

THE PHYSICIAN, TELEMEDICINE AND INFORMATION AND COMMUNICATIONS TECHNOLOGIES



11/2015
PRACTICE
GUIDELINES

**Publication of the Collège des médecins
du Québec**

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This document advocates professional practice that integrates the latest medical information at the time of publication. However, new scientific knowledge may advance understanding of the medical context described in this document.

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Legal deposit: 4th trimester 2015
Bibliothèque et Archives nationales
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Library and Archives Canada
ISBN 978-2-9815140-6-6 (PDF)

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November 2015

Note: In this publication, the masculine gender is used without prejudice and solely to facilitate reading.

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In September 2013, the Executive Committee of the Collège des médecins du Québec created a working group composed of the following persons:

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The Working Group was mandated to review and update the Collège des médecins du Québec's position statement on telemedicine.

To fulfil its mandate, the Working Group met three times in 2013/2014. At these meetings, members discussed the main issues surrounding telemedicine and the use of ICT. The discussions were informed and supported by the many documents consulted as well as by meetings with experts and representatives of organizations. The Working Group also benefited from the work of the CMQ's Working Group on the Use of ICT.

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PREFACE

In May 2000, the Collège des médecins du Québec (CMQ or the Collège) published a position statement on telemedicine¹ in which it expressed the view that the advent of new information and communications technologies (ICT) would provide opportunities for new approaches to the practice of medicine and the delivery of specialized and ultraspecialized medical services to areas where they were otherwise unavailable. The Collège made the observation that the communications sector was revolutionizing the way people and communities interact with one another and that this was also true of telemedicine. Therefore, we felt there was a need to review and provide guidance on the practice of telemedicine.

Fourteen years later, it is clear that we are indeed witnessing profound changes in social interaction and communication at all levels: individual and collective, informational, commercial, scientific, etc. Medicine has also been affected by this technology revolution

and is reaping the benefits. It could also fall victim to it if certain guidelines are not respected.

Whether he uses them or not, a physician must deal with tools that change the way he interacts with patients, colleagues and other professionals, to mention just these main players.

To justify the increasing use of email to communicate with patients or their presence on social media, physicians cite, and rightly so, their need to communicate more efficiently and, above all, their patients' growing acceptance of these new methods. But beyond the obvious benefits of these technologies for professional practice, what pitfalls might the physician encounter? Should we be concerned about some technologies or their improper use by physicians? What ethical issues do these technologies raise?

There is undoubtedly much to be gained from using these technologies professionally. They make communication easier and improve access

¹ *Telemedicine*, position statement of the Collège des médecins du Québec, May 2000.

to medical services that might otherwise not be available owing to distance barriers, the specialized nature of resources or the urgency of the situation. However, using these technologies increases the risk that the physician might violate certain ethical obligations, including professional secrecy. And when a physician uses Facebook or Twitter, either personally or professionally, does he keep in mind that the medical opinions he expresses must be in line with current information in medical science? Is he mindful of anything that might compromise the honour and dignity of the profession?

The CMQ's mission is "quality medicine at the service of the public". Therefore, the Collège must ensure that telemedicine and ICT are used in such a way that they will lead to a real improvement in the quality of professional practice and contribute to the protection of the public. This is why it wanted to review the situation with respect to medical practice in 2015.

In November 2013, the Collège's Executive Committee created a working group that was tasked with reviewing and updating the position statement produced in 2000. The working group drew not only on the

expertise of its members, but also on the findings of a scientific committee established by the Collège to prepare workshops on the use of email and social media, as well as on the reflection undertaken by the Working Group on Clinical Ethics in 2012.

Based on this work, a number of guiding principles and practical recommendations were identified and are presented in these guidelines.

INTRODUCTION

Written with the objective of providing practical and operational support to physicians in Quebec, the guidelines have several parts. The first part focuses on telemedicine, namely, the main medical acts that can be performed remotely using ICT. The Collège clarifies its position on the location where the medical act is considered to be performed when teleconsultation services are provided. The issue is then considered from another angle, namely, the different technology tools used (email, social media, Web), each with its unique features and advantages and limitations. The final part concerns electronic records and, more generally, record keeping when using ICT.

Yet, irrespective of the medical act performed or the technology used, the guiding principles remain the same. Most media observers and commentators, be they professionals and experienced users themselves or researchers, agree that ICT is here to stay in the physician's practice environment. The CMQ believes

that encouraging physicians to learn how to use these technologies appropriately and in accordance with certain parameters specific to the medical profession is a better approach than attempting to ban them or ignoring them.

We believe that physicians who wish to use these technologies must understand them, weigh the benefits and risks and try to strike the best possible balance in the particular circumstance. For example, the urgency of a situation might warrant taking certain risks with respect to confidentiality. Nevertheless, the physician must always ensure that the technology used is appropriate for the level of sensitivity of the information being exchanged.

Chapter 1/ The practice of telemedicine

1.1 DEFINITION

In this document, telemedicine will be defined as “the practice of medicine at a distance using information and communications technologies (ICT)”. In this context, the notion of distance means that the physician and patient are not in the same location. This definition includes the use of cellphones and the Internet, but not facsimile. It is understood that, by its very definition, communication by mail is not part of telemedicine. Telemedicine includes teleconsultation, teleexpertise, telemonitoring and teleassistance.

