



ALLINA HEALTH RESEARCH

2019 Annual Report

Advancing health outcomes through research

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For a complete list of Allina Health Research 2019 manuscripts, abstracts, presentations and posters, visit allinahealth.org.

Allina Health Research annual report
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writer: Jennifer Syltie Johnson



Welcome to the 2019 Allina Health Research annual report.

Unprecedented times. Challenging situation. Financial duress. Disparities. Stay Home. Stay Safe.

How many times have we heard these words uttered in the last few months? Indeed, it has been an unprecedented and challenging time. We are all experiencing the COVID-19 pandemic and civil unrest while facing our own personal and professional challenges. Allina Health, like many health care organizations worldwide, is facing the duality of preparing for and addressing the local COVID-19 surge while ensuring the safety of our patients, staff, visitors, and community. We are championing our

efforts as we also confront a record slow-down on scheduled surgeries and other services.

Through this difficult period, our research teams have been tremendously resilient and have worked rigorously to ensure that essential clinical trials continue with tele-consenting, tele-monitoring and other innovative methods. We have been diligent to ensure that our research work is prioritized for the most critical studies so that our patients can continue to receive the best care.

You may ask why this is the right time to present information on our work from last year. Allina Health Research leadership determined that it is important to continue to showcase our outstanding research outcomes. Why? Because cancer does not stop for COVID. A brain tumor or cardiac event does not stop; a much needed hip or knee replacement, or a mental health consultation cannot stop. And the research continues.

This much-abbreviated version of our research outcomes from 2019 serves to highlight this fact. It gives us hope that although we will be in a forever COVID-changed world, the excellent work of our dedicated teams does not go unnoticed and will continue through adversity.

We invite you to peruse our 2019 outcomes and ask you to look forward to a special 2020 COVID-19 specific research report in the upcoming months.

Timothy Sielaff, MD, PhD, FACS
Chief Medical Officer and Senior Vice President

Vani Nilakantan, PhD
Vice President of Research

Research houses

Allina Health considers research an essential component of supporting its patients, families and communities. The institutional investment in research provides the necessary infrastructure for advancing research across the organization and fosters a supportive environment for the research community. Research at Allina Health is organized into clinically focused research houses. This structure aligns with and supports the strategic mission of the Allina Health Clinical Service Lines.

