

HEALTHCARE'S DIGITAL DIVIDE:

Will Underserved Providers and Partners Get Left Behind?



THE DIGITAL DIVIDE: YEARS & DOLLARS IN THE MAKING

Since I left nursing nearly 40 years ago to raise my family, I've seen the healthcare stories about new technology, federal investment and other dramatic improvements to the patient experience. The news about electronic health records appeared to change everything from my perspective, especially transitions of care. Physicians and hospitals are now sharing clinical information more efficiently and securely, eliminating the time we used to spend waiting and calling and waiting some more to get all of the files we needed to provide the best care.

Then I broke my hip and realized this was only part of the story.

When I was a registered nurse, we filled out paperwork over and over with the same information. I figure that 30% of my time was spent either writing documentation or trying to read someone else's notes. I expected, with all of the funding the hospitals and physicians received to upgrade their information systems, that this had changed.

Perhaps my experience as a patient and the reality of health information technology is just an exception or my healthcare system isn't up-to-date with clinical technology. I live at my home in Chicago by myself since my husband passed away a number of years ago. My two children live on the West Coast and worry about me living alone but I want to be near friends and allow them to live their own lives. I have a few health problems and receive chronic care for high blood pressure and diabetes. But I keep my health under control with six different medications and have little to complain about.

Two months ago that changed when I was walking down the stairs of my house and slipped and fell down the last three steps. I know I should have been holding on to the handrail but I had my dog in one arm and the keys in the other. It was stupid but it happened. I guess I also might have been a little dizzy from the medications I had just taken. I may have blacked out for a few minutes but when I awoke the pain was nearly too much to bear and I could not move. I knew I must have broken something.

Luckily I had my cell phone to call 911 and babbled my condition and address to the person on the phone. The next thing I knew, I was being lifted onto the gurney by three medical technicians and we were on the way to the hospital with sirens blaring.

My doctor and my son had told me about electronic health records so I was sure, when I got to the emergency room, that they would have all the information they needed on me. Everything went well with the surgery at the hospital and when I woke up I learned that I broke my right hip and right arm. I remember many tests during the four days I was in the hospital. They then sent me by ambulance to a local skilled nursing home for post surgery care and rehabilitation therapy.

I arrived at the nursing home and was immediately given a room, where I interviewed with the admissions nurse alongside my two kids, who had flown out to be with me. I was still in slight pain from the ambulance ride when they started asking me all kinds of questions about my health and insurance.

“Why are you asking these questions, I have already given the answers to the people at the hospital more than once,” I said.

That was the first disconnect I remember between the hospital and the facility. Then they told us I wouldn't get any medication until the list had been reconciled. My therapy would also be delayed indefinitely because the therapist hadn't received a copy of my images nor the hospital post-operative therapy care plan. Meanwhile they were doing a complete assessment, which they said was necessary to satisfy Medicare regulations.

This was the moment my son spoke up and said, “What is going on? I thought the hospital was required to send the electronic transitions of care summary document over to you before my mom was admitted and that all of this should have been completed, like yesterday.” Then he asked to see the administrator.

My son is a hospital administrator on the West Coast so I know he knows what he is talking about. Things got pretty exciting from there. From what I could follow, this nursing home had not established an electronic clinical document exchange capability with the hospital. Later I found out that the nursing home didn't have the capability to share my records electronically with the home care agency either, which took care of me after my two-week rehabilitation at the nursing home. This also meant that the home care agency or nursing home couldn't share my details with my primary physician, my children or me when I finally made it home.

Forty years have passed since I worked my last shift as a registered nurse and I'm not sure communication is any better between hospitals, long-term care providers and physicians. As a patient, it doesn't matter to me who receives the federal dollars and who hasn't. I just want everyone to have my medical information readily available when they need it so I can get on the road to recovery quickly and they don't make a mistake.

Is that too much to ask?

Welcome to healthcare's digital divide.

DIGITAL DIVIDE: A CHASM DECADES IN THE MAKING

Electronic medical records. Health information exchange. Fitness tracking devices. Health-focused smartphone apps. While healthcare and technology appear inseparable today, industry adoption has been glacial without financial motivation and selective at best when incentives are involved.

It wasn't always this way. Before payment reform legislation was introduced in the 1970s and 80s, technology was a minimal part of any healthcare organization, whether you were a surgeon or managing a nursing home. That changed when legislation offered increased reimbursement rates for those willing to implement electronic billing technology.

What resulted was the first seismic shift to separate the “haves” from the “have-nots” in the healthcare industry.

Most of the organizations capable of investing in and implementing this technology were hospitals and physician practices. Long-term and post-acute care providers such as nursing homes, hospice, home care, rehabilitation, behavioral health and therapy services were not included in these reforms and incentives. Nor could the small margins and volumes of these organizations support the high cost of investment and implementation in these systems. Responsible for patient care beyond the roles and capabilities of those able to invest in electronic billing and gain additional incentives, these essential care providers soon found themselves on an uneven playing field.

