No Going Back

» PROFILE:

Lyle Berkowitz, M.D.

ILLINOIS

~ Chicago Doctor Helped Spearhead EHR Program in His Hospital

"Now that there are thousands of drugs that often have similar-sounding names, you can't have any room for error. I can't imagine handwriting a prescription anymore. It seems so fundamentally wrong at this point."

– Lyle Berkowitz, M.D.

One of Dr. Berkowitz' patients owes his life to accessible electronic health information. The fact that Richard Peck's medical records were available in advance of his arrival at the emergency room meant that a possibly fatal situation became manageable. As a result, Richard was able to return to a normal quality of life within days instead of weeks or months.

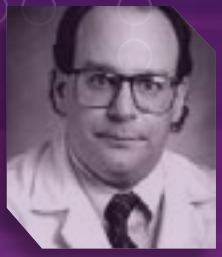
Dr. Berkowitz can't imagine going back to the system of paper records he used just a few years ago. "There's no question it helps us improve the quality of care that we deliver. Just access to information that's legible significantly improves the care in a number of different ways. It decreases how much redundant care has to be done—and redundant care is a potential for risk. It also makes sure the right people have the right information at the right time."

"Now that there are thousands of drugs that often have similar-sounding names, you can't have any room for error. I can't imagine handwriting a prescription anymore. It seems so fundamentally wrong at this point. In our electronic health record, when we do prescription-writing there's a system of checks for allergies and drug interaction."

Dr. Berkowitz has also seen firsthand the barriers that need to be overcome in order to have a system truly work for patients. "One barrier to this is that we have to pay for the system without being compensated. Also, our current system compensates mainly on volume of care. So, in fact, if I do something that creates a mild error with a patient, or I can't find a lab value or a chest x-ray and have to repeat it, well, I make more money. Our system and the incentives are completely misaligned."

"You can actually provide better healthcare if you have a well-functioning electronic medical record. You never have to worry about finding chart information. It's all there, and it's not going to get lost."

– David Levy, M.D.



PROFILE:

David Levy, M.D.

ILLINOIS

~ Taking Steps to Provide the Best Possible Care

Creating a Paperless Environment

Dr. David Levy wants the best for all his patients: to provide each of them with the best possible care he can give them. It's the reason his small practice went out on a limb to buy a new electronic medical records (EMR) system in 2004.

Dr. Levy's practice in Chicago is affiliated with a hospital in Berwin, Illinois. In 1994, the hospital started using an EMR, but the company that sold them the system went out of business shortly after, leaving them without the technical support they needed.

After dealing with a practically useless system for years, Dr. Levy and the other doctors in his practice decided to buy their own system. While it still may be too early to tell, he is optimistic about the positive effect the new EMR will have on his practice and for his patients.

"Practicing medicine, particularly in primary care, is very scary these days. No longer are we in a situation where we can feel reassured that if we come to work each day we're going to be able to pay for all we need to pay for." Malpractice costs have kept him and many doctors from implementing these systems, due to the up-front cost to their practice.

Their system also cannot access information from the hospital, and the hospital cannot access information from them. Even with his new EMR, if one of his patients goes to the hospital, there is no way for him to know what happened there unless they fax the chart to his office, since the hospital's system is still paper-based. Plus, Dr. Levy's EMR system does not allow him to search for information like a diagnosis for a patient with a certain set of problems, e-mail information to patients, or catch possibly harmful drug interactions.

Dr. Levy hopes one day to have the ability to fully utilize his system to provide all his patients with optimal care, while also being able to recover his costs with a more efficient system.

A Win-Win Situation

PROFILE:

Sharon Yearous, PNP

IOWA

~ A School Nurse Who Wants Health IT Tools to Provide Better, More Consistent Healthcare for Kids

"With the system we have now, when a kid comes in with asthma or diabetes, we have to fend for ourselves. Most of the time, we don't have any information other than what the child can tell us."

– Sharon Yearous, PNP

"Having access to information is crucial for school nurses. Kids are in school nine months out of the year, five days a week. Who is there that can help provide the healthcare but a school nurse? The school nurse can provide that continuation of care. A child may have seen a healthcare provider earlier in the week or over the weekend, or you may have a child with a chronic illness like diabetes, asthma, seizures, etc. If the nurse has access to an electronic patient record, then she can provide the best care possible because she would have updated, accurate information, up to the last time the child saw a healthcare provider."

So says Sharon Yearous, a high school nurse in Iowa who is also involved in state and national school nursing organizations. She has seen firsthand the challenges school nurses face every day, and she knows that giving nurses access to accurate health information about their students can help them provide better healthcare to millions of children across the country, one school at a time.

"Most school nurses are struggling just to get a computer on their desk. Some of them don't even have e-mail access. I think every school nurse probably knows of the concept of the electronic patient record. Would they like to have it as a school nurse? Absolutely. Do they talk about it? Not really, because they're already feeling like they're struggling just to get one nurse in a building. They know that there are so many kids out there that aren't even served. I think a majority of parents have a misconception that their child is in a school with a school nurse. Nobody realizes that their school nurse may be covering three or four buildings with 1,500 to 2,000 kids. How can we expect to be put on track to get this up-to-date, state-of-the-art electronic patient record? It would be ideal, but it sounds like a pipe dream. Most nurses are just trying to survive day to day with what comes through their door."

"Especially for younger kids, electronic health records would help keep track of things like vaccinations and the routine things that they are supposed to have. Kids move all over, either within town, or out of State, and within school districts, and it's hard to keep track of their health records. We're flying blindly most of the time."

"I've found it impossible to become totally paperless until everything is really interoperable. We still get x-ray reports, lab reports, and consultation letters in the mail. I would have to hire a full-time person to scan all that stuff into a patient's chart, and it's just too costly for me."

– Ernesto Africano, M.D.

PROFILE:

Ernesto Africano

M.D.
MARYLAND

~ A Specialist in Suburban Maryland Looks Forward to the Day When Medical Records Can Be Easily Shared Among Doctors, Labs, and Pharmacies

Impossible to Achieve Total Interoperability

Dr. Ernesto Africano uses a basic electronic medical record (EMR) in his solo office. While the system doesn't really have any "bells and whistles," it definitely helps him keep track of his patients' progress, saves him time, and ensures that their records are legible and easy to share with his patients' primary care doctors after they come to see him. The biggest benefit he sees is being able to provide better, more efficient healthcare to his patients. But he has been frustrated that more offices and labs are not able to connect to his office. He still has to maintain paper charts because of the volume of information he still receives via fax and "snail mail."