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Research portfolio 2019

 **229**  academic presentations & abstracts



3.6% increase from 2017



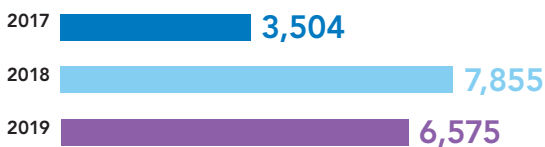
 **744**  active studies

24% increase from 2017



 **6,575**  patients enrolled

87.6% increase from 2017



 **285**  publications

10.0% increase from 2017



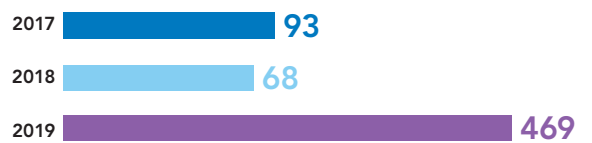
 **396** Allina  investigators

10.6% increase from 2017



 **469**  media presentations

404% increase from 2017



Research portfolio 2019


92 grants
 96% increase from 2017*

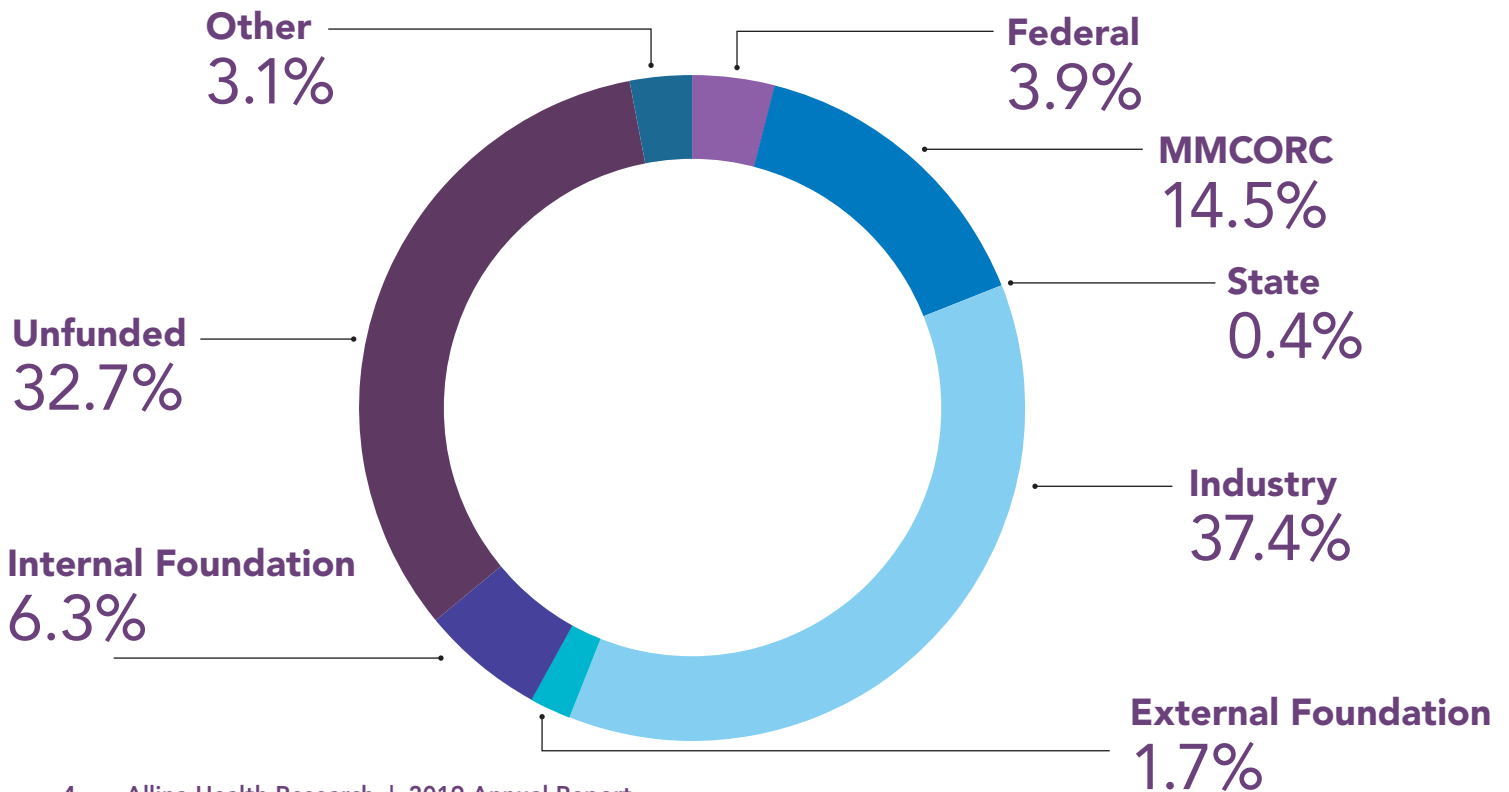


* 2019 data includes grants awarded to additional groups not included in previous years.


