## Remote Wound Consultation Series

## PART 2:

# Considerations for Service Delivery and Policy Development

By Elise Rodd, RN, BSN, CETN (C) and Sabrina Hasham, PEng, MBA, LLM

Technological innovation, coupled with implementation of best practice wound care, can universally enhance healing times, improve clinical outcomes, increase patient and provider satisfaction and reduce costs. Around the world many health-care specialties, including wound management, are embracing remote consultation as a solution to bridge the geographical and service access divides between patients and specialists.[1,2,3,4] Remote wound consultation is a high-impact practice that promotes evidence-informed service delivery and enhances the effectiveness of community care.[5]

Evidence supporting telehealth (also known as telepractice) outcomes is compelling.[3,4] Various studies have demonstrated improved wound healing and cost savings with remote consultation over usual care.[6,7,8]Additionally, remote wound consultations offer mentorship opportunities for frontline community providers and informal caregivers.[9] High patient satisfaction with both synchronous (live—usually by video) and asynchronous (time-separated data collection and analysis) telehealth applications have been reported.[3,4,8,10] A recent study in Australia found that remote wound care served to overcome many of the barriers to optimal care such as the need for multiple health-care providers, lack of nurses' confidence, insufficient training in wound management, limited access to specialists, as well as incomplete and inconsistent documentation of wound history and management.[11]

Despite the promise of remote wound consultation to improve care outcomes, the introduction of a technology-based solution to address insufficient system capacity should be approached carefully. Medico-legal considerations, including patient privacy, professional licensure and jurisdiction, protocol and guideline requirements,

medical records management and care provider liability should be considered prior to implementation of the service.[12,13] In this second of two articles (see Part 1, Clinical Digital Photography), considerations for the development of telehealth policies and the provision of remote wound consultation will be addressed.

## Technology Considerations

The College of Nurses of Ontario defines telepractice as "the delivery, management and co-ordination of care and services provided via information and telecommunication technologies, which may include the use of telephones, personal digital assistants, faxes, the Internet, video/audio conferencing, tele-radiology, computer information systems and telerobotics."[14] Although the simple capture and transmission of photographic images is not specifically listed, this practice also falls under the rubric of remote consultation.

*"The introduction of a technology-based solution to address insufficient system capacity should be approached carefully."*

The use of smartphones for digital imaging is an emerging practice for which Canadian guidance should be addressed by the wound care community, in collaboration with experts in technology. In the United Kingdom guidelines on clinical digital photography explicitly state that mobile telephones should never be used, as the practice "poses unacceptable risks to the security and confidentiality of the images,"[15] but these guidelines are a decade old. The patient's perspective of the use of smartphone cameras may be different. In a recent study in the U.S. where mobile phone cameras were used to submit wound images to a remote medical provider, patients had few concerns regarding privacy and security and found the practice acceptable.[16] This may be reflective of the patient's lack of awareness of the privacy risks or simply that patients' desire for timely and high-quality care overrides any health information safety concerns. The automatic photo geotagging function of many smart devices is one potential privacy risk that should be managed. Disabling the geotagging app could mitigate some of the risks in the community setting; however it would interfere with the distance-tracking applications used by some home-care agencies. Geotagging indoors is dependent upon the patient location within the building.

## Duty of Care and the Nurse-patient Relationship

A patient-provider relationship and a "duty of care" are established in all telehealth encounters between the remote consultant and the

patient,[13,14] in a manner similar to that in a face-to-face encounter. In nursing, it is understood that the provider-patient relationship is based on trust,[14] and to establish this patients need to be informed of the name, professional designation, place of work and province of registration of the remote consultant providing care.[17] In an asynchronous consultation, the availability of a biographical photo of the consultant can be helpful to the patient. Patients also need to be given clear instructions regarding the professional who, at the conclusion of the telehealth consultation, will have ongoing responsibility for continuing health care.[17,18]

