



IHPI's FY2018 Annual Report

Covering July 1, 2017 – June 30, 2018



**INSTITUTE FOR
HEALTHCARE POLICY
& INNOVATION**
UNIVERSITY OF MICHIGAN

Welcome! We are pleased to present highlights of accomplishments across the Institute for Healthcare Policy & Innovation from July 1, 2017 through June 30, 2018.

Our work addresses the most pressing questions facing healthcare today. By developing, sharing, and implementing evidence and insights, we are shaping healthcare policy and practice for the benefit of individuals, families, and communities.

Here, we provide a snapshot of how IHPI is working to achieve a healthier tomorrow, and I hope it inspires you to learn more.

John Z. Ayanian, M.D., M.P.P.,
Director, Institute for Healthcare Policy & Innovation



Who We Are

Our institute is built on the work of more than 550 faculty members who study healthcare and how to improve it.

A Community of Health Services Researchers across U-M



14 Schools, Colleges,
& Institutes

Art & Design
Business
Dentistry
Engineering
Information
Kinesiology
Law

Literature,
Science & Arts
Medicine
Nursing
Pharmacy
Public Health
Public Policy
Social Work



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FY17 Research Funding for IHPI Members Remains Notably Strong



259
new awards

\$133.8M
in new awards

\$880M
in HSR active sponsored research

\$168M
in HSR research expenditures representing over 10% of U-M total research expenditures



45
awards of \$1 million+

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**A Research
Engine Driven
by Evidence
and Impact**



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Physical and Virtual
Home for Health
Services Research
Collaboration



23

Member-led
Collaborating
Centers and
Programs

4

New Centers
and Programs

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Helping to
Fuel Career
Advancement



53

members advanced to
full, associate, or named
professorships
in FY18

Practice and Policy Engagement

At IHPI, we focus on maximizing the impact of our members' work throughout the research continuum, from the formulation of study questions through analysis and dissemination of results. This means designing and conducting research that both anticipates and responds to real-world challenges, and sharing and interpreting findings with those who can use them to help address urgent issues across healthcare.





Optimizing healthcare value within our own health system and beyond

Improving value in healthcare is a hot topic these days, but total spending is just a part of the equation. High-value health services are those that provide the best possible health outcomes at the lowest possible cost, while low-value services offer little to no benefit when factoring in costs, patient preferences, and alternatives. How can we help make sure that people receive the medical tests, procedures, and treatments that they need to improve their health, but not the services that are unnecessary, nor those whose potential harms outweigh the likely benefits?

MPrOVE brings the research expertise of IHPI to the needs of the clinical delivery system of Michigan Medicine, in a way that hasn't been done before.

– Eve Kerr, M.D., M.P.H., MPrOVE director

The [Michigan Program on Value Enhancement](#) (or MPrOVE) launched in January 2017 as an effort to reduce the gap between what research shows about value in healthcare, and what actually happens in clinical practice. Led by four IHPI members, MPrOVE works to identify, implement and evaluate specific projects focused on improving quality and demonstrating the value of care at Michigan Medicine (six were launched in 2017), while at the same time catalyzing collaborative research efforts to inform state and national policy decisions.

In September 2017, MPrOVE hosted its first Research Innovation Challenge, in which 57 faculty developed team-based research ideas focused on appropriateness and optimizing value in healthcare. Two projects—one on improving the science behind telemedicine, and another on using predictive analytics and systems engineering to reduce delays in specialty care—were awarded planning funds and support to develop proposals for large-scale external grant funding.



Ensuring health policy priorities are responsive to the needs of older adults

When you ask older Americans about their opinions and experiences across a range of health issues—from sleep to sexual health to medical marijuana—their answers can be surprising. Since its launch in June 2017, the [National Poll on Healthy Aging](#) (NPHA) has been querying a representative sample of U.S. adults 50 years and older, gathering eye-opening perspectives on the health and healthcare topics that matter most to them, and how health policies affect their daily lives.

