



Social Media/Networking and Psychiatric Education: Competencies, Teaching Methods, and Implications

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Abstract

Patient-centered care features quality and timely care in a variety of settings. Technology facilitates care and its use is common in the Digital Native (Z), Millennial (Y), and X Generations, particularly for adolescents and young adults. Social media/networking options like Twitter^R and Facebook^R are popular, as are text, e-mail, and mobile health apps. This paper proposes social media competencies and teaching methods based on the fields of healthcare, service delivery, education/androgogy, and evaluation. A brief review of the literature based on PubMed/Medline, Cochrane, Embase, and PsycINFO was performed using primary terms of social media, networking, technology, competency(ies), and other terminology. The social media/networking competencies are framed in contemporary competency-based frameworks. Teaching methods are aligned with competency outcomes, learning context, and program evaluation options. Case examples demonstrate ways to train residents/fellows/other mental health trainees in curricular settings. Novice/advanced beginner and competent/proficient competencies for social media/networking fit within a larger e-behavioral health curriculum, along with telepsychiatric competencies. Teaching methods for social media/networking competencies require additional planning, use of cases, and other in-time clinical activities for learners and teachers. Institutions must plan for clinical and educational elements, in order to support training, shift attitudes, and promote faculty and staff development. These competencies, their implementation, and impact need more research and institutions need an integrated approach to social media/networking, telepsychiatric, and other technology developments for this new era of care.

Keywords Competency · Social media · Education · Telemedicine · Telebehavioral health

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Introduction

SM/N may be defined as web-based and mobile services that allow people to share a connection, monitor progress, and create/manipulate text, audio, photos, and/or video (Boyd and Ellison 2008; Canadian Medical Association 2015). It is one of the many technologies sweeping through our culture, with both person- (i.e., a vehicle for learning) and patient- (i.e., medium for health) centered movements. For doctors and patients, it is part of a rapidly expanding spectrum of e-behavioral health (e-BH), telepsychiatric (TP), and telemental health (TMH) care (Hilty et al. 2015b). TP/TMH has been shown to be as effective as in-person care in terms of outcomes across ages, populations, and models of care (Hilty et al. 2004, 2013, 2015e; Fortney et al. 2015). New developments include adult (ATA 2009, 2013) and child (ATA 2017) TP guidelines, research across cultures (Yellowlees et al. 2013), and systems (e.g., stepped and integrated care; Hilty et al. 2015e).

SM/N is a shift in society and healthcare. Sites like Facebook^R have reported an increase from 360 million daily active users in 2010 to 936 million in March 2015; 798 million of these use mobile devices (Facebook^R Newsroom). A 2013 survey suggested that 51% of Internet users in the USA engage in SM/N and video sharing online (Cole et al. 2013). In healthcare, persons/patients are shifting from being “mere passengers to responsible drivers of their health...clinicians encourage and value them as full partners” (Frydman 2009). SM/N is in the middle of a spectrum of e-BH care that has emerged (Hilty et al. 2015b)—one end is low-intensity with patients, families, and caregivers seeking health information on the Internet—and the other end employing high-intensity resources like specialist time and synchronous technology (TP) (Table 1). The spectrum is organized based on what technology people pick, likely goals, questions/perspectives, liabilities, and suggestions for clinicians.

The TP evidence-base and competencies (Hilty et al. 2013, 2015c) are far ahead of descriptive reports and “guidelines” for SM/N (professionalism; DeJong et al. 2012) and other technologies (Hilty et al. 2015b). They may provide a guide to SM/N and other e-BH service technology competencies, but there are differences between in-person, TP, and other e-BH care and training. SM/N and most e-BH are quite different than in-person and TP care; the former are asynchronous, in-time, spontaneous, and unstructured engagements. These also occur outside academic health center (AHCs) and other hospital platforms (e.g., electronic health record (EHR)). Systems used for SM/N are usually public and/or proprietary and they afford little privacy, data protection/integrity, and security. Current “guidelines” are not based on evidence or expert consensus according to the Institute of Medicine standards (IOM 2001).

