

INSTITUTE FOR PUBLIC HEALTH AND MEDICINE AT NORTHWESTERN MEDICINE

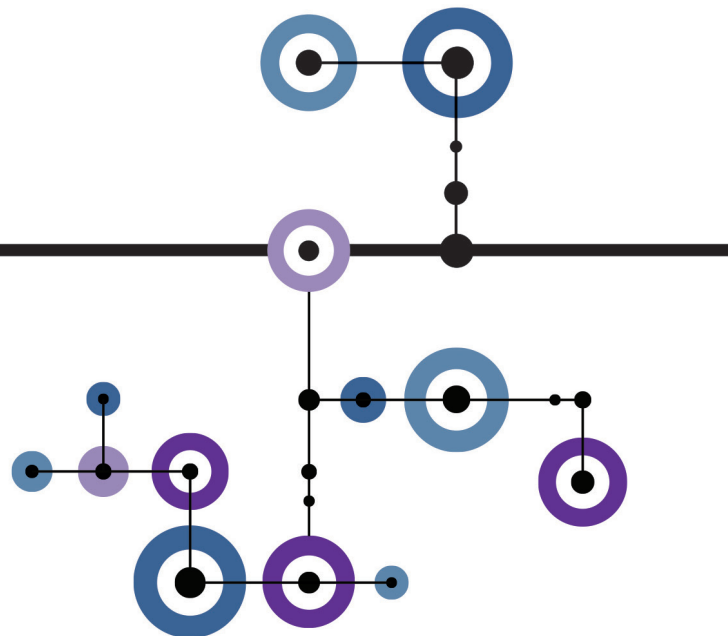
CENTER FOR HEALTH INFORMATION PARTNERSHIPS



INFORMATION-DRIVEN
HEALTH FOR ALL

CHiP

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Electronic health data has been collected for decades in doctors' offices, clinics, and hospitals and has been used primarily for straightforward and simple clinical care purposes.

Now, consider something quite bold. Imagine this information being aggregated and analyzed in a way that allows for both the detection and control of the next new infection, early detection of a chronic condition, such as diabetes, or the personalization of a patient's medication regimen so that better results can be achieved for the patient and with the most minimal side effects.

Such a vision is not only within reach, but is a reality today. This exciting progress is due to the cutting-edge work being carried out by the Center for Health Information Partnerships within the Institute for Public Health and Medicine (IPHAM) at Northwestern University Feinberg School of Medicine. Abel Kho, MD, serves as director of this new Center.

In the past few years, electronic health records have supplanted paper charts as the repository for all information related to a patient's health. The ubiquity of electronic health records in the United States presents data in a way that it has never been available before—exhaustive, vast, and replete with new medical knowledge that is waiting to be analyzed and discerned.

CHIP—A Bold and Exciting New Era for Health Information

The Center for Health Information Partnerships, known as CHIP, was founded in 2015 to bring electronic health data, investigators, and populations together to answer the most pressing healthcare and public health questions. Inspired by a vision for “information-driven health for all,” CHIP is ushering in crucial and radical changes to the landscape of medicine by transforming how we think about and employ health information technology. Researchers at CHIP recognize the important benefits that can be generated by aggregating health information across institutions and disciplines. Through this approach to data, they embrace that insights are dramatically multiplied and could potentially lead to improved health for individuals and entire populations.

Despite the great potential that Health Information Technology now offers, most healthcare entities are not capable of using data to their greatest benefit. This is primarily due to a lack of current skills, training, or vision. Furthermore, if novel insights are to be unlocked from Health Information Technology, new ways of thinking are a must as are innovative methods and interdisciplinary partnerships.

CHIP is further positioning Northwestern University Feinberg School of Medicine as a national leader in research and education. The Center is building on five years of successful health IT-related projects and strong relationships within Northwestern Medicine and with Chicago-area, Illinois-based, and national partners.



“CHIP collaborators come from a number of backgrounds and industries. They, however, all have one goal in common—a desire to work toward a world where data is effectively used to inform medical practices and improve health outcomes.”

Abel Kho, MD, Director, Center for Health Information Partnerships

The Center for Health Information Partnerships is:

- Bringing together diverse departments/divisions/other centers, institutes, and community organizations to provide them with the data, relationships, and methods to identify and solve impactful and innovative healthcare and public health questions;
- Expanding the use of health IT and continuing to advance our ability to integrate data across multiple institutions and partners;
- Identifying and disseminating effective clinical practices for the use of health IT to improve care quality and patient outcomes;
- Securing funding to support research projects that uncover novel individual and population health insights.