For example, the poll discovered that one in three older adults takes some kind of aid to help them sleep—but many don't bring this up with their doctors. Meanwhile, more than 1 in 4 adults age 50–64 lack dental insurance, and half don't know how they'll get it after they turn 65, the poll found. And while most older Americans take multiple medicines each day, only one in three has talked with a healthcare provider about possible drug interactions, according to poll data.

The NPHA, a partnership between IHPI, Michigan Medicine, and AARP, is helping ensure the voices of older Americans are heard when it comes to important and timely health and healthcare issues, and is also uncovering areas where additional research is needed to better understand the implications for health policy decisions.



Innovative partnerships to prevent chronic opioid use

We've all heard about the growing epidemic of deaths from prescription pain medication in the U.S., which the U.S. Department of Health and Human Services declared a public health emergency in 2017. The [Michigan Opioid Prescribing Engagement Network \(Michigan OPEN\)](#), a partnership between the Michigan Department of Health and Human Services, Blue Cross Blue Shield of Michigan, and U-M, is taking a novel preventive approach to avoid chronic opioid use before it starts. Michigan-OPEN, which launched in 2016 with support from IHPI, focuses on improving opioid prescribing practices in acute care settings (surgery, dentistry, emergency medicine, and trauma), as well as preventing the diversion of unused and unwanted opioids into local communities through medication take-back events statewide.



Partnering with providers

This comprehensive strategy relies on strong partnerships and data sharing among robust networks of physicians engaged in quality improvement efforts across the state of Michigan, the BCBSM-funded Collaborative Quality Initiative (CQI) programs, which represent all surgical specialties and major hospitals within Michigan. One significant accomplishment from 2017 was the creation of prescribing and patient counseling guidelines for common surgical procedures, based on data and patient surveys from across Michigan. These are the first evidence-based opioid prescribing recommendations for surgical teams released in the U.S.; they are available online and continually updated based on new CQI data.

Community engagement

Michigan-OPEN partners with hospitals and police departments around the state to organize drug take-back events to properly dispose of unused medications. Two takeback events at sites across Michigan in October 2017 and April 2018 removed more than 2000 pounds of unwanted pills from circulation, including approximately 54,000 excess opioids, and tens of thousands of other medications that could potentially be abused. Across the drives, surgery was the most common reason people report having surplus pain medications on hand. The program is also involved in disseminating resources to other agencies, and state, regional, and national programs with the intention of reducing opioid misuse and overall healthcare costs, and offers consultative expertise and resources for agencies on current legislation. The program also serves as a model for similar initiatives across the country; the team has consulted with several physicians interested in establishing similar programs in other states.



Preventing opioid misuse through stronger partnerships



Health professionals must partner more effectively with law enforcement, public officials, the business community, the faith community, and others to make headway in the national opioid crisis and other pressing health issues: this was the key message that U.S. Surgeon General Jerome M. Adams, M.D., M.P.H., brought to Michigan in March 2018 during a daylong visit to the U-M campus organized by IHPI. Adams delivered the [fourth annual IHPI Director's Lecture](#), participated in a 'fireside chat' with opioid researchers and public health officials, and engaged with dozens of U-M faculty, business community leaders, and students in sessions leading up to the public talk.

In September 2017, several IHPI members spoke at a Wolverine Caucus event in Lansing about the opioid crisis in Michigan and the U.S. They discussed trends in overdoses, prescribing patterns, and prescription drug monitoring programs, and new initiatives based at IHPI and the Injury Prevention Center aiming to curb overuse and misuse of opioid medications within the state and beyond.





Expanding and Strengthening Relationships for Informed Policy & Practice Impact

IHPI members inform key health policy decisions by serving on state, federal, and nonprofit advisory committees, providing expert testimony and consultation to decision makers, and contributing to health policy panel discussions. Helping ensure our members' work has the greatest potential impact on policy, research, and practice is a top priority for IHPI. In 2017, the institute's Policy Engagement & External Relations core helped more than 350 elected officials and external stakeholders connect with more than 100 IHPI faculty, facilitating critical discussion and exchange of information on pressing health policy issues.