Nurse-patient communication is key to establishing and maintaining a therapeutic relationship; this can be challenging with asynchronous remote consultation applications. Remote service consultants should consider adopting or creating consultation platforms that list questions in a logical sequence, avoid medical jargon, take into account language and cultural barriers, allow for subjective patient input and facilitate referral to a higher level of care should the patient's needs exceed the nurse's knowledge, skill and judgment.[14]

## Consent

Patient consent serves two purposes, one of which is to inform the patient of the proposed treatment, risks, benefits and alternate care. The other is to shield the provider and employer from legal exposure.[19] When a digital image is used as part of the standard electronic documentation, consent is considered "implicit,"[18] but all consent needs to be informed.[17] Information for the patient should include how information will be stored and recorded, who will have access to it, who will be present during the interaction and alternate methods of care available.[17]

Formal written consent should be obtained if there is any likelihood that wound images may be used for education or publication purposes, or if the patient information may be transmitted to a consultant outside the patient's circle of care. It is also advisable for videoconference interactions,[18] although as synchronous consultations become more routine many telemedicine networks have eliminated explicit consent requirements. Integrating consent procedures into existing patient admission processes can avoid duplication and confusion[18] and decrease workload.

*"Patient consent serves two purposes . . . to inform the patient of the proposed treatment, risks, benefits and alternate care . . . [and] to shield the provider and employer from legal exposure."*

## Health Information Protection

Telehealth settings pose more challenges to maintaining patient confidentiality than do traditional settings.[17,18] There are additional risks to patient privacy related to the collection, transmission, storage and review of data. Legislation and regulation pertaining to personal health information protection and access to information and privacy are governed by provincial/territorial jurisdictions. These should be taken into consideration when developing policy specific to clinical digital photography and remote consultation.

The consultant in remote interactions must ensure that they are in a location with sufficient privacy to ensure that only those in the circle of care are privy to the health professional-patient interaction.[18] Patients need to be informed of any health-care team members who may view or listen in on a telepractice interaction, including students,[14,17,20] and whether the interaction is being monitored for quality improvement purposes.[14] The patient has a right to decline to participate in a telehealth consultation or to end the interaction at any time. However, patients do not have the right to ask for telehealth records to be destroyed[21] as they form part of the medical records (including associated photos).

## Documentation

In provider-to-provider interactions (e.g., remote enterostomal therapy nurse to frontline RN), the interaction should be documented by both the remote consultant and the direct caregiver if no specific consultation app is in use. If the remote interaction is directly between a provider and a patient, there is no legal requirement for a patient to document a consult. Documentation protocols that address direct consultant-to-patient/caregiver interactions need to be in place, as often the patient's physical chart is in a remote location.

Consultation apps should be based on validated tools—such as the Bates-Jensen Wound Assessment Tool (BWAT)—that strengthen the quality of data for any potential research. Practically speaking, this entails the input of the wound parameters—as assessed by the frontline staff—into the remote application. These assessment data are typically accompanied by digital images of the wound. However, introducing BWAT assessments carried out by the frontline staff for input into the wound consultation app may entail additional training, even for the most experienced of care providers.

A study that compared a bedside BWAT assessment of a pressure ulcer by a certified wound nurse with the assessment of a digital photo of the same wound by a panel of experts resulted in only fair to moderate levels of agreement.[22] This is largely the result of the inability to assess certain tactile wound assessment parameters remotely, such as induration or the adherence of slough. The Photographic Wound Assessment Tool revised version (revPWAT) provides an alternative for wound assessments done by the remote consultant based on digital photos of the wound.[23] This tool was made specifically to visually assess the status of a wound based on a digital image and has been found by Canadian authors Thompson, et al. to be both valid and reliable compared with bedside assessments.[23] The revPWAT is performed by the remote consultant, as opposed to having assessment data entered by the frontline staff. It should be noted, however, that the revPWAT only assesses the visual parameters of the wound and does not include such critical assessment points such as wound pain, odour, exudate and peripheral edema.[23]