revenue
\$10,931,316
 9% decrease from 2017




expenses
\$15,763,878
 12.2% decrease from 2017



Key 2019 accomplishments

Clinical Research Informatics & Analytics

113 
data supports
with more than
400 data extracts

32 
Greater Plains
Collaborative (GPC/
PCORnet) queries

4 submitted
manuscripts
3 accepted and
1 pending

Research Operations

 **19%**
Decrease for
average total weeks
to fully executed
contracts

 **Effort
certification**
procedure
implemented for
Federal grants

**Financial
analyst** 
joined the team




\$938k
spend on Allina
Health hospital
services for clinical
research services



246
agreements
reviewed

Met all timeline
requirements for
Workday system
impementation



 Initial contract review
timeline decreased by
38%

Abbot Northwestern Hospital Foundation Medicine Ball

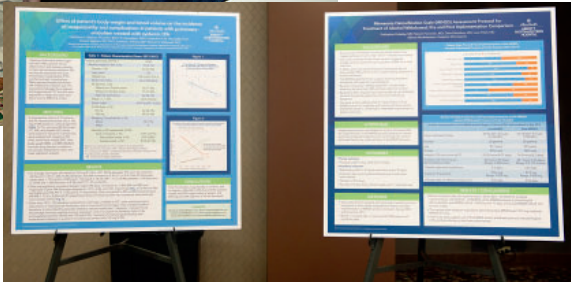
\$1,260,000

This year's Abbott Northwestern Hospital Foundation Medicine Ball gala, Ray of Hope, raised more than \$1.2 million for Abbott Northwestern and Allina Health Research programs. A crowd of 800 guests filled the Hilton Minneapolis ballroom, with the gala chaired by Sharon Hawkins and Dr. Dan Buss of Sports & Orthopaedic Specialists, while the late Earl Bakken, health care visionary and Medtronic co-founder, was the evening's Honoree.



Research Day

Allina Health Research held its first-ever Research Day, an inaugural event that included a research patient story; a keynote address by William Schuyler Jones, MD from Duke University on behalf of the William E. Peterson Physician Leadership Lecture fund; an Awards Ceremony recognizing researchers from across Allina Health; and a poster viewing/networking session featuring 40 posters detailing the excellent research conducted across the system.



Research by the numbers

CANCER

Virginia Piper Cancer Institute

Active studies	74
Active enrollment	235
Publications	11
Media presentations	2
Academic presentations and abstracts	12
All grants	9
Active Allina investigators	28

Metro-Minnesota Community Oncology Research Consortium

Active studies	124
All grants	1

CARDIOVASCULAR

Minneapolis Heart Institute Foundation®

Active studies	253
Active enrollment	610
Publications	207
Academic presentations and abstracts	225
Active Allina investigators	97

Metropolitan Heart & Vascular Institute

Active studies	7
Active enrollment	212
Publications	3
Academic presentations and abstracts	4
Active Allina investigators	18

United Heart & Vascular Clinic

Active studies	30
Active enrollment	198
Publications	1
Academic presentations and abstracts	4
All grants	3
Active Allina investigators	13

CARE DELIVERY

Critical Care and Hospitalists

Active studies	23
Active enrollment	100
Publications	2
Media and other presentations	2
Academic presentations and abstracts	4
All grants	13
Active Allina investigators	69

Emergency Medical Services

Active studies	10
Publications	3
Media presentations	12
Academic presentations and abstracts	1
Active Allina investigators	5

Mother Baby

Active studies	17
Active enrollment	1,900
Publications	4
Media presentations	1
Academic presentations and abstracts	4
All grants	6
Active Allina investigators	29

Heart of New Ulm/ Cardiovascular Diseases

Active studies	8
Active enrollment	114
Publications	2
Media presentations	11
Academic presentations and abstracts	5
Active Allina investigators	7

Other care delivery research studies

Active studies	3
Active enrollment	18
Active Allina investigators	11

Other (Fellow projects, PEI, MN Epilepsy Group, Pharmacy)

Active studies	66
All grants	9

INFECTIOUS DISEASES

Active studies	7
Active enrollment	88
Media presentations	44
Academic presentations and abstracts	3
Active Allina investigators	4

NEUROSCIENCE

Active studies	45
Active enrollment	51
Publications	28
Media presentations	4
Academic presentations and abstracts	41
All grants	15
Active Allina investigators	28

NURSING

Active studies	5
Active enrollment	210
Publications	6
Media presentations	27
Academic presentations and abstracts	10
All grants	1
Active Allina investigators	10

ORTHOPEDIC

Sports & Orthopaedic Specialists

Active studies	10
Active enrollment	99
Publications	2
Media presentations	50
Academic presentations and abstracts	18
Active Allina investigators	7

REHABILITATION

Courage Kenny Rehabilitation Institute

Active studies	20
Active enrollment	519
Publications	8
Academic presentations and abstracts	14
Active Allina investigators	50

SPINE

Twin Cities Spine Center

Active studies	21
Active enrollment	31
Publications	5
Media presentations	77
Academic presentations and abstracts	15
All grants	1
Active Allina investigators	20



