UNIVERSITY OF ALBERTA

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Review every 4 years (next review 2025)

GUIDELINES FOR THE APPROPRIATE USE OF ELECTRONIC DEVICES IN CLINICAL SETTINGS

Office of Accountability:	Dean, Faculty of Medicine & Dentistry
Office of Administrative Responsibility:	MD Program
Approver:	MD Curriculum & Program Committee
Scope:	Compliance with this policy extends to all members of the MD Program..

Overview

The Faculty of Medicine & Dentistry at the University of Alberta values innovation in health education, research and service. While innovative use of Information and Communication Technologies (ICT) can promote the faculty's mission, their misuse can frustrate educators, compromise research and threaten patient safety. Specifically, mobile computing devices (smartphones, tablet computers, etc.) have become ubiquitous in the clinical workplace. They improve immediate access to decision support and best evidence, and offer the allure of efficient communication. However, there is growing concern that these same devices distract decision-makers, detract from the learner-instructor relationship, inappropriately expose private information, and even promote the spread of infection. The purpose of this guideline is to suggest ICT norms – indeed, a digital etiquette -- that can maximize benefits while limiting harms associated with the use of mobile computing devices in clinical settings.

Principles

These guidelines are consistent with CanMEDS 2015 eHealth competencies in the domains of:

- Communicator
  "Use information and communications technologies in a manner that supports collegial interaction and enhances doctor-patient relationships"
- Professional
  "Apply an understanding of current legislative, professional and ethical obligations relating to

privacy, confidentiality and security of health data and communications with colleagues, patients, administrators … and the public."

- Health Advocate
  "Anticipate potential harms associated with use of information communication technologies in patient care, professional collaboration and learning… and advocate for humanism in the digital health care workplace."
- Medical Expert.
  "Identify technology-enabled practices that can negatively affect patient safety and health outcomes."

The intent is to promote the conscientious use of mobile computing devices to the benefit of patients, learners, and teachers. Emphasis is placed on enhancing learner-clinician, learner-patient and patient-clinician relationships; separating personal from professional communications and minimizing learner, teacher, clinician and patient distraction.

Considerations

Examples of mobile computing devices that have been adopted into the clinical setting include, but are not limited to: cell phones, smartphones, tablets, personal digital assistants (PDAs), wearable computers and e-Readers. Possible benefits and harms are summarized in the tables below.

Benefits	Examples
Time Management	Mobile access to calendars, clinic and call schedules, teaching plans, etc.
Task Management	Mobile access to task lists, educational prescriptions, bedside exam and procedure logs, to-do lists, etc.
Communications Management	Rapid access to electronic mail, text messages, and group conferencing while being readily accessible via cell phone or messaging to supervisors and instructors.
Knowledge Management	Instant access to online textbooks, references, guidelines, policies, procedure manuals, journals, clinical podcast demonstrations, online lectures, note-taking and knowledge assessment tools.

Learning Management	Mobile access to eClassrooms, web conferencing, learning portfolios, online evaluations, practice assessments, maintenance of competence online diaries, etc.
Knowledge Sharing	Mobile access to journal clubs, note-taking clubs, virtual learning communities, and other educationally appropriate social media.
Clinical Decision Support	Point-of-care access to decision rules, clinical evidence, calculators, drug information systems, clinical pathways, quality criteria, etc.
Clinical Documentation	Electronic Medical Record applications, Electronic Health Record viewers, clinical dictation tools, secure clinical image capture to medical records, etc.

Harms	Examples
Safety	Mobile devices are proven fomites that increase the spread of nosocomial and drug-resistant pathogens.
Privacy, Confidentiality & Security	Lost or stolen personal mobile devices may contain unencrypted or inadequately encrypted information about the user, his/her/they colleagues, institutions, research projects or other sensitive materials where access by non-approved individuals would breach one or more legislative, institutional or civil codes. Any form of storage, including in messaging logs, of any patient information constitutes unapproved digital information sharing and a breach of the Health Information Act of Alberta.
Distraction	Awareness of and (even unconscious) monitoring of messaging, email or communications alerts has been

	shown to adversely affect the performance of medical decision makers and to increase medical error, a form of distraction comparable to what is subject to fines for automobile drivers. Awareness of and attention to personal communications during clinical or learning activities can fragment and distract from service or learning productivity.
Boundaries	Blurring of digital boundaries between personal, educational and professional communications can occur when all happen through the same mobile device. Loss of boundary can increase the risk of inappropriate communications or information sharing.
Relationships	Patients expect the full and undivided attention of their health care provider during any health care encounter and the presence of an active mobile computing device can contribute to the perception that a clinician is unfocused or uncaring. Instructors expect the full and undivided attention of learners to group learning activities and can perceive unapproved mobile device use as unprofessional behavior.

GUIDELINES

All members of the Faculty of Medicine & Dentistry are encouraged to be guided by the following recommendations regarding the appropriate use of mobile computing devices in clinical learning, research and practice settings.

1. Safety
   1.1. Proper and full hand washing and hygiene must be practiced before touching or using any mobile computing device in a clinical environment. After use, the device must be stored in a protective covering outside the field of any clinical activity. Clinical activity includes use

of any clinical technology (e.g. glucometer, pulse oxymeter, blood pressure cuff) or any multi-user computer keyboard or mouse.

1.2. Mobile computing devices must not be exposed in any infection control isolation environment.

1.3. Mobile computing device screens and/or keypads and buttons should be wiped with an alcohol swab daily and whenever exposed in a clinical environment. As alcohol may void manufacturer warranties, the mobile computing device should be enhanced with a transparent protective screen cover and case that can withstand alcohol wipes.

