

DHIN works to connect patients directly with their health information

Last summer, when Delaware Health Information Network (DHIN) learned it was one of just a dozen organizations nationwide to receive funding from the Office of the National Coordinator (ONC) for Health Information Technology, its CEO, Dr. Jan Lee, was ecstatic.

“I remember thinking, ‘this is our moment – we’ve been working toward this for so long,’” she said. “DHIN has been off the radar for most consumers up to now, working on the medical/technical side. This is a game changer: now we can be even more effective in serving the needs of consumers, providing tools and services that to better connect consumers and their care teams with important clinical information.”

The \$2.7 million grant – a combination of federal and matching state funds – was the result of a rigorous application process. It is performance based, meaning that DHIN, the nation’s first health information exchange (HIE), will draw down on the monies as it reaches certain milestones, and the list of those milestones is significant.

“These new services, made possible under the ONC grant, will be transformative. It will further speed our efforts to build Delaware’s Community Health Record by helping us improve the critical sharing of healthcare data,” she added. “Securely moving and storing the data is not enough – enhancing the patient experience, reducing healthcare costs and improving healthcare are key.”

Two Decades in the Making

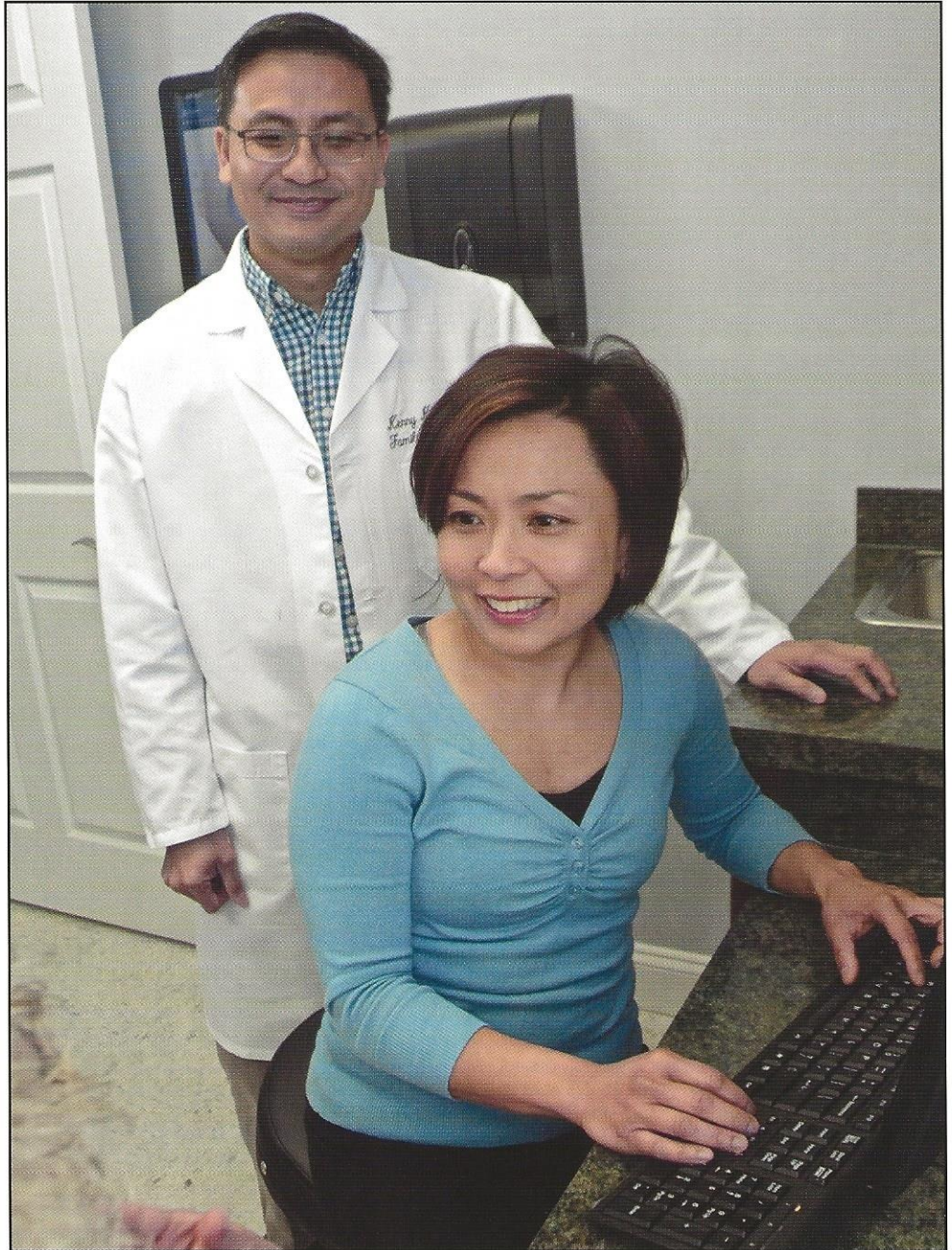
Delaware lawmakers authorized the creation of DHIN in 1997, but it was not up-and-running until 2007. In the last nine years, DHIN has become one of – if not the – most evolved statewide HIE in the nation.

Every hospital system in the state participates in DHIN, as do nearly all the lab and radiology groups. Virtually 100 percent of medical practices in the state are members as well. This involvement is critical because it allows for the most inclusive Community Health Record possible.

In the “old days,” patients were often subject to repetitive appointments and tests. Medical files were either faxed, often making them illegible, or had to be copied and hand carried by the patient. Patients were also tasked with recalling medication information, which doctors they saw and what tests they received.