Allina Health Research by the numbers

744
active studies

229
academic presentations & abstracts

285
publications

92
grants

6,575
patients enrolled

396
investigators

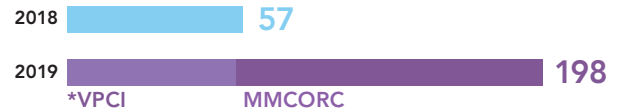
ONCOLOGY Virginia Piper Cancer Institute

The mission of our Allina Health Cancer Institute Oncology Research Program is to offer patients the opportunity to participate in promising new treatments for cancer within their own hospital or clinic. Our goal is to become a clinical research referral center in our region by offering high quality clinical trials for patients with cancer, or those who are at risk for developing a cancer diagnosis. In addition, we conduct internal research to develop and test methods to enhance care, manage side effects of cancer, and improve the effectiveness of cancer diagnostics and treatments. We also contribute to advancing oncology care through public forums, presentations at scientific and lay conferences, and publishing our study results in professional journals.

12 academic presentations & abstracts



198* active studies



235 patients enrolled



11 publications



28 investigators



2 media presentations



CARDIOVASCULAR Minneapolis Heart Institute Foundation®

Research improves and saves lives. Research is the reason why Hope is Discovered Here. MHIF research teams, including Minneapolis Heart Institute® physicians, conduct leading research and education across all cardiovascular subspecialties. This research offers hope in the form of new treatment options, which in some cases may offer the only option for a life-threatening heart condition. In other cases, hope is discovered in a study that confirms the real benefit of a new therapy, or one that confirms the value of important preventive steps. At any given point in time, MHIF research teams are conducting more than 200 studies involving more than 2,200 patients.

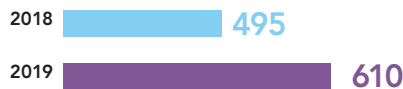

225 academic presentations & abstracts




253 active studies




610 patients enrolled



207 
publications



97
investigators 



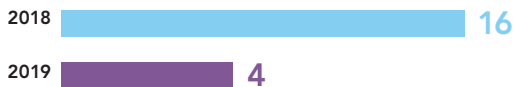
CARDIOVASCULAR

Metropolitan Heart & Vascular Institute

The Metropolitan Heart and Vascular Institute (MHVI) has spent over a decade participating in research studies to answer crucial questions about the advancement of cardiovascular treatment. Originally founded for delivering cutting-edge cardiology care for patients around the area, MHVI has deep roots within the Minneapolis metropolitan community.

MHVI's primary focus is on an impassioned search for revolutionary cardiovascular treatment and prevention options for patients. With experts and leaders in the field by their side, MHVI has participated in well over 70 clinical research studies.


4 academic presentations & abstracts




28 active studies



212 
patients enrolled



3 
publications



18 
investigators



CARDIOVASCULAR United Heart & Vascular Clinic

At the United Heart & Vascular Clinic, we provide resources for the prevention, detection and treatment of heart disease. Our patients matter to us, and we encourage them to take an active role in decision making when it comes to their plan of care. We offer options that may only be available through clinical research studies.



4 academic presentations & abstracts



30 active studies



198 patients enrolled



1 publication



13 investigators



3 grants awarded



CARE DELIVERY

Critical Care, Medical Education & Hospitalists

The critical care, medical education, and hospitalist clinical research programs at Allina Health are in partnership with Abbott Northwestern Hospital and Care Delivery Research. Investigators strive to continually advance outcomes for hospitalized patients. Results of our research studies provide important evidence that is used to develop optimized patient care practices and reduce complications and length of stay during hospital admissions. Focus areas of discovery include pulmonary embolism, bedside ultrasound, outcomes of hospitalized patients with penicillin allergy, treatment of alcohol withdrawal, and prediction of clinical decompensation in hospitalized patients, among other studies. Ultimately, the impact of this research benefits our community by decreasing the cost of care for patients and enhancing their overall experience.

