

PROTECTING THE CONFIDENTIALITY OF HIV AND AIDS PATIENTS: THE IMPLICATIONS OF THE ELECTRONIC MEDICAL RECORD

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ABSTRACT

The Electronic Medical Record is fast becoming technologically essential in our increasingly complex and internet based communication society. However, our health care system has an ethical and legal duty to respect and protect patient confidentiality. Health information and the medical record reveal some of the most intimate aspects of an individual's life. The importance of protecting that information in an ever changing technological environment is essential. This overview presents the pros and cons of the Electronic Medical Record (EMR). We have integrated the concerns as they are relevant to HIV/AIDS patients since this illness is so very stigmatized and feared that introducing the EMR into the equation makes patient confidentiality an explosive issue. This is also a very timely synthesis of the issues since the Bush administration is pushing for a rapid switch from paper records to computerized systems. While much present attention is focused on the resources required to make the switch, less attention is paid to the ethical concerns that need to be addressed.

Concern with the social patterns of health services and health care delivery systems is one of the major areas of investigations of medical sociology. Health care involves numerous factors that are social and cultural because a society tends to respond to health problems and to deliver medical care within a cultural context. Health, illness, and the institution of medicine are aspects of society experiencing significant problems, controversies, reforms, as well as unprecedented technological advances. The electronic medical record is one such technological advancement.

Healthcare is constantly changing and technological advances have transformed the institution of medicine to one of high caliber care. However, advancements in technology also have the potential to jeopardize patients' privacy and confidentiality. This article will examine the shift to electronic medical records and how patients who are infected with Human Immunodeficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (AIDS) can be affected by this shift. First, an explanation of the transformation of the paper medical record to the electronic medical record (EMR) will be reviewed. Second, the pros and cons of the EMR will be discussed, and finally the issues of privacy and confidentiality of patients who are coping with HIV and AIDS are presented.

Data are essential for research, education, public health monitoring, and many other activities essential to the provision of health care. The medical record is the primary

source for much of the health care data sought by parties outside the direct health care delivery system; that data helps decisions on an individual's access to credit, admission to educational institutions, as well as their ability to secure employment and obtain insurance. Inaccuracies in the information, or its improper disclosure, may cause one to be denied these basic necessities of life, and can threaten an individual's personal and financial well being (Gillespie 2003).

Healthcare data remain one of the most highly confidential forms of information in today's society. The archaic information systems of our hospitals directly affect the quality of care that patients receive (Gingrich & Kennedy 2004). The sharing of information between healthcare organizations will influence the quality of care that patients receive by decreasing repetition of services. Recently we have seen the benefits of an EMR system with the loss of records in doctors' offices and hospitals that were wrecked by Hurricane Katrina. Only one hospital in New Orleans used electronic medical records which made care of the patients who were evacuated much more efficient and accurate compared to the thousands of others whose records are forever lost and can not be replaced (McGee 2005).

It's estimated that less than 20% of hospitals in the United States, and even fewer doctors' practices, have adopted electronic medical-records systems. (McGee 2005 34)

The latest figures estimate that fewer than half of all U.S. doctors have electronic health records (Heavey 2006). Furthermore, the U.S. ranks lowest in the use of electronic medical records when compared to five other wealthy countries: Germany, Britain, Australia, New Zealand, and Canada (Reuters 2007).

THE TRADITIONAL MEDICAL RECORD

Medical records have been historically based on paper, a patient's stay in a hospital or office visit is recorded via the medium of paper. Before the development of modern computers, medical personnel documented their patient findings by hand (Freeman 1996). These records were often illegible, and cause many problems including medication, coding, and billing errors. This can cause problems when medical records are subpoenaed in court proceedings. Traditionally, medical records are stored in the hospital and are accessed by hospital personnel who are directly responsible for patient care. These records are kept in a locked department and are released only with the proper consent from the patient. The potential for unauthorized access to the private medical information is not as critical with a paper medical record as it is with an EMR (Electronic Medical Record), since paper medical records are stored in offices and hospitals (Freeman 1996). Today, the EMR allows access from the Internet and from any user throughout the hospital that has the proper password.