The authors outline SM/N competencies and explore differences between TP and other technologies in this paper, in order to help the reader to:

- 1) Understand competency frameworks and an e-BH spectrum of technologies (SM/N, e-mail/text and apps, TP) for health information and care
- 2) Compare SM/N and asynchronous technologies to TP and in-person care
- 3) Learn, apply, and teach SM/N competencies based on a medical education and practice frameworks
- 4) Develop an approach for evaluation, faculty development, and health system change to adapt to, incorporate, and leverage technology.

A brief review of the literature based on PubMed/Medline, Cochrane, Embase, and PsycINFO from 2000 till present was performed. It used primary terms of social media, networking, technology, and competency(ies), along with secondary terms of mental health, psychiatry, psychology, social work, counseling, and marriage family therapy. While social media and networking terms were not infrequent, the only specific reference to competencies and education was in papers by the group that put forward TP competencies and called for other technology competencies, accordingly.

Competency-Based Education, TP Competencies, and Technology Adopters

Competency Movement and Evaluation

Competency-based medical education (CBME) focuses on skill development and curricula produce desired outcomes for learners rather than knowledge acquisition (Frank et al. 2010). Skill targets and the learning setting inform the selection of teaching and assessment methods. Learner-centered educational outcomes at the outset of a training experience are akin to patient-centered goals (ACGME Lifelong Learning 2014; Frank et al. 2010). Faculty assessment of learners during patient care (Iobst et al. 2010) ensures skill development rather than assuming learners will develop the skills (Snell and Frank 2010).

A straightforward competency framework is needed for faculty, program directors, and administrators. The evidence-based CanMEDS framework describes the knowledge, skills, and abilities that specialist physicians need for better patient outcomes, based on the seven roles that all physicians play: medical expert, communicator, collaborator, manager, health advocate, scholar, and professional (Royal College 2005). ACGME uses domains of patient care, medical knowledge, practice-based learning and improvement, systems-based

Table 1 Social media/networking on the continuum of e-Behavioral health spectrum options: implications for training/curricula