- › Teleconsultation is a medical consultation that allows a patient to interact remotely with one or more physicians and other health professionals, as necessary.
- › Teleexpertise is a form of teleconsultation where a medical act is performed remotely by a physician, in the absence of the patient, for diagnostic or therapeutic purposes in response to a consultation request from a medical colleague or third party.
- › Telemonitoring refers to the remote monitoring by a physician of clinical, radiological or biological patient data collected by the patient, a physician or another health professional and sent to the physician using ICT for diagnostic or therapeutic purposes.²
- › Teleassistance is a medical act performed by a physician when he remotely assists another physician or health professional who is performing a medical or surgical act.

All these definitions imply the transmission of information or communication using ICT.

² Telemonitoring can be occasional or continuous. If it is occasional, it can be used to track an indicator over time for verification purposes or to provide alerts, whereas if it is continuous, it is called monitoring, hence the notion of teleinterpretation, or the remote interpretation of clinical signs and their evolution, where applicable, using information and communications technologies.

1.2 WHERE THE PRACTICE OF MEDICINE OCCURS

Telemedicine is unique insofar as the physician-patient encounter can take place while they are physically separated by thousands of kilometres. Similarly, a medical consultant can read and interpret a scanned radiology image taken thousands of kilometres away and sent using store-and-forward technology and send the attending physician his opinion via ICT (for example, by email). This raises a number of questions, including one of paramount importance for the CMQ: in which jurisdiction is the consultation considered to take place?

The Working Group examined this question at length. It compared the positions of the Federation of Medical Regulatory Authorities of Canada and the Canadian Medical Protective Association. It also looked to experiences in the United States and Europe and realized that significant advances had been made in ICT in the past fourteen years.

In its reflection, the Working Group took into account the mission entrusted to professional orders under section 23 of the *Professional Code*,³ namely, to ensure the protection of the public. Thus, the Collège believes that, when a physician provides telemedicine services, the practice of medicine is deemed to occur in the territory in which the patient is located, not where the physician practices. Consequently, a physician outside Quebec who wishes to provide telemedicine services to a patient in Quebec must be entered on the Roll of the Order or hold an authorization issued by the Collège des médecins du Québec. This necessarily involves administrative procedures for physicians who are not licensed to practice medicine in Quebec and who wish to provide telemedicine services to patients in Quebec.

Furthermore, it should be noted that a physician who is licensed to practice in Quebec must, before providing telemedicine services to a patient outside Quebec, learn about and comply with the laws and regulations governing the practice of telemedicine in the territory where the patient is located.

The Collège would like to remind physicians and the public that when telemedicine services are provided by a physician who is not licensed or authorized to practice in Quebec, the Collège neither recognizes the physician's competence nor has any practice oversight mechanism for such physicians.

³ *Professional Code*, CQLR, c. C-26.

1.3 REGISTRATION WITH THE COLLÈGE DES MÉDECINS DU QUÉBEC

As in some Canadian provinces and American States, the Collège requires a physician who provides telemedicine services to a patient who is in Quebec at the time of the consultation, including medical consultants who provide laboratory or imaging services, to hold a permit to practice issued by the Collège and be entered on the Roll of the Order. Failing this, he may practice under an authorization issued by the Collège specifically for the practice of telemedicine.

A physician from outside Quebec remains accountable for his competence and his acts to the authorities in the jurisdiction that governs his practice.

The attending physician must ensure, when he requests a teleconsultation from a physician practicing outside Quebec, that the latter is authorized to practice in Quebec. A distinction must be made between a formal teleconsultation that will be used to establish a diagnosis or medical treatment plan and informal exchanges that are widely used by physicians to share their thoughts on a clinical situation. In the latter case, the physician consulted does not have to be entered on the Roll of the Collège des médecins du Québec.

1.4 PRACTICE IN A HEALTH CARE INSTITUTION

The *Act Respecting Health Services and Social Services* (CQLR, c. S-4.2, s.108.1, hereafter ARHSSS) sets out the special standards applicable to telehealth services. In order to offer telehealth services to another institution, a body or another person, or to obtain such services from another institution, a body or another person, an institution must enter into an agreement to that effect with that other institution, that body or that other person. The administrative procedures applicable to the telehealth services offered by a health care institution or received in a health care institution will be those set out in the agreement and in the ARHSSS.

Under the ARHSSS, the health services and social services provided at a distance in the form of telehealth services are considered to be provided at the place where the health professional practices. The Act defines a health professional as follows: “a professional who provides health services or social services in Québec and who is a member of a professional order listed in Schedule I to the *Professional Code* (chapter C-26)”.

It must therefore be concluded that, under the ARHSSS, when remote medical services are provided by a health care institution in Quebec, they will be considered to be provided at the place where the physician practices. If the physician is outside Quebec, he must nonetheless be licensed to practice in Quebec, since the Collège des médecins du Québec considers this out-of-province physician to be practicing medical activities in Quebec.

Chapter 2/ Teleconsultation with a patient

While in the past, a teleconsultation with a patient often originated with a request for a consultation from another physician, it must be said that in many cases today this is no longer true. Now teleconsultations are often requested by another health professional or even by the patient himself. The purpose of the consultation may be to make a diagnosis, initiate treatment or provide teleinterpretation or teleassistance services.

Although the Collège would prefer a teleconsultation to be the result of a request made by another physician or professional, it does not believe that a teleconsultation can only take place if the patient is referred by a physician or another health professional. The Collège reiterates that physicians who provide care via telemedicine will be held to the same ethical and professional standards during a teleconsultation as during an in-person consultation, in particular with respect to the quality of the professional relationship, professional secrecy, consent, follow-up and record keeping. A teleconsultation does not obviate the need for a patient history and physical examination, even if the consultation is requested by a medical colleague. Furthermore, it is important to remember that the physician must assume full civil liability at all times and make his diagnosis with the greatest care, using appropriate scientific methods.

