

# From Hippocrates to facsimile

## *Protecting patient confidentiality is more difficult and more important than ever before*

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### Abstract

ALTHOUGH PATIENT CONFIDENTIALITY has been a fundamental ethical principle since the Hippocratic Oath, it is under increasing threat. The main area of confidentiality is patient records. Physicians must be able to store and dispose of medical records securely. Patients should be asked whether some information should be kept out of the record or withheld if information is released. Patient identity should be kept secret during peer review of medical records. Provincial legislation outlines circumstances in which confidential information must be divulged. Because of the "team approach" to care, hospital records may be seen by many health care and administrative personnel. All hospital workers must respect confidentiality, especially when giving out information about patients by telephone or to the media. Research based on medical-record review also creates challenges for confidentiality. Electronic technology and communications are potential major sources of breaches of confidentiality. Computer records must be carefully protected from casual browsing or from unauthorized access. Fax machines and cordless and cellular telephones can allow unauthorized people to see or overhear confidential information. Confidentiality is also a concern in clinical settings, including physicians' offices and hospitals. Conversations among hospital personnel in elevators or public cafeterias can result in breaches of confidentiality. Patient confidentiality is a right that must be safeguarded by all health care personnel.

### Résumé

MÊME SI LA CONFIDENTIALITÉ DES RENSEIGNEMENTS personnels sur le patient est un principe fondamental de l'éthique depuis le serment d'Hippocrate, elle est de plus en plus menacée. Les dossiers des patients constituent le principal aspect de la confidentialité. Les médecins doivent pouvoir stocker et éliminer des dossiers médicaux en toute sécurité. Il faudrait demander aux patients s'il faut exclure certains renseignements de leur dossier ou s'abstenir de les divulguer. L'identité des patients doit demeurer secrète au cours d'un examen critique par des pairs qui porte sur des dossiers médicaux. Des mesures législatives provinciales précisent dans quelles circonstances il faut dévoiler des renseignements confidentiels. Comme les soins sont prodigués «en équipe», il peut y avoir plusieurs professionnels de la santé et membres du personnel administratif qui voient des dossiers d'hôpital. Tous les employés des hôpitaux doivent respecter la confidentialité, surtout lorsqu'ils communiquent des renseignements sur des patients par téléphone ou aux médias. Des recherches fondées sur un examen de dossiers médicaux posent aussi des défis sur le plan de la confidentialité. Les communications et la technologie électronique peuvent être aussi des importantes causes de divulgation de renseignements confidentiels. Il faut protéger soigneusement les dossiers informatiques contre la consultation occasionnelle ou l'accès non autorisé. Grâce au télécopieur, au téléphone sans fil et au téléphone cellulaire, des personnes non autorisées peuvent voir ou entendre des renseignements confidentiels. La confidentialité est aussi un problème en contexte clinique, y compris dans les cabinets des médecins et les hôpitaux. Les conversations entre des membres du personnel de l'hôpital, dans un ascenseur ou à la cafétéria publique, peuvent dévoiler des renseignements confidentiels. La protection des renseignements confidentiels des patients est un droit et tous les professionnels de la santé doivent s'en charger.



Education

Éducation

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**H**ave you ever overheard staff physicians or hospital residents discussing personal details about their patients in public areas of a hospital? Such hospital gossip,<sup>1</sup> and forms of eavesdropping now possible through the use of electronic communications, prompted us to review issues concerning patient confidentiality.

