

HealthLink Information Exchange (HIEx™)

Improving quality of care while reducing medical errors and overall costs

By: Nancy Harker

A driving force throughout modern medicine is and will continue to be technology. It provides physicians with information-rich, easy-access systems that supply quick answers for better patient care. HealthLink Information Exchange (HIEx™) is one such system—and more.

HIEx™ was inspired, designed, and initially developed to meet the immediate critical need for patient information about the un- and underinsured throughout the Miami Valley for more than 11,000 patients. After the sudden closure of Dayton's Franciscan Medical Center in 2000, a multidisciplinary team working through HealthLink Miami Valley and the Center for Healthy Communities recognized a serious need for a centralized data repository that could be securely accessed by many health care providers in a variety of clinical settings. Development of the system was originally funded through a grant from the U.S. Department of Health and Human Services.

“The HIEx™ system is basically an electronic warehouse for patient centric health information,” says Mary Crimmins, M.A., research associate for Wright State University Department of Community Health. This “warehousing” of information provides the capability to electronically move clinical information between health care information systems while maintaining the integrity of the information being exchanged. In HIEx™ this process is validated on each and every entry through electronic recording of time, date, and who entered specific information into the patient record. It also provides users with a secure HIPPA compliant audit trail for data viewing and entry.

HIEx™ is built to the standard of the Continuity of Care Record developed by the American Society for Testing and Measurement for health information exchange. It also uses the Unified Medical Language System (UMLS®) developed by the National Institutes of Health, National Library of Medicine. Because these national “gold standards” are used in the system's development, HIEx™ is now garnering attention from

various state agencies and from other communities interested in health information exchange. Lehigh Valley Hospital in Allentown Pennsylvania is looking at HIEx™ as a possible model for use in its region. Regional Health Information Organizations (RHIOs) are hubs that will provide the building blocks for the Nationwide Health Information Network. Epidemiologists have long recognized the advantage of such hubs. “This centralized system will help in faster communication of reportable diseases. The hubs will help to consolidate data, and assist local health organizations diagnose and report possible health alerts more quickly,” states Kate Cauley, Ph.D., director for the Center for Healthy Communities and associate professor of community health, who has also served on the Governor’s steering committee for health information technology, and has worked, along with Crimmins, on the Ohio team for the National Health Information Security and Privacy Collaborative.

“HIEx™ is a low cost solution. The system is designed to be flexible so that it can be used however you need to use it. It is set up according to national standards that will be required for governing how shared information is transmitted. That is the true value of a Continuity of Care Record,” says Dr. Cauley.

The overall goal of this information warehousing is to facilitate access to and retrieval of clinical patient data, and to provide safer, more timely, efficient, patient care leading to reduction of errors, reduction of time and resources spent on information exchange, and thereby reduction in the overall cost of medical care in today’s pinched health care economy.

“We are working with physicians to make this system work for physicians,” states Dr. Cauley. “This tool was created through one of our state institutions (Wright State University), and in affiliation with our local medical school.”

The Physicians’ Charitable Foundation foresaw the value of the system and provided a grant to HIEx™ to help put HIEx™ in the hands of health professionals. School nurses at the Dayton Public Schools use the system to record clinic visits, track immunizations and

medication use. CareSource, a nonprofit Medicaid managed health care plan serving Medicaid consumers in Ohio, works with HIEx™ to improve well child physicals in the public schools.

HIEx™ is now sustained by annual subscriptions that currently cost \$1,000 per year per user. Interested physicians and their practices are provided with a free trial user account so they can make use of and see the possibilities of the system. “With the system currently housing more than 55,000 records for more than 20,000 households inside the Miami Valley, most new trial users say, “Wow, this is exactly the information I need!” states Crimmins.

Warehousing health care information seems to be on the horizon for secure medical patient information exchange. How patient care systems are to do this securely and effectively is the question. The locally developed HIEx™ is one system that has and is developing into a usable, cost-effective solution for everyone. “This system seems to have infinite potential, and we are anticipating great possibilities for the future,” says Dr. Cauley.

For more information or for a trial membership to use HIEx™ in your office, contact Mary Crimmins, Wright State University Boonshoft School of Medicine, Department of Community Health, (937) 775-1122 or by E-mail: mary.crimmins@wright.edu Visit the website: med.wright.edu/chc/hiex