
ALLINA HEALTH RESEARCH

A Commitment to Research



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Welcome to the Allina Health Research 2020 annual report.

During the COVID-19 once-in-a-century pandemic and the civil unrest of 2020, Allina Health remained steadfast in its commitment to innovative research that advances health outcomes, improves patient lives and promotes population health in the communities it serves.

Despite the significant challenges we faced, we continued our systemwide research efforts and contributed our subject matter expertise to teams committed to the highest levels of quality and safety. Our commitment to patient-centered research translated into new therapies, treatments, knowledge and discoveries to advance patient care.

This report provides a snapshot of some of Allina Health's Research efforts in 2020. As a not-for-profit health system, Allina Health invests in research to advance the future of health care. Through critical partnerships with other organizations, Allina Health is committed to research that has an impact locally, nationally and globally.

We invite you to learn more about Allina Health Research through this report. The Allina Health Research team is grateful for the leadership and significant contributions to this work by Vani Nilakantan, PhD, our former vice president for Research.

To read our report on COVID-19 research please visit our [link here](#).

For more information on Allina Health Research, visit allinahealth.org/research.

Víctor Meléndez, PhD
Interim Lead and Director of Research Operations
Allina Health Research

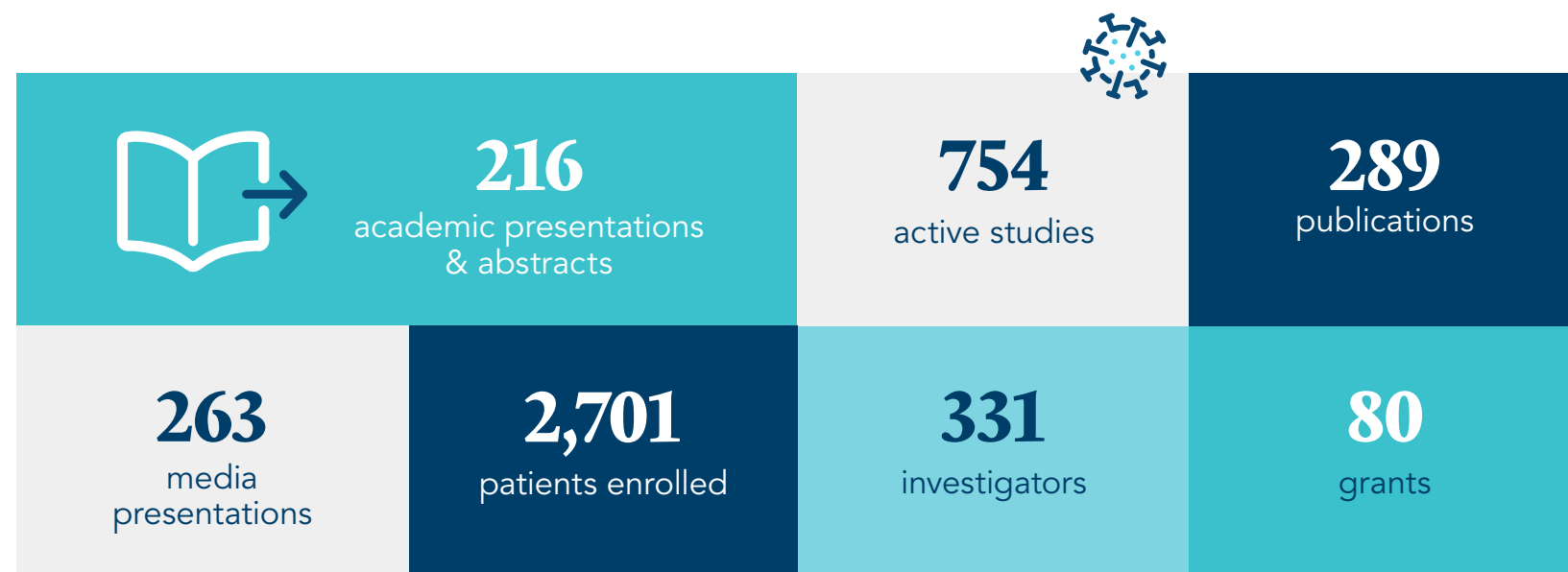
Our values

- Integrity
- Trust
- Respect
- Compassion
- Stewardship

Allina Health Research vision

To be a recognized leader in innovative clinical research that advances health care, improves patient lives, and promotes population health in the communities we serve.

ALLINA HEALTH RESEARCH OVERVIEW
2020 by the numbers



Research areas

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 Allina Health Research Clinical Service Lines.





PATIENT'S PERSPECTIVE

Jack Riebel

An accomplished and dedicated chef is grateful for access to world-class research, close to home

For more than 35 years Jack Riebel has been a dedicated member of the culinary community in the Twin Cities. A well-known chef who has worked at some of the region's top restaurants including Goodfellows, Butcher & the Boar, and Il Foro, Riebel's current post is at The Lexington in St. Paul.

Throughout his career, he has given back to the community through charity support for local cancer care programs. In June 2019, the tables turned when Riebel was diagnosed with neuroendocrine cancer. With his diagnosis, Riebel suddenly found himself seeking care for the extremely rare cancer—the same type of cancer that Aretha Franklin and Steve Jobs had been diagnosed with.