“Confidentiality” implies that a physician is entrusted with private, personal or secret matters. Patient confidentiality may be violated in hospitals during discussions among physicians, students or nurses in elevators, cafeterias or hallways.<sup>1,2</sup> In a few recent incidents, the lay press has inadvertently received parts of patients’ medical records by facsimile transmission.<sup>3</sup>

The two principal developments that may compromise the confidentiality of medical records are (1) the increasing use of electronic devices (e.g., fax machines and computers), which can be subject to surveillance by unauthorized people,<sup>4-8</sup> and (2) the growing “team” approach to medical care, which results in confidential medical information being available to people who may be unaware of its sanctity or who may not properly protect it.<sup>9</sup> These issues must be addressed as the nature of medical care and record keeping develops and as medical practitioners strive to maintain productive physician–patient relationships based on the inviolate confidentiality of medical records. We therefore wish to remind physicians, nurses, students, technicians and allied health care workers that we all have a responsibility to protect patients’ confidentiality.

## The principle

There is a personal contract between the physician and patient. As part of this contract, the physician implicitly promises not to reveal confidential information.<sup>10</sup> The Hippocratic Oath states that “what I may see or hear in the course of the treatment or even outside of the treatment in regard to the life of men, which on no account one must spread abroad, I will keep to myself holding such things shameful to be spoken about.”<sup>10</sup>

The American Medical Association declares that “physicians shall respect the rights of patients, colleagues, and of other health professionals, and shall safeguard patient confidences within the constraints of the law.”<sup>10</sup> The CMA Code of Ethics states that physicians are to “respect the patient’s right to confidentiality except when this right conflicts with your responsibility to the law, or when the maintenance of confidentiality would result in a significant risk of substantial harm to others or to the patient if the patient is incompetent; in such cases, take all reasonable steps to inform the patient that confidentiality will be breached.”<sup>11</sup>

Patient confidentiality must be respected and sustained

by physicians, who listen to their patients’ histories, record the results of examinations, note results of laboratory tests and transmit documents by mail, courier, fax or modem. While they do so, physicians must maintain accurate and legible medical records and, after a period defined by law, be able to destroy these records. All of the aforementioned must be done efficiently, effectively and confidentially.

## Confidentiality of records

### Medical records

All provincial medical colleges require that practitioners keep a clinical record for each patient. This record should show the patient’s name, address, date seen, history and details concerning physical examinations and investigations.<sup>12</sup> These records must be maintained for 6 years or more from the date of last entry recorded.<sup>12</sup> The CMA Code of Ethics<sup>11</sup> requires that this information be divulged only with the permission of the patient, except when the law requires release of information or when maintaining confidentiality would result in substantial harm to others or to an incompetent patient. We suggest that a physician ask a patient whether there is any information he or she wants to keep absolutely confidential. This information should either not be written in the record or not be released as part of a general request for release of all medical information pertaining to the patient. For example, does a patient really want an automobile insurance company to know that she underwent an abortion or that he had an infectious disease?<sup>13,14</sup> The patient should provide specific consent concerning the type of information to be released.

However, one area that is unclear is maintaining patient privacy and confidentiality during physician peer review. One study showed that 64% of 648 patients surveyed disapproved of their records being read by outside physicians without their permission during a peer review.<sup>15</sup> Either each patient’s permission should be obtained for physician peer review of medical records or each name on the chart should be covered to ensure patient anonymity and privacy.

Absolute patient confidentiality is superseded by societal priorities or requirements in a few exceptional situations.<sup>16</sup> The requirements are set by provincial statutes and include the following.

- Recording of vital statistics. Physicians must report cause of death and inform the coroner that a death is accidental or unnatural.
- Mandatory reporting of communicable diseases. For example, AIDS, but not HIV infection, is reportable in the United States and in Canada.



- Mandatory reporting of child abuse. This requirement is especially pertinent to emergency-department staff.<sup>17</sup>
- Mandatory reporting of violent injuries such as gunshot or knife wounds.
- Mandatory reporting of a patient who poses a danger to himself or herself or to others. Such reporting may have implications under each state or province's legislation governing motor vehicles.
- Court subpoena of documents. Physicians are normally required to release documents and records under court orders. However, if the release of records could jeopardize the physician's interest, it is advisable to obtain legal guidance.<sup>12</sup> For example, there may be a conflict between protecting the patient's confidentiality and releasing documents under a court order.