Healthcare Policy and Practice Impact



Over the last two decades, [Lisa Prosser, Ph.D., M.S.](#), and her team have conducted decision analyses and economic evaluations designed to bring clarity and transparency to a range of national health policy decisions. For this body of ongoing work, which has had a direct impact on the health and healthcare of millions of Americans, IHPI recognized Prosser with its [2017 Impact Accelerator Award](#).

Prosser's work informed the 2017 decision to recommend shingles vaccination for nearly everyone 50 years and older (a full decade earlier than the previous guideline), as well as recent decisions to expand the number of health conditions that all U.S. newborns are screened for at birth.

I've been collaborating with CDC for almost two decades now, and it's exciting and gratifying to be a part of one of the few areas of regulatory decision-making in the country that uses the type of research we produce.

— Lisa Prosser, Ph.D., M.S.



For their many years of work to reduce the risks of unneeded and harmful urinary catheters, [Sarah Krein, Ph.D., RN](#), and [Sanjay Saint, M.D., M.P.H.](#), received the 2017 Health System Impact Award from the Veterans Affairs Health Services Research and Development Service (HSR&D). Krein and Saint's scientific and operational efforts have significantly changed practice across the VA, and has also driven changes in urinary catheter practice in the U.S. private sector and around the world.



The [U-M Center for Value-Based Insurance Design](#), led by [Mark Fendrick, M.D.](#), is often recognized for its work in promoting high-value clinical services and prevention through legislation and executive policy making. The Center's policy initiatives and commitment to educating policymakers has contributed to action by both Congress and the Administration on issues related to value in healthcare and financial barriers to essential services, including the continued expansion of a demonstration project that allows Medicare Advantage insurers to encourage seniors with chronic illness to use high-value services by lowering out-of-pocket costs.

Academic Innovation

At IHPI, we strive toward a future of quality, effective, affordable healthcare that is available to all. Realizing this vision depends on education, training, and professional development experiences that are at once rigorous and innovative, and that integrate the breadth of disciplines and specialties involved in improving health and health care.





Academic Innovation

Immersive Research Training for Health Professionals

For clinicians keen to develop research and leadership skills that will position them to drive meaningful change in healthcare, IHPI offers a growing portfolio of training options as well as a community of eager mentors and collaborators across health services research, practice, and policy.



Through IHPI's **Clinician Scholars Program**, physicians, nurses, pharmacists, and other health professionals embark on a rigorous two-year training experience, in which they hone state-of-the-art

health services research and leadership skills that they then apply in executing projects to tackle real-world healthcare challenges—all within an environment with an established tradition of supporting multidisciplinary, community-based research.

U-M is one of five **National Clinician Scholars Program (NCSP)** sites. In 2015, the CSP program succeeded the highly successful Robert Wood Johnson Foundation Clinical Scholars program at U-M, which produced many distinguished leaders in research and healthcare during its 22-year history. The first cohort of seven IHPI Clinician Scholars completed the program in 2018, an additional cohort is in the midst of their training, and the 2018-2020 class began their training in July 2018.

There's a focus on teaching us to be really thoughtful about what our goals are in terms of impact—not just doing research for the sake of doing research, or to publish papers—but doing research that will have some use in shaping policy or the way that care is delivered on a broad scale.

— Parth Modi, M.D., IHPI Scholar and HSR Fellow in Urologic Oncology

Through the CSP, Scholars earn a Master's degree in Health and Health Care Research, which is also available as a one-year program to clinician researchers outside of the CSP. IHPI took on the administration of the Master's program in July 2017 and is currently training 16 **Master's Scholars**, who are often part of fellowship programs at U-M within a variety of healthcare disciplines, and who want to enhance their knowledge of health policy, the social determinants of health, and qualitative research methods.





