

2017

ANNUAL REPORT



Message from Institute Leadership

This has been an eventful year for the Institute. In the spring, we celebrated the opening of the new HealthPartners Neuroscience Center, giving our research team in the Center for Memory & Aging an opportunity to work alongside clinicians in providing the best possible care for our patients. We are grateful to our generous donors and partners in the Regions Hospital Foundation who made this vision a reality.

We also celebrated the 50th anniversary of International Diabetes Center (IDC), culminating in the Park Nicollet Foundation's annual gala in support of IDC's future work. We are proud of the significant contributions IDC has made to research, patient care and education and look forward to paving the way for new technologies and approaches that will transform health and well-being for patients living with diabetes.

It was a pleasure to welcome Karen Margolis, MD, last year as our new Executive Director of Research. She joined HealthPartners in 2005 as a primary care physician and researcher. She has since led many large, multi-center, federally funded initiatives and trials and focused on promoting collaboration between research and our care group. We are pleased that she has joined the Institute's leadership team.

One of our most significant initiatives completed in 2017 was a collaboration with leaders across HealthPartners to develop a new strategy for health professions education, one that aligns with our workforce needs and helps us improve care, experience and affordability. As a result of this effort, we will:

- Form a clinician workforce planning team to guide our health professions education plans
- Take an approach to training that supports HealthPartners' culture and champions our focus on care, experience and affordability
- Ensure that our resources are aligned to support this new strategy



Andrea Walsh, President and Chief Executive Officer of HealthPartners, joins Nico Pronk, PhD, and Jen Augustson at the Institute's annual celebration. This event highlights the Institute's work and its integration with HealthPartners.

In the pages ahead, you will read other examples of our pioneering work. We feature our efforts related to pain management and opioid reduction. We also share a variety of projects aimed at improving cardiovascular health, well-being and chronic disease care as well as monitoring vaccine effectiveness and safety.

As always, this work could not be done without the many partners who participate, engage and support our work. Thank you for helping bring our vision to life: health as it could be, affordability as it must be, through relationships built on trust.

Nico Pronk, PhD
President, HealthPartners Institute
Chief Science Officer, HealthPartners

Jen Augustson
Executive Director, Operations

Front cover photo: Research Associate Bhavani Kashyap, MBBS, PhD, at HealthPartners Neuroscience Center

Research and education on the front lines of **PAIN MANAGEMENT**

Pain medication is the most commonly prescribed class of drugs in the United States. Stories of opioid abuse are in the news at an alarming rate. HealthPartners has developed a pain management program to address this crisis, and the Institute supports it in many ways. These stories highlight some of what we've learned about pain management, how we've helped educate patients and clinicians in this journey and what's next.



Senior Researcher James Fricton, DDS, talks with a patient about self-care to reduce jaw pain.

Can self-care relieve jaw pain?

Institute researchers are looking at whether the Personalized Activated Care and Training (PACT) program is more effective than traditional self-care at relieving and preventing jaw pain and headaches in patients with temporomandibular disorders (TMDs).

TMDs are the second most common musculoskeletal pain condition, affecting about 15 percent of the general population. PACT is a personalized six-month online self-management training program designed to teach patients to reduce the lifestyle causes of chronic pain. The web-based program includes support from a telehealth coach to enhance patient understanding, adherence and success.

“The PACT program provides health professionals with an easy option to help prevent chronic pain and addiction by writing a prescription for self-management training instead of opioids,” said Institute Senior Researcher James Fricton, DDS, who leads the project. “It’s part of a new transformative care model that integrates patient training on an equal basis as treatments to improve long-term outcomes for common pain conditions such as TMD.”

Decreasing narcotics, not patient satisfaction

A new standardized protocol can halve the use of narcotics prescribed after hand surgery, according to a study conducted by researchers from TRIA Orthopaedics, Park Nicollet and the University of Minnesota.

Deborah Bohn, MD, orthopedic hand surgeon at TRIA, created a standardized protocol for prescribing after hand surgery along with a patient handout on drug risks and disposal of leftover pills. All six hand surgeons at TRIA’s Bloomington location began using these at the start of the study period.