"We get a number of requests for copies of medical records from other physicians and my handwriting is not the most legible, even to myself, so I felt that having very clear and legible records was a definite benefit in organizing my information and patients' charts, and being able to generate reports, letters, and photocopies of reports for other physicians and agencies requesting the medical records, which is almost a daily occurrence." But even while Dr. Africano is able to share his notes and charts with other offices, he still receives all his lab test results, x-rays, and consultation letters on paper. They then either have to be scanned into his EMR or manually entered, which is very time consuming.

Dr. Africano wishes he could connect with other offices, but without interoperability, he is forced to continue sifting through paper charts to find the information he needs. "I would absolutely want to become interoperable with laboratories and pharmacies, so instead of having to print out and sign or fax prescriptions or give them to patients, I would be able to e-mail prescriptions, receive lab reports back, send information electronically to other doctors, or receive existing medical records from my patients when they're referred to me. I think that's where the future is headed."

Finding the Perfect Balance

» PROFILE:

Alice Loveys, M.D.

NEW YORK

~ A Pediatrician and Working Mother Says EMRs Help Her Provide Better Care

"My motivations for doing this were not financial; it was definitely more a balance of personal and professional life, still giving good quality care and an enjoyable atmosphere."

– Alice Loveys, M.D.

Dr. Alice Loveys is a woman who values people. She values her family, her friends, and her patients. So when she saw the potential of computerized medical records, she decided to "take the plunge" and invested in an electronic medical record (EMR) system. At first, Dr. Loveys didn't know if she would be able to afford it, but she found a good basic system she could afford and has been able to make it work for her patients and her lifestyle.

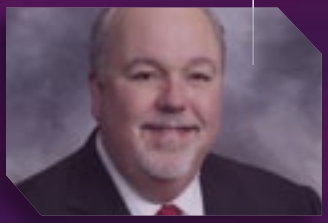
While it may not be perfect, the difference the system has made in the quality of care she can provide to her patients has been amazing. She says her nurses have seen one of the greatest differences. Now, they are thrilled that they are able to spend more time doing what they love—nursing—rather than calculating growth charts or writing down medical histories.

"I think the beauty of an electronic medical record in a group practice is your partner can view the patient care record you've started. That benefit is a no-brainer. But with a paper chart, I couldn't read half my partner's handwriting and sometimes I couldn't even read my own writing. You sleep easier at night knowing that you're going to have adequate documentation."

They can also do digital imaging in the office. One time, a patient came to see Dr. Loveys' partner, and her partner took a picture of the rash. The next day Dr. Loveys was covering for her, and the little boy came in with a rash that was even worse than the day before. "I was able to look up what it looked like the day before and looked at it that day, and I could not have done that with a handwritten note. If I had to rely on a handwritten note, I know I would have made the wrong diagnosis."

"I think doctors should not be about inputting all the data, but reviewing the data that's available. And I think technology allows you to do that. Technology assembles the data. You review it, and then you make decisions based on it." The system has truly made a difference in the way she practices medicine.

A Hefty Price Tag



PROFILE:

Joseph Flood, M.D.

OHIO

~ An Ohio Rheumatologist Longs for an EMR System, But Like Many Solo Practices Can't Afford the Cost

Like most doctors in America, Dr. Joseph Flood is in his own practice. He is a specialist who has patients referred to him from other doctors, and as a result, has a huge amount of paperwork flowing through his office all the time: letters to doctors, patient records sent from other offices, and so on. Also, like most other doctors, Dr. Flood continues to struggle with the skyrocketing costs of healthcare and the rising costs of keeping his office up and running every day.

Dr. Flood is well aware of the enormous benefits of using an interoperable system of electronic medical records, but he has discovered that the cost of installing such a system is difficult to afford. "The situation for a solo practitioner has been increasingly difficult. We see decreases in reimbursement and increases in expenses. My malpractice insurance has gone up substantially over the last year. The cost of getting all the supplies I need for my practice has gone up considerably. The cost of health insurance in my office has gone up. Everything seems to have gone up except for my salary. When I look at the potential costs to switch over to such a system, it's something that I just would not be able to do, even if the cost were spread out over several years."

"I think that almost every physician I know would be happy to have easily accessible data available to them, and all of us would like to see a patient who was on vacation or visiting another town have access to their medical records, so that people don't reinvent the wheel for them or put them through potentially hazardous testing that's already been done or wait while diagnostic testing is repeated."

– Joseph Flood, M.D.

Things like subsidies, loans, or reimbursement changes that would help pay for the kind of quality healthcare an interoperable system would ensure are all things Dr. Flood thinks are good ideas. "We've heard about pay-for-performance, but we haven't seen what that really means for a practicing physician at this point in time. I do efficient care of patients with high quality. And to the extent that I might be rewarded for that, I would be happy to see that. If the use of an electronic health record is part of that measurement, then I would certainly hope that those people who are measuring me would make the reward for using that at least neutral in terms of cost."

"Patients deserve the same quality of care in rural areas that they can get anywhere else. In order to do this, I have to be able to have a free flow of information between the tertiary facility and my primary care facility."

– Tad Jacobs, DO

» PROFILE:

Tad Jacobs, DO

SOUTH DAKOTA

~ Physician in Rural South Dakota Uses an E-Prescribing System to Ensure His Patients Get the Available Care

The E-Prescribing Difference

Dr. Tad Jacobs' small office in rural South Dakota has been using an e-prescribing system for two years now, and he is already sold. "I went through a lot of frustrations trying to learn the ins and outs of the process, but now that I've gotten used to the system, I probably write 80 to 90 percent of my prescriptions using e-prescribing."

Dr. Jacobs and the other doctor in his practice became part of an e-prescribing pilot program through a larger hospital system about 45 miles away. Dr. Jacobs loves what the new system helps him to do, even though he admits its imperfections. He is able to put prescriptions into the computer, and they are automatically faxed to his patient's pharmacy.

He is also able to keep a record of all the medications a patient is taking, their insurance information, and their allergies. If he tries to prescribe them something they are allergic to, or that might interact with another drug they're taking, the computer alerts him, and he is able to save that patient a possible trip to the emergency room. "One of the biggest frustrations that we have as physicians is knowing at any one time what medicines patients are on—especially when they are seeing multiple doctors. Electronic medical records will eliminate that as a problem."