Decades later, this digital divide would expand further when the 2009 Health Information Technology for Economic and Clinical Health (HITECH) Act was enacted. The HITECH act gives the U.S. Department of Health & Human Services the authority to establish programs to improve health care quality, safety, and efficiency through the promotion of healthcare technology, which includes digitizing health records and securely exchanging these clinical documents and other health information. It also reinforced the role of the Office of the National Coordinator for Health Information Technology (ONC). ONC is charged with coordinating nationwide efforts to implement health information technology and the electronic exchange of health information, which includes all care providers regardless of incentive eligibility.



Most notably, the HITECH act established the term “meaningful use” to define levels of technology adoption which is tied to incentives for implementation and use. Its first stage focused primarily on digitizing select patient information by implementing electronic medical record (EMR) technology. This initiative was bolstered by \$27 billion in federal incentives through the Affordable Care Act. These incentives meant individual doctors could earn more than \$100,000 in combined Medicare and Medicaid incentives while hospitals and healthcare systems could receive base payments of up to \$2 million plus additional amounts, depending on several factors.⁽¹⁾ The financial motivation worked. EMRs are now widely adopted in hospitals, health systems and physician offices nationwide. The opposite is true for care providers without access to incentives.

BEYOND ACUTE & AMBULATORY

- 58,500 long-term care providers take care of approximately 8 million patients every year (Centers for Disease Control)
- In 2011, hospice deaths accounted for 1,059,000 of the 2,513,000 deaths in the United States (National Hospice and Palliative Care Organization)
- Nearly 5 million seniors received physical therapy in 2011 (Medicare Payment Advisory Commission)
- In 2012, an estimated 9.6 million adults (18+) in the U.S. were considered to have a serious mental illness, representing 4.1% of all U.S. adults (National Institute of Mental Health)
- “The U.S. health care system often fails to meet the needs of patients transitioning from one care setting to another. Care is frequently rushed, responsibility is fragmented, and there is often little communication between care settings and multiple providers. The ensuing confusion regarding a patient’s condition or needs, can cause inconsistent patient monitoring, duplicative tests, medication errors, delays in diagnosis, and lack of follow through on referrals. The problems resulting from poor transitions can lead to significant financial burdens for patients, payers and the U.S. health care system as a whole.”
– *National Transitions of Care Coalition*
- “Frail older patients, particularly those with cognitive impairment, have difficulty participating in this (transition of care) process, resulting in miscommunication of crucial information. They consequently suffer repeat hospitalizations, complications, and uncoordinated care. Accurate, appropriate medication lists and advance directives are two crucial components of medical information for care of frail older patients as they transition between healthcare settings. Medication-associated errors have been identified as a major source of morbidity and mortality in transitional care.” – *Journal of the American Geriatrics Society*

AN INDUSTRY ON THE PRECIPICE

With select patient information digitized in specific medical settings, the next stage of meaningful use expands its reach beyond the walls of the hospital and doctor's office, directly into the digital divide. Soon, every care partner aligned with a hospital or health care system must be able to send and receive patient information securely and electronically, with a minimum of 10% of all patient visits. As acute care organizations strive to meet this core measure of meaningful use in its second stage, the pressure is on all care organizations to find a common ground for clinical document exchange.

Already left behind financially and technologically, most long-term and post-acute care providers aren't able to capture or digitize paper-based and other unstructured clinical information such as images, faxes, email and patient-provided information. Soon they must make the technological leap from paper files to exchanging patient information in a standards-based electronic format, or risk losing the referral sources that provide up to 90% of their business.

This situation places many "have not" providers on the brink. With limited financial resources, significant technology investment may not be an option for many members across the spectrum of care. While the digital divide directly impacts caregivers and their access to critical information, it also seriously threatens the entire healthcare landscape. Specialized healthcare options beyond the hospital may become more limited than ever before, impacting local resources in many communities while shifting the balance to larger care organizations.

As it stands, healthcare's digital divide will have a direct impact on everyone touched by healthcare. How we can solve this issue hinges on how we answer the following questions:

- How can those without financial incentives keep up with key referral partners who have digitally evolved?
- How is critical information shared today when hospitals transfer patients to facilities more specialized to support the long-term needs of the patient?
- How will clinical documents be exchanged tomorrow?
- Is technology only fueling the digital divide or can it solve this crisis?
- Is there a way to bridge the gaps between the paper and digital worlds that advances care?