Riebel underwent four rounds of chemotherapy at Abbott Northwestern Hospital's Virginia Piper Cancer Institute. His oncologist explored clinical trials and he enrolled in a trial in January 2020. "I was really grateful I could get this treatment at the Virginia Piper Cancer Institute," said Riebel. "I wanted

treatment close to my house and they sought out the best options available for me."

Participating in a clinical trial during a pandemic year brought its own challenges. Riebel feels his participation in clinical research is bigger than treatment for himself. "I credit the trial for keeping me alive, and part of my reason for participating in a trial is the hope I can make this path better for someone else in the future," said Riebel. "It gave me an opportunity to give back while getting the best care possible. I would do it again in a heartbeat."

Riebel is now back to work with a fully vaccinated team at The Lexington in St. Paul, which has opened again after a closure during the pandemic. "My care nurse Stephanie was amazing," said Riebel. "She was thorough, informative, and kept track of everything related to my care and participation in the trial. Everyone at the Virginia Piper Cancer Institute gave me incredible care and treatment options during a challenging year."

COVID-19 Funding Task Force

When a national emergency was declared in March 2020, Allina Health quickly responded by forming a COVID-19 Funding Task Force. According to Sarah Pederson, MBA, MA, manager, Research Grants and Finance, Research Administration, the task force oversees the pre-and post-award process for grants and works closely with investigators and grantees ensuring compliance with state and federal requirements, programmatic reporting, Single Audit and all aspects of funding.

Members of the COVID-19 Funding Task Force represent Finance, Reimbursement Accounting, Legal, Government Affairs & Public Policy, Audit & Tax Services, and Research. This multi-disciplinary team quickly united to support the needs of Allina Health and facilitate reimbursement for departments including Mental Health & Addiction, Telehealth, Supply Chain and more. The team members also monitored funds from the federal Coronavirus Aid, Relief and Economic Security Act (CARES Act) and the Minnesota Department of Health COVID-19 Response Grant for Short Term Emergency Funding and the COVID-19 Health Care Response Grant.

Navigating the complex and ever-changing opportunities took a team effort and flexibility. "There were some silver linings in the pandemic in that our Research team was able to collaborate so closely with departments across Allina Health," said Pederson. "We've partnered with many areas to ensure we've followed the necessary guidelines and requirements."

One area that saw years of planned changes unfold within weeks was in virtual care through telehealth. "There will be long-term implications in the area of telehealth," said Mike Fulcher, project manager, Research Grants & Finance, Research Administration. "Telehealth will not go away for patients once we are on the other side of the pandemic. Going forward, it's one way to address health equity and inclusion to ensure that health care is delivered in person or virtually in an equitable way."

For all health systems, 2020 was a year like no other—and the financial challenges of the pandemic, disruption of non-emergency care and added expenses of caring for critical patients with COVID-19 was felt across all care settings. "This was really important work done by the COVID-19 Funding Task Force members," said Pam Lewis, controller, Allina Health. "We put a great emphasis on representation, and our work to support research and patient care. Given all of the challenges we faced during the year, we definitely came out stronger as an organization."



Sarah Pederson, MBA, MA



Mike Fulcher

Minneapolis Heart Institute Foundation®



“Research is fundamental to solving the COVID-19 pandemic. MHIF researchers, together with our colleagues around the world, are working constantly to conquer this global health crisis.”

Scott Sharkey, MD
MHIF chief medical officer

Learn more about supporting research:

[Minneapolis Heart Institute Foundation](https://www.mplsheart.org)

[mplsheart.org](https://www.mplsheart.org)
612-863-3833

For more than 38 years, the Minneapolis Heart Institute Foundation (MHIF) has delivered exciting breakthroughs and new discoveries that advance medical knowledge and improve the lives of millions of people. MHIF clinical research studies test new drugs, devices and medical procedures.

MHIF research showed that the coronavirus pandemic stopped some heart attack patients from seeking urgently needed care

In April 2020, MHIF announced publication of a real-time data analysis pulled from its regional Level One STEMI (ST-elevation myocardial infarction, or heart attack) program that includes data reported from nine participating U.S. STEMI Centers.

The preliminary analysis during the COVID-19 pandemic showed a 38-percent reduction in U.S. cardiac catheterization laboratory STEMI activations, which are the standard-of-care treatment for patients with heart attacks. The analysis was published in the [Journal of the American College of Cardiology and can be found here.](#)

“It is critical to understand if patient-based anxiety is leading to this decrease of patients seeking care for the signs and symptoms of a heart attack,” said Santiago Garcia, MD, interventional cardiologist and MHIF researcher. “While we are all concerned about COVID-19 exposure, patients also need to know that avoiding care and treatment could be dangerous for certain acute cardiovascular conditions such as heart attacks. In these situations, timing is key and hospitals across the country are following careful procedures to keep patients safe from COVID-19 exposure, while providing life-saving treatments for other cardiovascular conditions.”



