

Electronic Health Records:
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Medical Informatics: An Executive Primer.
Health Information and Management Systems Society
Chicago, IL. Kenneth Ong, MD, Editor
January 2007

Electronic Health Records: The Use of Technology to Eliminate Racial Disparities in Health Outcomes

Neil S. Calman, MD
Maxine Golub, MPH
Kwame Kitson, MD
Charmaine Ruddock, MS

The Institute for Urban Family Health
16 East 16th Street
New York, New York 10003
ncalman@institute2000.org
Telephone: 212-633-0800 x 255
Fax: 212-691-4610

Word Count: 5,198

Authors' note: The authors' wish to thank the Tides Foundation for their support in the development of this article. We would also like to thank the members of the Bronx Health REACH Coalition for their efforts to unravel the many factors that contribute to disparities.

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Abstract

Background: Racial and ethnic disparities in health care and health outcomes have been widely documented, leading to calls for intensified efforts to address inequities in the health care system. While minority communities have typically been the last to benefit from advances in medical technology, electronic health records (EHRs) hold much potential for improving health care in these communities.

Description: The Institute for Urban Family Health has implemented an EHR and practice management system using lessons learned from multiple focus groups held as part of a community-based participatory research project on eliminating health disparities in the South Bronx. Some of the themes from these focus groups that have informed our EHR design include distrust and fear of the health care system, feeling undervalued and disrespected, difficulty communicating with doctors, concern about the competency of community doctors, and the importance of self-advocacy. Reviewing EHRs on flat panel monitors with patients has aided communication and prompted patients to become more involved in their own health care. With printers in every exam room, health care providers can provide to their patients charted laboratory results and vital signs, patient education materials, and a visit summary that highlights key information. EHRs not only enhance the patient's sense of the provider's competence, but can actually enhance that competence by providing electronic checks and clinical decision supports.

Conclusions: EHRs are an important tool in addressing racial and ethnic disparities in health. Decisions made in the course of establishing automated workflows and hardware configurations, as well as in software selection, are important in maximizing the benefits of electronic health records for vulnerable populations.

Key Words: electronic health/medical record, health disparities, racial disparities, quality of care, quality improvement

INTRODUCTION

Racial and ethnic disparities in health outcomes are one of the leading causes of death in this country, producing excess mortality among minority Americans in numbers that rival some of our most serious medical conditions.¹ Inequities in the quality of care received by racial and ethnic minorities have been widely documented,^{2,3} leading to calls for intensified efforts to redress systematic inequalities in the health care system.

The Institute for Urban Family Health has had a unique opportunity to study the root causes of health disparities in the Bronx over the past four years through a community-based participatory research project known as Bronx Health REACH. During this same time, the Institute has installed the Epic system (Epic Systems Corp., Madison, WI), a completely integrated electronic health record (EHR) and practice management system, at its family practice centers serving the Bronx community. The simultaneous initiation of these two projects has provided us with an opportunity to structure the implementation of this state-of-the-art system to address fundamental issues we identified in our work on health disparities.

In this paper, we discuss the implementation of Epic in our network of 13 practices: seven federally funded community health centers and six health centers that the Institute operates for our affiliated hospital system, Continuum Health. In total, this network comprises approximately 70,000 patients and produces over 180,000 primary care visits annually at four Bronx and nine Manhattan locations. We assess provider use of various features of the EHR and their views on the impact of the EHR on patient care. Findings of a recent provider survey are presented.

We describe the dominant themes that Bronx Health REACH focus groups identified as major problems in provider-patient relationships that contribute to health disparities. We then discuss the benefits an EHR can bring to a community family practice group to help address these issues, thereby improving the quality of care to people of color and helping to eliminate disparities in health care and health outcomes.

LESSONS FROM BRONX HEALTH REACH

Bronx Health REACH is a coalition of 40 community and faith-based organizations dedicated to eliminating health disparities in the Bronx. Funded by the U.S. Centers for Disease Control, the New York State Department of Health, and private funders, Bronx Health REACH has engaged in a varied portfolio of activities.⁴ Early on, REACH leaders held 10 focus groups to learn what community members perceived as the ways that these disparities arise from our health care system.⁵ From these focus groups, a number of themes were identified that have informed our work over the past five years. These themes are:

- Widespread distrust and fear of the healthcare system;
- Feeling undervalued and disrespected;
- Difficulty communicating with doctors;

- Concern about the competence of community physicians;
- The importance of self-advocacy and the difficulties in practicing it;
- The impact of stress and its relationship to poor health; and,
- Obstacles to modifying lifestyles to be more health-conscious, due to the absence of health information and other factors.