In recent years, healthcare providers have moved toward automation of all parts of the medical record (Freeman 1996). The growth of the Internet is also proving to be a factor in healthcare in this century. Eventually, all medical records will be electronic and stored on optical discs. The Bush administration is pushing for a rapid switch from paper records to computerized systems (Lohr 2005). Currently, there is a subcommittee in the U.S. House of Representatives considering legislation to create guidelines that would assist medical personal and the government in sharing patient records (Heavey 2006). However, it is estimated that it would cost an estimated \$400 billion to create a system that would be functional (Have paper records passed their expiry date? 2005).

The EMR would eliminate many of the problems associated with the paper record, but creates additional problems associated

with security of private health information.

THE PROS AND CONS OF THE ELECTRONIC MEDICAL RECORD

The electronic medical record has both positive and negative attributes. The electronic medical record basically eliminates lost paper records, insures legibility, cross checks medication dosages with physician orders and generates charges automatically. Loose filing, incomplete medical records, and lost records demand a great deal of time in the medical record department and are greatly reduced with EMR. With the elimination of paper based job duties, the clerk could be functional in other areas in the department or with the electronic record. Illegible handwriting from physicians, nurses, and other healthcare professionals is a very serious matter and the implementation of EMR will eliminate a significant part of those errors.

From a legal standpoint, records are often subpoenaed and must be legible. In ICD-9 coding, which is used by hospitals to convert medical diagnosis and procedures to a coding system used in billing, legibility is important for assigning diagnosis and procedure codes. These codes directly affect billing and reimbursement for the hospital. Illegible records can cause other professionals to misinterpret information and could cause errors in treatment.

The effect of crosschecking medication orders and recommended dosages is a significant area that could potentially prevent harm to a patient. When the record is illegible, an order for a medication may be misread and the incorrect dosage may be given to the patient. This error could be detrimental to patients' health. When an electronic medical record is being used, the computer will crosscheck the medications of a patient to prevent a medication reaction.

Billing of patient charges for medical treatment is an area that is affected by the electronic record. Accurate billing will always affect the financial solvency and cost containment of the hospital. Correct billing of hospital services insure proper reimbursement, and help to ensure that the organization remains viable.

Another benefit of the EMR is that data will be more readily available when medical information is easily accessed via the Internet. The EMR is linked between organizations

that are owned by the same corporation which allows them to share data on a patient. Eventually, medical information may be accessed by all health care organizations on a particular patient. This will decrease repetition and save time and money. However, understanding issues of electronic data access are critical to understanding the potential misuse of data.

Medical test results will be available as soon as they are processed via EMR. This will greatly improve the efficiency of care. Specialists will be able to consult online with the attending physician regarding a patient's care. There would be no traveling involved for the consultant, unless the specialist needs to examine the patient (Freeman 1996).

The EMR will save time, money, and paper. With society becoming more technologically advanced, healthcare delivery systems must be current or up to date in addressing the techniques for potential use of EMR. Electronically connecting the healthcare industry by an integrated system of electronic communicating networks will allow any entity within the health care system to exchange information and process transactions with other entities in the industry. As a result of the linkage of computers, patient information will no longer be maintained, accessed, or even necessarily originate with a single institution, but will instead travel among a myriad of facilities (Gillespie 2003). Every part of the institution must be considered in the planning because the facility will undergo vast changes when implementing an EMR system. Training of staff and physicians is very important since everyone involved in patient care is affected. Knowledge about the patient record program helps to insure a smooth transition process.

For example, data captured from HIV/AIDS reporting and other communicable disease must be available for further research for new drugs and a possible cure. Research is important in the search for cures for all diseases, but especially in this area since information is highly guarded by many individuals due to the stigmatized nature of contracting HIV/AIDS.