Academic Innovation Supporting Each Other



As the largest and fastest-growing segment of IHPI membership, early career faculty offer innovative ideas for supporting professional development and research skill enhancement among their peers. Formed in 2016, IHPI's 13-member **Early Career Faculty Advisory Council (FAC)** advises Institute leadership on how to best leverage its resources to promote the success of early career faculty across U-M and accelerate the impact of their research. The council's work has launched IHPI's Emerging Scholars Exchange Program, which provides selected early career faculty with the opportunity to deliver presentations and develop relationships at peer universities. The council also developed a successful workshop, piloted in January 2018, for early career faculty to learn from other IHPI members on developing research teams and managing their careers.



Academic Innovation Innovative Learning Opportunities



The U-M Medical School's **Health Policy Path of Excellence (PoE)** prepares students to understand how their work as future clinicians fits within the broader framework of health care systems and delivery. The path goes beyond the standard curriculum to guide students in how to apply knowledge and experience in directing and implementing real-world health policy change. Five

IHPI members serve as lead faculty advisors for the Health Policy PoE, with 43 IHPI faculty also participating in some capacity in the other paths: Ethics; Global Health and Disparities; Patient Safety/Quality Improvement; Medical Humanities; and Scholarship of Learning and Teaching. The first Health Policy PoE cohort graduated in spring 2018.

The Path of Excellence has allowed me to talk with faculty who balance their passion for big-picture change in health policy with a clinical practice that still involves direct patient care.

— Colleen Macke, fourth-year medical student

A uniquely interprofessional opportunity for students from across the U-M campus to learn about the fundamentals of the U.S. healthcare system and gain insight into how they can improve it, the **“Understanding and Improving the U.S. Healthcare System”** residential online course has increased in enrollment and diversity of disciplines for the third year in a row. From 2016-17, 1,455 undergraduate, master’s, and doctoral students from 16 Ann Arbor schools and colleges enrolled in the course, which includes a mix of online and in-person sessions. Each in-person session included students from multiple fields of study, and were facilitated by 61 IHPI members from across campus, for a truly interprofessional learning experience.

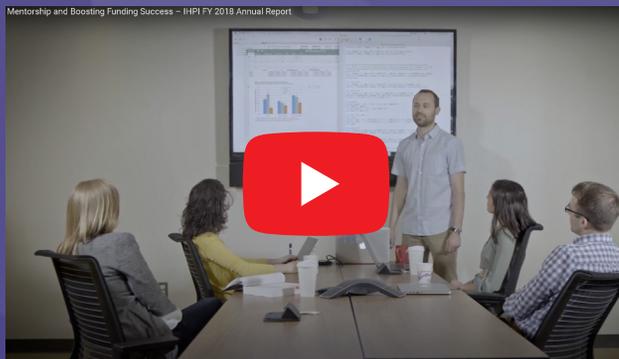




Academic Innovation Boosting Research Funding Success

Through mentoring, coaching, and constructive critiquing, IHPI supports member faculty who are developing proposals for health services research funding from a variety of sources. To complement a number of more clinically oriented research grant development programs at U-M, IHPI provides uniquely interdisciplinary, health services research-focused educational opportunities in which experienced IHPI faculty share their knowledge with early career faculty who are applying for potentially career-defining awards.

Mentorship and Boosting Funding Success – IHPI FY 2018 Annual Report



Career development awards, commonly known as K awards, are designed to support intensive research training over several years to prepare trainees and early career faculty for independent research careers.

In 2017, five senior faculty mentors provided guidance to 14 IHPI early career mentees in the Institute's **K Writing Workshop**, held in collaboration with the Michigan Institute for Clinical & Health Research (MICHHR)'s program. Meanwhile, as part of the Center for Healthcare Outcomes & Policy's Research in Progress seminars, IHPI conducted nine K mock study sections for early career faculty. The K mock study sections are designed to simulate actual proposal review by federal funding decision-makers. Twenty-seven IHPI member reviewers provided proposal critiques during the sessions that ran September

2016-May 2017. Another cycle recently wrapped up for the 2017-18 academic year, with a total of 12 sessions and 34 reviewers.