The study team developed and deployed a survey on patient experience and satisfaction with pain control using the new protocol. Data from the study showed that the protocol, in addition to halving narcotics prescriptions, had no negative effect on patient satisfaction. This decrease affected more than 600 patients during the three-month study period.

Scott Allen, MD, an orthopedic surgery resident, and Jillian Johnson, a medical student, conducted chart review and data analysis for this study. Health professional trainees often participate in research at HealthPartners, from study design and chart reviews to data collection and dissemination of findings. Johnson will present the findings to the Minnesota Orthopaedic Society.

Research and education on the front lines of **PAIN MANAGEMENT**



Taking a stance against chronic pain

The idea of doing downward dog or other yoga poses may not seem like an option for people with chronic pain. But a HealthPartners Institute study has found that yoga can provide relief. Thirty-three people took part in the 10-week study. Participants who completed the study saw improvement in pain interference and physical function.

“We are teaching them that they can move gradually and still see a lot of improvement,” said Sara Hall, Regions Hospital pain management clinical nurse specialist. “It’s a way to provide patients with self-care skills.”

The yoga classes have been created for chronic pain patients. Poses are altered so everyone can take part. The sessions include yoga poses, breathing exercises and meditation. The study showed a trend toward improvement in pain intensity, pain behavior, mood, sleep and pain medication usage. Also, participants’ likelihood of continuing yoga after classes ended was 8.5 out of 10.

Clinicians learn about pain management

In 2017, our Continuing Medical Education team offered its first Pain Management Summit to address the challenges of opioids and changing standards of practice in pain management. The summit for clinicians shared evidence-based, practical approaches to managing chronic pain – from the basic to the advanced. About 135 clinicians from many local and regional health care systems attended the summit. A multidisciplinary team of experts reviewed common pain-related conditions, non-opioid options, complex case studies and current guidelines. Speakers also discussed addiction and pain, how to safely prescribe opioids when needed and how to talk to patients about pain management.

New conversations about pain

When you are in pain, you want relief. And you want your doctor to help you. Since the risks of opioid use are now better understood than they were even a few years ago, that conversation between doctor and patient has become more complicated. Consistent and clear information is key in developing shared pain management goals and treatment plans.

Our Patient Education team worked closely with HealthPartners Chronic Pain Steering Committee to develop guiding messages about pain management. This information is now available throughout HealthPartners to help patients create realistic expectations about managing pain.



Treating pain after tooth extraction

Institute researchers are conducting a four-year study to determine the most effective way to reduce the use of opioid pain medication for dental extractions.

“There is this myth that opioids are better and stronger because they are narcotic drugs,” said Brad Rindal, DDS, Senior Research Investigator and Associate Dental Director for Research at HealthPartners Dental Group. “Actually, there is evidence that they are not. This study is partially addressing the myth and patient perception about opioids and a look at the alternatives, which will reduce the exposure of opioids to a susceptible age group – teens and young adults.”

The goal of this project is to reduce the reliance on opioids, drugs that are designed for short-term pain relief but can lead to addiction and overdose, in favor of non-opioid pain medications. The researchers will compare different strategies to increase the use of alternative pain management approaches through the use of clinical decision support tools for both dentists and patients.

“There is this myth that opioids are better and stronger because they are narcotic drugs.”

Brad Rindal, DDS

Helping patients with opioid use disorder

We recently developed a clinical decision support tool to help primary care clinicians better identify, assess and treat opioid use disorder.

Opioid Wizard identifies patients at risk for the disorder, gives clinicians diagnosis and treatment options, offers patient education materials, recommends preventive services and suggests referrals or prescriptions.

Senior Investigator Rebecca Rossom, MD, who leads the project, said that the tool will help clinicians provide better, safer care. “Physician prescribing helped contribute to the creation of the opioid crisis, and we now have an obligation to help treat people with opioid use disorder,” she said.

Clinicians in every specialty are working to decrease new prescriptions of opioids and, when they are needed, to decrease the level at which they’re prescribed. “It’s just on the radar of a lot of providers,” she said.

Opioid Wizard will be piloted from April to September 2018 at Park Nicollet and HealthPartners primary care clinics.

See related story on page 7.



HealthPartners health plans, clinics and hospitals and the Institute are helping patients, members and the community manage pain. Visit healthpartners.com to learn more about this strategic initiative, which includes pain management clinics, opioid use reduction and other resources.