But the system is not yet perfect, and Dr. Jacobs looks forward with excitement to the day when his system is truly interoperable. "We transfer a lot of patients to our tertiary care center in Sioux Falls. It's frustrated me at times trying to get all the information that we have available on patients down there. You would think that communication between physicians would be a very easy thing, but it's not. We have all the information about the patient on these charts, but the charts can't always go down with them. To have information immediately available if I transfer someone down there would be a huge plus. I see just an incredible waste of dollars from labs and x-rays being duplicated that were already done in rural settings just because they're not available in front of the doc who is seeing the patient at the time."

FACT

~ Sixty-one percent of patients fear being given the wrong medication.

Source: Buckley, Melissa. Improving Drug Prescribing Practices in the Outpatient Setting: A Market Analysis: California HealthCare Foundation, 2002.

Free is Not Always Best

PROFILE:

Kim Kehoe

HAWAII

~ Nurse Practitioner Urges Health IT Advocates to Consider Providers' Needs

"It's got to work for the providers. Already we're dealing with a system that doesn't make it very easy to practice good medicine. So if it doesn't make our lives easier, it's not going to work."

– Kim Kehoe

Kim Kehoe has no doubt that using information technology in healthcare can transform medicine for the better. But without well-designed and well-maintained tools, doctors and nurses will continue to use whatever methods will help them provide proper care for their patients, even reverting back to the old methods of paper record keeping.

Kim works as a nurse practitioner for a community health center in Hawaii. The center recently was given a government-funded electronic health records system and used the system for a six-month period. However, the small office with only three doctors and two nurses found the system to be more of a hindrance than a help. "Part of the problem was that we're a small community health center and we don't have tech support. Our tech support was basically an out-of-town computer consultant whom we called anytime we had computer problems." After six months, they went back to using paper.

"The whole idea of electronic medical records from a provider's perspective is that it's supposed to make the visit and the billing more efficient, so we could see a patient and click everything on the electronic medical records, and by the time the patient left the room, it was immediately transmitted to billing. The problem was we couldn't really customize the electronic system for our purposes. We've heard of other products that might be more user-friendly, but ours wasn't working in that way."

"It was taking a long time to complete the record in the room with the patients. There was also an issue with interviewing patients. You couldn't look them in the eye because you were looking at a computer screen clicking buttons. It was sometimes very difficult to find buttons that fit every person, so you ended up free-texting a lot. It ended up taking a lot longer. It was not saving us time, at least from the providers' point of view."

"We definitely see the benefit of it, mostly around issues like medication lists and chronic health problems. If you came into the clinic and we changed your medication, it would change it on your master list. If you were hospitalized for some reason, the ambulance would have instant access to that medication list, or your list of allergies to medications or chronic health problems. We see the benefit of every provider having access to that information, but in terms of the patient encounter with a provider, you're limited. Most patient visits are 15 minutes. So if the system isn't making you more efficient, it makes your job more complicated and less personal."

In Need of a Lifesaving Tool

PROFILE:

Lisa Amiotte, M.D.

SOUTH DAKOTA

~ A Psychiatrist in South Dakota Struggles with an Antiquated Information System

Dr. Lisa Amiotte knows firsthand the difference in care that a patient receives with—or without—information available to their doctors and nurses. She tells one horror story of a young patient who was brought to her hospital last winter. The young man had been found wandering around a reservation in western South Dakota in freezing cold conditions. When he finally arrived at the hospital, he was severely frostbitten and unable or unwilling to speak. Rather than being able to pull up his information on a computer and find out why he was not speaking, Dr. Amiotte, along with countless other doctors, nurses, and social workers, began the painstaking process of trying to scrape together any information that would help them properly treat the sick young man.

Days later, and after hours of searching for information and medical guesswork, they were finally able to contact his primary care doctor miles away. At that point, they learned that the young man had paranoid schizophrenia, and also had severe problems with substance abuse. Dr. Amiotte sees this incident as an example of how lack of information can severely hurt patients.

But even on a day-to-day basis, Dr. Amiotte knows that having a reliable system of accessible electronic medical records could revolutionize the way she treats her patients. "From the standpoint of just being able to get collateral information from another clinician, not just having the information from the patient's standpoint, but having the information from another clinician's standpoint, you'd be able to avoid a lot of pitfalls (like what other medications the patient is on, their history, etc.). A lot of times it's trial and error until you get the actual release of information and paperwork back from that other physician's office. You have to just go on your own good judgment and clinical experience, and on what the patient has given you. My patients don't always have an accurate recollection."

"Doctors are spread pretty thin. Information is scattered throughout the various clinics and doctors, which makes it very complex to navigate."

– Lisa Amiotte, M.D.

Dr. Amiotte sees many possible benefits to healthcare providers in rural areas, like her. "Doctors are spread pretty thin. Information is scattered throughout the various clinics and doctors, which makes it very complex to navigate."

Instant Access, Rapid Results

PROFILE:

James Morrow, M.D.

GEORGIA

~ Significant Improvements in Quality of Care and Efficiency After Implementing an EMR

Dr. James Morrow knows the difficulty of financing a medical practice. However, he has discovered an electronic tool to assist in reducing costs while also providing his patients and staff with tools needed to better manage patient care.

In 1998, Dr. Morrow implemented an electronic medical record (EMR) system at his practice in Cumming, Georgia and costs were immediately cut to both practice and patients. Before the system was in place, a patient visit tracked on paper records cost the practice $112.47. The new EMR system has reduced that cost to just under $80 and has enabled the practice to see three times the number of patients.

More patients require more doctors, and the savings from the EMR enabled his practice to double the number of doctors on staff and to hire additional physician's assistants and registered nurses.

While reducing costs and increasing staff is important to Dr. Morrow, he states, "The big thing is we can practice better medicine." The staff at his office now alert patients when medications are recalled, receive reports in a secure electronic fashion, track tests and procedure results, and communicate more efficiently internally. For patients with chronic diseases, it is possible to track their visits and know when they have missed a visit that could be vital to their care.

The effectiveness and accuracy of electronic records allows Dr. Morrow and fellow doctors in the practice to better utilize resources, see more patients, and provide personalized care. According to Dr. Morrow, "The return on investment for my office is measured in real dollars, in quality, job satisfaction, a sense of accomplishment, and success in today's changing world."

"Everything is about access. Patients need to message us securely and quickly, and they can. They look at lab results, ask for medication refills, and request referrals. It helps them manage their care better."

– James Morrow, M.D.