### Documentation: What you need to know

- Remote consultation documentation policies and protocols need to be in place.
- Both remote consultant and frontline staff should document consultation if no remote consultation app is used.
- Verbal advice should be followed up with retrievable documentation.
- Written recommendations should be sent to the advice recipient and primary healthcare provider.
- Emails should be converted to PDFs and filed with the patient chart.
- Use validated tools:
  - BWAT: a 13-parameter assessment done at the bedside to accompany digital photos
  - revPWAT: an 8-parameter assessment done by remote consultants based on photos only

Note: Wound pain is not addressed with the BWAT or the PWAT.

*"Integrating consent procedures into existing patient admission processes can avoid duplication and confusion and decrease workload."*

Any verbal interactions by the consultant done with either the patient, care provider or another professional should be followed up with a retrievable document,[20] preferably with a copy sent to the advice recipient as well as their primary professional care provider. At a minimum, the report should include a summary of the findings, clinical impressions (diagnosis/differential diagnosis for physicians) and recommendations.[20] Emails can be converted to portable document format files (PDFs) and kept as part of the permanent documentation in a secure location electronically or in hard copy, depending on institutional policy.

## Equipment and Data Security

Security policies need to address the equipment used in telehealth consultations and the data generated. Hasham[13] recommended that the following measures should apply:

- Access to the equipment is restricted and protected with high-level passwords, biometric data, cards or tokens.
- Access to equipment is tracked.
- Equipment is securely locked when not in use.
- All data transmission is encrypted.
- All servers are kept behind firewalls.
- Virus and intrusion protection is built into the system.
- Redundancy is built into the system.
- A back-up plan is available in case of equipment failure.

## Jurisdictional and Collaborative Practice Considerations

According to the Canadian Nurses Association (CNA), "provincial and territorial nursing regulatory bodies in Canada have determined that nurses engaged in telehealth are considered to be practising in the province or territory in which they are located and currently registered, regardless of where the client is located".[17] A recently conducted informal scan done by one of the authors (SH) revealed that some provincial nursing colleges have yet to establish regulations and policies with regard to telehealth practices. Given the CNA guidance, the remote nurse consultant is professionally accountable and liable in the jurisdiction from where the nurse is conducting the consultation.[17] Put simply, it is as if the remote patient is visiting the nurse in her/his location and not the reverse. Nevertheless, it is strongly advisable to review the regulations in the patient's jurisdiction[13] with particular attention to provincially dictated controlled and delegated acts relevant to wound care. Telehealth conducted with international patients adds a layer of complexity to the issue of jurisdiction about which there is a gap in the literature.

### Ensuring Buy-in

Uptake of new remote consultation services is facilitated by:

- Formal staff orientation, training and ongoing development
- An expectation that computer literacy is not universal
- Backfilling of staff during training
- A stable workforce
- Wound care as a high percentage of caseload
- A relatively stable patient pool

*"It is strongly advisable to review the regulations in the patient's jurisdiction with particular attention to provincially dictated controlled and delegated acts relevant to wound care."*

Regulation of collaborative consultations can become more complicated as licensure for each of the multi-disciplinary health-care providers is managed by their individual provincial professional colleges. The Federation of Medical Regulatory Authorities of Canada has offered guidance to the provincial physician colleges, informing them that the jurisdiction for a tele-

## Areas of Consideration

- Technology
- Duty of Care
- Consent
- Health Information Protection
- Documentation
- Equipment and Data Security
- Jurisdiction Issues
- Legal Liability
- Provider Adoption
- Training and Engagement

medicine consult should be the location of the patient (contrary to that of the CNA); however, some colleges have made a different decision. For example, the College of Physicians and Surgeons of Alberta deems the location of a telehealth consult to be the location of the *patient*, while the College of Physicians and Surgeons of New Brunswick stipulates that the consult takes place in the location of the *physician*. Where jurisdictional issues have not been specifically addressed by the professional college, it is advisable to seek clarification of the licensure issues and request that the appropriate authorities commit to their position in writing.[13] In addition, arrangements for payment need to be addressed, if not covered in the provincial fee schedule.[13]