2.1 THE PHYSICAL SETTING OF THE TELECONSULTATION

It is important to emphasize certain aspects of the physical setting in which the teleconsultation takes place. The patient must be in a setting that is appropriate for a medical examination, i.e., a professional setting. Privacy and confidentiality, the physical environment (noise, public place, etc.), safety, especially for vulnerable patients (in psychiatry, for example), the presence or absence of staff or family members, depending on the circumstances, are all aspects that must be taken into account. Needless to say, these considerations must be discussed and decided upon beforehand with the patient by the physician or professional who requested the teleconsultation.

Medical consultants must take the same aspects into account: the setting must be professional, it must ensure privacy and confidentiality and the physical environment must be appropriate.

2.2 PHYSICIAN AND PATIENT IDENTIFICATION

Every consultation should start with the physician identifying himself to the patient (he must say his name and specialty at the beginning of the interview) and a reminder of how the consultation came about (“At the request of my colleague, Dr..., I have agreed to see you for a remote consultation using technology” or “I’m delighted to respond to your request for a remote consultation using electronic means”). If necessary, the physician can hold his permit to practice or authorization from the Collège up to the camera. The physician must mention the technological limitations of the digital environment he is working in, especially the limitations with respect confidentiality, and obtain the patient’s consent to the remote consultation.

In turn, the physician must ask the patient to identify himself: his name, date of birth, home address, the location of the consultation. If the physician doesn’t know the patient, the Collège suggests that he ask the patient to hold his health insurance card up to the screen if the consultation is being charged to the Régie de l’assurance maladie du Québec (RAMQ; Quebec health insurance board) or, alternatively, a valid photo identity card.

If a patient is unable to consent to care, verifications must be made concerning the person authorized to consent on his behalf. Similarly, if the consultation requires the presence of an interpreter or accompanying person, the patient’s and the interpreter’s or accompanying person’s identity must be verified.

2.3 CONSENT

The physician must obtain the patient’s consent to the teleconsultation. He must make sure the patient agrees to this type of consultation and understands its limitations.

The physician must therefore provide the patient with all the information he needs to provide free and informed consent. He must ensure that consent is obtained without undue influence or coercion and that the patient has been given all the information he needs to consent to the acts that will be performed.

In all telemedicine cases, this must include information about the telecommunications methods used, namely:

- › the limits of medical practice given the methods of communication used;
- › the potential for breaches of confidentiality associated with the methods of communication used;
- › the electronic storage of information.

These aspects of consent, which are specific to telemedicine, must be documented in the record. If desired, a “communication agreement” can be drawn up specifying the communication channels that will be used and the recipients of the communications.

For procedures or treatments, consent to care must be obtained just as it is for an in-person consultation. The information provided must also include:

- › the nature of the illness;
- › the nature of the procedure or treatment;
- › the foreseeable or potential risks;
- › the desired outcomes;
- › the treatment options (and their respective risks and benefits);
- › the consequences of refusing to provide consent.

Remember that express consent must be obtained for certain procedures, including remote or robotic surgery, that satisfies the criteria generally established for these types of medical acts.

The Collège would like to stress that patient consent to remote care using ICT does not allow, unless it is explicitly requested and obtained, the record or information in the record to be sent to a third party for purposes other than medical follow-up, for example for commercial or research purposes.

You will find an example of a form that could be used as a “communication agreement” on the McGill RUIS Telehealth website (www.telesantemcgill.ca/files/documents/forms/patient-consent.pdf).

2.4 CONFIDENTIALITY

Under the *Code of ethics of physicians*,⁴ a physician must protect the confidentiality of information obtained in the practice of his profession. He must determine whether or not the technologies used to communicate with his patient or with a third party allow him to maintain professional secrecy. The patient's waiver of confidentiality or authorization to communicate information electronically does not release the physician from his duty to ensure that professional secrecy is maintained to the extent possible.

In some circumstances, the physician may be required to demonstrate that he has given his patient enough information to understand what he is consenting to. Was the patient told that the information from the teleconsultation might transit through a multitude of public or private servers and might be stored for an indefinite period?

2.5 MEDICAL LIABILITY AND PATIENT RECOURSE

When a physician provides telemedicine services, his liability is no different than that assumed in his other professional activities. He alone is responsible for his professional judgement and therefore assumes full civil liability at all times.

A physician who refers a patient for a teleconsultation to a physician practicing outside Quebec must ensure that the latter is authorized to practice in Quebec. Moreover, the attending physician must inform his patient of the credentials and competence of the physician he is referring him to and that he practices in another jurisdiction.

A patient who initiates a teleconsultation with a physician outside Quebec himself may contact the Collège des médecins du Québec to make sure the physician is indeed authorized to practice medicine in Quebec.

⁴ *Code of ethics of physicians*, CQLR, c. M-9, r. 17.

Chapter 3/ Using information and communications technologies (ICT)

The advent of ICT has profoundly changed communications. The same is true of the medical field, where ICT are used by physicians to communicate with patients, medical colleagues, other health professionals and the general public. Whether it is an email, a remote consultation by text message (Short Message Service; SMS), transmitting or storing a record using a USB flash drive or external hard drive, all these and many other methods are widely used and, unfortunately, often without taking the necessary precautions. Yet these methods have their limitations in terms of compliance, confidentiality and protection of data integrity and it is important to know what they are.