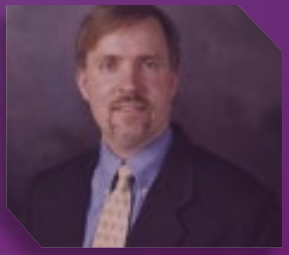
FACT

~ Physicians spend 38 percent of their time writing up charts. For nurses, this figure is 50 percent. The average office spends $10 per visit to track the paper file.

Source: http://ruralhealth.hrsa.gov/RHC/March16Transcript.htm

"If we're not connecting, we're not getting the data on the labs, on the vital signs, or the medications that they're taking. The more information you have at your fingertips, the better."

– Robert Lamberts, M.D.



PROFILE:

Robert Lamberts

M.D.

GEORGIA

~ Less Time Searching for Patient Information and More Time for Quality at the Point-of-Care

More Time for Quality Patient Care

Dr. Lamberts was first introduced to "computerized" medicine when he completed his residency in an Indiana hospital. They used computers to look up test results, x-rays, and patient records. After finishing his residency, he settled in Georgia to start his practice. He was shocked when he realized how behind the times they were. "I got kind of spoiled there, then I came here to Georgia to practice medicine and realized that I had gone back to the dark ages, and quickly decided I wanted to get on to electronic medical records."

The switch was not easy, but it was definitely worth it. Now, Dr. Lamberts' office is able to provide the best possible care to all his patients. "The computer doesn't cut down on the time you're talking to your patient. The computer does allow you to spend less time doing all of that other stuff. If I can have information at my fingertips, I can spend much more time caring for my patients, because I don't spend as much time looking for information."

The biggest reward for Dr. Lamberts is being able to see his patients becoming healthier. He can look at his system and find numbers for his patients with high cholesterol, diabetes, heart disease...and see them improving. His new, larger office is now totally paperless, containing more space for patient care areas instead of paper medical records. He is also able to better monitor his patients who are on various medications. "When Vioxx® got recalled, we had a letter in the mail that same day to our patients. They were so impressed, and said 'How do you get all that to us? My other doctor never sent me anything.' I said of course they don't, they have no idea you're on Vioxx. We did because we keep track of that."

Worth the Cost

PROFILE:

Tamara Lewis, M.D.

UTAH

~ A Medical Director in Utah Knows the Costs and Benefits of Interoperability

Dr. Tamara Lewis has a unique vantage point on what it takes to develop interoperable systems of health information. Dr. Lewis has helped to "mesh" the Utah Statewide Immunization Information System (USIIS) with her health system's electronic medical records (EMR) system. USIIS/WebKids is used by 50 pediatricians and 80 family practitioners in their health system, which covers all of Utah and parts of southern Idaho. The system allows doctors to see exactly what immunizations each child has received and "forecast" which immunizations they still need and when. The State Department of Health gathers the information from clinics and hospitals all over the State, and stores it in a secure database that doctors can access.

Being in the trenches throughout this complicated process has given Dr. Lewis a unique perspective on the many obstacles and considerations that are involved. The first major factor she cites is money. She says that money has to be available, not just to initially implement the systems, but to keep the systems up-to-date with the most recent health information and medical terminology. "It has to be constantly flexible, constantly rebuilding, and constantly changing according to new medical information."

"I think we need to have certain national standards so that systems will in the future be able to talk to each other. That's core and critical."

– Tamara Lewis, M.D.

Another major barrier to the wide use of health information technology by doctors is that government bureaucracies tend to work much slower than private sector doctors and hospital systems. The result is that when a new vaccine comes out, the computer systems have to be updated and ready to handle the new vaccine. There are layers of bureaucracy that have to "approve" the update, and the process is painfully slow. New vaccines may be ready and on the market, but doctors can't use them because they can't document them in the system.

Despite the many barriers, Dr. Lewis sees many more benefits—for patients, doctors, and even the government and the Nation's health as a whole. With Utah's system of tracking immunizations, they may someday have the capability to see, for example, how many people in the state need a smallpox vaccine in the case of a bioterrorism attack. The system has the potential to save the lives of countless men, women, and children, not only in Utah, but all across America.

Mac vs. PC All Over Again

PROFILE:

Maureen Mays, M.D.

WISCONSIN

~ A Cardiologist with a New EMR System Discovers That Access Without Interoperability Can Be Meaningless

"It's funny...it's sort of like back in the 80s with PCs versus Macintoshes. There was no way they linked. Over the last 20 years that's been resolved. I hope this doesn't take 20 years."

– Maureen Mays, M.D.

Dr. Maureen Mays looks forward to the day when she will have all her patients' information right in front of her during an appointment. Unfortunately, that day is not today for many reasons. Dr. Mays has discovered that even having an electronic medical record (EMR) system sometimes isn't enough. Interoperability—being able to have her computer system share information with the computer systems of other hospitals, labs, and doctors—sometimes means the difference between a healthy patient and a sick one.

Dr. Mays' HMO started implementing an EMR system a short time ago, and she expects it will still be another year or two until it is fully working. But she is very optimistic about the benefits of the system once it is completed. "Our HMO has four stand-alone clinics, plus the hospital, and then we have satellite clinics. It's a huge area, and it will be amazing when we don't have to have charts sent to us from remote locations, and we will be able to instantly access information when a patient comes in."

One of the problems she has run into early on with the new system is a lack of interoperability. Even though she has EMRs for most of her patients, Dr. Mays orders some very complex labs for some of her patients from labs all across the country. When she sends samples out, most labs cannot send the test results back to her in a format that can be put into the EMR. The result: any doctor that looks at that patient's medical records will not see the whole picture. They will have to go "clicking around" to find lab results that were scanned into the computer and won't see them next to all the other lab results.

One thing Dr. Mays is not concerned about is the security of electronic records. After working with paper records for so long, she knows firsthand just how unsafe they really are. "First of all, they're traveling around in cars. Second of all, charts are exploding all the time! You're walking down the hall and a chart will break open and papers go flying everywhere. And third, even when I'm walking down the hall in the clinic, somebody could look down and look at the name on the side of the chart. So I don't know... I'm not well-versed in Internet security or in electronic record security, but I don't think it should be a big concern."

Well on the Way

"The laws that inhibit this [interoperability] need to be changed."

– Peter Gross, M.D.