NEGATIVE ASPECTS OF THE ELECTRONIC MEDICAL RECORD

The EMR is an added concern for patients because private information could be illegally

accessed. Computer hackers have already found their way into several secure health-care sites. We are increasingly aware of the privacy violations or destruction of patient information that can occur through electronic storage when we hear of a stolen computer server that contained electronic data, including medical records of 930,000 Americans (Popkin, Sandler, and the NBC Investigative Unit 2006). An organization becomes an easy target for hackers when connected to the Internet. According to a recent survey of U.S. corporations, government agencies, financial institutions, medical institutions, and universities by the Computer Security Institute in conjunction with the Federal Bureau of Investigation, 85 percent of these entities detected "cyber attacks" (Sardinas & Muldoon 2001). Several organizations were willing to quantify the financial impact of cyber intrusions, and they indicated more than \$377 million in losses or an average loss of \$2 million per organization (Sardinas & Muldoon 2001). Security breaches included theft of information, financial fraud, system penetration from outsiders, denial of service attacks, and sabotage of data or networks. For physician offices and hospitals, this causes even greater anxiety over the transition to EMR (Sardinas & Muldoon 2001).

THE STIGMA OF HIV AND AIDS

Illnesses are a personal issue which patients often keep to themselves. Many diseases are stigmatized. To stigmatize a person is to describe or identify them as a public disgrace. HIV and AIDS are two of the most stigmatized of diseases. Often people who live with these diseases keep them confidential. Disclosing HIV or AIDS status to employers, friends, religious affiliations and even some family members can be detrimental to the health of an individual. Ethics and confidentiality come into play because of the competing interests of those infected and those potential others who may become infected. Thus, the issue of HIV and AIDS is an ethically and politically volatile topic.

The severity of HIV and AIDS can vary depending on the stage of the disease. AIDS is considered by many to be the deadliest epidemic in human history (Pozgar 2003). Although a patient can live with HIV for years with little or no symptoms, it will eventually lead to acute illness and premature death (DeMatteo, Wells, Goldie & King 2002). It is

important to remember that being infected with HIV does mean that a person will eventually develop full blown AIDS (Brannigan & Boss 2001). A patient living with AIDS or HIV is not the only person on which the disease has an effect. Family members often suffer along with the infected individual, as they may be the primary care taker of the patient diagnosed with AIDS.

Most individuals express feelings of shame, loss and worthlessness after being diagnosed with HIV or AIDS (Paxton 2002). Acquiring HIV can be a devastating life change with which one must deal. Most people that contract the virus keep it a secret thus creating psychological stress and depression. Rejection is a fear that is associated with disclosure. Furthermore, these patients struggle with whether to conceal or disclose this disease to the public (Allen & Carlson 2003). If the disease is disclosed, the fear is that the public may view this disease as a disability and treat the individual differently.

Having a disability is often seen as a negative trait. The concealment of HIV is a common practice used to avoid the stigma that is associated with the disease. For years, hiding a disease which is stigmatized has been common. Since stigma of HIV/AIDS is also associated closely with the stigma of disability, many individuals choose not to disclose their condition (Allen & Carlson 2003).

From the time that the HIV virus was discovered, there has been public fear and disapproval both of the disease and those afflicted by it. The stigmatization of HIV/AIDS is caused by the fear of the disease and the mystery of it. The disease was originally associated mostly with socially disapproved behaviors, namely homosexuality and drug use (Siegel 1998). After much research, it was discovered that there are other ways of contracting the disease. Public education on the spread of the disease has increased knowledge about it, but the stigma remains.

Introducing the EMR into the equation makes patient confidentiality an explosive issue. Great strides must be taken to insure that changing technology does not jeopardize the trust between patients with communicable disease and the medical establishment. For patients with HIV or AIDS, the possibility of an EMR may be a basis for the decision not to seek care. With the implementation of the EMR and the connection to the

Internet, health care facilities open themselves up to the possibility of confidentiality breaches.

There are several laws in place to decrease the likelihood of this occurring. The exposure of private health information to the public can open the healthcare facility to lawsuits and cause the patient harm by possibly exposing certain diseases. In some cases, if the private health information is released to a patient's employer, he could lose his job or be discriminated against in other ways. Employers may discriminate because of illness because they may fear the employee will miss work due to their illness. Also high insurance coverage costs may occur, or other employee's productivity issues may arise.