Physicians who use ICT must take all the necessary precautions to ensure that professional secrecy is maintained to the extent possible. The *Act to Establish a Legal Framework for Information Technology*⁵ stipulates that the confidentiality of information must be protected by means appropriate to the mode of transmission, including on a communication network.

Physicians must therefore exercise caution and diligence. This means they must take the time to learn about the technologies they intend to use, the inherent risks involved and methods or solutions to prevent or mitigate these risks. Otherwise, they have no way of knowing if the information they wish to send is too sensitive for the technology in question.

⁵ *An Act to Establish a Legal Framework for Information Technology*, CQLR, c. C-11, s. 34.

3.1 GENERAL RULES FOR USING ICT

- › The physician must separate his professional life and his personal life when he uses information technology.
- › The physician must always use his judgement as to the content and quality of the information sent using information technology.
- › The physician is responsible for weighing the benefits and risks of exchanging information with a patient or colleague using technology.
- › The physician must therefore be cognizant of the issues raised by the use of information technology.
- › The physician must inform his patient of the benefits but also the risks of using information technology.
- › Even with his patient's agreement or consent, the physician remains responsible for maintaining professional secrecy and the confidentiality of the information he sends. Thus, even if the patient has consented to email communication, depending on the nature of the information the physician needs to send, he may sometimes have to adapt the method he uses to communicate with his patient to the situation.
- › The patient is responsible for the content of the information he sends his physician.
- › The physician must use the appropriate medium for the method of communication and the nature of the information he is sending his patient.
- › The physician must agree with his patient on the methods of communication and the safeguards that he will be using depending on the nature of the information. This agreement must be documented.
- › The physician and the patient always must be aware that when they use social media, the information sent is:
 - › public (can be accessed by anyone);
 - › permanent (in time);
 - › universal (no geographic limit).

3.2 COMMUNICATING WITH PATIENTS AND COLLEAGUES BY EMAIL, SMS OR TEXT MESSAGES

Many physicians and patients mistakenly think that all email is private and secure. It is not. There are risks involved in using email, for example, the email might go to the wrong recipient, be intercepted by a third party or multiple copies might be kept on a number of devices. It is also important to be aware that between the outbox and the recipient's inbox, an email transits through many servers, possibly in other jurisdictions or countries, and some may keep a copy of the email. Users must understand that most forms of electronic communication leave traces in many places. We also know that keyword software allows third parties to identify emails that may be of economic or strategic interest.

It is the physician's duty to inform his patient of the types of technology that he will be using to communicate with him and the limits of these technologies, for instance with respect to confidentiality; the patient can then decide whether or not he wishes to use this environment.

COMMUNICATING WITH PATIENTS

GENERAL PRINCIPLES

The Collège believes that a secure platform should be used for the large majority of electronic exchanges of personal and confidential patient information. However, it is aware that some information, even clinical, may be sent fairly safely over the Internet even if the transmission is not electronically secure.

Indeed, in cases where the patient has given consent, the law of numbers could be applied when communicating certain health information. Based on this principle, information will be sent without protection, presuming that everything will go smoothly, given the high volume of emails continually circulating on the Internet and the relatively low number of people likely to intercept one email in particular.

The Collège would like physicians to use their judgement and consider their ethical and professional obligations before they send nominative data or exchange clinical data with a patient by text message or email. For instance, these methods could be considered...

Acceptable or useful for:

- › scheduling or confirming appointments;
- › sending or receiving health information (blood glucose, blood pressure, presence or absence of adverse effects);
- › giving general health advice;
- › confirming the receipt of a laboratory, consultation or imaging test result and providing follow-up;
- › providing follow-up and adjusting treatment for chronic diseases;
- › sending certain clinical or paraclinical results.

SOME GROUND RULES

- › Use only your professional email address or telephone number.
- › Inform your patients about the procedure you use (for an example, see the *Consent to use electronic communications* form on the Canadian Medical Protective Association's website).
- › Tell your patients who will be reading and processing your email and text messages.
- › Obtain the patient's informed consent to the use of email and text messages, informing him of the benefits and potential risks. A signed agreement can be used as an adjunct to this discussion.
- › Tell your patients that all incoming and outgoing emails and text messages will be entered in their medical record.
- › Establish procedures for staff members who process email and text messages.
- › Use your judgement for emails or text messages with sensitive content (non-exhaustive list):
 - › any information identified as such by the patient
 - › mental health disorders
 - › cancer problems
 - › drug abuse or alcoholism
 - › sexually transmitted and blood-borne infection (STBBI)
 - › communication of a new diagnosis
 - › communication of a new treatment
 - › a highly emotionally charged diagnosis
- › Make your patient aware of the risks of exchanging emails or text messages via a third-party email address or platform (for example, an email address provided by an employer or Facebook Messenger, MSN Messenger, Gmail, Hotmail, etc.).
- › Be careful when sending and receiving electronic messages from mobile devices, smartphones and tablets.
- › Remember that even if the physician uses a secure email service, the patient's email is not necessarily on a secure platform.