Mistrust

Of all these issues, the one which stood out above all others, in both the frequency with which it was mentioned and in the intensity of emotion with which it was presented, was the issue of mistrust that exists between patients and providers in low-income communities of color. Many describe this as “the Tuskegee Legacy,” a reference to the infamous abuse of a group of African-American men over decades as medical researchers watched them deteriorate from the effects of syphilis in order to study the natural history of the disease, long after there was a known cure.⁶

Disrespect

Focus group participants frequently discussed the disrespect they felt from health providers as a major issue in their encounters with the health care system. People reported being treated like “ants in a line,” and being told to “take a number.” Examples included the failure of providers to treat them as intelligent participants in decision-making about their own health care, and failure to share the results of labs, diagnostic tests, and specialty consultations as the providers assumed a paternalistic and authoritative role in their communications with them.

Segregation of services based on the type of health insurance one carries, or whether or not one has a “private” physician to serve as their advocate, has convinced people in our communities that they are indeed second-class citizens of the American health care system. The disparities that exist in private and public health insurance coverage by race serve to reinforce the community’s experience that they are being treated differently because of the color of their skin.

Communication Barriers

The lack of trust articulated by focus group participants is intensified by poor communication between patients and physicians. Many participants felt that their doctors rushed through visits and made little effort to communicate. Some expressed difficulty understanding the information they received. By contrast, those who trusted their physicians expressed a sense of being listened to and having information carefully explained. The mismatch of the racial and ethnic background of the patients in communities of color and the health care providers who serve them also creates barriers to maximally effective, culturally sensitive communication in most cases, and impedes linguistically competent communication in many other medical encounters.⁷

Competence

Participants in our focus groups were frequently concerned about the competence of their providers, and shared the many ways in which they judged the competence of those who cared for them. Some related how they compare what their provider did for them to what their friends had experienced in similar situations, what they knew from their own reading, or from mass media public health education. A few community residents reported “testing” their doctors by withholding important health information to see if the provider would ask about such problems or find them during their examination. Others spoke of leaving providers who, for example, did not refer them for an annual eye exam if they were diabetic, or did not mention that they needed a mammogram even though they hadn’t had one in two years.

Need for Self-Advocacy

Many of the focus group participants felt that self-advocacy is important in interactions with the health care system and routinely act on that belief. Others were not comfortable advocating for themselves. They expressed feeling awkward and unclear about self-advocacy, and accepted the inadequacies of the system. “You’ve got to have money. That’s the bottom line. You got to brace yourself to that,” was one man’s comment.

Overall the issues related by focus group members, almost all of who were African-American or Latino, showed that they were deeply disenfranchised in their dealings with the health care system. This often led to misunderstanding and/or mistrust of their provider’s recommendations, or the provider’s rationale for a particular course of treatment. As a result, the concept of “non-adherence to provider recommendations” must be viewed in a new light.

THE EHR BRINGS ESSENTIAL CAPABILITIES TO SUPPORT PATIENT CARE

How can an electronic medical record serve to bridge this chasm of distrust and poor communication between providers and their patients? Some providers initially fear computers in the exam room as a potential added barrier to good communication and view this as a necessary evil of automating the clinical encounter. That view would lead one to shy away from EHRs, especially as a tool to improve the doctor-patient relationship. At the Institute, we decided that we would use the EHR as a major tool to bridge trust and improve communication. At every step of our planning and implementation, the focus group findings were considered and decisions regarding system configurations were made accordingly.

Restructuring Workflows to Incorporate the EHR

In the process of automating the clinical record through the installation of an EHR, all manual workflows must be reexamined, and many must be reworked. This provides an opportunity to examine inefficiencies in care and places where patient communication can

be improved. One example is the way in which providers had to restructure their review of the patient's office record at the start of each visit.