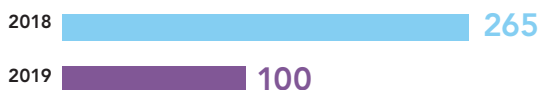

4 academic presentations & abstracts




23 active studies



100 
patients enrolled



2 
publications



69 
investigators



13 
grants



CARE DELIVERY Emergency Medical Services

The Emergency Medical Services (EMS) research agenda at Allina Health aims to improve the delivery and outcomes of the prehospital care provided by our ambulance service. Since 2011, a small but active group of core investigators has been conducting research in support of Allina paramedics, EMTs and dispatchers who deliver life-saving and compassionate care in the pre-hospital setting to patients and families facing acute and often life-threatening events in the out-of-hospital setting. With over 600 care providers and approximately 130,000 responses for service annually across 100+ communities, Allina Health EMS is one of the largest ambulance services in the upper Midwest. The research we conduct in this large applied setting is aimed at advancing new treatments and approaches in the field of pre-hospital care delivery and studying their impact on patient outcomes. Research focus areas include management of cardiac arrest, provider well-being, response vehicle design and safety, sepsis recognition, and administration of opioids and naloxone.

1 academic presentation & abstract



10 active studies



5 investigators



3 publications



12 media presentations



CARE DELIVERY Mother Baby

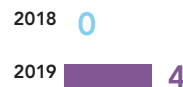
The Mother Baby research agenda at Allina Health seeks to improve models of care and outcomes during prenatal care, labor and delivery for both low- and high-risk pregnancies. Our research is also focused on identifying disparities and inequalities to create opportunities to improve health equity among patients. Ultimately, we aim to partner with providers to generate practice-based evidence within the Mother Baby service line.

Allina Health's Mother Baby clinical service line brings together obstetrics (OB), perinatology, midwifery, newborn care/ neonatology and women's health to provide world-class care. Allina Health is the largest OB delivery system in the state with over 15,500 annual deliveries. Research conducted by the Mother Baby team is guided by the Mother Baby Research Council, which provides scientific, strategic and practical guidance to the development and implementation of research.

4 academic presentations & abstracts



4 publications



1,900 patients enrolled



17 active studies



29 investigators



6 grants

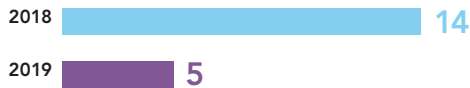


CARE DELIVERY

Heart of New Ulm/Cardiovascular Diseases

Hearts Beat Back®: The Heart of New Ulm (HONU) project is a 10-year partnership that began in 2009 between Minneapolis Heart Institute Foundation (MHIF), Allina Health, the New Ulm Medical Center and the community of New Ulm to identify and deliver the best interventions to reduce cardiovascular disease at a population level (for an entire community). This groundbreaking initiative was inspired by the bold question from MHI® cardiologist, Dr. Kevin Graham, “Can we improve the cardiovascular health of an entire community?” Aimed at reducing heart disease – and heart attacks – throughout the city of New Ulm, Minnesota, the initiative focused on preventing cardiovascular disease versus treating it after it occurs. This was done through community education, healthcare and worksite interventions, and environmental changes to help residents reduce their health risks through physical activity, nutrition, smoking cessation and maintaining a healthy weight. Preliminary results, including data published out to six years, show improvements in cardiovascular risks such as cholesterol and blood pressure.

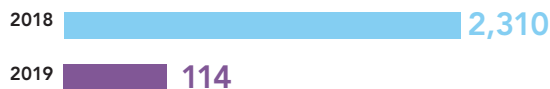
5 academic presentations & abstracts



8 active studies



114 patients enrolled



11 media presentations



7 investigators



2 publications



INFECTIOUS DISEASES

The Infectious Diseases research team is a small group that functions equally well independently and through interdisciplinary collaboration with various departments and organizations. The team explores new possibilities for the treatment and prevention of infectious diseases, and their work with diseases such as COVID-19, influenza, septicemia, Respiratory Syncytial Virus (RSV), Human Immunodeficiency Virus (HIV) and Hepatitis B/C has made great strides toward better infectious disease management.