New prevention and treatment approaches to

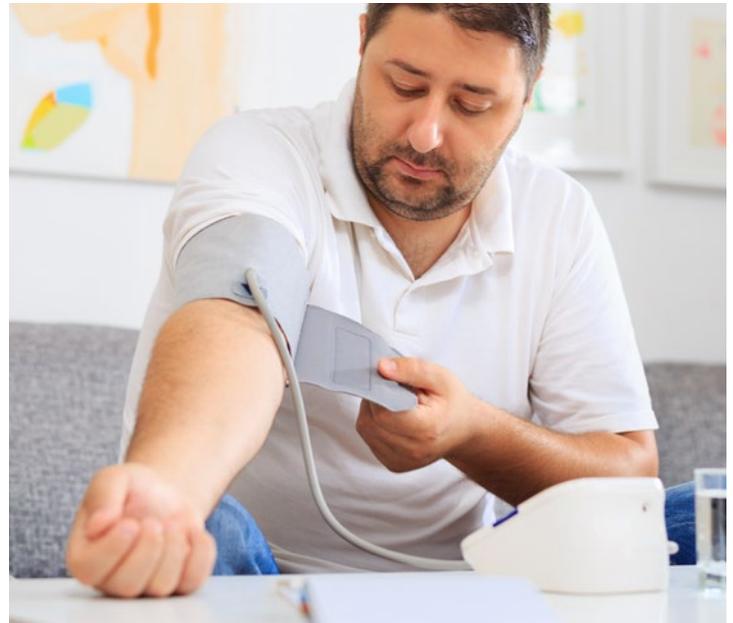
CHRONIC DISEASE

About half of adults in the United States have at least one chronic health condition, according to the Centers for Disease Control and Prevention. These conditions, such as heart disease, type 2 diabetes and obesity, affect families, communities and health care systems. We continue to research prevention and improvement strategies as well as develop tools and training for clinicians and patients. These articles show some of the things we've learned about chronic disease, how we're advancing technological solutions and what's ahead for clinical decision support.

Remote control

“Even a two- to three-point drop in blood pressure reading over a sustained period can make the difference between having or not having a stroke or heart attack,” said Karen Margolis, MD, principal investigator of the HyperLink study. “That’s why we are excited to continue this line of research.”

Institute researchers began examining blood pressure control 10 years ago through the HyperLink study. In the first two phases, investigators found that patients who worked with a pharmacist and received home-based telemonitoring achieved double the rate of blood pressure control over the next year compared with those who did not. Now in the third phase of the study, the team is comparing clinic-based care and monitoring blood pressure from home with a direct link to a pharmacist. They are looking at which type of care decreases blood pressure most and which method patients prefer.



With this study’s potential to impact cardiovascular disease, it has gained national interest. Margolis was invited to speak at a congressional briefing in Washington, D.C. The briefing, “Preventing and Treating America’s Number One Killer: The Need for Evidence-Based Strategies in Cardiovascular Disease,” was organized by the Patient-Centered Outcomes Research Institute and the American Heart Association.

Gauging heart disease risk in the Somali community

Investigators Bjorn Westgard, MD; Brian Martinson, PhD; and Mike Maciosek, PhD, saw that the medical community knew little about the health challenges of Minnesota’s Somali community. The state is home to the biggest group of Somali immigrants in the United States.

To learn more about health and heart disease risk in this group, they gathered a team and pursued funding from the National Institutes of Health. They partnered with several health professionals who were already well known and respected in the local Somali community.

Early research shows that some heart disease risks have gone up since 2001. It happens to many immigrant

groups when they come to the United States, where unhealthy food abounds and people are less active and less social. As a result, they gain weight, their cholesterol rises and they may develop diabetes or heart disease. The team is working to identify factors that put Somali people most at risk for heart disease.

The team is studying how social networks and social capital affect people’s health. When the study is done, they hope to have better ways to identify Somali people at the highest risk for heart disease and work with their communities to lower heart disease risks and improve health.

Transforming diabetes care through new technologies

With the support of Park Nicollet Foundation and funds raised from its 37th annual gala, International Diabetes Center and the Pediatric and Adult Endocrinology and Primary Care teams are working to transform diabetes care through technology. The implementation committee – or Diabetes Care Transformation Team – is focusing early efforts on developing a continuous glucose monitor (CGM) educational tool for patients and clinicians.