Many providers were trained to keep the patient's chart outside their exam room so they are able to review previous encounters before going in and speaking with a patient. This gives the patients the sense that they are remembered and makes them feel less anonymous. It also serves to keep the record from being reviewed by the patient when left alone in the exam room waiting for the provider. Workflows from this paper chart model had to be dramatically restructured to avoid creating a situation where providers enter the exam room and read through computer notes without involving the patient. One solution suggested by other EHR users was to install additional terminals outside the exam rooms where providers could access their patient's charts and review them before entering the room.

Instead, we chose to redesign the encounter to put the review of prior information in the context of the current day's encounter, and to use this as an opportunity to involve the patient in his or her own care. Now providers enter the exam room unprepared by prior review of the patient's record. Their review of the record and any activity since the previous encounter is done in collaboration with the patient. Looking at the computer screen together, the provider might say, "Let's look over the note I wrote on the last visit to make sure we have followed up on all your issues." Then, "Now let's go over all the reports that have come in since your last visit ... two consult reports and your blood test results." All of our providers indicate that they encourage their patients to look at the computer screens at least some of the time, and some do this during nearly every patient visit (see Table 1).

Rather than being insulted by this, patients are immediately drawn into reviewing their own records with their provider at their side, where a discussion of the results and necessary follow-up are facilitated. Copies are printed for the patient to keep at home with their medical records.

Flat Panel Monitors Aid Communication

The historical view that the provider owns and controls the patient's medical record is a fiction that must be undone if we hope to involve patients in taking more responsibility for their own health care. We made a decision early on in our Epic planning to bring patients directly into the process of the encounter, and to eliminate patients' sense that their health records were not theirs, but were "owned" by the providers and practices. We specifically rejected the option of portable wireless touchpad computers, as they have screens which are visible only to the provider and are often held cradled in the provider's arm, preserving the secrecy of the paper charts they replaced.

Flat panel monitors were installed on every desk, so that all information entered into the computer would be visible to the patient as it is entered. This was a major step in eliminating the secrecy of the paper chart that patients have experienced. Patients now

often read over our shoulders as we document their care, and some even correct misinformation or the misinterpretation of their statements as they see the typed words appear on the screen. Even though not all patients choose to look at the monitors, the availability they offer creates a bridge of trust and improves the provider-patient relationship.

Printers in Every Exam Room Promote Patient Education and Involvement

Another example of the critical decisions that need to be made in the set-up of hardware is the location of printers. We decided to install printers in every examination room so that information could be produced for patients as part of the encounter process. This not only improves patient flow in the health center, but also makes the vast resources of the EHR instantly available to both the patient and the provider. It also insures the confidentiality of patient information, eliminating the possibility of a document being picked up off a central printer and inadvertently handed to the wrong patient.

At the start of the encounter, while reviewing lab results and returned consult reports, the providers can print copies for their patients on the spot. The workflow used by most providers next involves a review of the nurse's notes and the vital signs taken when preparing the patient to see the provider. Vital signs, as well as all lab values, can be trended, graphed and printed for patients. The most common use of this function is the printing of progress charts of weight or blood pressure, graphing patients' improvements (or lack thereof!). While most of our providers still use this function infrequently, there is much variability and some providers have clearly adopted this as a standard visit activity (Table 1).

It is well known that patients frequently do not take all the medications they were prescribed.⁸ The EHR permits providers to review the list of current medications the patient should be taking, the quantity prescribed, and when the patient should require a refill. A summary of indications and doses can be printed as well. Prescriptions are printed in the exam room, as are requests for labs and specialty consultations. Our recent survey shows that virtually all prescriptions are now written through the EHR, and that providers review printed prescriptions with their patients during most or all of their visits. All of these documents become part of a package of health information that the patient can take with them and keep as part of their personal health records.

Table 1.
Survey of EHR Use by Health Care Providers

Providers were asked to estimate the percentage of visits in which they use each of the specified features of the EHR system.