Dr. Peter Gross is well-versed in the challenges and benefits of having health information technology (IT) in hospitals and doctors' offices across the country. He teaches medical students about the nuances of such systems and has worked with his own hospital and other organizations to help doctors and nurses get over the initial hump of starting to use these systems in their day-to-day practice. Dr. Gross believes that, with the right legal reforms, health IT can finally give providers the tools they need to practice better, safer medicine.

"I think that the laws that inhibit this [interoperability] need to be changed. There are [Stark] laws that prohibit doctors from cooperating with hospitals and other organizations because it's viewed as collusion. That has to be dealt with. The HIPAA laws have to be dealt with, too, so that they don't impair having a nationwide free exchange of information."

PROFILE:

Peter Gross, M.D.

NEW JERSEY

~ Changes to HIPAA and Stark Are Needed to Make Interoperability a Reality

"There are a number of companies out there that are helping us get into e-prescribing. With these systems, if a patient is ready to leave the hospital, I could write all the prescriptions on the computer and send them off to the patient's pharmacy, wherever it is. When a patient is admitted to another hospital in our area—or eventually anywhere in the country—I could go onto the computer, enter the patient's name, birth date, and whatever other identifiers are necessary, and call up all of the current medications the patient is taking. When a patient comes into the hospital and they say, 'I'm on this blue pill for hypertension and this red pill for heart failure,' that doesn't help me. Having a nationwide system where we could find out what medications the patient is on would be very helpful."

Dr. Gross emphasizes that when using these computerized systems to record information about a patient's visit, the most important things to document are not billing codes, but vital information about a patient's health conditions. "When patients go to two or more different doctors, the doctors could enter a brief summary note about what they did during the visit. That summary note should include only critical information that the physician thinks is important to put there, otherwise you'll have so much verbiage that it will be worthless. What goes there should not be dictated by billing concerns."

PROFILE:

Jeanie Stahl, RPh

SOUTH DAKOTA

~ A Pharmacist in Rural South Dakota Says Using Information Systems Should Be Common Sense

Prescription for Efficiency

Jeanie Stahl runs the only pharmacy in a rural county in South Dakota. Jeanie works with all the doctors in the area, but her favorite to work with is Dr. Tad Jacobs, who started using an electronic medical information system about a year and a half ago. She loves it.

When she receives a prescription from his office, either by fax or e-mail, the patient's information and the name and dosage of the drug are all complete and readable, saving her hours of phone calls back and forth to clarify information. "That part of it alone has really improved patient care. In the past, they would call in a prescription, and if you didn't quickly think to ask them all the information you might possibly need, then you had to call them back again and get the birth date to figure out which patient it was. There was a lot of time wasted."

"With the two other doctors I work with, I'm used to reading their handwriting, but there are some days when the only way I can figure out what the prescription is to fax it back to the clinic it came from and say, 'What is this supposed to be, because I can't read anything?' It's very scary."

"My electronic system is also able to check drug interactions for all my customers. Every time I add a prescription to a particular person's profile, it automatically screens through everything. Then it gives me the option, depending on the level of severity, to hit a button and it faxes that right over to Dr. Jacobs, and it tells him that there is an interaction with something else they're on. It's very handy, especially because you do have people going to different doctors and specialists, and they are not always good about saying, 'I have this, and I'm taking this from another doctor.'"

With countless new drugs coming into the market all the time, Jeanie sees the use of information technology as a vital part of practicing healthcare nowadays. "It is not humanly possible for the doctor or the pharmacist to catch all the possible complications. With so many new drugs available, the people at the drug companies coming up with new names are not thinking about how similar the names are to each other. Throw in bad handwriting, and you're asking for a mistake. It's very scary to think that poor handwriting can easily result in a very grave outcome for a patient."

"It's very scary to think that poor handwriting can easily result in a very grave outcome for a patient."

– Jeanie Stahl, RPh

Did You Know?

~ According to the Institute for the Study of Healthcare Organizations and Transactions, over 150 million phone calls requesting clarification from pharmacists to physicians are made annually due to the physician's handwriting being illegible.

Source: John F. Kihlstrom, PhD, Copyright (c) 2000 Institute for the Study of Healthcare Organizations & Transactions, Bad Penmanship Can Lead to Medical Errors; www.institute-hot.com

Transforming Dentistry with IT

"Having an electronic health record system makes sure the right people know the right information at the right time."

– Jung-Wei Chen, DDS

PROFILE:

Jung-Wei Chen

DDS

TEXAS

~ A Pediatric Dentist Turns to Health Information Technology

Pediatric dentistry and health informatics are not two fields that would normally be considered a common pair, but for Dr. Jung-Wei Chen, the combination makes perfect sense. At the university where she teaches, Dr. Chen supervises the undergraduate and post-graduate dentistry clinic and serves on a committee that is evaluating electronic dental records systems for patient care and teaching purposes.

The electronic record currently in use at the dental/medical school does not allow all forms of medical and dental information to be stored. Patient radiographs cannot be entered, and much of the information cannot even be exchanged. "Sometimes we have to ask the patient to fill out the same information over and over, and then go to a referral doctor and fill out all the information again. Those things can be limited if all the information can be transferred or can be united."

According to Dr. Chen, electronic health information in dentistry, like that in medicine, can do a multitude of good, from tracking oral hygiene to tracking the medical actions and the learning progress of a dental student while giving clinical care to patients. While many electronic tools have not yet been developed, currently chronic illnesses can be tracked. Rural health systems benefit greatly from having access to tools and doctors. "If you have diabetic patients, electronic records keep track of their hemoglobin A1C levels, or it helps keep track of drug allergies or drug interactions. And it is very helpful for rural areas. For example, you're the only dentist in a small town, but you see a big lesion in the patient's mouth, you're thinking, should I send this patient 500 miles away to a big medical center to do the cancer screening, or should I just give the patient a Tylenol?"

With the added tools that an electronic health information system can provide, the rural clinician would not have to send a patient hundreds of miles away to an oral pathology or cancer specialist for consultation on a possible benign mouth sore. Any doctor could track the history and disease pattern of a chronically ill patient and exchange this information electronically with the specialist for consultation. Dental students would be exposed to a new way to treat patients. There are as many possibilities for health informatics in the dental profession as in the medical profession.

A Healthier System Means Healthier Kids

PROFILE:

Stephen Borowitz

M.D.
VIRGINIA

~ A Pediatric Gastroenterologist Praises Progress and the Use of Technology

Dr. Stephen Borowitz can see infinite benefits to using electronic medical information systems in medical practice, especially when working with so many growing children. But he also sees many things that need to change with the current system to truly improve patient care.