TRACKING HIV AND AIDS

One of the biggest challenges in tracking HIV/AIDS is maintaining confidentiality of infected persons while, at the same time, protecting the public. The individuals that have HIV/AIDS have contracted the virus and have the right to privacy concerning their health status. On the other hand, the public has the right to be protected from the spread of disease. AIDS is a reportable communicable disease in every State; a positive result on an HIV test is required to be reported to the State's Health Department. Infectious diseases such as diphtheria and tuberculosis have been reported to State Departments of Health for many years. These diseases are then tracked and used to trace others who may be infected. In the case of HIV and AIDS, these policies have not been consistently followed because of the stigma associated with the disease. This phenomenon is referred to as AIDS exceptionalism (Brannigan & Boss 2001). The protection of the patient and the public must be considered when dealing with the privacy of this disease.

Each state tracks the infection of HIV and AIDS in different ways. There are no federal standards for reporting. Physicians and hospitals must report every case of AIDS to government public health authorities (Pozgar 2003). Cases reported to local health authorities are also reported to the Centers for Disease Control (CDC). The patient's names are encoded by a system known as Soundex (Pozgar 2003). In the United States, thirty five states have name-based reporting, eight states and Washington DC have code-based

reporting, and five states have name-to-code based reporting. There are several HIV Testing Options. Anonymous and Confidential testing is offered in thirty nine states and Washington DC. Eleven states offer confidential testing only (The Henry J. Kaiser Foundation 2004). The State of Texas offers anonymous and confidential testing. This is achieved by a report mechanism where every HIV test is reported to the Texas Department of Health.

The stigma associated with HIV and AIDS and the severity of the disease causes many individuals simply to choose not to be tested. They fear a positive result which will alter their lives forever. According to recent figures from UNAIDS Joint United Nations Program on HIV/AIDS and the World Health Organization, as of December 2002, the total number of people in the United States infected with HIV was over 900,000 (WHO 2002).

For appropriate management of patients with HIV and AIDS, healthcare organizations must have policies that govern disclosure and confidentiality, which in turn is reported to the state agencies. The literature suggests that physicians lack understanding in this area (Rogers 2002). Physicians have a high degree of information about a patient, but often times the physicians are more concerned with the treatment of the patient rather than thinking about the consequences that the disease may have on the patient. Continuing education for physicians should be a focus in medical school and in every practice to avoid disclosure which is unauthorized by the patient.

DISCRIMINATION BECAUSE OF CONFIDENTIALITY VIOLATIONS

Americans stated in a poll taken by the Wall Street Journal that they were more concerned about the loss of personal privacy in the 21st century than they were about the threats of terrorism. The outcome of a breach of confidentiality can alter or even ruin a person's life.

Violations of confidentiality can bring severe consequences in an AIDS patient's life. AIDS cases carry a stigma which could result in social, economic, familial, and professional banishment (Brannigan & Boss 2001). Many people fear the disease and do not fully understand how it is transmitted. Thus the fear of being discriminated against is real. The number of individuals who are

being tested may decrease if their confidentiality is not maintained. This could be a peril to the healthcare system because patients may not seek care. The spread of this disease could, in theory, be increased because of the fear of HIV/AIDS status' being disclosed.

Patients with HIV/AIDS are apprehensive when sharing their personal health data because of the implications if the information is breached. Many times patients do not seek the care they need for this reason. In a survey on policies and procedures regarding confidentiality, 70 percent of people with HIV/AIDS objected to receptionists knowing their HIV status, 48 percent objected to practice managers knowing, 40 percent objected to a consulting or an additional physician knowing, 37 percent objected to counselors and 36 percent objected to practice nurses knowing (Petchey, Farsworth & Heron 2001). For this reason, healthcare workers must be trained in the maintenance of confidentiality as well as of its importance.