| Source/ entry | Initiator goals/aims | Questions and perspectives | Liabilities | Suggestions for programs |
|---|--|---|---|--|
| 1 Website information | Health information: gain perspective, obtain standard and updated info | Do I need more information? How should I approach the problem? What is out there? Better if referred by clinician who has checked it out | Quality of information and lack of regulation | Provide training on how to evaluate sites and to identify good ones; how to screen for patients' use |
| 2 Support/chat groups or "communities" | Spontaneous, anonymity, gain answers/tips and greater perspective Socialization and networking | What should/can I do? What are others doing locally, regionally or globally? Can I connect easier with others? | Peer compatibility? Information quality? Who is talking on the other end? | Provide curricula in general and how to use at specific clinical sites (e.g., inpatient unit, outpatient care) |
| 3 On-line formal educational materials | Person/patient: education Caregiver: education, supports, and advice Clinician: continuing medical education (CME) | I learn easier this way? I need "sound" info to make decisions for loved ones CME implies good quality; peers' opinion helpful | Some prefer in-person interaction (e.g., Q&A) May not fit learning style | Provide advice on good options, how to evaluate the materials, and help patients do likewise. |
| 4 Self-directed assessment | Person/patient: tips to reflect, make changes, and get help Caregiver: tips to reflect, tools to assess loved ones, and next steps Clinician: give patients assignments/resources; obtain tips on clinical care | What are my needs and resources? What is my next step in seeking help? Can my loved ones/patients get help/support outside the office with help (i.e., with a nurse, mid-level or care coordinator)? | Not all problems can be self-assessed Some illnesses affect insight and reflection Quality is an issue; get a reference | Provide training on how to help patients consider options, take steps, and share information with clinician; start self- and life-long learning options |
| 5 Self-care decision-making options | Person/patient/caregiver: choose information; get perspective; discuss change with clinician Clinician: verify information; suggest good resources; make assignments | Can/should I make a change/take? Do I need help in taking the next step? Who should I get advice from? Which of my patients can do some of this outside the office with help? | Should I do option A or B? How do I decide? Quality, context, and sequential planning are critical. | Provide training on how to help patients take initiative, evaluate a new step (or change in one), and when to get help. |
| 6 Assisted self-care assessment and decision-making; de-identified | Person/patient/caregiver: feel ownership of care and better partnership is with clinician Clinician: distributes my time with help from others and empowers patients | Empowering, in general? Increased self-efficacy/confidence? Feel part of a team? Do I have time to discuss issues with patient? Is there time to train team and share decision-making? | Occasional "bad" decision or poor outcome, partly due to lack of context? Doing more without time/quality is a risk? | Provide training on how to screen what patients are doing and when to seek help, and when to make decisions together. |
| 7 Social media (SM)/networking | Person/patient/caregiver: easy, convenient, and spontaneous Clinician: rarely use; could/should screen if/what patients are doing, why, and impact All: if purposeful and focused on one dimension, it could add to relationship | Can impact therapeutic alliance positively/negatively Public information may be visible; it cannot be collected for analysis, though Discuss, weigh pros/cons, address privacy, when to use/not use (e.g., SI) and tracking (if any) Not billable care | Not HIPAA compliant? Undisclosed and/or impulsive use may indicate problems and boundary issues? Personal/professional role diffusion? | Provide skills, knowledge and approaches in curriculum and with case conferences Focus on developing professional role in transition from past personal experience(s) |
| 8 Asynchronous, between-session patient-clinician contact (e.g., mobile app or e-mail/text) | Person/patient/caregiver has minor question, forgot a question, or needs a detail Clinician: good for quick advice and simple details All: can send/assign apps, questionnaires, reports (e.g., individualized educational | Convenient to reach the clinician or team member? Easier for teen patients, who prefer texting over calling? Build into the EHR? Is the contact tracked, private, documented, and billable? | Some patients and/or clinicians do not use? Things taken out of context; errors? HIPAA compliant? Some see as a nuisance (i.e., extra time) | Provide training across the curriculum; boost at core training sites; enhance with subspecialty (e.g., child) Faculty development suggested for patient and trainee e-mail/text |

Table 1 (continued)

| Source/ entry | Initiator goals/aims | Questions and perspectives | Liabilities | Suggestions for programs |
|---------------|---|--|---|---|
| 9 | Synchronous, traditional, or TMH care plans); use screening/ follow-up surveys to track Person/patient: it works and is much more convenient Clinician: if patients like it, it is a good option | Allows synchronous decision-making (patient–clinician); links providers (e.g., primary care psychiatry) | It always has to be scheduled (and paid for); not spontaneous | Provide curriculum, and other experiences |
| 10 | Integrated, longitudinal mobile health (e.g., wireless, sensors) | Person/patient: access, mobility, and low cost Clinician: better integrated, longitudinal “ecological” assessment | Convenient, multi-modal approach to integrate information, trigger alarms Cue patients/clinicians; prn communication | Requires cellular phone, \$, and platform Difficult across systems |
| | Provide training across the curriculum; boost at one core site Faculty development suggested | | | |

practice, professionalism, and interpersonal skills and communication (ACGME 2013).

TP Competencies, Curricular Development, and Teaching Methods

TP competencies framework is based on the ACGME and CanMEDS models and aligns standard andragogy methods for teaching and assessment (Table 2). Key TP competencies began with the Dreyfus model of learners: level 1—novice; level 2—advanced; level 3—competent; level 4—proficient; and level 5—expert (Dreyfus and Dreyfus 1980). This was simplified to three levels: novice/advanced beginner (e.g., advanced medical student, early resident, or other trainees); competent/proficient (e.g., advanced resident, graduating resident, faculty, attending, or interdisciplinary team member); and expert (e.g., advanced faculty, attending, or interdisciplinary team member).