RECOMMENDATIONS FOR PHYSICIANS WHEN SENDING EMAILS OR TEXT MESSAGES

- › Use a validated list (for professional use only) of your patients' email addresses to address emails and text messages instead of entering addresses by hand, which can result in errors.
- › Address your emails or text messages carefully and preferably to a single recipient.
- › If you need to send a group email, make sure that recipients cannot see the names and addresses of other recipients.
- › Do not use acronyms and medical terms the public is not familiar with.
- › Be aware that lay people may not know that common words can have a medical meaning.
- › Do not use sarcasm, criticism, profanity, make biased or offensive comments or defamatory references.
- › Do not use humour, for it might be misinterpreted.

RECOMMENDATIONS FOR PHYSICIANS WHEN RECEIVING EMAILS OR TEXT MESSAGES FROM PATIENTS

- › Set up an acknowledgement of receipt to respond to patients' emails (see Appendix I).
- › Triage patients' emails and text messages to ensure a reasonable response time.
- › Set a response time for messages from patients.
- › Inform patients of the procedure to follow if they do not receive a reply within the response time or if their situation worsens.
- › Inform patients that they are responsible for following up on their emails and text messages.
- › Inform patients that they must send you an acknowledgement of receipt if necessary.

NETIQUETTE

- › The email or text message must reflect professional etiquette throughout.
- › Always state the subject of the email.
- › Specify "for action" or "for information".
- › Keep your messages short and to the point, ideally no longer than half a page.
- › Deal with only one subject per email or text message to make it easier to classify emails or text messages by subject.
- › Do not forward emails or text messages without adding to the original text.

- › Use a courteous greeting and closing, without overdoing it.
- › Use a professional signature, i.e., for an email, a signature that includes, at a minimum, your name, your specialty and your office telephone number.

COMMUNICATING WITH MEDICAL COLLEAGUES OR OTHER HEALTH PROFESSIONALS

In the course of his work, a physician sometimes has to consult medical colleagues or other health professionals.

CONSULTING A COLLEAGUE

The Collège des médecins recommends that a physician use only secure email for consultation requests, for they usually include the patient's name and health insurance number.

Furthermore, the physician must:

- › Obtain the patient's consent.
- › Address the email to a single recipient.
- › Ask the consultant clear questions and send all the necessary information so that he receives a relevant reply.
- › Ask for an acknowledgement of receipt.
- › Ask the consultant to reply within a reasonable time.
- › If photos are taken with a camera or smartphone, make sure all the images are deleted once they have been transferred to the patient's record.
- › Inform the consultant that all emails will be entered in the patient's record.
- › Enter the consultant's opinion in the patient's record.

AN INFORMAL REQUEST TO ONE OR MORE COLLEAGUES BY EMAIL OR OTHER NON-SECURE APPLICATION

In this case, the physician must:

- › Make sure he does not disclose information or distinguishing features that could be used to identify the patient.
- › Not share photographs with distinguishing features that could be used to identify the patient (face, tattoo, etc.).
- › Send only the information required.
- › Ask the colleague to destroy any photos or information sent for the purposes of the consultation.

3.3 VIDEOCONFERENCING APPLICATIONS

Videoconferencing applications allow a physician to conduct a remote, real-time patient consultation with sound and images. This technology improves access to medical services significantly, especially in remote areas. It ranges from sophisticated videoconferencing systems to user-friendly applications for personal computers, tablets and smartphones.

Whatever the technology or application used, it is important, for both the physician and the patient, that it be secure and that the consultation take place in an environment where the confidentiality of communications will be protected. Therefore, while applications or software such as Skype or FaceTime are not prohibited, they must be used with caution. Conversely, videoconferences supported by integrated university health networks (RUIS), which use the RTSS platform, employ much more secure technology.

In all cases, it is a good idea to remember the rules mentioned previously for the physical setting, the presence or absence of accompanying persons and the possibility of an unwanted third party being privy to the communication. Just as for emails and text messages, the physician must use his judgement and remember his ethical and professional obligations when he uses videoconferencing.

3.4 SOCIAL MEDIA

Perhaps of all ICT, social media raise the greatest number of issues for physicians, since it is virtually impossible to ensure the confidentiality of communications. Furthermore, few physicians use social media in the context of a therapeutic relationship. They tend to use them for educational and personal purposes and, even then, precautions must be taken.

In general, a physician should not use social media to give an opinion outside his area of expertise or to disseminate defamatory comments or information. Needless to say, the rules of confidentiality apply at all times.

LINKEDIN OR VIADEO

Acceptable or useful for:

- › raising your professional profile;
- › sharing factual information;
- › finding a professional/consultant for your patient;
- › advertising your services.

Unacceptable for:

- › disseminating defamatory comments or information;
- › publishing comparisons of results;
- › forming associations with commercial sites.

Important:

- › avoid copyright infringement.
-

FACEBOOK

Prerequisites:

- › separate professional and personal pages;
- › privacy settings adjusted so that they are appropriate for the intended use.

Acceptable or useful for:

- › raising your professional profile;
- › sharing factual information;
- › advertising your services;
- › providing general health information;
- › referring patients to reputable non-commercial medical sites.

Unacceptable for:

- › accepting a patient's "friend" request in your personal Facebook account (could be seen as a commitment or a favour in a therapeutic relationship).

Important:

- › be aware that you might receive offensive comments.
-

TWITTER

Acceptable or useful for:

- › sharing information with colleagues;
- › doing continuing professional development;
- › sending patients general health information;
- › teaching students/residents.

Unacceptable for:

- › sharing specific medical information about a patient;
- › sharing specific medical information with a patient.