Compared with finger stick glucose monitors, which are used to test glucose a few times a day, a CGM provides more complete readings of glucose levels, with a reading every one to 15 minutes, day and night. The CGM's transmitter also sends the glucose values to a phone, watch, receiver or the cloud. Patients can see their glucose values in realtime to adjust food and exercise

accordingly or review their trends or patterns over weeks to help with diabetes management such as medication adjustments.

By creating educational tools to improve clinician-patient collaboration and action plans around CGM, the team hopes to accelerate awareness and use of this technology for patients who could benefit.

The team is also planning initiatives to improve diabetes care through telemedicine and hybrid closed-loop automated insulin-delivery systems. They will be working with partners in our care group, Patient Education and Information Services & Technology to implement diabetes technologies throughout HealthPartners.

Focusing on what's most important

Clinical decision support has been shown to improve outcomes and efficiency in patient visits and reduce risks. As a point-of-care aid for clinicians and patients in developing the most beneficial care plan, it can make a significant difference in the lives of patients with chronic disease.

Our clinical decision support (CDS) tool, which we call the Wizard, helps physicians easily prioritize care and medication decisions based on individual patient risk factors. The Wizard synthesizes electronic health information and uses algorithms based on clinical guidelines to drive best practices in care. It prioritizes risk factors based on potential benefits to patients, allowing patients and clinicians to make more informed decisions.

CDS tools exist or are being developed for:

- Heart disease risk reduction (addresses high blood pressure, cholesterol, tobacco use, aspirin, and weight)
- Prediabetes and diabetes
- Serious mental illness
- Opioid use disorder
- Cancer prevention
- High blood pressure in teens and adults
- Pediatric abdominal pain in the emergency room
- Medication adherence
- Chronic kidney disease
- Tobacco use in dental patients

Next up is CDS that combines the information from disease-specific Wizards into one tool. It will cull data from a patient's record to prioritize decision support for multiple conditions. Helping patients and clinicians identify those key health concerns and opportunities will result in a more focused and beneficial visit.

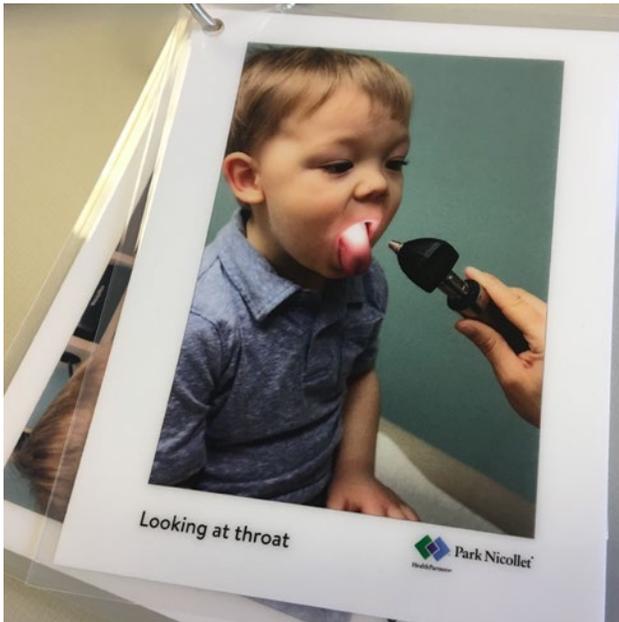


We've been awarded over \$30M of federal research funding since 2004 to develop Wizard-related clinical decision support.



Completed research shows using the Wizard improved outcomes in patients with high cardiovascular risk and/or diabetes.

AROUND THE INSTITUTE



Flash cards ease the fear of clinic visits for patients with autism.

Education improves care and experience

Our Patient Education team goes above and beyond to support patients and families. They received two National Health Information Awards for producing *Successfully Managing Diabetes: Your Care Guide for Type 1 Diabetes*. The guide was judged one of the best consumer health information materials produced in the United States in 2017, earning a Gold Award. It was also named a Best of Show winner.

The team also helped the Park Nicollet Clinic in Bloomington create special flash cards to ease the fear of checkups for children with autism. Families are given pictures of different parts of the clinic so they can practice walking through the process of an office visit at home.