Regardless of the competency framework, learners have been categorized as adapters of technology based on interest, age, stage in career development, and other factors (Rogers 1962). The categories are influential innovators (2.5%), early adopters (13.5%), early majority (34%), late majority (34%), and laggards (16%). This research has not been stratified according to Digital Native (Z), Millennial (Y), and X Generations. Being in those generations, though, with personal competence with technology, does not automatically imply professional competence and this has led to unintended consequences (e.g., students not updating Facebook^R pages to be

more professional or not setting privacy settings to sequester very personal information).

A Comparison of SM/N and Asynchronous Technologies to Telepsychiatric and In-Person Care

New Ways People/Patients Seek Help Using SM/N and Other Technologies

With contextual issues discussed above, there are some positives and challenges with SM/N versus TP and other technologies. SM/N is empowering in bringing groups on a common theme together (e.g., chat room for support), bringing the world to us (e.g., shopping or comparing health care), and allowing in-time communication/expression. Such technologies do make a patient more of a driver than a passenger, which is consistent with shared decision-making between doctors and patients. SM/N has much broader applications than health care, though, with personal, education, workplace, industry, and global impact. Not all users are technophiles or socially adept.

SM/N, use of the Internet, and Smartphone usage continues to grow at alarming rates without apparent boundaries internationally. Estimated Internet users worldwide now total three billion people, including 86 and 73% of women and men, respectively (Internet World Stats 2011a, b). As of January 2017, approximately 77% of American adults had a

Table 2 An ACGME framework for telepsychiatric (TP) competencies for clinicians and trainees

| Area/topic | Novice or advanced beginner (e.g., advanced medical student, early resident, other trainees) | Competent/proficient (e.g., advanced resident / graduating resident / faculty / attending / interdisciplinary team member) | Expert (e.g., advanced faculty/attending/ interdisciplinary team member) |
|--|---|--|--|
| Patient care | | | |
| History-taking | Perform standard history | Informed consent for telehealth (check to see if form required; option not to do telehealth is discussed) Contextualize history (e.g., aware of geographic and cultural specificity) | Solves informed consent problems (e.g., lacks capacity, just like in-person care) In-depth, well-paced, and concise interview; checks in on comfort level Uses telepresenter/clinician if supportive |
| Engagement and interpersonal skills | Establish therapeutic alliance and/or notes problems Builds trust and rapport Projects self and interest | Identify and manage problem(s) with alliance/trust/rapport Adjust interview to technological and patient needs/preferences/nuances (e.g., substitute for handshake) | Determine best appropriate assessment adjustments based on the setting (in-person vs. TP) Avoids distractions, attends to “virtual” room environment |
| Assessment and physical examination | Identify risk factors based on interview (e.g., suicide, homicide) Ascertain need for literal PE Request help for unexpected emergency | Anticipate risks for suicide/harm to others and identify immediate resources Ensure identification of significant exam findings (e.g., movement disorders; intoxication / withdrawal) Examine and administer tools from a distance ^{CM} with adjustments (e.g., MMSE, PE with aid at distance) | Synthesize information (including risk vs. protective factors and collateral information) Administer tools contextually (e.g., MMSE substitute score item for non-reproducible task at distance) Teach staff/others how to do parts of PE and trouble-shoot PE problems far end |
| Management and treatment planning | Biopsychosocial (BPS) outline Provide summary and recommendations to patient Medical decision-making on safety, need for treatment and other interventions Follow-up with PCP or TP by note Follow-up with necessary others | BPS outline with depth, identify safety and risk factors; use follow-up plan Provide summary and recommendations to patient and interprofessional team Awareness of treatment continuum (levels of care), including ones at a distance Follow in-person medication recommendations (i.e., reviews options, side effects and alternatives if applicable, provides specific instructions for PCP to initiate, titrate, and augment) Formulate plan for calls, Rx and such Follow-up with PCP by TP or phone | BPS outline with prioritization, with emergency plan execution, and obstacles anticipated Tailor recommendations to available resources, cultural specificity and patient preference Engage patient, referring doctor or other providers succinctly Select “best” mode: e-mail, telephone, or other (and if it changes the process); terminate video if too problematic For medication recommendations: considers safety and adherence factors; plan for follow-up and monitoring; aware of legal and jurisdictional issues related to prescribing |
| Documentation | Draft TP note hard copy or rudimentary EHR | Initial/revised draft primary or other specialty care modification for consultation Complex EHR (e.g., Cerner, Epic) | Provide sufficient detail to allow implementation of plan over time and within local context/resources Phone, e-mail and asynchronous notes |
| Billing | Learn why billing is important and how it is configured | Identify diagnoses for billing | Final time spent, diagnosis and codes Consideration of health advocacy issues related to billing; access to care |
| Privacy and confidentiality (medico-legal issues ^{CM}) | Learn in-person basic regulations | Be aware of regulations and learn translation of principles to video and adjunct regulations, if applicable Be aware that technologies are encrypted differently | Practice within in-person and telemedicine standards Be aware of pitfalls with technologies (e.g., cellular phones are not private; Gmail is not HIPAA compliant) |
| Communication^{MS-IPSC} | | | |
| Cultural, diversity, and social determinants of health | Consider diversity of patients, families and communities: language fluency, customs Consider one’s culture, values, behaviors, and preferences ^{CM} Learn how social determinants affect in-person care ^{CM} | Adjust in consideration of patient culture and preference Language fluency: double check/confirm Ways to elicit cultural meaning of illness/wellness Be aware that social determinants may affect interest in, using of, and experience with telemedicine | Follow cultural formulation frameworks Ask if culture affects using TP (general exploration) or explanation of illness Consider patient-doctor relationship in context of culture, values, behaviors, and preferences |