Important:

- › respect confidentiality requirements.
-

YOUTUBE

Acceptable or useful for:

- › presenting and demonstrating knowledge, techniques or information for teaching purposes.

Unacceptable for:

- › sending specific information or images about a patient.

Important:

- › obtain consent from all those involved before posting a video on YouTube;
 - › avoid plagiarism and copyright infringement;
 - › respect confidentiality requirements.
-

BLOG

Acceptable or useful for:

- › sending general health information;
- › communicating with colleagues.

Unacceptable for:

- › giving an opinion outside your area of expertise;
- › giving specific information to a patient.

A “must”:

- › avoid plagiarism and copyright infringement;
- › if a blog is associated with a discussion forum, the physician must filter and manage the content of the comments made.

3.5 WEBSITES

Depending on the circumstances, websites can be acceptable or useful.

Acceptable or useful for:

- › Public information:
 - › clinic hours;
 - › services offered;
 - › addresses and contact information;
 - › names of the professionals who work at the clinic;
 - › general health information;
 - › references to patient association sites or relevant and reputable scientific sites;
 - › references to scientific articles or articles intended for the general public.
- › Secure services (HTTPS), recommended for:
 - › scheduling appointments;
 - › exchanging emails with patients;
 - › sending reminders for vaccination and preventive examinations;
 - › following up tests or vital parameters.

Important:

- › avoid copyright infringement;
- › beware of the risk of providing hyperlinks to sites that are not reputable or information that has not been scientifically validated.

A “must”:

- › discussion forums must have a webmaster to filter comments and act as a moderator.

With the Web, the security of information transmission mechanisms is never guaranteed. Violations of professional secrecy and use that is undesirable, abusive and contrary to the purposes for which the information was transmitted are reported on a daily basis. The physician must always remember that the Web is a public commercial space.

Without exaggerating or giving way to unfounded fears, it is important to remember that:

- › information is very often used for commercial purposes;
- › malicious acts are performed on the Web (viruses, hackers);
- › spyware and other forms of unwanted surveillance exist;
- › information is recovered and aggregated into what is commonly called “big data”, which is used for commercial and other purposes.

Chapter 4/ Record keeping

AMENDMENTS WILL BE MADE TO THE *REGULATION RESPECTING RECORDS, PLACES OF PRACTICE AND THE CESSATION OF PRACTICE BY A PHYSICIAN*⁶ TO INCLUDE CERTAIN OBLIGATIONS SET OUT IN THIS SECTION.

With the advent of ICT, it is clear that the medical record is undergoing profound changes in institutions and elsewhere. We could say that the record has become “fragmented”, for its content might be found in the archives of one or more institutions, in a private clinic, on the computer of one or more physicians and on various smart devices, on servers both in and outside Quebec, in short in a multitude of physical or virtual places.

4.1 GENERAL RULES

It is important to remember that the physician must create and maintain a single medical record per patient for each place of practice.⁷ Whether the patient is seen via telemedicine or in a traditional consultation, a patient record must be created and the same information must be entered in the record. Appropriate measures must be taken to ensure the integrity and confidentiality of the record. When photos are taken with smart devices or when ultrasound or radiology images are exchanged by health professionals, they must be entered in the patient’s record. The same applies to videoconferences that are recorded.

Special situations arise when information is stored virtually on a server that the physician can access at any time, for example, a radiology image archived in the Québec Health Record. In these cases, the image does not have to be downloaded to the patient’s local record. Only a code linking the physician’s consultation and the images consulted has to be entered in the record. The physician must, however, ensure that the retention standards applied to these technology-based documents comply with the minimum standards set out in the *Regulation respecting records, places of practice and the cessation of practice by a physician* and that he can access them at any time.

⁶ *Règlement sur les dossiers, les lieux d’exercice et la cessation d’exercice d’un médecin* [Regulation respecting records, places of practice and the cessation of practice by a physician], RLRQ, c. M-9, r. 20.3.

⁷ At the place of practice and by place of practice; i.e., in an office, where applicable, in an institution, etc.

In cases where a patient is registered with or admitted to an institution, the rules in effect in the institution relative to the retention of patient records will apply.

The electronic record should have the following features:

- › it is protected by a user-specific access code;
- › data and systems are accessible at all times;
- › data integrity is protected;
- › the confidentiality of data is maintained;
- › all users can be identified and access is logged;
- › the inalterability of transactions is guaranteed (all transactions must be recorded, cannot be modified once signed and subsequent modifications must be “traceable”);
- › data can be transferred to another platform in a universal format.

With respect to the integrity of a document, section 6 of the *Act to Establish a Legal Framework for Information Technology* stipulates that:

The integrity of a document is ensured if it is possible to verify that the information it contains has not been altered and has been maintained in its entirety, and that the medium used provides stability and the required perennity to the information.

The integrity of a document must be maintained throughout its life cycle, from creation, in the course of transfer, consultation and transmission, during retention and until archiving or destruction.

To assess the integrity of a document, particular account must be taken of the security measures applied to protect the document throughout its life cycle.

It is vital that the communication of medical data using ICT (text, images, sound) take place in an environment where the sender and the recipient can be unequivocally identified while maintaining the confidentiality and original nature of the communication.