Medical records ultimately come to an end. Just as secure storage of health records is important when they are active, secure and confidential means of shredding, burning or erasing medical records is important when they are inactive.<sup>18</sup> There have been reports of hospital records found incompletely burned on a beach, of health unit records left in a filing cabinet that was sold by a government disposal service and of a physician's medical records found on a lawn during a house move.<sup>19</sup> The disposal of confidential medical records should therefore be carefully planned.

### **Hospital records**

In the United States, there are an estimated 1 billion patient visits each year to physicians' offices, clinics and hospitals.<sup>16</sup> Each visit leads to creation of a new record or addition of information to an existing record. In the physician-patient relationship, confidentiality is implicitly agreed upon in order to promote full disclosure by the patient. However, once the patient enters a hospital this expectation of privacy, secrecy and confidentiality is lost.<sup>9</sup> We now have a "team approach" to medical care in hospitals. The existence of health care teams implies that information previously held in confidence by an individual physician may now be disseminated to many members of the team. Siegler<sup>9</sup> observed that, in a university-affiliated teaching hospital, at least 25 and up to 100 health care professionals and administrative personnel had access to a patient's medical record. These people included 6 attending physicians, 12 house staff, 20 nurses (on 3 shifts), 6 respiratory therapists, 3 nutritionists, 2 clinical pharmacists, 15 students (in medicine, nursing, respiratory therapy and pharmacy), 4 unit secretaries, 4 hospital financial officers and 4 chart reviewers (who reviewed utilization, quality assurance, tissue biopsies and insurance).

It is therefore not surprising that patients may fear having sensitive information such as their psychiatric or sex-

ual history or HIV status recorded in hospital records. A leak of such confidential information from hospital records could affect the patient's housing, employment or political status. The mass media are interested in the medical problems of public figures such as politicians, athletes and actors. Each patient, whether a "VIP" or an average person, should determine who, besides the health care providers, has access to any details of his or her medical care.<sup>14</sup> All hospital workers must respect the patient's confidentiality.

Upon admission to hospital, patients should be asked whether they consent to having any information given out in response to telephone inquiries. Hospital workers should not reveal any information over the telephone without the patient's consent. However, representatives of a hospital can confirm to a relative who is trying to locate a missing or ill relative or a relative who is a victim of an accident that the patient is located in the facility.<sup>20</sup>

### **Use of records in research**

Citizens' right to privacy and confidentiality of information are fundamental values in Canadian society.<sup>21</sup> In medical research involving a retrospective review of medical or hospital records, patient confidentiality can be breached through the researchers' access to medical records.<sup>22</sup> Although patients may not be asked for their permission, nevertheless, the researcher must maintain the patients' confidentiality. The consequences of a breach of confidentiality must be delineated in a signed agreement between the research investigator and staff members of the organization releasing the records.<sup>21</sup> Hospitals may disclose identifiable health care information to qualified researchers, provided there has been prior approval by a human experimentation committee or other similar committee. The members of such a committee must not be confined to the principal investigator's discipline, and the committee must include 1 or more members of the public.<sup>20</sup> Research protocols must include the use of identifiers other than name or birth date, so that the patients' confidentiality and anonymity can be maintained when the data are recorded, disseminated or published.<sup>17,21</sup> (For further discussion of confidentiality in the use of secondary data sources in research, see "Health services research: reporting on studies using secondary data sources," by Patricia Huston and C. David Naylor, *Can Med Assoc J* 1996;155(12):1697-1702.)

## **Implications of new technology**

### **Computer records**

Medical information was found on used computer



disks purchased from a Value Village store in Langley, BC, in 1994.<sup>19</sup> These disks contained patient assessments from the provincial cancer agency, hospital reports on operations and consultation letters. The information had been word-processed and stored on the disks by a commercial secretarial service that had gone out of business.