R01 awards are highly competitive and provide funding support for up to five years for defined research projects, which can help establish independent research careers. In 2017, nine early career mentees and two senior faculty coaches participated in **IHPI's "Boot Camp" program** for developing R01 grant applications, run in conjunction with the Medical School's R01 Boot Camp. The 2018 program is underway, with two coaches and eight mentees.



Given the often long time frame between applying for funding, review, potential resubmissions, and notices of award, it is difficult to evaluate the success to date of these new programs. But feedback from several recent grant applicants and their mentors indicates their participation in these programs has contributed to some unusually highly scored applications and funding awards. IHPI has also recently begun offering grant development support services to IHPI members who are preparing proposals for innovative, large-scale, and multi-disciplinary health services research projects that align with the Institute's strategic priorities.



Academic Innovation Hacking for Health Communication Innovation



2018 Gupta Family Hackathon winners with the Gupta family.

In March 2018, the first-ever **Gupta Family Hackathon for Health Communication** assembled more than 120 students and professionals from U-M, other higher-education institutions, and community members for a two-day frenzy of creative collaboration. At the end, teams had created 30 new solutions to real-world problems related to health communication, from apps and websites to devices and electronic medical record innovations. The event was organized by IHPI and Michigan Medicine, with support from U-M alumni Sanjay Gupta, CNN's chief medical correspondent, and his wife Rebecca.



Healthcare Equity and Access

A key part of IHPI's mission is helping to ensure advances in healthcare are available to everyone who needs them, and that all people have equal opportunities to improve their health and wellbeing.



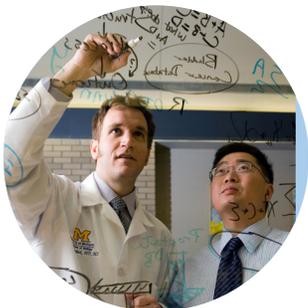


Community Partnerships for Sustained Health Improvement in Detroit

A unique partnership between IHPI, community organizations, Medicaid health plans, and the Detroit Health Department aims to build sustainable resources that can help people living in Detroit's Cody Rouge neighborhood work together to improve and maintain their health. In addition to focusing on the healthcare needs of Cody Rouge residents enrolled in Medicaid health plans, the program also provides professional development opportunities to selected individuals who are interested in becoming community health workers (CHWs), with the opportunity to receive training and learn alongside established CHWs involved with the initiative. The program aims to increase access to preventive care and reduce unnecessary use of emergency services, and to develop a training model that could be extended to other communities within and beyond Detroit.

Healthcare Equity and Access

The program was awarded one of the first U-M Poverty Solutions planning grants in 2017, with additional funding in 2018 for the program implementation phase. It also receives Michigan Medicaid Match funding from the Michigan Department of Health and Human Services, as well as support from the Blue Cross Blue Shield Foundation of Michigan and the Ralph C. Wilson Foundation.



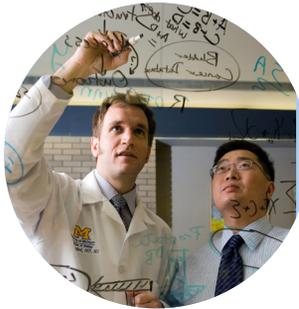


Access to Healthcare: What Works?

Has Michigan's expansion of Medicaid, the government health insurance program for low-income individuals, led to better health, improved access to effective healthcare, or reduced healthcare costs? Since 2014, **IHPI has been studying these questions** under a contract from the state Department of Health and Human Services, and the findings are informing critical policy decisions in Michigan and throughout the nation.