IMPACT OF THE DIVIDE: PATIENTS AND THE HEALTHCARE SPECTRUM

Today, there may be no starker contrast between the business models and technology of the healthcare haves and the have-nots than when patients move from the hospital to long-term care provider. Despite being responsible for a patient's care materially longer than their hospitalization, most long-term and post-acute care settings continue to rely on paperwork and 50-year-old fax technology. Soon, neither format will be an option for these providers unless they invest part of their already strained revenue stream.

“With the new models of care it is important that partnerships are formed with hospitals and physicians who are participating in the HITECH Act. Just being a post-acute provider is not good enough to be a preferred provider. Post-acute providers have to have the capability of electronically exchanging clinical documents that are based on approved standards. Advancing the capabilities of post-acute care providers to exchange clinical information electronically from their paper world will lead to a higher quality of care during the transitions of care from one provider to another.”

– John F. Derr, RPh

While the digitizing of medical information is designed to enhance patient care with improved access to more detailed health records, patients ultimately rely on all providers to work together to provide excellent, well-coordinated care. Ideally this means every member of the healthcare spectrum, from primary physician to hospital to skilled nursing and therapy facilities, has access to the same clinical documents to make the most informed care decisions. Whenever there is a weak link, the patient is ultimately the one who suffers most. Today there are several weak links across the healthcare spectrum where patient information is involved. This is especially true when a patient's care is transitioned between acute care and long-term care providers, who take care of approximately 8 million patients per year.⁽²⁾

Today these transitions of care often involve manila envelopes filled with paperwork that travels with the patient, extensive phone conversations between caregivers or the painfully slow and endless drip of documents from the fax machine or fax server. This dichotomy between care settings plays out hundreds of times per day across the nation, providing one of the most notable illustrations of the digital divide.

In a world where everything from the smartphone in your pocket to your home's thermostat are connected to the Internet and sharing information, the primary sources of information exchange during transitions of care remain paperwork, phone calls and faxes. Gaps in each format often lead to confusion about the patient's condition, duplicative tests, inconsistent patient monitoring, medication errors and delays in diagnosis.⁽³⁾

While stage 2 of the HITECH Act is expected to reduce the challenges listed below by eliminating both unstructured medical information formats and establishing healthcare standards in acute care settings for medical information exchange, this requires a technological leap from a world of manila folders, physician phone calls and outdated fax technology.

TRANSITIONS OF CARE

- Among hospitalized patients 65 or older, 21 percent are discharged to a long-term care or other institution.
- Approximately 25 percent of Medicare skilled nursing facility (SNF) residents are readmitted to the hospital.
- On discharge from the hospital, 30% of patients have at least one medication discrepancy.
- Medication errors harm an estimated 1.5 million people each year in the United States, costing the nation at least \$3.5 billion annually.
- One in five U.S. patients discharged to their home from the hospital experienced an adverse event within three weeks of discharge. Sixty percent were medication related and could have been avoided.
- On average, 19.6% of Medicare fee-for-service beneficiaries who have been discharged from the hospital were readmitted within 30 days and 34% were readmitted within 90 days.
- According to MEDPAC, hospital readmissions within 30 days accounted for \$15 billion of Medicare spending.

*Source: Improving Transitions of Care, National Transitions of Care Coalition, September 2010

FROM PATIENT TO COMMUNITY AND REGIONAL HEALTH

First responders to disasters. Leaders in emergency preparedness. Monitors of disease outbreaks. Community health liaisons. Health resources for poverty-stricken or underserved communities. Public health plays several critical roles in the health of our communities, region and nation – especially to those who need care the most. Despite its critical functions public health isn't simply overlooked in the healthcare discussion, it is excluded from the conversation entirely. The digital divide may be even larger for public health professionals, whose roles require a proactive exchange of communication given their responsibility for acquiring, analyzing and sharing health-related information with the right parties internally and externally.

“Public health is at the center of many health-related events, playing both reporter and gatherer of information.”

– Mark Bennett, Executive Vice-president, Mitchell & McCormick

Like many government entities, public health organizations are subject to specific regulations and limited budgets, not unlike its counterparts in long-term and post-acute care. With the added information gathering and reporting functions, compounded by health issues that impact communities and regions, the need for communicating with healthcare professionals in the digital age is just as critical.

Today public health is just as reliant on paperwork, phone calls and faxes as the rest of the healthcare industry, if not more so. As stage 2 shifts the communication requirements to a standardized format, public health organizations now face the challenge of being disconnected from advocates and partners throughout the healthcare industry. It also provides additional hurdles in communicating health issues, such as disease outbreak, to medical professionals who need to treat those impacted and help prevent its spread.

Though every member of the healthcare spectrum contributes to the health of patients in their care and the community at large, it can be argued that public health has a much broader influence with even less resources. It also means the digital divide is an even bigger threat unless these challenges can be overcome.