Dr. Borowitz sees electronic tools as a key that could unlock many medical mysteries—for patients and for doctors—in real time. "I think it's a tremendous opportunity for just-in-time education, not only for the patient, but for the practitioner, since all adults are problem-oriented learners. If I have a patient in front of me with a problem I don't understand and I can deliver educational content in the context of that encounter, I'm going to get much more out of it, because it's real to me, rather than going to a lecture three weeks later that may or may not be pertinent to a particular patient."

He also sees that simply having access to patient data could make a huge difference in caring for children. "One of the major focuses of taking care of children is immunizations. To have access to immunization data, so that we know what immunizations the child has or has not gotten across the continuum of care, enables us to at least do somewhat of a better job of catching that child up, or making sure that they're up-to-date on their shots."

"One of the struggles that I had with this whole process is that a lot of people when they move to an electronic medical record simply automate what we've previously done on paper, instead of stepping back and saying, 'What information do I really need to take care of this patient, and how might I codify it in a way that enables me to look at the information in a different way?' A lot of people continue to rely on dictation, transcription, and free text, which I think is the only way we could do it in the near term. However, if we codified it, we could do all sorts of creative things."

"I think that one of the problems with healthcare is the lack of trust of other people's data, so we tend to duplicate. Anybody who has ever gone into a doctor's office knows that you fill out your history form for every new doctor you go to see."

– Stephen Borowitz, M.D.

PROFILE:

John Cole, M.D.

LOUISIANA

~ The Downfalls of an EMR System That Isn't Interoperable

"We have patients who come back and forth from other hospitals and research centers—and we spend a lot of time assembling information or waiting for information from those different places. If you could automatically send that in an electronic fashion, the amount of time spent would be greatly decreased, and the accuracy and completeness would be enhanced."

– John Cole, M.D.

Plays Well with Others

Dr. John Cole treats many patients with rare and deadly forms of cancer. He also likes to stay on the cutting edge of medical discoveries and is in constant contact with a major cancer research institute. He emails with doctors there, and gets feedback about his patients and information about clinical trials. Many of his patients move back and forth between cancer research centers, and they will often go for second opinions and specialized treatment. Altogether, this amounts to numerous doctors he must be able to communicate with in an efficient and effective way every day.

The hospital where Dr. Cole practices recently started using an electronic medical record system with amazing capabilities...within their own system. The downfall, he says, is that he has no way to quickly send information or his patients' medical records to their other doctors or research centers hundreds of miles away.

While he believes that the ability to quickly and accurately share information is vital to his patients' health, his main concern is that he may "accidentally" violate HIPAA, a law recently enacted to protect patient privacy. "I think that is a barrier for some people, because they would like to be helpful. If they are not sure where to send the information, it can get misdirected, which is not always in their control. I think most people would like some sort of protection against that from a HIPAA standpoint. I think people are so scared that somehow they're going to get dinged for unintentional violation of HIPAA regulations that when medical records start being transferred it's going to be a concern."

Did You Know?

~ Eight percent of patients are referred to another physician.

Source: CDC/NCHS, 2002 National Ambulatory Medical Care Survey.

Connecting the Data

"We spend a lot of money and we waste a lot of time, just because we don't have access to medical information from another place."

– Jorge Rangel-Meneses, M.D.

PROFILE:

Jorge Rangel-Meneses, M.D.

FLORIDA

~ Discovering the Benefits of E-Prescribing

For Dr. Jorge Rangel-Meneses, being able to connect the dots of his patients' medical information has been the missing link between providing care with limited knowledge, and providing the best possible care—with the most accurate information—for every one of his patients through the use of information technology.

Using tools and technology that already exist for doctors, Dr. Rangel is saving a significant amount of money for the community health center where he practices. He is also able to save his patients time and frustration every time they come to see him...and help them stay healthier longer.

After only a few years of using the electronic prescribing (e-prescribing) system, he can't imagine going back to pen and paper that most doctors still cling to. He sees about 9,000 patients every year, and before he was able to use the system, he had to rely on his patients' memory to know what medications they were taking. He also had to rely on his own memory to decide if a new drug he might prescribe would interact with one that his patient was already taking. And if a patient was trying to "doctor shop" to get a drug he or she had already been prescribed by another doctor, Dr. Rangel would have no way to know. Needless to say, the pen-and-paper system was far from foolproof.

Now Dr. Rangel is empowered with the information he needs to treat his patients and improve their overall quality of life. "The system allows me to get a list of all my patients and a list of all the medications that my patients are on. It allows me to write or renew prescriptions electronically and send them directly to the patient's pharmacy of choice. And it allows me also to check for interactions and duplications. It allows me to see what other physicians have prescribed my patients. It is definitely much better than the written paper communication form."

Dr. Rangel's office is in the process of connecting the drug information they have to a new system of complete electronic health records, but for now, e-prescribing has transformed the way he practices medicine. Rather than being isolated from data and limited to a scribbled note in a paper record or his own memory, he is now able to be proactive—rather than reactive—when prescribing treatment. The e-prescribing system even lets him see immediately if a drug he has prescribed is not covered by his patient's insurance, and saves the phone tag that would normally ensue with the pharmacy.

Continued

"I can communicate clearly with the pharmacist. The pharmacist doesn't have to call me back because he or she doesn't understand what I wrote. That saves time. There is also the ability to check for interactions as I write the prescription. When I write a prescription, the system will tell me that I'm duplicating, or that there is a possible interaction with other medications that the patient is on."

"It's a big difference when one writes a prescription by hand. One has to have all the information and be cautious about what one is writing, where the system does that automatically and checks on a much bigger database than is usually available only by memory from the physician."

Dr. Rangel also has a large population of HIV-positive patients. They have been able to benefit from e-prescribing and electronically connected information more than a lot of his patients. But the doctor wishes he could do even more. He looks forward to the day when he will have their complete medical records at his fingertips whenever he needs them. "Sometimes their care can be very complicated. They can see multiple physicians for a variety of problems. They can have neurological problems, and ophthalmologic problems, and gastrointestinal problems, and dermatologic problems, and oncological problems, so they see a variety of specialists. If we all had just one record, it would be great, because we could communicate much more easily. Unfortunately, we don't get reports from every physician that sees our patient."