An additional consideration is that the technology solution supporting the consult may be from an entirely different jurisdiction, perhaps governed by ecommerce laws or by a contract. Clearly navigating the jurisdictional challenges of multi-jurisdictional, multi-disciplinary, collaborative, technology-supported consultations can be difficult.

Another example of complexity in remote consultation collaborative practice comes from the increasing use in wound care of unregulated care providers (UCPs), also known as health-care aids or personal support workers (PSWs). As an example, in Ontario, care for wounds located below the dermis or in a mucous membrane is considered a controlled act for UCPs. A controlled act requires that care be delegated from a regulated health professional. A registered nurse who delegates wound care to a UCP or family member is expected to have first-hand knowledge of the care provider's competence.[24] The registered nurse also has a duty to ensure that the UCP understands his/her responsibilities in performing the procedure, has support and assistance in the provision of care and knows to whom the outcome of care should be communicated. These requirements put an extra burden of duty on a remote nurse consultant wishing to delegate to a UCP. Health care is regulated provincially, and legislation related to the delegation of wound care to UCPs may vary in other jurisdictions.

## Legal Liability

Most lawsuits against nurses stem from a failure in communication, in particular with other health-care providers, in delegation and supervision and in patient teaching and discharge.[25] Remote consultation can help or hinder communication. An evidence-informed assessment protocol with mandatory completion of all fields by the assessor ensures the inclusion of all relevant information needed for nursing diagnosis, evaluation and care planning.[26] Conversely, if a digital photo alone is transmitted to a consultant with limited information, it may not be sufficient to relay pertinent clinical assessment information, and unsafe recommendations could ensue. The American Telemedicine Association recommends that documentation language for the remote consultant

providing recommendations should include the phrase "based on the images and history provided, my impression is as follows . . . ."[18]

Telehealth consultations are becoming more integrated into the routine delivery of healthcare operations. In Ontario alone, over 200,000 telehealth consultations took place in 2011–2012, and increasing rates are expected.[10] The standard of care should be the same whether the patient is seen in person or through telehealth technologies.[14,18] As telehealth services become increasingly prevalent, the provision of such services is becoming in itself part of the standard of care. In the U.S., lawsuits have been filed against those who *did not* offer telehealth services, based on the claim of harm arising from the lack of provision of a widely available technology.[27]

Many remote consultation applications are protocol driven. In cases where the nurse's judgment conflicts with consultation protocols, and the nurse decides to override the protocol, the nurse is accountable for his/her decision and any subsequent actions.[14] This applies to both the nurse consultant and the recipient of the recommendations.

## Provider Adoption

In order to facilitate a successful introduction of telehealth services, organizations should ensure that there is technical and staff readiness, as well as a risk-mitigation strategy in place.[18] One barrier to the successful adoption of telehealth services is an approach that is not integrated into existing care.[20] Integrating telehealth documentation with existing charting avoids time-consuming duplication and is one strategy that can assure a successful uptake of telehealth services.[7,15] The addition of integrated mandatory reporting into the telehealth application is ideal. In many exemplary cases, the provision of remote consultation services has been fully integrated into inpatient clinics.[10]