PROTECTING ELECTRONIC INFORMATION

How should the organization protect against breach of information in an electronic environment? Security is an ongoing process. It must evolve and continuously adapt to changing technology. Risk assessment is crucial to the whole process. The privacy officer must stay on top of the latest developments in software to prevent future incidents of hacking (McCormack 2000).

Planners for the computerized medical record systems must consider the effects of the Internet when planning for their hospital's system. Hospitals must consider how the Internet will play a role in their electronic record systems (McCormack 2000). This tremendous change in the every day actions of a hospital will affect all aspects of care. Practitioner's day to day actions will be impacted. This is not something that can be ignored; it must be viewed as an improvement in care.

The healthcare system as a whole will become intertwined via the internet and EMR. The internet plays an important role in the business industry today. It will eventually play a pivotal role in sharing data with all healthcare providers. In an interview with C. Peter Waegemann, executive director of the Medical Records Institute, a Newton, Mass. based association that promotes the use of elec-

tronic medical records, Waegemann advises, "If they are not including the internet, they need a wakeup call, there is a technological revolution going on" (McCormack 2000 1). New developments are occurring every week on the Internet. Chief Information Officer's (CIO) must consider the implications of the new developments to their own electronic systems. According to McCormack (2000) the following questions need to be considered by every healthcare organization:

- ♦ Is it time to use the internet to provide clinicians with remote access to electronic medical records systems from their offices or homes?
- ♦ Is it time to use Internet technologies to help provide access to clinical information from multiple information systems instead of installing a stand-alone electronic records system? Or is it time to use internet technologies to seamlessly present information from various stand-alone information systems, thereby creating a virtual electronic records system?
- ♦ Is it time to enable system users to access electronic medical records via application service providers-software companies that maintain information systems and data at their sites and provide access to the systems via the internet?
- ♦ Is it time to use the internet to provide patients with access to their computerized, official medical records?

Routine use of electronic medical records is becoming more common. Estimates for the time it is expected to become routine range from less than 10 years, by the most optimistic experts, to decades, by those with less optimism (Hagland 2000). As previously stated, eventually, all hospitals and physician offices will share information electronically. President George W. Bush has a goal of 2014 for all Americans to have electronic health records (Heavey 2006). Americans trail Europe in adopting electronic medical records. Twenty five percent of hospitals and health systems in the United States have developed an EMR implementation plan, and another 32 percent have begun to install EMR hardware and software (Hagland 2000). American physicians use the Internet and computers more than European physicians,

but are behind Europe in technology use for patient records. For example, 94 percent of U.S. physicians use computers in their practice, and 79 percent use the Internet or an online network compared to 80 percent as a high and 61 percent as a low for the 15 countries in the European Union. In Finland and the Netherlands 100 percent of physicians use computers and an online network (Chin 2002). American physicians' use of electronic medical records matches Greece (17%), but trails every other European Union country except Portugal (5%), France (6%) and Spain (9%) (Taylor 2002). Throughout the European Union, 29 percent of general practitioners use electronic medical records (Taylor 2002). The major reason why most European countries are ahead of the United States in using electronic medical records is they either have a single-payer system or something close to it that is government owned or administered. If the United States were to implement a government health system, it might be easier to integrate health and financial information.

Obstacles to implementing a computerized record involve complicated technology, costly implementation, security concerns, time in the change over, and resistance from clinicians required to do "clerical" data entry (Briggs 2006). Electronic medical records are very complicated and there are many variables to consider when implementing a system. Environmental factors come into play because of payment, governing organizations, and relationships with other healthcare delivery systems. Sharing of information with physician offices must be considered; are the two compatible? Are we meeting the standard for privacy for the governing agencies? Are data secure? How will it affect patients and their confidentiality?

Recent technological advances have changed the way we provide medical care. The medical record is the foundation by which physicians and other healthcare providers base their plan of care. Changing from a paper record to an electronic one may not only affect the process of providing care to patients, but it may raise the possibility of harming the patient.