Looking toward the future, Dr. Rangel sees the definite need for a new way of doing business for doctors. "I can't understand how physicians can be so far behind in the use of information technology. If we don't use electronic records, if we keep using the manual records, we are basically using the same technology and communications that we've been using since the 18th century. I think that it is very, very important that we can intercommunicate. I think it's critical. Right now, we unnecessarily duplicate a lot of testing. We spend a lot of money and we waste a lot of time, just because we don't have access to medical information from another place."

Dr. Rangel also has a word of wisdom for doctors who are hesitant to start using such a system. "The system is not perfect, and I think part of the resistance of some physicians to use this system is because we expect perfection from the system. Of course it isn't perfect, and there is a learning curve, and it takes time to enter patients, and physicians are—in general—very conservative: we don't want to change our ways. But I think that as we get used to electronic systems, and we learn about how this saves some time and makes our practice safer for patients, we have to move in this direction. I don't think we have a choice. I think that there is evidence that the electronic records are going to be cheaper if you consider the direct and indirect costs."

Did You Know?

~ The Institute of Medicine states that 7,000 people die every year due to medication errors.

Source: To Err Is Human: Building a Safer Health System, Institute of Medicine, 2000.

A Medical Battlefield

PROFILE:

Colonel John Holcomb

TEXAS

~ Challenge of Adding an EMR on the Battlefield Without the Internet Available

"We have hospitals in Afghanistan and Iraq, and many of the soldiers would arrive without records in Germany, with no record of the CAT scans or what happened in surgery in Afghanistan or Iraq. The clinicians in Germany would have to re-operate on the patient, would have to redo all their x-ray evaluations, CAT scans, etc...."

– Colonel John Holcomb

Most American citizens do not see Black Hawk helicopters and falling mortars as daily scenery, but the American soldier on tour in Iraq or Afghanistan does. Receiving medical treatment on a battlefield is dramatically different than in a hospital stateside, but today interoperable information holds the power to change military medicine.

Colonel Holcomb is a researcher and clinician in the Army. He testifies to the importance and need for interoperable electronic health information in the military, especially in a war zone. "Without an electronic medical record (EMR), we're relying on pieces of paper that are inadequately filled out or if they are filled out, they get lost as soldiers move from a small little surgical site to a larger site by helicopters or ground, and then get transported on a cargo plane to Germany. Then another cargo plane transports them to the United States, and pieces of paper get lost in the shuffle." When pieces of paper holding medical information get lost in the military, soldiers pay the price as their doctors try to put the puzzle pieces of medical information together. However, a soldier's health can hold the key for how daily operations are carried out for fellow soldiers on the battlefield.

Colonel Holcomb works with the Joint Theater Trauma Registry, which is a database that allows injury patterns and outcomes to be tracked. "It's an extraordinary research opportunity to help find out what was going on at each level, and how patients did, and what their outcomes were, but the Joint Theater Trauma Registry is really hampered by not having electronic data at every site that is compatible from one site to the next, and transferable from one site to the next. It is limited in its scope, quality, and timeliness."

"If we had that timeliness factor we could respond with injury patterns, changing tactics, and techniques and procedures of the enemy, and we would recognize injury patterns." However, military hospitals in the United States do not have the tools needed to track injuries and relay preventative information to those in command in a timely fashion.

FACT

~ Tricare, the largest military health plan, has nearly nine million beneficiaries.

Source: Weiner, Tim. "A New Call to Arms: Military Health Care" New York Times. April 14, 2005.

Seeing the Big Picture

"Dentistry is just one part of the human body, and the same principles apply there as other medical care. It's such an integral part of the total health of the patient. It's not separate from medicine."

– Joseph Chasteen, DDS

Dr. Joseph Chasteen is frustrated that some sectors of the medical community continue to see dentistry as something apart from medicine in terms of patient care. Dr. Chasteen is the Director of the Office of Educational and Information Technology at a university in the state of Washington and he knows firsthand the benefits and barriers to using information technology effectively in a dental practice.

Dentists have recently seen a boom in new, high-tech devices to help them in the diagnosis and treatment of their patients. But as remarkable as these devices are, they can be more of a hassle than helpful because each individual device is designed to store information in its own software program. When the information cannot be transferred or shared with a universal, electronic patient record system, it prevents dentists from being able to see the complete picture of their patient's oral health status in one information system.

» PROFILE:

Joseph Chasteen

DDS

WASHINGTON

~ A Dentist Pleads for Dentistry To Be Included in New Health Technologies

According to Dr. Chasteen, the key benefit to having an interoperable system is efficiency. "A private practitioner, trying to get on the leading edge of the electronic age, in the spirit of the national trend toward the implementation of electronic patient records often hits an impasse because of the lack of interoperabililty. If you can bring all patient information together in one software package then you would not have to close out of one system and open another just to look for the information you need to care for the patient. If there was such a system, dentists could use the program as a significant tool to improve the care of their patients. The electronic record should serve as a repository of all patient data. Individual electronic devices such as digital radiographic equipment and periodontal charting devices should be designed to work with the electronic patient record using established standards."

A major advantage of an electronic patient record for both dentists and patients is the ability to see the whole picture of the patient's health. "If a patient has a history of hypertension, I want to know that so I can avoid using incompatible medications and anesthetics during treatment. A standardized electronic patient health history could be integrated with a drug interaction program to automatically prompt warnings of any potential incompatibility of current patient medications with planned treatment. Such innovations would be welcome tools in a contemporary dental practice."

Did You Know?

~ There are 176,063 professionally active dentists in the United States.

Source: American Dental Association, Information Line.

Making IT Work for Everyone

PROFILE:

Arlowen Raygor

RNBC, MN, BCNA

VIRGINIA

~ Information Systems Director at a Non-Profit Hospital Highlights Smaller Facilities' Needs

"Gathering all essential data about a patient's situation is critical in decision-making."

– Arlowen Raygor
RNBC, MN, BCNA

Arlowen Jordan Raygor has a daunting task ahead of her. As Director of Clinical Information Systems at a not-for-profit community hospital, she is responsible for updating their current information system to an interactive, interconnected, efficient, and accessible system of patient medical records.

"We want to be able to automate more documentation and we want more integration. Currently we do not have computerized physician order entry (CPOE), but we want to implement that in the future. We also want evidence-based practice modules for physicians, nurses, and other care providers. We need vendors who are willing to work with us to create electronic health records that are available to the patient anywhere they happen to be. Currently none of the systems are truly interoperable, but that's the direction we need to go. Patients should have one seamless record."