As this example shows, physicians, hospitals and private laboratories must use only reputable data- and word-processing services. The personnel involved must be reminded about the importance of patient confidentiality. Dictation tapes should be erased, as should any material on computer disks or hard drives. When medical office computers are sold or donated to schools or other organizations, the data must be erased from the hard drives first.

The increasing use of electronic medical records has created interesting challenges.<sup>4</sup> Compared with a paper record, an electronic record provides the potential for broader accessibility, once the electronic lock is opened. With the correct access code, a person can sit at a computer terminal and review data on everyone in the system.<sup>4,5</sup> In fact, a person using a computer can review electronic data inconspicuously, whereas the presence of a person reading a paper medical record at a chart rack or in the medical records department is obvious.<sup>4</sup> In Florida, the teenage daughter of a hospital employee used a vacant computer terminal to gain access to the records of patients who had come in for blood tests. As a joke, she then called several patients to tell them that they were pregnant or infected with HIV.<sup>6</sup>

A poll found that 75% of respondents feared that computerized health information would be used for purposes unrelated to health care.<sup>6</sup> Twenty-seven per cent of respondents reported that their own medical information had been improperly disclosed. Drug marketers, insurance companies and vendors of computer networks have access to vast amounts of patient information. The Medical Information Bureau in Massachusetts, run by the insurance industry, has information on more than 15 million people with serious medical conditions.<sup>6</sup> Insurers contribute the data and, in return, can search the database to screen new applicants who may have high-risk medical conditions. With insurance agents and clerks having easy access to information, sensitive data such as HIV status could be made public.

Hospitals and health care organizations need to make their records accessible to physicians and other providers yet secure enough to protect patient privacy. This can be a

difficult challenge. Easy access by insiders may allow "record browsing" for such diverse reasons as curiosity, perversity or financial or political gain.<sup>6</sup> In a recent case, 24 people in Maryland were involved in a scheme in which hospital clerks sold patient information obtained from the state's Medicaid database to 4 health maintenance organizations.<sup>6</sup>

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## **In Florida, the teenage daughter of a hospital employee called several patients to tell them that they were pregnant or infected with HIV.**

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To evaluate concerns about privacy and confidentiality, researchers conducted a survey of accessibility of information to nursing staff in a large acute care hospital in the United States.<sup>2</sup> Of the respondents, 72% had obtained information about patients not in their assigned area while browsing through the hospital's network.<sup>2</sup>

How can access to records be allowed and patient privacy protected? First, there are system and application controls specific to the hardware that runs each computer system and to the software

that contains the clinical information.<sup>4</sup> Each system must have data-restriction capabilities (such as password access) specific to particular tasks or types of information. Each institution must have administrative controls and policies concerning the appropriate use of, access to and dissemination of information. There must be educational mechanisms to ensure the use of ethical practices in regard to clinical information in the health care system.<sup>4</sup> Institutions can distribute information notices about patient confidentiality to their staff and add reminders to hospital bulletins. Signs reminding staff about patient confidentiality can be placed conspicuously at nursing stations, dictation areas and staff changing rooms.

### ***The fax machine***

Facsimile transmission (fax) is convenient and efficient, allowing rapid communication between professionals. As a result, it has become a common means of transferring patient information. However, there are no absolute safeguards on or guarantees of patient confidentiality. In 1995 a former president of the CMA inadvertently faxed a patient's blood test results to the *Vancouver Sun* newspaper. He had the *Vancouver Sun* fax number on his fax machine speed dial so that he could send letters to the editor at the push of a button. The blood test results were transmitted to the newspaper rather than to a hematologist because the wrong speed-dial button was pressed.<sup>3</sup> Therefore, physicians must be wary of which fax numbers are preset



on a fax machine and are advised not to preset any numbers that should not inadvertently receive confidential information.