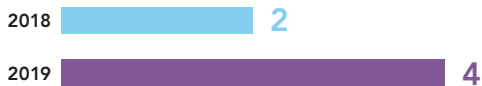
3 academic presentations & abstracts



7 active studies



4 investigators



88 patients enrolled



44 media presentations



NEUROSCIENCE

The Neuroscience Research Department was established in 2012 to provide operational support to Neuroscience Research across Allina. Currently, we support investigators specializing in neuro-oncology, neuro-pathology, neuro-radiology, stroke care, and neurophysiology research. We continually strive to apply the discoveries made from our research projects toward improvements in patient care. We also bring what we learn from patients back to the research team to enhance our understanding of neuroscience. This bench-to-bedside approach allows us to move discoveries expeditiously into the patient-care setting, while helping researchers refine therapies and techniques based on clinical observations.

41 academic presentations & abstracts 



45 active studies 



51 patients enrolled 



4 media presentations 



28 investigators 




28 publications 



NURSING

Nursing research at Abbott Northwestern Hospital supports the process of clinical inquiry throughout all the phases including problem identification, scoping the problem, enlisting study investigators, literature review and synthesis, study design, analytic plan, budget planning, funding sources and dissemination plans. Patient safety is a main focus of nursing research at Abbott Northwestern Hospital. We use a variety of clinical inquiry methods including: quality improvement, evidence based practice, and collaborative and independent research.


10 academic presentations & abstracts




5 active studies



210  patients enrolled



27  media presentations



10  investigators



6  publications

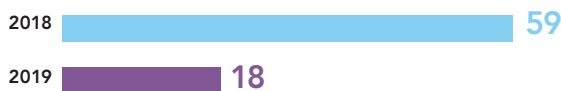


ORTHOPEDIC Sports & Orthopaedic Specialists

Orthopedic and sports medicine research at Allina Health is primarily lead by the efforts of Sports & Orthopaedic Specialists (SAOS), part of Allina Health. Through remarkable research and passionate involvement in the orthopedic community, SAOS has made great strides improving the treatment of our patients.

Over the years, much of the research has been comprised of investigator-initiated studies focusing on specific patient populations, surgical techniques, treatment options and risk factors. As of late, their increased emphasis on Investigational Device Exemption (IDE) and long-term arthroplasty outcome studies has opened new doors in the orthopedic and sports medicine marketplace.

18 academic presentations & abstracts 



10 active studies 



99 patients enrolled 



50 media presentations 



7 investigators 



2 publications 



REHABILITATION

Courage Kenny Rehabilitation Institute

The overarching goal of CK Research is to develop knowledge that optimizes rehabilitation outcomes and full societal participation for people with acute or chronic disability. With funding from foundations, industry, and the federal government, our studies generally pertain to advancing functioning and quality of life for people with concussion, stroke, spinal cord injury, and cancer. We partner with clinicians from Courage Kenny Rehabilitation Institute so that rehabilitation research stays tethered to organizational concerns and so that research serves as a vehicle for clinicians' professional development.

14 academic presentations & abstracts



20 active studies



50 investigators



519 patients enrolled



8 publications



SPINE Twin Cities Spine Center

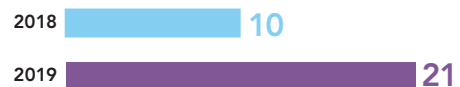
Allina Health Research's spine research is conducted in partnership with Twin Cities Spine Center surgeons and includes retrospective and prospective clinical studies and quality improvement projects.

Twin Cities Spine Center has been conducting pivotal research, advancing spine care and training surgeons from all around the world for over 70 years. Twin Cities Spine Center's Research Department is an outgrowth of the pioneering work of John H. Moe, MD. Dr. Moe is regarded as the founder of modern scoliosis research and treatment. His work led to the creation of the Scoliosis Research Society and the publication of the first comprehensive textbook on spinal deformities. Our physicians and research staff carry on the legacy of Dr. Moe.


15 academic presentations & abstracts




21 active studies



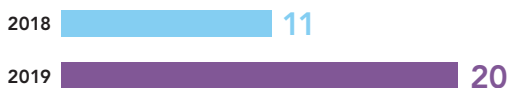
31 patients enrolled 



77 media presentations 



20 investigators 



5 publications 





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