ADDRESSING THE DIGITAL DIVIDE IN YOUR ORGANIZATION

Solving a complex, far-reaching issue begins by evaluating the entire landscape followed by some simple steps in the right direction. Bridging the digital divide requires an approach that is adaptable to every member of the healthcare spectrum and overcomes the common challenge of limited resources including time, money, technology and other hurdles.

There is no bigger hurdle than solving how patient information is sent and received in an industry where the fax remains one of the most common communication tools, nor is there a larger opportunity to improve a patient's healthcare journey by providing a common resource for exchanging clinical documents at every transition.

Clinical document exchange isn't simply about enabling incentivized settings to achieve core measures of legislation, the ideal solution will keep care providers not bound by the HITECH Act connected to referral partners and the medical histories of their patients. This requires a secure "send and receive" solution for healthcare providers with limited technology budgets, both by minimizing cost and by leveraging existing technology spanning EMRs to multi-function devices to health information networks.

While there are several healthcare technology providers in the market, the best option should be interoperable, easily integrate into your existing processes and workflows to make your organization more efficient.

OVERCOME THE DIGITAL DIVIDE

- **Identify the sources of unstructured content.** This not only includes fax machines, fax servers, scanners, printers, medical devices and other hardware responsible for producing both paper and unstructured digital information, it also includes external care partners. Is there a common platform that can be used to share patient information securely and digitally?
- **Consider the financial and staff capacity for needed interoperability.** Many healthcare IT departments are suffering from "IT fatigue" thanks to the demands of large-scale EMR implementations. Low-cost and high-benefit solutions can benefit both staff and patients.
- **Determine the benefits.** Quality care and patient safety are critical and rely on a complete medical record available across the spectrum of care. Any solution should directly address unstructured, structured, digital, and fax content and interface with information management systems to improve efficiency.

How Clinical Document Exchange Works

- Clinical document exchange creates a simple and effective way for administrators and users within a healthcare environment to manage clinical content without changing the way they work. The best solution should enable them to view, send, receive, manage, and upload content through a single interface using their familiar clinical workflows with minimal training.
- Clinical document exchange solutions should transform “unstructured” clinical content into usable, relevant, “structured” clinical documentation by capturing and converting available data of all kinds to a secure and standard format that meets current healthcare regulations and requirements.
- Ideally, clinical document exchange should integrate with devices you may already have, including everyday devices that scan documents to submit and receive via the emerging standard of secure Direct messaging, including messages with attachments.
- The most cost-effective exchange will be lightweight, simple-to-use and preferably cloud-based for maximum accessibility. It should also require minimal training and limited impacts on the IT department for set up or maintenance.

Solution Criteria:

- **Agnostic to any information source:** Ability to manage multiple sources and formats of clinical documents, including Direct messages, HIE documents, registry documents, XDM Media Output (USB, CD, DVD), among many others.
- **Integrated with common processes and medical release scenarios:** A solution should enable the release of patient information to be seamless during referrals, transitions of care, insurance requests, public health reporting and other record release requests.
- **User friendly.** Tools are only as good as their ability to be understood and used. Updating or creating records should be as intuitive and easy to use as navigating a smartphone.
- **Standards based.** Technology and communication formats must be based on healthcare standards to ensure you remain connected to all care partners today and well into the future.
- **Compatible with existing technology investments independent of the EHR provider in place .** While being standards-based solves many hurdles, the best options leverage existing technology investments
- **Easy to implement.** Providers can reduce IT fatigue by incorporating systems that don't overtax existing IT departments and minimize the need for additional training or other manpower.

“Long-term and post-acute care organizations (LTPAC) face a challenging balance between maximizing limited financial resources and ensuring they stay connected with their acute care referral partners. From a budgetary perspective, that means finding solutions that reuse existing technology, maximize current investments, improve economies of scale or reduce needed training – preferably all of the above. Long-term and post-acute care providers also need to be the easiest to do business with. This means collaborating more closely with acute care systems to become more efficient, communicate more effectively and strengthen how they integrate with everyday processes.”

– Leslie Kelly Hall, SVP Policy, Healthwise

REFERENCES

- (1) Medical Economics. “Financial incentive programs for electronic health records” October 25, 2011
- (2) Centers for Disease Control
- (3) Improving Transitions of Care, National Transitions of Care Coalition, September 2010

ABOUT INOFILE

Inofile technology creates vital links to simplify healthcare. Its groundbreaking software solves one of the most complex and overlooked problems facing healthcare, transforming unstructured medical information into a common, standards-based format. Its Kno2 solution is an easy-to-use, innovative and inexpensive solution for managing all the different ways a healthcare organization can capture and exchange clinical documents with outside providers and partners. Kno2™ provides a secure “send and receive” solution for healthcare providers with limited technology investment budgets and those that are currently exchanging the majority of patient information on paper.

Learn more at www.inofile.com.