"Gathering all essential data about a patient's situation is critical to decision-making. In our hospital, like most hospitals throughout the country, patient data resides on multiple systems. We need to have all that data integrated in such a manner that care decisions can be made safely. We also need more tools within these systems that use data to guide practice. Currently there is a lot of attention on evidence-based practice modules for physicians, but nurses and other clinicians need these tools also. Given the nursing shortage we are experiencing, most hospitals have nurses with various levels of experience. Embedded practice guidelines based on research and data specific to an individual patient will help us make better decisions about the care of our patients. This integration needs to extend outside the walls of the hospital. Many of our physicians express frustration in having some of the patient data on the electronic health record in their office and some of it on the hospital system. Interoperability is definitely needed."

"One of the biggest roadblocks to purchasing and implementing systems that meet all these needs is financial. As a single community hospital, we face numerous challenges and must make wise decisions on how we spend our money. Picking the right vendors to provide the solution that is right for us and at a price we can afford is critical. These systems cost millions. While we appreciate that there will be substantial savings for Medicare, it is the hospital that pays for the system. Part of our decision process must include not only the quality improvements but also our return on investment in terms of operational costs and efficiency gains."

Did You Know?

~ A standardized, encoded, electronic healthcare information exchange would save the U.S. healthcare system $395 billion over a 10-year implementation period...[and] save $87 billion each year thereafter.

Source: Middleton, Blackford, MD, MPH, MSc, FHIMSS, The Value of Healthcare Information Exchange and Interoperability. February 23, 2004 Presentation: HIMSS Annual Conference & Exhibition.

A Culture of Safety

PROFILE:

Jandel Allen-Davis, M.D.

COLORADO

~ HMO Physician Supports Electronic Records for Quality Patient Care

"Many of our patients, especially our older patients, are on multiple medications, and there's always the potential to harm somebody by not being aware of drug interactions."

– Jandel Allen-Davis, M.D.

Dr. Jandel Allen-Davis puts the safety of her patients at the top of her priority list every day. With a system of electronic medical records (EMRs) and e-prescribing, Dr. Allen-Davis has the information needed to provide the best care possible.

While the integrated healthcare delivery system she works with is almost completely integrated inside its own walls, its systems cannot communicate with the systems of other hospitals. Still, for the average patient, Dr. Allen-Davis and others are able to help their patients find better and safer treatment options and be more involved in their overall health. "One of the biggest bangs for the safety buck is when I order medications. When I enter a certain disease into the computer, it automatically gives me all the possible treatments and the correct dosage for my patients. This is a tremendous tool, especially when I have patients with diseases I'm not as familiar with."

"Instead of sending them to another doctor or calling someone to get their opinion about what medicine would work best, all the most recent and accurate information about all of these drugs is right there, in the medical record. In a given department or with a clinical situation, we look at what would be the best way to use the system to keep patients safe, to alert doctors to anything new that might be going on or new warnings for medications. Many of our patients, especially our older patients, are on multiple medications, and there's always the potential to harm somebody by not being aware of drug interactions."

But safety is not the only benefit. Dr. Allen-Davis frequently uses the system to help connect her patients with other doctors and the treatment they need, especially for those with chronic diseases. "Last week I had a patient whose labs came back and showed that her blood sugar was elevated. I was able to call her, let her know that based on the information, it looks like she's developed diabetes. I then ordered the appropriate follow-up lab work and told her to 'make sure you call your primary doctor.' But with the EMR, I was also able to say, 'I'm going to send a copy of this note to your primary doctor, so that she can be involved in your care right away.' Her primary doctor called her to make sure she came in, and we got her connected into the right programs of diabetic counseling and nutrition teaching. I think those little nudges begin to change the culture of safety for patients."

FACT

~ Chronic conditions make up 29.6 percent of the reasons people visit their primary care specialists.

Source: CDC/NCHS, 2002 National Ambulatory Medical Care Survey
http://www.cdc.gov/nchs/about/major/ahcd/officevisitcharts.htm

Improved Care Justifies Costs

» PROFILE:

Robert Fried, M.D.

NORTH CAROLINA

~ Family Physician Focuses on Improved Quality of Care Through Use of Electronic Information

"We need a system that works for us and the workflow in our organization and gives us communication so our hospitalists and the people in our walk-in clinic, which is an urgent care after-hours, have access to the patient's record...."

– Robert Fried, M.D.

With 9,000 patient charts and 60 patient visits per day, family physician Dr. Robert Fried is excited and mindful of the positive impact that electronic information exchange could have on his practice. Because of the need to have patient charts on hand, link with the affiliated hospital, and connect data such as x-rays, surgical reports, and lab tests, Dr. Fried is actively investigating what an electronic medical record (EMR) system will mean for his practice.

When it comes to adopting an EMR system, Dr. Fried is not concerned financially. He says, "Every year we're spending more on transcription than the system is going to cost, and we already have a couple pay-for-performance contracts. So, one of our criteria when we're looking at systems is that they can give us quality indicator reports, so we can have our own data to go by, instead of just going by the insurance company's data."

Physicians often have to monitor multiple health conditions and know necessary medications and their side effects. Doctors like Dr. Fried, must be familiar with up to 60 patients' medical histories daily. Dr. Fried explained that complicated multiple conditions and treatments can be a difficult balance. Even a small oversight can have a major impact on an individual's health.

Because of the tremendous amount of information that is needed for accurate medical care, repeated medical tests are common. They are a necessity that can become expensive for patients and would be unnecessary for doctors if access to prior results were available. Dr. Fried states, "I do labs not knowing what they [the patients] have done, and some of them are repeated. It's hard to eliminate that waste."

With the help of an electronic system that allows doctors to communicate, some medical oversights can easily be avoided. Dr. Fried says, "I'm really looking forward to having a system that helps remind me of all the things I should be doing when I've got somebody with, you know, three and four problems going on at the same time, because it's hard to juggle it all in your head."

FACT

~ In an article published in the July/August, 2004, *Annals of Family Medicine*, medical errors were studied as a chain of events rather than isolated incidents. Two-thirds of all errors in treatment and diagnosis were found to begin with errors in communication. These included missed communication between physicians, misinformation in medical records, mishandling of patient requests and messages, inaccessible records, mislabeled specimens, misfiled or missing charts, and inadequate reminder systems.

Source: Wooley, Mary. Research for Health: The Power of Advocacy. January 14, 2005. Research!America. PowerPoint. August 2005. www.nlm.nih.gov/csi/research_america_011405.pdf