SECURITY AND CONFIDENTIALITY

Why does confidentiality matter? The following are reasons that patients need to be able to trust in the security of their medical

information.

- **Autonomy** - Respecting confidentiality involves respecting the autonomy of the patient. Autonomy is ethically important and is a cornerstone of medical ethics.
- **Privacy** - Respecting confidentiality means protecting the patient's privacy.
- **Trust** - Consultations would soon become dysfunctional if the patient could not rely on the doctor to respect their confidentiality. Patients would not reveal anything embarrassing or intimate. Patients would not seek care if they were not insured confidentiality.
- **Promise Keeping** - There is an implicit and sometimes explicit duty of promise keeping between doctor and patient (Molyneux 2003).

Advances in technology have added a new dimension to an individual's right to seek medical care in a confidential and dignified manner (Freeman 1996). There is a significant risk of compromising patient confidentiality with the advent of the Internet and the EMR. Technology is changing so rapidly that there are opportunities for hackers or even accidents in transmission of data (Setness 2003). The misuse of private personal information is available for those who are intelligent enough to try to obtain it.

If a patient can not trust a provider or a facility to protect his or her medical privacy and keep highly sensitive and personal facts confidential, a crucial foundation in the relationship between patient and provider is undermined. Patients will be less willing to divulge sensitive information about their condition and lives, which will then impede adequate diagnosis and treatment (Alpert 2003). Many individuals have admitted to doing something out of the ordinary to keep personal medical information confidential. These actions include changing physicians, paying cash instead of filing an insurance claim, giving inaccurate or incomplete medical histories, and asking a physician or other healthcare provider to not document or to falsely document information in the medical record (Alpert 2003). The alteration of medical information could get in the way of proper treatment of patients. Therefore, quality of the treatment received by the patient may not be adequate.

RELEASE OF MEDICAL RECORDS

Medical records may be released to an individual with the proper consent forms completed. In general, with a paper medical record, it is relatively easy to monitor the release of information and to keep track of who is getting this information. Now that the EMR is becoming common place, there are other ways for medical information to be released. Many times medical information is transferred via the Internet to other medical institutions for further patient care, via fax machine or may even be obtained illegally by a hacker. Patient confidentiality and security are considered paramount in healthcare. Maintaining medical information online raises significant issues. Great caution is required when contemplating access to confidential health information. Information stored on a computer is not necessarily easy to access, but the proper security measures should be in place. Technology provides as much as or even more security than paper records. Loss of records and misplaced records has always been a concern. The EMR will eliminate much of this problem.

THE LAW ON EMR

There are many regulations and statutes which must be followed when maintaining medical records. Each state has its own set of laws as well as federal laws which encompass all states. These rules and regulations generally describe the requirements and standards for maintaining, handling, completing, authenticating, filing, and retaining medical records (Pozgar 2003). These laws which give patients rights to privacy and confidentiality include the Human Rights Act of 1998. It includes article 8 which is the right to respect "private life." This may be overridden for "the protection of the public health." The Data Protection Act of 1998, also accords individuals rights, in terms of access to their data, their right to know how it will be used, and control, in some circumstances, over its dissemination (O'Brein & Chantler 2003). The impact of these laws has improved patients rights concerning their health information.

HIPAA

The Health Insurance Portability and Accountability Act (HIPAA) of 1996 was enacted to provide improved portability of health benefits and greater accountability in the area of

healthcare fraud (Regan 2002). This act will impact patients and healthcare operations. It is a step to providing patient privacy and confidentiality and providing a better service for the patient. This act is the most significant healthcare legislation in the United States since the creation of Medicare (Regan 2002). The rule will give patients more control over and access to their health information. It will set boundaries on the use and release of health records and safeguard that information. Healthcare organizations will be held accountable for inappropriate use or release of private health information. The regulations will establish the following:

1. Give consumers control over their health information by informing patients how their health information is being used. This new regulation requires health plans and providers to inform patients about how their information is being utilized and to whom it is disclosed. It gives each individual patient the right to a 'disclosure history,' listing the entities that received information unrelated to treatment or payment, which must be provided within sixty days. It also limits the release of private health information without consent by establishing a new federal requirement for physicians treating patients and hospitals to obtain patients' written consent to use their health information even for routine purposes, such as treatment and payment. Other, non-routine disclosures would require separate, specific patient authorization.
2. Set boundaries on medical record use and release by restricting the amount of information used and disclosed to the minimum necessary. Currently, providers and plans often release a patient's entire health record even if an employer or other entity only needs specific information, such as the information necessary to process a workers compensation claim. This new regulation restricts the information that is used and disclosed to the minimum amount necessary.
3. Ensure the security of personal health information by requiring the establishment of privacy conscious business practices. The regulations require the establishment of internal procedures to protect the privacy of health records.

They include: training employees about privacy considerations in the workplace; receiving complaints from patients on privacy issues; designating a privacy officer to assist patients with complaints; and ensuring that appropriate safeguards are in place for the protection of health information.

4. Establish accountability for medical record use and release by creating new criminal and civil penalties for improper use or disclosure of information. In the past, there often has not been any legal basis to prosecute individuals who inappropriately disclose private medical information. This rule applies the standards included in HIPAA to create new criminal penalties for intentional disclosure; up to \$50,000 and up to a year in prison. Disclosure with intent to sell the data is punishable with a fine of up to \$250,000 and up to 10 years in prison. The regulation also establishes new civil penalties of \$100 per person for unintentional disclosures and other violations. (Regan 2002)

RECOMMENDATIONS

Below are recommendations that will help in the protection of confidentiality of HIV/AIDS patients. First, the education of future physicians and current physicians is important. In medical schools today, patient confidentiality should be stressed and the consequences of breach of confidentiality should be discussed. Student physicians will have the responsibility in the future of protecting HIV/AIDS patients from unwanted stigma. Physicians want to ensure the highest standards of care and patient confidentiality must be one of them.

Second, the security of the EMR must be a priority in every healthcare organization. The latest Internet technology and software technology should be chosen by the Chief Information Officer to avoid a break down in security. The security of the EMR should be the number one concern for the organization when setting up or improving records systems.

Third, the laws governing HIV/AIDS confidentiality and tracking must be enforced to give patients trust in our healthcare system. Trust must be there for a patient to be tested and seek treatment for the disease. Without trust in the protection of confidentiality, pa-

tients will not seek treatment, thus increasing the spread of the disease.

Finally, as a society, the stigma of HIV/AIDS patients should be acknowledged and hopefully decreased in the future. The education regarding this disease is very thorough and the public should know the specifics of its transmission. We should accept that this disease is widespread and increase the tolerance for those who are unfortunate enough to be infected.

CONCLUSION

Our health care system has an ethical and legal duty to respect patient confidentiality. Health information and the medical record reveal some of the most intimate aspects of an individual's life, especially those who have a diagnosis of AIDS or HIV. The importance of protecting that information in an ever changing technological environment is essential and may be of more importance to those suffering with HIV/AIDS.

Our health care system must keep up with those in other countries and must continue to provide the highest quality of care. An indication of our need for improvement was stated by President Bush who recently stated, "The 21st century health care system is using a 19th century paperwork system" (Gingrich & Kennedy 2004 23). Politicians like to say that the United States has the best health-care system in the world, but that is not entirely true when you consider the information infrastructure.

Hospitals must weigh the advantages and disadvantages of the EMR system they are considering. All considerations should be evaluated to distinguish which system is right for a particular hospital or organization. Including input from different types of health-care clinicians will enable the CEO to envision and assemble the appropriate kind of electronic medical record system for his/her organization. The quality of care that results will inevitably be worth the time and effort.

There is a tremendous value in protecting and preserving medical privacy. The social implications of lack of privacy are devastating to an individual with a life threatening disease such as HIV or AIDS. Technology is ever changing and the healthcare industry must keep up with those changes. Considering the implications that the EMR could have on a patient with a disease such as AIDS and all other stigmatized diseases is an im-

portant issue to consider.

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