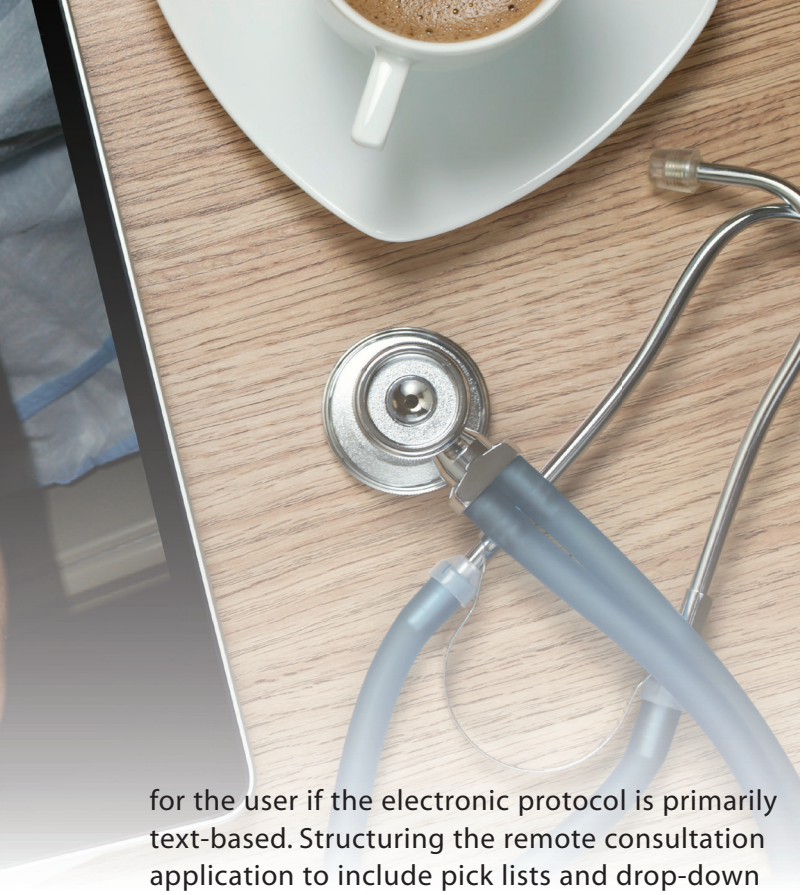
A balance of information needs to be struck when developing any type of telehealth application: be it a faxed assessment form with digital photo or a fully interactional web-enabled tele-

health service. There is a potential for unsafe patient care if the information sent to the consultant is incomplete or inaccurate;[15] however, the ability to rapidly complete an electronic wound assessment is beneficial for user uptake.[7]

*"Integrating telehealth documentation with existing charting avoids time-consuming duplication."*

## Training and Engagement

Health professionals who employ telehealth services must have the necessary orientation, training and ongoing development to ensure competency and safe care.[18] Telehealth practice may not be suitable for entry-level nurses.[15] Organizations newly adopting the use of tablets and computers for telehealth consultation can experience educational challenges related to technology. Computer literacy of nursing staff is not universal, and extra time and formal training may need to be devoted to learning even the most user-friendly applications.[11,14] Entering wound assessment information into an electronic device will be time consuming



for the user if the electronic protocol is primarily text-based. Structuring the remote consultation application to include pick lists and drop-down menus is advisable.

Best practice remote consultation supports mentoring and empowerment of frontline care providers and informal caregivers. Télé-assistance en soins de plaies (telehealth wound assistance) at the University of Sherbrooke is an excellent example of this type of consultant-to-nurse coaching relationship.[9] Telehealth is used to empower frontline staff and ensure the continuity of care. Experts at larger care and referral centres can demonstrate complex dressing procedures to providers in real time in the patient's home town, resulting in increased confidence in the care.[10]

Staff engagement in the change of process is critical to successful implementation of a remote wound consultation service.[6,11,14] Other factors cited as contributing to the success include a stable workforce, wound care as a high percentage of the caseload, a relatively stable patient pool and backfilling of staff during training.[11]

## Concluding Thoughts

The regulation of human behaviour takes place through a complex interaction among four modalities of regulation: law, markets, social norms and architecture.[28] In the case of remote wound care delivery, the regulatory framework that includes reimbursement and licensure is trailing behind patient and caregiver support for technology-assisted remote consultations. In a world immersed in instant and extensive communication facilitated by a plethora of innovative technologies, health-care delivery is failing societal expectations.