The **first peer-reviewed** study from the evaluation, published in December 2017, provides new insights for states that are considering imposing work requirements for Medicaid recipients. The study found that most Michigan Medicaid enrollees either already work—calling into question the value of tracking enrollees' employment—or can't work, likely because of serious health conditions, which could worsen if individuals were dropped from coverage for failure to fulfill a work requirement.

Healthcare Equity and Access





Working to Close the Gaps

Many IHPI members' research focuses on how to reduce inequalities in health outcomes or access to health services that people may experience because of their race, income, gender, education, or other factors, known as **health disparities**. This includes work by **Shervin Assari**, who examines how gender, race and socioeconomic resources influence health; **Arlene Geronimus**, whose pioneering work has demonstrated the connection between racism and poor health outcomes; and **Reshma Jagsi**, whose findings on sexual harassment in the medical professions have long predated the #MeToo movement.

Healthcare Equity and Access



Precision Health and Big Data

In our digital age, mammoth amounts of data are collected from the billions of healthcare services Americans receive each year, providing incredibly rich information for researchers who study how healthcare works and how it can be made better. But these data are enormously complex and expensive to acquire, and come with stringent requirements for storage and privacy protections. **IHPI's Data & Methods Hub** supports our members' needs around Big Data by facilitating cost-effective access to and secure storage of a variety of healthcare data, along with consultation on how to use these immense resources.