Table 2 (continued)

| Area/topic | Novice or advanced beginner (e.g., advanced medical student, early resident, other trainees) | Competent/proficient (e.g., advanced resident / graduating resident / faculty / attending / interdisciplinary team member) | Expert (e.g., advanced faculty/attending/ interdisciplinary team member) |
|--|---|---|--|
| | | | Adjust interview, assessment, and treatment per social determinants; consider in-person care if critical need |
| Language/interpreter ability | Use the interpreter | Manage time, use professional > staff > family options | Attend to verbal and non-verbal dimensions |
| Communication | Clear communication with patient, family, and healthcare professionals | Clarify and amplify communication Anticipate problems and has basic resolve new ones | Trouble-shoot communication difficulties by using one or more strategies |
| Systems-base practice ^{MS-SBP} | | | |
| Outreach to community | Participate and engage | Visit community in-person before TP Identifies relevant resources and needs within community | Establish and maintain relationships with communities Thoughtful integration of in-person and TP care, if applicable |
| Interprofessional ^{MS-IPSC-} ^{CM} education (IPE) and team work | Participate and experience with different roles; work effectively | Work with interprofessional team and familiar with IPE Begin to teach within IPE | IPE provider and teacher Support interdisciplinary team care (e.g., care coordinators—MA—RN—PA/PCP/NP—therapists) |
| Collaborative primary care | Considers consult from perspective of referring provider’s perspectives/needs | Understand the referring provider’s needs and adapt consultation and note appropriately | Engage providers with unclear needs Uses individual consult as an opportunity for building ongoing relationship Integrate indirect care (e.g., case or chart review) into practice |
| Rural health | Learn about rural access, epidemiology, \$, and other | Learn rural health basics | Practice and role models |
| Special populations | Learn differences (e.g., veterans, child/adolescent/parent/-family, geriatric) | Recognize differences and adapts assessment and management approaches accordingly | Practice and role models |
| Safety | Learn systematic assessment | Identify problems and stratifies risk | Adjust risk and its management to TP system practice |
| Care models | Learn what in-person, TP care, and consulting TP care are | Has facility with traditional referral, consultation care, and TP models Begin to learn collaborative care | Has facility with models of consultation, integrated, stepped and hybrid care; practice with one that fits context |
| Licensure regulations as applied to telemedicine care model (medico-legal issues ^{CM}) | Learn in-person regulations and that there are differences between states | Be aware that in-person and telemedicine regulations may/not differ | Practice within telemedicine regulations state-to-state or within unique system (e.g., veterans affairs) |
| Evaluation | Understand patient satisfaction | Know basic evaluation strategies for TP outcomes | Consider range of evaluation approaches and use results for QI or to inform practice |
| Health advocacy | Identify issues related to access and health equity | Consider how technology can address and also contribute to health equity gaps | Consider ways that the physician role can impact policy and advocacy through technology |
| Professionalism ^{MS-P} | | | |
| Attitude | Learn and be open to technology | Interprofessional clinical practice and teaching/learning | Leadership in groups/teams |
| Integrity and ethical behavior | Demonstrate behavior consistent with | Role model | Role model and gives feedback |
| Scope | Become aware of scope issues of in-person, TP care, and TP consultation | Practice within scope(s) | Provide feedback on scope and boundary issues; trouble-shoots problems |
| Practice-based learning ^{MS-P+BLI} | | | |
| Administration | Learn basics of in-person care | Be aware that in-person and telemedicine care have differences | Practice with adjustments to telemedicine care |
| QI | Learn how to participate in QI | Apply QI information to cases and system | Analyze QI options, selects, and evaluates |