There is increasing disparity between health services available to residents of rural and urban areas. Patients are becoming more knowledgeable about health care and are demanding more involvement in their own care as well as increased accountability from providers and institutions traditionally involved in care delivery. Technology has the potential to allow patients and providers to narrow geographic and socio-economic barriers to health care. As well, the increasing cost and complexity of health care are compelling health-care providers to adopt cost-effective means of providing high-quality patient care. Remote wound consultation supported by telehealth technologies and evidence-based protocols presents new opportunities to provide high-quality care to Canadians. It is hoped that the publication of this article will galvanize the wound care community in Canada to address some of the issues that remain unclear or inconsistent for remote wound consultants.

***Elise Rodd*** *is an enterostomal therapy (ET) nurse known nationally for her skills in telehealth service development and delivery. She has had extensive experience providing education and remote nurse-to-nurse clinical support in the federal, provincial and private community sectors in BC, Manitoba, Saskatchewan, Quebec and Ontario since 2007. She is the clinical lead for CHAYA and an independent ET consultant.*

***Sabrina Hasham*** *is the founder of CHAYA, a service that facilitates remote consultations and personalized education for patients and frontline caregivers. Her client list includes the Ontario Telemedicine Network, KO Telemedicine, Health Canada, Alberta Cancer Board, McKesson, Canada Health Infoway, CIBC, Citibank, Transamerica Insurance and the Canadian Space Agency.*