1.4. Mobile computing devices should be turned off or placed in “airplane mode” (wireless and telecom transmitter/receivers turned off) wherever notices about interference with patient monitoring or therapeutic equipment appear.

2. Privacy, Confidentiality and Security

2.1. Demonstrate certification in clinical privacy awareness through satisfactory completion of Faculty (Health Information Literacy online learning module) and AHS privacy training programs for clinicians.

2.2. All mobile communicating devices, irrespective of use, must be secured with a minimum 4 character passcode that is invoked after no more than 5 minutes of inactivity. If available, the ability to remotely erase device memory in the event of theft or loss should be activated.

2.3. Personal mobile computing devices must not be used to capture, store, share or communicate any form of patient information or images, whether the learner considers the information personally identifiable or not.

2.4. Zero footprint (no health data stored on mobile device) approved clinical applications (e.g. Electronic Medical Record applications, approved encrypted patient lists, secure clinical messaging and paging services, clinical image capture tools, etc.) may be appropriate for identifiable health information sharing if explicitly sanctioned and downloaded from an official Alberta Health Service provider.

2.5. Given an acceptably secure and approved image-capture application (e.g. EMR app), patient consent must be obtained before images are captured and the consent must specify the intended use of the image and the accountable individual.

3. Distraction

3.1. Ensure that mobile computing devices have “do not disturb” settings activated, even if that means disconnecting from the network (e.g. “airplane mode”) when engaged in clinical, procedural or learning activities where distraction could compromise decision-making, learning, concentration, patient composure, or care.

4. Boundaries
   4.1. As much as possible, personal and professional communications should be kept to separate geographic (e.g. student/resident lounge or call room) and temporal (e.g. break or lunch) spaces, especially if the same mobile computing device is used for personal, educational and clinical domains.
   4.2. Where it may be acceptable for learners to message one another about learning tasks, it is not acceptable for learners or clinicians to message other members of the health care team unless an institutionally approved secure messaging application (e.g. EMR messaging app) is used. Approved clinical messaging devices (e.g. pagers) have detailed audit trails of all clinical communications, as required by legislation.
   4.3. If an urgent personal or educational communication could be received in a clinical teaching environment, alert colleagues and teachers ahead of time.

5. Relationships
   5.1. A mobile computing device, if visibly, tactilely or audibly present in a teaching and/or clinical encounter should be explicitly acknowledged by stating the educational or clinical purpose of the device.
   5.2. Seek permission for use of mobile computing devices during individual or group learning activities for a specific information management task (e.g., checking drug dosages, seeking evidence, etc.) .
   5.3. If a mobile computing device is used during a learning and/or clinical encounter, explicitly relate that use to the learning or clinical purpose, stating what was learned or discovered, demonstrating the application of technology to humanistic, patient-centred intents.

DEFINITIONS

Any definitions listed in the following table apply to this document only with no implied or intended institution-wide use.	
Faculty members	Includes all academic faculty and clinical academic colleagues; residents; undergraduate, graduate, and postgraduate students; and postdoctoral fellows.
Clinical setting; Clinical Environment	Refers to any environment, either real or simulated, that involves patient-practitioner interactions.

Mobile computing devices	Include, but are not limited to, cell phones, smartphones, tablets, personal digital assistants (PDAs), slate computers, wearable computers and e-Readers.

RELATED POLICIES

1. College of Physicians and Surgeons of Alberta. Electronic Communications & Security of Mobile Devices: Advice to the Profession. January 2016.
2. Alberta Health Services Infection Prevention and Control Best Practice Guidelines. Cleaning and Disinfection IT Equipment. August 2016.
3. Alberta Health Services Level 1 Policy. Information Technology Acceptable Use Policy. October 16, 2019.
4. Alberta Health Services Policy. Mobile Wireless Devices and Services. January 12, 2021.
5. University of Alberta Information Technology Policies, in particular Information Technology Use and Management Policy (June 25, 2010); the Access to Information and Protection of Privacy Policy (January 26, 2007); and the Information Technology Security Policy (June 25, 2010).

REFERENCES

6. Wu RC, Tran K, Lo V, O'Leary KJ, Morra D, Quan SD, Perrier L. Effects of clinical communication interventions in hospitals: a systematic review of information and communication technology adoptions for improved communication between clinicians. Int J Med Inform 2012; 81(11):723-32.
7. Edwards A, Fitzpatrick LA, Augustine S, Trzebucki A, Cheng SL, Presseau C, Mersmann C, Heckman B, Kachnowski S. Synchronous communication facilitates interrupt workflow for attending physicians and nurses in clinical settings. Int J Med Inform 2009; 78(9):629-37.
8. Wallace S, Clark M, White J. 'It's on my iPhone': attitudes to the use of mobile computing devices in medical education, a mixed-methods study. BMJ Open 2012;2.
9. Gill PS, Kamath A, Gill TS. Distraction: an assessment of smartphone usage in health care work settings. Risk Manag Healthc Policy 2012; 5:105-14
10. Weill Cornell Medical College - Smartphone and mobile device policy (http://weill.cornell.edu/its/telephony/mobile/pda/pda-policy.html)

11. Manning ML, Davis J, Sparnon E, Ballard RM. iPads, droids, and bugs: Infection prevention for mobile handheld devices at the point of care. Am J Infect Control 2013; 15(8):e176.doi:10.1016/j.ajic.2013.03.304

APPROVAL HISTORY

APPROVER	STATUS	DATE
MD Program	Approved	27 March 2014
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