4.2 CONTENT OF THE RECORD

The intent of the regulation respecting records and some of its provisions must be reiterated, for this regulation also applies to telemedicine and the use of ICT. In particular, it stipulates that the physician must create and maintain a single medical record per patient by place of practice for any person who consults

him or who is referred to him. When drawing up a medical record, the physician must enter sufficient information to describe the person who is the subject of the record, in particular, his name, his sex, his date of birth and his address as well as, where appropriate, his health insurance number. He enters or includes in the medical record in particular the following information and documents: the date of the consultation or of the entry in the record and, in the case of an emergency or critical situation, the time; requests and reports of consultations with another physician or requests for professional services; the diagnosis and the differential diagnostics when the clinical condition of the patient is unclear; prescriptions, reports, and where applicable, iconographic documents concerning preventive, diagnostic and therapeutic acts performed by the physician or entrusted to another identified person; the expert report and the list of documents and the relevant documents on which the report was based; the list of medications taken by the patient.

A physician who uses a computer medium for drawing up and maintaining some or all of a medical record shall:

1. Use a separate directory for the record in question.
2. Protect access to the data, specifically by using a security key and user authentication.
3. Use document management software:
 - a. designed so that the data already entered cannot be erased, replaced or altered in order to protect their integrity;
 - b. that allows the author of an entry in the record to be identified;
 - c. that allows data to be printed and identifies the author of the entry in the record;
 - d. that allows this data to be transferred to another platform.
4. Store, in another location, an encrypted backup copy of data so collected.

THE PHYSICIAN'S SIGNATURE

If a digital document requires the physician's signature, the physician must first assess the level of trust required and then choose the appropriate signing procedure. Not all signing procedures have the same legal value and some may even put the physician at risk by creating a handwritten signature image that could be replicated by a third party.

Under the *Act to Establish a Legal Framework for Information Technology*, a digital signature must have the following four features:

1. A personal mark that identifies the physician.
2. Proof that the act of signing is an acknowledgement of consent by the signatory.

3. A mechanism that establishes a link between the physician and the document.
4. A mechanism that ensures the integrity of the document after it has been signed.

Only procedures with all four features can be said to correspond to the legal definition of a digital signature. These procedures are based on cryptography (for example, SecurSanté mechanism, Notarius certificate) or are incorporated in a computer system.

All other signing procedures that meet some of these conditions can be used for identification purposes only and do not actually constitute a digital signature. For example:

- › When a physician writes his name in an email using a computer keyboard.
- › When a physician “pastes” a preprogrammed signature using a command in his word processing program – which amounts to the same.
- › When a physician uses a copy of a handwritten signature scanned from a paper document.

To clearly understand the issues surrounding the different types of signature, remember that if a document is not encrypted, it can be modified, in which case the physician’s signature no longer authenticates the same source. Remember also that a handwritten signature on paper, when scanned and copied onto an electronic document, can be captured and copied by a third party, even if it is used in a “Portable Document Format” (PDF) document. In both cases, the physician exposes himself to malicious acts and identity theft.

That said, not all the documents signed by a physician require the same level of trust and security. Thus, the Collège believes that username and password authentication is an adequate signing procedure for medical information entered in an electronic medical record or in the Québec Health Record (QHR).

Electronic prescriptions, however, involve a higher level of trust and a digital signature must be used to ensure that they cannot be falsified.

A TELECONSULTATION RECORD

In the case of a teleconsultation request between two physicians for a patient, a record is created and retained in the same way as for a traditional consultation: the attending physician must retain a copy of all digital documents or other documents provided to the medical consultant as well as a copy of all those he received after the consultation. Similarly, the medical consultant must create a

record and enter a copy of all the documents received for the consultation in it, along with a copy of any digital documents or other documents sent after the consultation.

In the case of a teleconsultation request in an institution, the rules in effect in the institution relative to the retention of records will apply; the physician is, however, required to enter the same information in the institution's patient record.

4.3 ELECTRONIC MEDICAL RECORDS

MONITORING AND BIOLOGICAL PARAMETERS

Medicine continues to evolve inexorably with the advancement of technology and its constant influence. Thus certain biological parameters measured remotely by the patient under conditions defined and accepted by the physician must be entered in the record. These include blood glucose and blood pressure to mention but a few.

The way medicine is practiced is also changing. For instance, the “health care team” is increasingly becoming an essential approach in the treatment and follow-up of conditions such as cardiometabolic diseases. The health care team's notes, which document the observations made and the treatment provided via telemedicine, must also be entered in the record.

In short, all the information and recommendations sent to a physician using information technology, whether they come from the patient, a medical colleague or a health care team member, must be entered in the patient's record. This includes all emails and text messages sent or received, the original parameters recorded during a test (an echocardiogram, for example) and not only those selected by the physician in the course of his work and the summary of any case discussions the physician might have participated in.

When a physician receives biological parameters and monitoring data from his patient or third parties, he must document the technology used in the patient's record along with the conditions of use defined with the patient in order to ensure the validity of these medical parameters.

CONCLUSION

ICT have become an undeniable reality in our daily lives and their use continues to grow. They have changed and continue to profoundly change how medicine is practiced for the benefit of both the public and physicians.

The Collège considers that ICT have become essential tools in ensuring the delivery of quality health care to Quebecers. They provide valuable services, in particular by improving access to medical resources in family medicine and specialized or ultraspecialized medicine.

The Collège believes it is appropriate to promote this new way of practicing medicine by encouraging the use of various applications while ensuring it is governed by certain guidelines. It is participating in various mechanisms in the health and social services network to develop telemedicine and telehealth⁸ and encourages physicians to do likewise given their unique expertise. The Collège also encourages research and evaluation of the use of these technologies.