	0-10%	11-20%	21-30%	31-40%	41-50%	51-60%	61-70%	71-80%	81-90%	91-100%
Percent of visits where you encourage your patients to look at the computer screen to view information	8% (5)	5% (3)	11% (7)	8% (5)	14% (9)	3% (2)	8% (5)	19% (12)	14% (9)	11% (7)
Percent of Office Visits where you receive one or more Best Practice Alerts	17% (11)	14% (9)	19% (12)	11% (7)	12% (8)	5% (3)	6% (4)	5% (3)	6% (4)	5% (3)
Percent of Office Visits where you ignore one or more Best Practice Alerts	42% (27)	9% (6)	3% (2)	6% (4)	8% (5)	6% (4)	3% (2)	5% (3)	3% (2)	14% (9)
Percent of Best Practice Alerts you ignore overall	42% (27)	9% (6)	3% (2)	0% (0)	11% (7)	5% (3)	3% (2)	6% (4)	8% (5)	12% (8)
Percent of Prescriptions you write through the EHR	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	2% (1)	6% (4)	92% (59)
Percent of visits where you review prescriptions with your patients after they are printed	2% (1)	0% (0)	0% (0)	2% (1)	6% (4)	3% (2)	2% (1)	17% (11)	22% (14)	46% (29)
Percent of visits where you print graphs (BP, weight, labs) for your patients to take with them	44% (28)	8% (5)	8% (5)	6% (4)	8% (5)	8% (5)	8% (5)	8% (5)	2% (1)	2% (1)
Percent of Visits you print educational materials from the Reference section of the EHR	12% (8)	12% (8)	12% (8)	8% (5)	12% (8)	12% (8)	12% (8)	8% (5)	5% (3)	5% (3)
Percent of Office Visits you print the After-visit summary for the patient	70% (45)	14% (9)	5% (3)	5% (3)	0% (0)	0% (0)	2% (1)	3% (2)	2% (1)	0% (0)

Institute for Urban Family Health – EHR User Survey – October 2005
(based on an 89% response rate)

IMPROVING TRUST AND COMMUNICATION THROUGH THE EHR

A Complete and Instantly Retrievable Clinical Record

Nothing contributes to distrust as much as having a provider who forgets critical information about their patients. Our patients have relayed examples that include providers who did not document medications they previously had given the patient, resulting in difficulty refilling the patient’s prescription, and providers who forgot that they had ordered tests and had not reviewed the results since the patient’s last visit. Even when prior face-to-face encounters are recorded in a paper record, the paper record rarely documents the myriad other patient encounters - requests for refills and specialty referrals, telephone calls from patients, and provider’s attempts to call patients regarding abnormal test results. The EHR facilitates such documentation, as it is available for recording information in almost every location in every one of our facilities, and is available to providers when they are away from our network though a Virtual Private Network (VPN.)

Thus, when patients return to the center, a complete record of all their activity is readily available to the provider, instilling confidence in the patient that their information is complete. Over half of our providers feel that patients view them as having improved ability to find important information in their health records, and that patients view staff competency as somewhat or much better than before the installation of the EHR.

Our providers have also indicated that communication with patients, both during visits and between visits, has improved. Thirty-four percent of providers responding to our recent survey think that their patients feel communication in the exam room is somewhat better or much better than before the EHR. One-third of providers responded that they think patients feel communication with their provider between visits is somewhat or much better and that they get better responses to messages that they leave.

Table 2.

How do YOU think YOUR PATIENTS feel about your EPIC-supported practice compared to their experiences before EPIC?

	Much Worse now than before	Somewhat worse now than before	About the same now as before	Somewhat better now than before	Much better now than before	Don't know
Their ability to get prescriptions refilled	0% (0)	0% (0)	16% (10)	19% (12)	41% (26)	24% (15)
Their ability to get health education information	0% (0)	2% (1)	11% (7)	32% (20)	35% (22)	21% (13)
The overall competency of the staff	0% (0)	3% (2)	24% (15)	30% (19)	21% (13)	22% (14)
Your ability to find important information in their record	0% (0)	0% (0)	6% (4)	29% (18)	58% (36)	6% (4)
Your communication with them in the exam room	3% (2)	11% (7)	17% (11)	27% (17)	17% (11)	24% (15)
Their access to their own clinical information	0% (0)	0% (0)	17% (11)	33% (21)	37% (23)	13% (8)
Your communication with them between visits	0% (0)	0% (0)	13% (8)	25% (16)	43% (27)	19% (12)
Their ability to get prescriptions refills	0% (0)	0% (0)	10% (6)	27% (17)	47% (29)	16% (10)
Their ability to speak with a nurse about a health concern	2% (1)	2% (1)	35% (22)	16% (10)	14% (9)	32% (20)
Your response to messages they leave	0% (0)	3% (2)	22% (14)	24% (15)	29% (18)	22% (14)
The confidentiality of their medical record	0% (0)	3% (2)	27% (17)	13% (8)	16% (10)	41% (26)