“Before we had the cards, Vincent would get very scared in the parking lot,” Amy Vo said about her son, who has autism. “He would refuse to open the car door and get out. But the cards have helped a lot. And now when we go for a visit, Vincent knows that he is going to be okay.”

New fellowship aims to meet demand for specialized training

Our Office of Health Professional Education is developing an Advanced Practice Clinician (APC) Fellowship Program. The program will provide a central support structure to grow and improve the quality of APC fellowships throughout HealthPartners.

Michelle Noltimier, Director of Physician Assistant/Nurse Practitioner Education, is leading development of the new program in collaboration with current APC fellowship directors. “The development of the program infrastructure builds on the success of current APC fellowship programs in emergency medicine, hospital medicine and psychiatry,” she said.

As a result of this collaboration, program assessment tools and curriculum support are available to departments systemwide that want to develop APC fellowships. “The central support will offset the administrative burden of developing a new program and ensure that new programs lead to high-quality care aligned with the workforce strategy of HealthPartners,” Noltimier said.

APC fellows will be based in multiple practice settings (urban or rural hospital, inpatient or outpatient) throughout HealthPartners for about one year. The intent is to create more APC fellowship opportunities by December 2019.

“The goal of the APC Fellowship Program is to graduate advanced practice clinicians who demonstrate clinical expertise, ethical behavior, leadership skills, cultural awareness, professionalism and an ongoing commitment to learning,” Noltimier said.

“The central support will offset the administrative burden of developing a new program and ensure that new programs lead to high-quality care aligned with the workforce strategy of HealthPartners.”

Michelle Noltimier

Capturing the patient's perspective

Patient-centeredness and patient-reported outcome measures (PROMs) are hot topics in research and practice. Because PROMs capture patients' assessments of how the health care they receive affects their ability to function, some experts believe that PROMs can improve care. The Institute supports HealthPartners' initiative to incorporate PROMs in routine care, starting with joint replacements and spine surgery. Through a \$1.9 million grant from the Agency for Healthcare Research and Quality, we are learning which outcomes matter most to patients. We will also evaluate how using PROMs data in both patient visits and feedback to surgeons affects care and costs.



The cost of cancer

Understanding the financial toll of cancer on patients is the goal of a Metro-Minnesota Community Oncology Research Consortium (MMCORC) study. Investigators are participating in a National Cancer Institute study measuring how often patients with cancer face financial problems and how it affects their quality of life.

"It's clear the cost of cancer care drugs is rising rapidly," said Daniel Anderson, MD, MMCORC principal investigator. "This study will help us figure out how this affects our patients' ability to receive care and afford other expenses."

Investigators will recruit 350 patients nationwide who have colorectal cancer. The one-year study will include questionnaires every three months asking patients how cancer care has affected their finances.

"We know there is a financial impact," said Pam Pawloski, PharmD, site principal investigator. "The ultimate goal of this study is to estimate the incidence of cancer treatment-related financial hardship."

Institutional Review Boards critical to research

Our Institutional Review Boards (IRBs) not only provide the required oversight for conducting research, they make our program stronger. They advocate for research subjects and conduct ethical reviews so that:

- Participants' rights and welfare are protected and they agree to participate
- Studies maximize possible benefits and minimize possible harms
- Studies result in important knowledge

Members of the HealthPartners IRB include Elie Gertner, MD (Chair); Elizabeth Reeve, MD (Vice Chair); Elizabeth Farrell; Jill Goring; Jennifer Haberman; Dave Hamlar, MD; Margaret Krieser; Mary Jeanne Levitt; Mike Maciosek, PhD; Gerda Ottman, PharmD; Don Postema, PhD; Amar Subramanian, MD; Julie Switzer, MD; and Bjorn Westgard, MD.

Members of the Park Nicollet IRB include John Schousboe, MD, PhD (Chair); Stefanie Larson, PharmD (Acting Chair); Rowan DeBold, MD; Kari Joy Garman; Amber Larson; Holly Raby; and Nathan Scheiner.

Our IRBs are part of HealthPartners Research Subjects Protection Program, which received full accreditation in 2018 from the Association for the Accreditation of Human Research Protection Programs. Accreditation reinforces that our program is focused on excellence.