**Supporting
Big Ideas
With
Big Data**

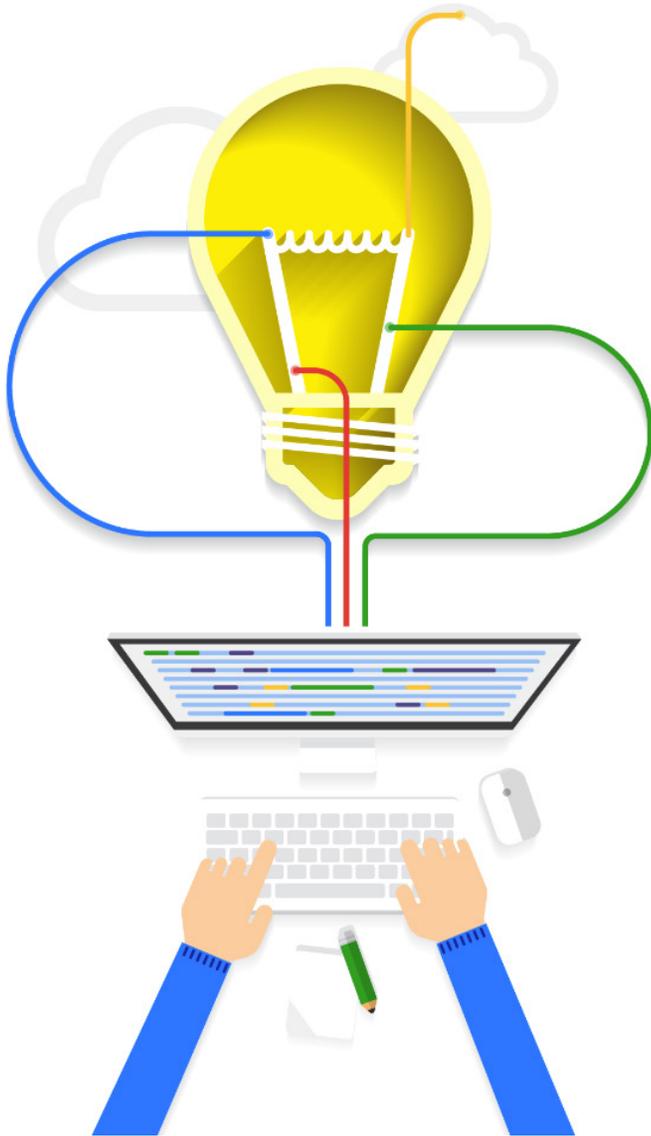
**Precision
Health**

**Using
Big Data
for Better
Predictions**

Supporting Big Ideas With Big Data

Precision
Health

Using
Big Data
for Better
Predictions



In 2017, IHPI's methods consultations increased 67 percent, while the volume of abstracts and manuscripts submitted as a result of IHPI data and methods support quadrupled over the last year. These included an analysis of Optum data published last year in the journal *JAMA Surgery* that ranks among the top 5 percent of all research output in terms of attention and reach; the analysis demonstrated that new, persistent opioid use after elective surgery was far more common than previously reported—findings which led to the creation of [Michigan-OPEN](#), a statewide effort to improve appropriate prescribing of these powerful painkillers after surgeries.

IHPI has also fostered a growing community of U-M healthcare data analysts, who share knowledge, skills, and—perhaps most importantly for a specialized field that can at times feel isolating—a sense of camaraderie.

IHPI is also driving the continued development of the Yottabyte Research Cloud, which provides a more efficient way to store, analyze, and process data by offering access—free of charge—to a flexible hardware environment, where security requirements are professionally managed by U-M's Advanced Research Computing services. Yottabyte had its initial release in 2017, with the goal of soon providing a central processing area for Medicaid and Medicare claims—a potentially enormous benefit to researchers studying these public health insurance programs.

Precision Health and Big Data

Precision Health

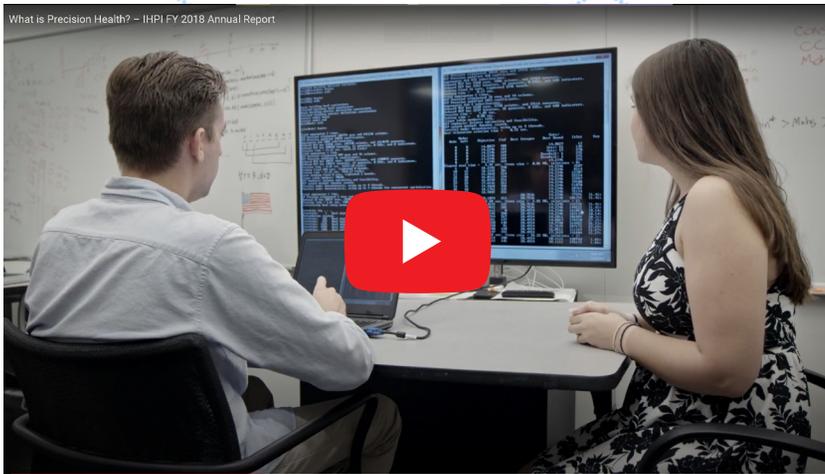
Using
Big Data
for Better
Predictions

Supporting
Big Ideas
With
Big Data



Designer drugs. Targeted treatments based on an individual patient’s genetic blueprint. These are some of the promising developments emerging from the “new frontier” in healthcare referred to as precision health.

But this buzzworthy field goes far beyond clinical treatment concepts. Precision health also uses advanced tools and methods aimed at preventing disease and improving the health of communities. It also envisions a healthcare system that can predict and respond to the wildly diverse needs of individual patients and their unique health conditions. The university-wide [Precision Health](#) initiative draws on U-M’s strengths across basic, clinical, and health services research to expand and strengthen collaborations in precision health from discovery through implementation—including evaluations of health policy impact.



Using Big Data for Better Predictions

Supporting
Big Ideas
With
Big Data

Precision
Health



Many IHPI members are involved in research on machine learning and predictive analytics for healthcare applications, through the newly formed Michigan Integrated Center for Health Analytics and Medical Prediction (MiCHAMP) and other collaborations. This approach harnesses vast pools of health data within electronic health records and other sources, and uses sophisticated computer modeling to predict the likelihood of developing disease, the likely success of given treatments, and can factor in costs and other criteria to help patients and providers determine the most appropriate course of action for a given scenario—and with far greater precision than what’s otherwise possible.



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