Improved Patient Education

Most EHRs have some library of patient education material readily accessible to the provider. Epic's library is purchased from McKesson Health Solutions (Broomfield, CO), is largely bilingual (English/Spanish) and contains thousands of health education documents and drug information sheets. Epic facilitates the use of these educational materials for the provider by picking up key diagnoses and pharmaceutical names from the problem list, encounter diagnoses, and medication lists, and suggesting educational documents that are available for immediate retrieval. In addition, hundreds of anatomical drawings are available which can be annotated by the provider on the computer and then printed for the patient. This capability completely changes the flow of information from what it had been prior to automation. It enables providers to locate information with a few keystrokes that previously required either the provider or nurse to retrieve and copy, and was therefore used far less than it is today. Despite the variable usage of printed materials by providers, we view provider feedback for expanded and improved patient educational materials as a positive sign that providers are willing to use this feature and have ideas about the type of information they would like to provide to their patients.

Patients Leave the Center with a Full Report of Their Encounter and Follow-up Recommendations

Studies of patients leaving their doctor's office indicate that they rarely have a complete understanding of what was done and what they are supposed to do next.⁹ To address this, the Institute designed an "After-Visit Summary" that contains patient-friendly headings and a printout of all issues discussed in the day's encounter. The summary includes patient identifying information, a list of their measured vital signs, the chief issues as told to the nurse, the provider note, a complete problem list, a summary of active medications, any new orders written for the patient, including consultations, imaging studies, lab tests, and immunizations or medications administered in the center. Although initial use of this feature is limited, providers who do use it regularly in our practice report that their patients remind them to print the After-Visit Summary if they forget to do so at the end of an encounter.

Template Letters for Follow-Up

In our experience, nothing shows our patients that we care about them as much as a call or letter from their provider. The Epic system's ability to generate pre-formatted letters is an important tool in that regard. Letterhead is scanned into the system, and letters can be generated with just a few keystrokes. Patients are routinely sent letters with their tests results and specific requests for follow-up. Templates that automatically import values from the patient's most recent laboratory results and then explain the normal value range are generated in seconds, and have been particularly helpful in improving communication with patients. Patients' contact information – home, work and mobile phone numbers can be retrieved with a single click from anywhere in the system so a quick call can be made and documented, relaying newly received information to the patient. This type of follow-

up, though time consuming, truly makes for a patient-provider partnership that demonstrates the kind of respect and caring patients deserve.

Quality of Care is Greatly Enhanced

EHRs and the decision-support systems that can be built into them can not only enhance the patient's sense of the providers' competence, but can actually increase that competence by running through scores of electronic checks that the human mind is incapable of doing with the same consistency and precision. One year ago, we implemented a reminder that would alert providers to recommend a pneumococcal vaccine to patients over 65 years of age and patients of any age with chronic pulmonary disease. This vaccine is designed to prevent pneumococcal pneumonia, a threat to the elderly and those with chronic pulmonary diseases and is recommended by the US Preventive Services Task Force, indicating excellent evidence of its utility.

The results of implementing this clinical decision support can be seen in Figure 1. In the nine months prior to turning on this alert, our 12 facilities averaged administration of 16 vaccines per month. A clinical decision support, or "Best Practice Alert" (BPA), was designed to remind providers at the time of a patient encounter that their patient's age or medical history warranted a vaccination and that the system could not find evidence that a pneumococcal vaccine had been ordered. In some cases, patients had been vaccinated prior to the implementation of the EHR, but to our surprise, in most cases they had not. In the first month after the BPA implementation, the number of vaccine doses given rose precipitously to 299 – an 18-fold increase. Subsequent months saw rates that gradually declined as the population of patients for whom the vaccine is recommended quickly became immunized.

Another BPA programmed the same month was designed to remind providers that their diabetic patients had not had an order for an ophthalmology consult in the prior 12 months or more. The results of this BPA can be found in Figure 2. The baseline rate for this activity was an average of 104 consultation referrals per month for the nine months prior to programming the BPA. After the BPA was implemented, the rate went to an average of 161 consults per month, a 55 percent increase.