Researcher elected to national post

Leif Solberg, MD, Institute Senior Investigator and Senior Advisor for Care Improvement Research, was elected to the National Academy of Medicine in October 2017. Election to the academy is considered one of the highest honors in health and medicine. Solberg, who joined the Institute in 1992, studies quality measurement and improvement, patient reported outcomes and organizational change, especially for chronic disease care and clinical preventive services delivery, as well as primary care redesign.



Leif Solberg, MD

AROUND THE INSTITUTE



Measuring vaccine safety and effectiveness

The public has many questions about vaccines. Are they safe for my child? How important are vaccines? Data from large health systems are critical to studying the safety and effectiveness of currently recommended vaccines to answer these questions. Data on real-world vaccine use help identify and reduce vaccination disparities.

We conduct vaccine safety, effectiveness and disparity research, much of it through the Vaccine Safety Datalink (VSD), a collaboration between the Centers for Disease Control and Prevention and several health care systems, including HealthPartners. Other work is funded by the National Institutes of Health and internal grants.

Some of our studies are noted below. Visit our [website](#) to learn more.

- Safety of influenza and pertussis vaccination in pregnancy
- Safety of accidental exposures to human papillomavirus (HPV) vaccine during pregnancy
- Ethnic and racial disparities in childhood immunization
- Safety of live attenuated influenza vaccine in children with asthma
- Effectiveness of maternal pertussis vaccination

Seeing beyond the symptoms of dementia

Through the Partners in Dementia program, first-year medical students are paired with patients with memory disorders. The goal is to improve students' ability to diagnose and develop a care plan while connecting with patients. "Much of the care for dementia is not drug-based but social," said Michael Rosenbloom, MD, Clinical Director of HealthPartners Center for Memory & Aging. "When it comes to care for memory loss, social interactions are as impactful, if not more, than any drug." Last year, 20 student and patient pairs participated in these monthly connections to discuss the impact of the disease and much more.

Understanding employee well-being

Worksites are significant in the health and safety of employees. Protection from safety and health hazards and promotion of injury and illness prevention are key. We are actively studying these challenges and opportunities.



The National Institute of Occupational Safety and Health accepted HealthPartners Institute as a Total Worker Health Affiliate Program in 2018. Our strong track record of research and education supports the Total Worker Health concept, making affiliate status a great fit. This program fosters protecting and promoting worker well-being through collaborations with academic, labor, nonprofit and government organizations.

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2017 Audited Financials (in thousands)

Statement of activities

Revenue	
Total operating revenue	\$ 41,268
Total operating revenue	41,268
Expenses	
Total program expenses	29,922
Total admin/program support expenses	14,118
Total operating expenses	44,040
Operating net income/(loss)	<u>(2,772)</u>
Investments	
Investment income and net realized gains	3,714
Net income/(loss)	<u>\$ 942</u>

Statement of financial position

Assets	
Cash/cash equivalents	\$ 1,445
Accounts receivable	9,659
Pledges receivable	77
Other current assets	118
Prepaid expenses	163
Total current assets	11,462
Other Assets	
Investments	56,052
Property/equipment	3,368
Other assets	66
Total other assets	59,486
Total assets	<u>\$ 70,948</u>
Current liabilities	
Accounts payable	\$ 2,503
Deferred revenue	92
Total current liabilities	2,595
Net assets	
Unrestricted	
Undesignated	64,400
Board-designated	2,398
Total unrestricted	66,798
Temporarily restricted	1,555
Total net assets	<u>68,353</u>
Total liabilities + net assets	<u>\$ 70,948</u>

Mission

To improve health and well-being in partnership with our members, patients and community.

Vision

Health as it could be, affordability as it must be, through relationships built on trust.

BY THE NUMBERS 2017



400+ research studies
145 paper and poster presentations at national and international conferences
400 researchers and 30+ core investigators



24,000 participants in 300+ continuing medical education activities
10,000 health professional participants in clinical simulation programs
600 clinician educators
1,200+ medical and advanced practice students
575 medical residents and fellows



1.7 million views of patient education content by patients and members
16,000 participants in patient and diabetes education classes and nutrition visits
4,500 medical literature searches performed by our librarians



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