The following are some suggestions to ensure security of information sent by fax.<sup>8,19</sup>

- Control or limit the type of information sent by fax.
- Address cover sheets to a specific person rather than to an institution or organization and include a legal notice regarding the confidential nature of the records.
- Locate fax machines outside of areas where the public or patients can see them.
- Check the accuracy of programmed numbers regularly.
- Retain fax activity reports.
- Check for unauthorized transmissions.
- Use programmed numbers only to eliminate the possibility of misdialling frequently used medical destinations (laboratories and specialists, for example).
- Look at the selected number on the fax machine to ensure that the correct number was actually dialled.<sup>23</sup>

Clinical information in which a patient is identified can be sent by encrypted e-mail rather than by fax. Sensitive information should be sent to a secure fax machine or to one where there is a known recipient waiting to receive the material.

## Clinical settings

### *The office*

Physicians and office staff must be cognizant that patients, visitors and sales personnel may see and hear what is happening in an office. Therefore, telephone messages, which may contain confidential information, should be kept in a secure and private place. Medical records in which patients' names or diagnoses are visible must be out of view from other patients. Confidential messages should not be recorded on any answering machine, since it is uncertain who will hear the message. Patients whose names may be easily recognized because of their public stature require special privacy precautions, since the mass media are often interested in their medical problems. In regard to these patients, it is easier to maintain confidentiality in an office setting than in a hospital ambulatory facility, since there are fewer personnel in an office. One politician indicated to us that he would rather have an exercise electrocardiogram performed in our office than in the hospital to maintain his privacy.

Lack of privacy is also a concern with the use of cellular and cordless telephones.<sup>24</sup> Physicians and other personnel should not use cordless telephones when talking

to patients or hospitals about confidential information, since anyone with a radiofrequency scanner or tunable very-high-frequency receiver can eavesdrop on these conversations.<sup>24</sup>

### *The hospital*

Patient gossip among physicians, nurses and students in hospitals should be curtailed. Respecting confidential information has no boundaries in the medical, nursing and health sciences professions. It should be honoured by all. Release of private health information has resulted in ruined careers, public ridicule, social rejection and economic devastation for patients and their families.<sup>25</sup> Hospital and university ethics committees should be active in ensuring that patients' rights and confidentiality are protected by all employees in the health care system.

Any information presented at hospital medical rounds must protect the identity and privacy of the patients involved. Only information relevant to the topic should be presented. Gossip or derogatory remarks about the patients should be avoided. Photographs and videotapes used for teaching or research purposes in medical school or hospital rounds should omit unnecessary biographic information and should protect the identity of the patient.<sup>17</sup>

Discussion of matters pertaining to the hospital or to specific patients may be overheard by people who should not be privy to that information. In a hospital cafeteria we recently overheard a conversation among surgical residents about 1 of their difficult cases. Coincidentally, the patient's family was seated at a nearby table and also overheard the residents. The family complained to the hospital administration.

Another issue is whether visitors should be seated with or near the medical staff at meals. This should probably not occur, since otherwise routine or casual medical conversations could be misinterpreted by the visitors.

Ubel and associates<sup>1</sup> observed and reported the frequency of inappropriate comments made by hospital employees while riding hospital elevators. Four observers rode in elevators at 5 hospitals and listened for comments that violated patient confidentiality, raised concerns about the speaker's ability to provide high-quality patient care or about poor quality of care in the hospital, or contained derogatory remarks about patients or their families. The researchers overheard inappropriate comments during 14% of the elevator rides. Physicians were responsible for 38% of the comments, nurses for 26% and other hospital employees for the rest. Some hospitals place signs in their elevators cautioning employees not to discuss confidential matters.



## Conclusion

We have written this article to emphasize the obvious: patient confidentiality must be acknowledged by all medical and hospital staff. There has been growing access to medical records because of requests from insurance companies, use of records for research projects and the ability to browse through medical records via computer. New technologies and the "team approach" to health care have created new problems for safeguarding confidentiality. Yet privacy and confidentiality must be honoured, whether the information is on paper or contained in electronic media. Confidentiality is a right, not a privilege.

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