Table 2 (continued)

| Area/topic | Novice or advanced beginner (e.g., advanced medical student, early resident, other trainees) | Competent/proficient (e.g., advanced resident / graduating resident / faculty / attending / interdisciplinary team member) | Expert (e.g., advanced faculty/attending/ interdisciplinary team member) |
|------------------------------------|--|---|--|
| Teaching and learning | Participate and contribute | Organize and provide | Provide context and next steps |
| Knowledge | Relevance History | Relevance History Evidence-base | History Evidence-base Clinical guidelines |
| Technology | | | |
| Adapt to technology | Identify differences between TP and in-person care Tries to project self 15% more (voice/animation) Realize some non-verbal limitations (e.g., offering a tissue, handshake) | Takes steps to engage and put patient at ease Expect and plan for differences Identify barriers → replacement behavior Adding in third part by phone | Use humor, self-deprecatory remarks or “top moments” to ease Analyze what actually happened and make adjustments for next time Additional ways to express empathy |
| Remote site design | Observe | Identify problems and possible solutions to try Modification: toys for a child to play with and furniture | Pre-plan: continuous, iterative improvement Modification: use professional staff for remote play therapy |
| Technology operation ^{CM} | Familiarity with microphone, camera, and pm 2nd camera Observe how multiple technologies (e.g., primary and secondary camera) are used simultaneously | Operate hardware, software, and accessories Basic trouble-shooting (e.g., re-boot system; call for assistance) Operate use of multiple technologies | Optimize hardware, software, and accessories based on context (for enhancement and avoiding distraction) Manage all trouble-shooting operations on near end and advice on far end pm Optimize use of multiple technologies |

Adapted from Hilty DM, Crawford A, Teshima J, Chan S, Sunderji N, Yellowlees PM, Kramer G, O’Neill P, Fore C, Luo JS, Li ST: A framework for telepsychiatric training and e-health: competency-based education, evaluation and implications. *Int Rev. Psychiatry* 2015;27(6):569–92

CM = based on submission for CanMEDS TP competencies

MS = U.S. Milestones; consistent with non-TP, regular competencies of the Accreditation Council of Graduate Medical Education (ACGME): (a) PC patient care, K medical knowledge, PrBLI practice-based learning and improvement, SBP systems-based practice, P professionalism, IPSC interpersonal skills and communication. (b) Example is MS-PC milestones patient care