Lastly, in keeping with its mission to protect the public, the Collège wishes to contribute, within its jurisdiction, to the appropriate use of ICT, given their potential and their limitations.

There seems to be no end to advances in technology and it is not utopian to say that we are still on the threshold of phenomenal transformations: ICT are a step towards the medicine of the future.

⁸ Telehealth can be defined as "Health care and services and social, preventive and curative services provided from a distance using telecommunications, including audiovisual exchanges for informational, educational and research purposes, and the processing of clinical and administrative data." Ministère de la Santé et des Services sociaux, 2001, reproduced in *Telehealth: Clinical Guidelines and Technical Standards for Telepsychiatry*, AÉTMIS, Quebec, August 2006.

— Appendix

APPENDIX I - PHYSICIAN-PATIENT AUTOMATIC ACKNOWLEDGEMENT OF RECEIPT TEMPLATE

This confirms that I received your last email.

By communicating with me by email, it is assumed that you agree to the following conditions:

1. Mail (and email) is a form of delayed communication and not a form of instant messaging. My response time is 7 working days (excluding my vacation period).
2. You are responsible for following up on your emails.
3. If you are a patient:
 - a. You must have read, understood and signed the form *Consent to use electronic communications*;
 - b. If you do not receive a reply within the above response time or if your symptoms and problems worsen, contact the clinic at the number below or Info-Santé at 811.

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— Glossary

AÉTMIS

Agence d'évaluation des technologies et des modes d'intervention en santé [Agency for the evaluation of technologies and methods of intervention in health].⁹

APPLICATION

Small specialized computer program downloaded to an ICT-enabled mobile device.

AUTHENTICATION

Action of authenticating, making authentic or guaranteeing authenticity.

BLOG

Type of website, or part of a website, used for the periodic and regular publication of articles, usually brief and providing commentary on a particular subject or profession.

CMQ

Collège des médecins du Québec [Quebec college of physicians].

DATA INTEGRITY

Property of data that has not been voluntarily or accidentally altered or destroyed during processing, storage or transmission and remains in a usable format.¹⁰

EMAIL

Service that allows users to send written messages electronically via a computer network (mainly Internet) to the electronic mailbox of one or more recipients.

FACEBOOK

Online social networking site that allows users to publish content and exchange messages.

INFORMATION AND COMMUNICATIONS TECHNOLOGIES (ICT)

Set of computer, audiovisual, multimedia, Internet and telecommunications tools and techniques that allow users to access sources of information, store, manipulate, produce, communicate and transmit information in all its forms.¹¹

LINKEDIN

Online professional social network; it facilitates dialogue among professionals.

PACS

Picture Archiving and Communication System.

PDF

Portable Document Format.

PROFESSIONAL SIGNATURE

Signature that generally appears at the end of a professional email and contains the name of the sender, his professional title, the name and address of his office and his telephone number.

QHR

Québec Health Record.¹²

⁹ The Institut national d'excellence en santé et en services sociaux (INESSS) succeeded AÉTMIS on January 19, 2011.

¹⁰ Data integrity is described as having four elements: completeness, precision, accuracy or authenticity and validity.

¹¹ Often abbreviated to the acronym ICT and sometimes referred to as telematics.

¹² For further information, see <http://www.dossierdesante.gouv.qc.ca/en/index.php>

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REMOTE QUALITY ASSESSMENT

Remote interpretation by a physician of clinical, radiological, biological, epidemiological or other data in order to assess the quality of the medical act (this definition implies the transmission of information or communication using ICT).

RTSS

Réseau de télécommunications sociosanitaires [Health and social services telecommunications network].¹³

RUIS

Réseau universitaire intégré de santé; Integrated university health network.

SMS

Short Message Service (see text message).

SOCIAL MEDIA

Internet sites or applications that allow their users to communicate with one another and share information and digital content.

TELEASSISTANCE

Teleassistance is a medical act performed by a physician when he remotely assists another physician or health professional who is performing a medical or surgical act (this definition implies the transmission of information or communication using ICT).

TELECONSULTATION

Medical consultation that allows a patient to interact remotely with one or more physicians using ICT.¹⁴

TELEEXPERTISE

Medical act performed remotely by a physician, in the absence of the patient, for diagnostic or therapeutic purposes in response to a consultation request from a medical colleague (this definition implies the transmission of information or communication using ICT).

TELEHEALTH

Health care and social services, social, preventive and curative services provided from a distance using telecommunications, including audiovisual exchanges for informational, educational and research purposes, and the processing of clinical and administrative data.

TELEINTERPRETATION

Remote interpretation of clinical signs and their evolution, where applicable, using information and communications technologies.

TELEMEDECINE

The practice of medicine at a distance using information and communications technologies.

TELEMONITORING

Remote interpretation by a physician of clinical, radiological or physiological patient data collected by the patient, a physician or another health professional and sent to the physician using information and communications technologies for diagnostic or therapeutic purposes.

¹³ Now RITM for Réseau intégré de télécommunications multimédia [Integrated multimedia telecommunications network].

¹⁴ This definition deliberately emphasizes the physician given the subject of this document; a broader definition would be a consultation that allows a patient to interact remotely with one or more health professionals using ICT.

— Glossary

TEXT MESSAGE

Short text message sent between mobile phones.

TWITTER

Microblog created by Twitter Inc. which allows users to send short 140-character messages on the Internet for free by instant or text messaging (SMS).

VIADEO

Online professional social network.

YOUTUBE

Video-sharing website that allows users to upload, view and share videos.