numerous opportunities exist for IPIC to potentially take on a larger role, such as developing standards for data sharing for public health challenges, becoming a central body for new collaborations/spinouts, etc. • If you are interested in joining and helping set the direction, please contact IPIC at https://www.pandemiccollaborative.org/contact.html
Resources	<ul style="list-style-type: none"> • www.pandemiccollaborative.org
IHIE-ISDH COVID-19 Lab Results Dataflow¹	<ul style="list-style-type: none"> • Hospitals having existing IHIE integrations feed COVID-19 results in real-time through IHIE. • IHIE sends these results daily to the ISDH ELR, KSM, and the Regenstrief Institute. <ul style="list-style-type: none"> • KSM and Regenstrief use this information to update both the State and Regenstrief COVID-19 dashboards on a daily basis. • The ISDH also receives a direct feed of COVID-19 results from other facilities and state institutions. • ISDH forwards these results through their NBS system, which sends processed results back to IHIE on a daily basis. <ul style="list-style-type: none"> • ISDH also sends LIMSNET and Optum processed COVID-19 results to IHIE from non-IHIE reporting facilities multiple times per day. • LIMSNET is an application used by ISDH to store processed lab results performed by ISDH and their partner labs (IUH/MACL/Quantigen/Lilly). • IHIE receives these results to provide a more complete picture on the current statewide COVID-19 testing status for physicians and other clinical users in IHIE systems.



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¹ Only includes IHIE specific data flows, not all data flows in Indiana for COVID-19. Information as of August 2020

² ISDH COVID-19 site: coronavirus.in.gov/2393.htm. Regenstrief COVID-19 site: regenstrief.org/covid-dashboard/