## References


1. Tran K, Polisena J, Coyle D, et al. Home Telehealth for Chronic Disease Management [Technology report number 113]. Ottawa: Canadian Agency for Drugs and Technologies in Health. 2008.
2. Ndegwa S, Prichett-Pejic W, McGill S, Murphy G, Prichett-Pejic W, Severn M. Teledermatology Services: Rapid Review of Diagnostic, Clinical Management, and Economic Outcomes [Internet]. Ottawa: Canadian Agency for Drugs and Technologies in Health. 2010 (Technology report; no. 135). Accessed July1, 2013. Available at: www.cadth.ca/media/pdf/H0502_Teledermatology_Report_e.pdf.
3. Deshpande A, Khoja S, McKibbon A, Jadad AR. Real-time (Synchronous) Telehealth in Primary Care: Systematic Review of Systematic Reviews [Technology report number 100]. Ottawa: Canadian Agency for Drugs and Technologies in Health. 2008.
4. Deshpande A, Khoja S, Lorca J, McKibbon A, Rizo C, Jadad AR. Asynchronous Telehealth: Systematic Review of Analytic Studies and Environmental Scan of Relevant Initiatives [Technology report number 101]. Ottawa: Canadian Agency for Drugs and Technologies in Health. 2008.
5. Canadian Home Care Association. High Impact Practice: Digital Wound Photography Program. 2006.
6. Clegg A, Brown T, Engels D, Griffin P, Simonds D. Telemedicine in a rural community hospital for remote wound care consultations. J Wound Ostomy Continence Nurs. 2011;38(3):301–3014.
7. Santamaria N, Carville K, Ellis I, Prentice J. The effectiveness of digital imaging and remote expert wound consultation on healing rates in chronic lower leg ulcers in the Kimberley region of Western Australia. Primary Intention. 2004;12(2):62–64, 66–68, 70.
8. Wilkins EG, Lowery JC, Goldfarb S. Feasibility of virtual wound care: A pilot study. Adv Skin Wound Care. 2007;20(5):275–276, 278.
9. Télé-Assistance en Soins de Plaies (TASP). 2012. Vimeo. Retrieved from: http://vimeo.com/43260522.
10. Williams R. Telemedicine in Ontario: Fact not Fiction: How to enhance your practice and enrich the patient experience. Telemedicine Insights, Ontario Telehealth Network, 2013. http://otn.ca/sites/default/files/telemedicine_in_ontario-_fact_not_fiction_02-26.pdf. Accessed July 26, 2013.
11. Barrett M, Larson A, Carville K, Ellis I. Challenges faced in implementation of a telehealth enabled chronic wound care system. Rural and Remote Health. 9; 2009:1154. Accessed July 6, 2013. Available at: www.rrh.org.au.
12. Quashi RY. Things that should keep the telehealth community awake at night (Part 1). Lexology. 2013; June 10. Accessed July 7, 2013. Available at: www.lexology.com/library/detail.aspx?g=9773f113-74d1-4637-acdb-1fff-1b58a6d2.
13. Hasham S, Akalu R, Rossos PG. Medico-legal implications of telehealth in Canada. Telehealth Law. 2003;4(2):10–23.
14. College of Nurses of Ontario. Practice Guideline: Telepractice. Toronto, ON. 2009.
15. The NIFTE Research Consortium. National Initiative for Telehealth Guidelines: Environmental Scan of Organizational, Technology, Clinical and Human Resource Issues. 2003. Accessed July 6, 2013. Available at: www.cranhr.ca/pdf/NIFTEEnvironmentalScan-ExecutiveSummary-May72003.pdf.
16. Sikka N, Carlin KN, Pines J, Pirri M, Strauss R, Rahimi F. The use of mobile phones for acute wound care: Attitudes and opinions of emergency department patients. J Health Commun. 2012;17(suppl 1):37–43.
17. Canadian Nurses Association. Position Statement: Telehealth: The Role of the Nurse. Ottawa, ON. 2007.
18. National Initiative for Telehealth (NIFTE). National Initiative for Telehealth Framework of Guidelines. Ottawa, ON. 2003.
19. Scott BI. Proactively approaching telehealth informed consent. Lexology. 2013, June 19. Accessed July 13, 2013. Available from: www.lexology.com/library/detail.aspx?g=a90e1cd6-8090-481b-90c0-7b19407a70a0.
20. American Telemedecine Association. Practice Guidelines for Teledermatology. 2007. Accessed July 14, 2013. Available from: www.americantelemed.org/practice.
21. Office of the Information and Privacy Commissioner of Ontario. RE: Question regarding withdrawal of consent and its impact on medical records. [Email] Hasham, S. July 22, 2013.
22. Jesada EC, Warren JI, Goodman D, Iliuta RW, Thurkauf G, McLaughlin MK, et al. Staging pressure ulcers using photographs by staff nurses in acute care settings. J Wound Ostomy Continence Nurs. 2013;40(2):150–156. DOI: 10.1097/WON.0b013e31828093a4.
23. Thompson T, Gordey L, Bowles H, Parslow N, Houghton P. Reliability and validity of the revised photographic wound assessment tool on digital images taken of various types of chronic wounds. Adv Skin Wound Care. 2013;26(8):360-373.
24. College of Nurses of Ontario. Practice Guideline: Working with Unregulated Care Providers. Toronto, ON. 2011.
25. Reising DL, Allen PN. Protecting yourself from malpractice claims. Am Nurse Today. 2007;2(2):39–44.
26. Khalil H, Cullen M, Chambers H, Steers N, Walker J. Implementation of a successful electronic wound documentation system in rural Victoria, Australia: A subject of collaboration and community engagement. Int Wound J. [Article first published online: 2013:1-5. DOI: 10.1111/iwj.12041].
27. Ge BC. Telehealth and Standards of Care. Lexology. 2013; May 13. Accessed July 7, 2013. Available from: www.lexology.com/library/detail.aspx?g=388343b8-bf6a-465a-9dd9-d3592abd2d05.
28. Lessig L. Code and Other Laws of Cyberspace. New York: Basic Books. 1999.