Figure 1.
Doses of Pneumococcal Vaccine Given per Month
Before and After the Introduction of Specific Best Practice Alerts

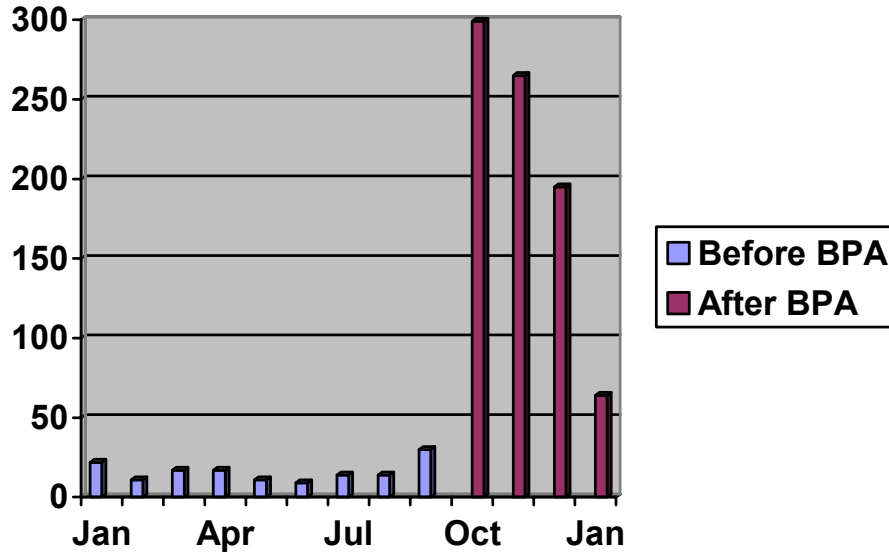
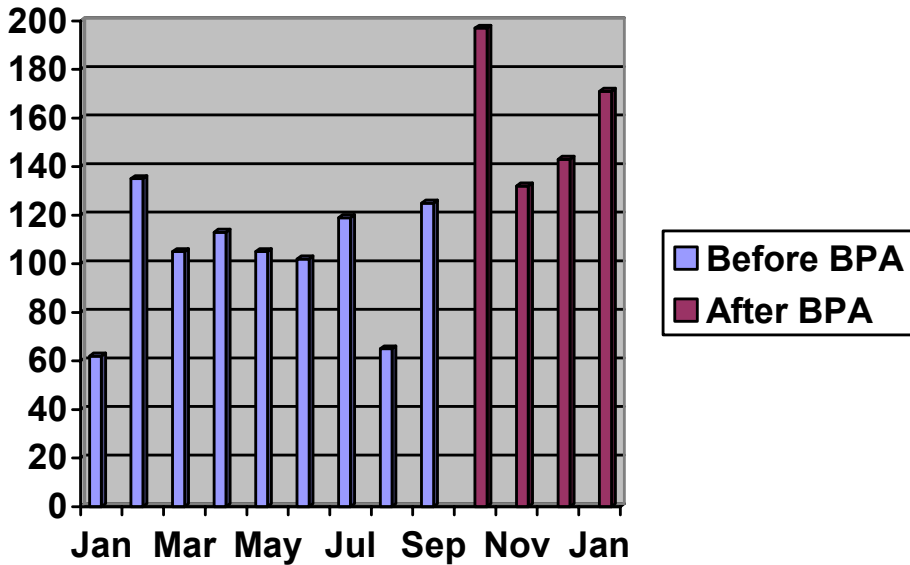


Figure 2.
Consults to Ophthalmology for Diabetic Patients Per Month
Before and After the Introduction of Specific Best Practice Alerts



How are these quality improvements related to the elimination of health disparities? The obvious answer is that improvement in the quality of our preventive care leads to improved health outcomes for our patients. But there is another effect as well.

Our REACH focus groups taught us that in part, patients judge their providers by their adherence to what the patients understand about necessary or recommended guidelines for their care. As more is learned by people in the community about recommended standards of care, patients will increasingly measure the competence of their providers by their adherence to these standards.