Dr. Abel Kho and his team are at the forefront of health IT and health data projects. In 2010, they received an \$8.5 million grant to steer the adoption and use of electronic health records and to establish the Chicago Health Information Technology Regional Extension Center. The Center's ability to integrate health data from a variety of electronic health record systems has led to \$4 million in contracts from the Illinois Medicaid program to support more than 6,500 doctors throughout the state. Additionally, the Agency for Healthcare Research and Quality has funded a 3-year, \$15 million assessment of quality improvement support in small practices across three states. This is a collaborative effort with four other universities, as well as Walgreens, CVS Pharmacy, and the American Medical Association, among others.

Another success for CHIP is the HealthLNK Data Repository. This initiative is a city-wide database effort to merge and de-duplicate patient electronic health records across multiple institutions in Chicago. HealthLNK enables high throughput, patient-centered comparative effectiveness research that would otherwise be grossly inaccurate or simply impossible. The significance of this functionality is further underscored by the numerous successful multi-year, multi-million dollar follow-on grants made feasible by HealthLNK.

Building Partnerships to Propel CHIP's Activities

Currently, the Center for Health Information Partnerships is working with teams in Indiana and Michigan to develop a regional, multi-state program investigating how quality improvement data can be best used to transform clinical care. This Great Lakes Practice Transformation Network brings \$18 million over 4 years into Illinois. In addition, it also will allow Northwestern investigators from a variety of disciplines, tapping into their diverse expertise and perspectives, to contribute to the implementation research that will transform our nation's health care system.

CHIP serves as the broker of trusted relationships with data partners and other method experts both regionally



and nationally. The Center is founded on the premise that accessing varied perspectives and expertise is the most effective way to address health questions and develop innovative solutions that can be tested, implemented, and scaled for maximum impact. The primary success of CHIP, and each initiative it develops, is due now and in the future to deep relationships formed with and facilitated between practitioners, community health centers, and large healthcare systems around the city, in addition to the network of regional and national partners with aligned missions. Only through such partnerships do groups and communities gain the necessary leverage to increase the use of health information technology, and, from there, begin to unlock the enormous power of health data of greater quantities and superior quality.

CHIP collaborators come from a number of backgrounds and industries. They, however, all have one goal in common—a desire to work toward a world where data is effectively used to inform medical practices and improve health outcomes.

The success of CHIP's collaborative efforts rest on:

- Ideas or meaningful questions that require solutions;
- Information with which to test hypotheses;
- Infrastructure that can safely and securely bring health data together;
- Insights as extracted from the data analyzed; and
- Innovation that can be implemented and scaled once solutions are identified.

Individuals or single organizations are unlikely to possess all of the components required to fully address a difficult health question; but together, the strengths of each can be pooled and utilized at their greatest advantage. The rise of health information technology will only continue to accelerate. The Center for Health Information Partnerships is ensuring that invaluable data is captured and converted into solutions that enhance the lives of individuals and the health of populations.

To date, CHIP projects with Dr. Kho as principal investigator or co-principal investigator have brought in more than \$60 million dollars to the Chicagoland or tri-state region with over \$40 million in the past six months alone. Our primary funding comes from federal agencies such as the Agency for Healthcare Research and Quality, Centers for Disease Control, National Science Foundation, Centers for Medicare and Medicaid Services, Office of the National Coordinator, or Patient Centered Outcomes Research Institute. With this support, CHIP has built an unprecedented regional concentration of health data, supporting infrastructure and partnerships. So why is philanthropic funding so important and why now?

The Role of Philanthropic Support in Our Future

We are at a crucial moment where the **Center for Health Information Partnerships** can explore completely novel and exciting directions from the goals laid forth by our current funding.

Having embedded ourselves in the current health care system, we see tremendous opportunities to reshape and leap over what we see as core impediments to a safe, cost-efficient, and equitable healthcare delivery system. For example, CHIP seeks to partner with experts in human-centered design and human-computer interaction

to radically re-envision and redesign clinical workflows to be more satisfying for both the clinician and the patient. We are developing technical means for patients to more quickly and easily access and interchange their own health information across health systems. And, we are working with public health experts to create privacy-protecting means to quantify health and environmental risk factors at the hyperlocal geographic level.

CHIP is already engaged with the Chicago start-up community (e.g. MATTER/1871) and also recognizes the potential to take successful pilots out into the wider community to dramatically scale the impact of our successes. As our track record to date demonstrates, we at CHIP are willing to take risks to “skate to where the puck will be,” to aim big, yet work methodically in steps to get there.

These and other new exciting focus areas for the Center for Health Information Partnerships require agility, a willingness to make bold moves, and the investment of private individuals and organizations since these type of projects are often not supported by current grants. Philanthropic support from interested friends and organizations in the form of outright gifts and endowments will be crucial in continuing our positive trajectory and accelerating CHIP’s breakthrough efforts.

For more information about supporting the Center for Health Information Partnerships, please contact:

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For more information about the Center for Health Information Partnerships please visit:

<http://www.feinberg.northwestern.edu/sites/ipham/centers/health-information-partnerships.html>