Santiago Garcia, MD, MHIF

This research resulted in a front-page story in the Star Tribune and other media coverage.

Personal protective equipment (PPE) during a pandemic

In the early days of the pandemic, health care systems throughout the country suffered from a shortage of essential PPE for health care workers. Allina Health researchers applied for and received an Emergency Fund Grant from the Minnesota Department of Health to purchase more than 15,000 pre-assembled elastomeric respirators and other critical supplies for health care workers.

Health care workers in designated COVID-19 units including nurses, laboratory technicians, dietitians and other patient-facing roles were fit tested and trained to use the elastomeric respirator for use in the clinical setting. The proper use and fit of the reusable respirators are essential to maintain the safety of Allina Health staff members, as well as the patients served.

Through the grant funding, Allina Health researchers were able to complete two research studies on the use of the PPE:

- Health care worker perceptions of the half-face reusable respirator study
- Audiology study to evaluate the impact on speech and communication at two environmental noise levels with the half-face reusable respirator compared to other types of respiratory protection devices that cover the face differently.

“This really was a team effort,” said Catherine St. Hill, DVM, PhD, principal research scientist, Care Delivery Research. “It took a collaborative, multi-disciplinary approach across Allina Health and everyone on the team had a role to play to pitch in to get it done.”

Overall, the findings from the health care worker perceptions were encouraging. Staff members felt well-protected while wearing the respirator, but there were concerns with communication.

The audiology study’s purpose was to evaluate the impact on speech and communication at two environmental noise levels: the half-face respirator compared to other types of respiratory protection devices that cover the face differently.

Rachel Zerby, AuD, board-certified audiologist at Allina Health Bandana Square Clinic, completed the Modified Rhyme Test (MRT) on clinicians participating in the research study. The MRT hearing test was administered using six types of respiratory protection devices with two different background noise levels, simulating a quiet clinical exam room and a noisier emergency department setting.

“PPE is a big challenge for health care workers,” said Zerby. “PPE can dampen or muffle the sounds, generally from three to 12 decibels and usually in the higher frequencies, and most respirators cover the mouth which many people use for visual clues to fill in the gaps with any type of hearing loss.” According to Zerby, the muffling of sound in the higher frequencies means that consonant sounds are too soft to hear, leading to loss of speech clarity.

This initial research shows the need for further analysis to gain a better understanding of the impact of PPE on clinical communication models and improvements that could ultimately better these conditions.

Two manuscripts will be prepared and submitted to peer-reviewed journals to report the findings from these two studies.



Rachel Zerby, AuD

Briefs

Clinical Research Informatics & Analytics (CRIA)

The mission of the CRIA team is to apply the science of information management to enable the effective and efficient execution of clinical research, including clinical trials, observations studies and outcomes research.

PCORnet/GPC studies and projects

The CRIA team participates in a research network called PCORnet, the National Patient-Centered Clinical Research Network. PCORnet includes 251 healthcare systems and academic medical centers throughout the United States. Allina Health is part of the Greater Plains Collaborative (GPC), one of the 12 networks within PCORnet. CRIA maintains a PCORnet datamart structure for data collection, disease surveillance, and clinical research. Currently CRIA manages and supports 13 PCORnet/GPC research studies and projects.

CRIA services and support for Allina Health research study teams

CRIA plays a significant role in support and services provided to Allina's research study teams. In addition to extracting data from medical records for research studies, CRIA designed multiple REDCap tools for entering, tracking, and reporting on COVID-19 studies at Allina. These tools enhance collaboration among study team members and eliminate data redundancy and duplication. For example, CRIA designed a REDCap form with multiple sections for study teams to use for capturing data in one place, one time, instead of entering the same data in multiple places. CRIA also created a dynamic dashboard to provide weekly statistics and status details using data from REDCap to provide snapshots of COVID-19 projects and studies.

Health care registries

CRIA participates in four health care registries at global, national, state and Allina-wide data levels.

- CDC Task Force for Global Health contains 331,000 Allina Health patient records to help decision makers quickly track trends and capture insights on COVID-19 infection rates.
- Minnesota EHR Covid-19 Consortium includes Allina Health, CentraCare, Children's Minnesota, Essentia, HealthPartners, Hennepin Healthcare, M Health Fairview, Mayo Clinic and North Memorial. This state-wide registry provides granular level data for nearly 90% of vaccination data and 35% of COVID -19 testing data within the State of Minnesota.
- SCCM VIRUS global registry contains 64,182 hospital admissions and 12,130 ICU Admissions among 298 organizations that now span 26 countries.
- Allina-wide COVID-19 registry contains 2,900 unique patient records with 641 COVID-19 characteristics.

The importance of philanthropy to Allina Health Research

TOGETHER, WE MAKE IT POSSIBLE

Philanthropy enables Allina Health to conduct groundbreaking research, recruit and retain brilliant research staff members and continue to make exciting advances in patient care.

Through the support of generous donors, the following Allina Health foundations fund critically important research.

Learn more about supporting research at the foundations:

Abbott Northwestern Hospital Foundation

Richard Meyer
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United Hospital Foundation

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Courage Kenny Foundation

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We are grateful for your support