In one particularly poignant clip in a video called *Voices of Health Equality*¹⁰ that was made by members of Bronx Health REACH, a community resident relates how she felt when a specialist she was seeing expressed surprise that she had never had an electrocardiogram even though she suffered from severe hypertension. She told the interviewer that she had been cared for by her primary care physician for years without ever having had this test offered to her. Her trust in this physician had been injured beyond repair, and she was now in search of a new source of medical care. Decision supports that remind providers of such critical errors of omission improve the quality of care and the trust the patient has in their provider.

Supporting Patient Self-Management

Physicians have no ability to change the health-related behaviors of their patients without the cooperation of their patients, and oftentimes their patients' families as well. Whether the behavior is smoking, seat belt use, overeating, lack of exercise, substance abuse or high-risk sexual behavior – without the full buy-in of the patient there is little hope that behavior will change.

Office-based health education is a proven benefit in stimulating behavior change.¹¹ Yet in one study of smokers, only one third of the patients interviewed reported ever being told to stop smoking by their regular physician.¹² In many other cases, the reimbursement system for primary care does not recognize the extraordinary time and dedication it takes to educate patients as to the dangers of their unhealthy behavior, give them the tools to change, and monitor their adherence to the provider's recommendations.

In our community focus groups, patients often spoke of the brief time that providers spent with them, often commanding behavior change with a single sentence without any explanation of why or how things needed to change, let alone how to make the change itself. Patients felt rushed and uninvolved in their own care, and generally unable to fulfill their providers' request.

Our implementation of the EHR brings patients to the forefront of their own care by providing access to health education materials in English and Spanish in the exam room for review by patient and provider together in the course of each health care visit. Patients who understand the importance of behavioral changes are far more likely to make the

necessary effort, and providers who feel that their patients' are responding to their recommendations are far more likely to continue their efforts to help.

CONCLUSION

Electronic health records have great potential for improving communication between providers and their patients. There is also great potential to expand the impact of EHRs beyond the walls of the practices where they are implemented through linkages with public health agencies that provide new information to improve the health of the public.

The selection of software that is robust enough to be configured into workflows that enhance care in the manner described above is critical. Equally important are the decisions about how computers and printers are used in interactions with patients. With careful attention to these issues, EHRs can be used to effectively enhance communication.

People of color, as well as those without health insurance, get care later and often from providers who are less experienced and less likely to be board certified.^{13,14} Racial and ethnic disparities in care have been linked to delays in access to new technology, care improvements, new pharmaceuticals, and state-of-the-art diagnosis and treatment.¹⁵ In the rollout of health information technology, we must be sure that this injustice is not repeated. Government must provide funding for technology to be implemented and supported in safety-net hospitals, community health centers, and public health facilities nationally and these systems must be set up with intelligence and attention to the special needs of the populations they serve.

The Institute chose the Epic system because it allowed us to incorporate what we had learned about meeting the needs of our patients into the electronic health record system. In addition, its expandability will enable us to offer the system to other community health practices, an essential feature if complex systems are to be available to community health centers at an affordable price. Finally, its potential for integration with the public health care system in New York City has positioned us to participate in a number of exciting initiatives.

The Institute is committed to providing a model, not just for the integration of state-of-the-art information technology into community health practice, but for the development of multi-organizational collaborations to facilitate innovation and progress in the use of these systems in low-income communities of color. We have become the first primary care organization in New York City to collaborate with the Department of Health and Mental Hygiene to collect primary data to identify disease outbreaks and promote preventive care as part of the City's world-class Syndromic Surveillance System, a unique effort to gather data electronically from emergency departments, laboratories, pharmacies, and now, a network of primary care providers. More recently, we have partnered with the Visiting Nurse Service of New York to develop an interface with their electronic system to improve the quality of care for homebound patients.

Concern about racial disparities in health outcome in low-income communities of color has come to dominate much of the thinking about the next frontier in improving the health of these communities. In a parallel track that is not often related to concerns about health disparities, health care and governmental leaders have become strong advocates for advancing the use of sophisticated information technology in health care delivery. Using information gleaned from focus groups of community residents, and supported by literature research as well as our ongoing work on health disparities, the Institute for Urban Family Health has implemented an electronic health record in a manner that permits us to address many of the issues raised by patients about the health care they receive. We believe that information technology will be an increasingly valuable tool in eliminating health disparities in the community, and have, in the implementation of our electronic health record system, put that belief into practice in our community health centers in New York City.

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