With DHIN, this information is at a medical professional’s fingertips.

Drs. Kenny Vu and Andrea Arellano-Vu of the Family Medical Centre, a primary



Drs. Kenny Vu and Andrea Arellano-Vu of the Family Medical Centre in Dover receive clinical information on their patients through a certified integration between DHIN and their office’s electronic medical records system.

care medical practice in Dover, receive clinical information on their patients through a certified integration between DHIN and their office’s electronic medical records system.

“With the changing times and the EMR we use, DHIN’s Community Health Record gets us the information we need in fewer clicks, which helps us better manage the business

aspects of our practice,” said Dr. Vu.

Added Dr. Arellano-Vu, “By leveraging these types of technology tools, we are able to spend more time doing what we do best, providing care to our patients.”

Testing the System

DHIN’s CIO, Mark Jacobs, knows all-too-well the value of an accessible health



DHIN CEO Dr. Jan Lee (left, in red), CIO Mark Jacobs (bottom left) and COO Randy Farmer (bottom right) lead the monthly all-hands DHIN Town Hall conference call that includes representatives from the different groups of stakeholders.

record. During the winter of 2014 he inadvertently tested the system for which he is responsible, slipping on the ice and severely injuring his shoulder. Stopping first at an urgent care for x-rays, doctors felt the results were inconclusive and sent him to a local hospital for further testing.

Emergency room doctors were able to review the urgent care center's report and x-ray through DHIN's secure network, and Jacobs was sent for an MRI.

"Once the MRI was complete, I was off to my third appointment - the orthopedic surgeon," recalled Jacobs. "He, too, was able to log in to DHIN, see the x-ray, the MRI and the notes from the previous appointments, and then explain to me why he felt it all added up to surgery. I was able to focus on my injury and make an informed decision without the worry of whether each doctor had up-to-date information - exactly what we work to deliver for every patient. Seeing the system in action was very impactful."

Blurring State Lines

Not only does DHIN save time, it saves money. Between 2009 and 2013, DHIN reduced duplicate ordering of lab tests by 64 percent and radiology tests 21 percent - saving patients and insurance companies in excess of \$10 million annually. In addition, the HIE has saved practices nearly \$900,000 - about \$3,000 per practice that each would have had to commit to transferring paper records to an electronic record system.

There are 2.2 million patients in the DHIN database (nearly triple the 800,000 residents of the state) who hail from all 50 states and beyond.

"Medical needs don't care about state lines," said Lee. "Whether you live here or are in Delaware on business, visiting family or taking a vacation, if you have been treated here the odds are extremely high that clinical information from your visit is in DHIN."

Odds are nearly as high that your doctor knows about it as well, and in near real time.

DHIN has introduced an Event Notification System that advises health care teams about patient movements, be they hospital admissions, discharges or transfers to other DHIN-connected facilities. This helps speed follow-up, a key metric in the continuity of care.

During the last three years DHIN has further blurred its physical borders by entering into agreements with hospitals in Maryland and the District of Columbia. For instance, Union Hospital in Elkton, Md. is just minutes across the Delaware state line. Delaware residents may find it more convenient to seek care there, especially when time is of the essence.

When Union hospital launched its connection to DHIN in the spring of 2015, Union's former president and CEO commented, "Immediate access to a patient's medical history is invaluable, particularly in an emergency."

"Our collaboration with DHIN is an integral part of our ongoing commitment to provide safe, high-quality health and wellness services."

The Next Decade

In 2017, DHIN will celebrate its 10th anniversary, but in many ways it is planning far beyond that point.

"The next hill to climb is directly interfacing with the consumer," said Lee. "Focus groups show that they want peace of mind when it comes to understanding what is in their medical records and knowing who can actually see them. The ONC grant will help us design products and services that will meet those needs."

On tap is a new smartphone alert system by which consumers can track how their medical information is being accessed - much like a credit report - and to advise when medical tests and reports are available so they can reach out proactively to their doctors. DHIN will launch a patient portal that will allow patients to see their own medical records in a password protected setting.

Dr. Jan Lee Named One of the "Most Powerful Women in Healthcare IT"

In her career, Dr. Jan Lee has been many things: the chief information officer of the Air Force Medical Service, steering the management of a \$3.2 billion IT portfolio supporting 130,000

Department of Defense healthcare employees and 9.1 million beneficiaries worldwide; vice president of Knowledgebase and Content for NextGen Healthcare, a

leading vendor of health information technology products and services; a practicing family physician and, today, CEO of DHIN.

If knowledge is power, then Lee is certainly an excellent pick as one of the "Most Powerful Women in Health IT" - an award she will receive next month in Boston at the Powerful Women in Health IT conference. Lee will be honored for the scope and breadth of her career, in particular for her leadership of DHIN.

Lee has served on a range of national level committees and workgroups and is frequently sought as a speaker on health and health IT topics. Her specific areas of interest are health policy and the use of health IT to improve clinical practice and population health. Recent recognition includes listing in "Guide to America's Top Family Doctors" and "Who's Who in America" and selection by "Cambridge Who's Who" as Executive of the Year.



Dr. Lee

"The grant is also lengthening the continuum of care by bringing long-term post-acute care, nursing home and behavioral health records into DHIN," said Lee. "This means our records will be both broader and deeper. DHIN is a key player in the Delaware healthcare ecosystem and we are very excited that with the ONC grant we will be able to further improve healthcare communication across the state and beyond."

Learn more about DHIN by visiting DHIN.org or following Delaware Health Information Network on Facebook, on Twitter (@DHIN_HIE) and on LinkedIn.