PE physical examination, PCP primary care provider, QI quality improvement

smartphone (Pew Research Center 2017), Americans aged 13 to 54 use them primarily for entertainment, socializing with others, managing themselves including their health, and researching information (Harvard Business Review 2013). Families and caregivers (Hu et al. 2015) are seeking e-health information from non-traditional sources, particularly the Millennial generation (i.e., teenagers prefer SM/N and prefer technology-based communication) (Hilty et al. 2015b, d).

The boundary between SM/N and other technologies is not always clear. It may differ from traditional or industrial media in many ways, including quality (lower), reach (greater), frequency (greater), usability (variable), immediacy (greater), and impermanence (flexibly altered). Features vary, too, with LinkedIn^R users focused on identity, reputation, and relationships, whereas YouTube’s primary features focus on sharing, conversations, groups, and reputation. People engage in private communities around a narrower theme, as in around a particular brand, vocation, or hobby, rather than SM/N containers such as Google+, Facebook^R, and Twitter.

A wide range of clinical populations seek social support, engagement, or a connection with a clinician (Chan et al. 2014; Hilty et al. 2015e; Luxton et al. 2014). Some young people feel less stigmatization on sensitive topics like sexual health and other behaviors. Of young college students, 94% of participants with mental illnesses used SM/N sites (Horgan and Sweeney 2010). These modalities help boost social support for cancer survivors (McLaughlin et al. 2012), new mothers’ well being (McDaniel et al. 2011), and older adult users and the elderly with family and friends (Sundar et al. 2011; Hogeboom et al. 2010). Studies show that 33% of military personnel may prefer a technology-based platform for MH care rather than talk to a counselor in-person (Wilson et al. 2008), using the iPhone (Bush et al. 2013), and an app called PTSD Coach (<http://www.ptsd.va.gov/public/pages/PTSDCoach.asp>) (National Center for Telehealth and Technology 2013). Part of this is due to reluctance to seek help in-person due to stigma. Others include those with substance abuse, schizophrenia, and affective disorders (Hilty

et al. 2015b; Välimäki et al. 2016), with patients reporting social support/belonging and sharing strategies for coping (Naslund et al. 2016).

SM/N and TP Similarities, the Concept of Presence and “Netiquette”

SM/N, e-mail/text, psychiatric/MH apps for mobile health and synchronous options like FaceTime/video/TP have many similarities. While there is a range of early to late adapters, basic requirements of users include interest, need, time for a learning curve, digital experience, and fundamental software/hardware issues. In regular life outside of medicine or clinical care, technology is used for banking, shopping, coordinating, problem-solving, communication, service, and other functions. Foundation requirements include Wi-Fi, money, service contracts, and other things. For clinicians, requests for contact between visits (e.g., texts, Facebook^R visits) are increasing due to time online (Hilty et al. 2015b). “Friend” requests on sites like Facebook^R have resulted in decidedly mixed views: shall we engage, not engage, or exercise caution (Koh et al. 2013; Frankish et al. 2012)?

The nature of what is exchanged via technology varies depending on the mode used. From a clinical point-of-view, clinicians with good personal qualities/values and interpersonal skills may be equally adept with SM/N and TP. Media broadcasters and other professionals have to project themselves 15% more lively to achieve the same impact as an in-person interaction (Hilty et al. 2002). TP information exchange takes place with both audio and/or video channels, whereas telephone primarily employs an audio channel; the latter leads to information exchange more so than connectedness. Video allows mutual connections and understanding, largely through eye contact, gestures, posture, fidgeting, nods, grins, smiles, frowns, and lip-reading, but even TP limits some detection of non-verbal cues during patient interviews.

There is some overlap, too, between a physical environment for in-person care, video TP, and the virtual environment of a website. Informational cues are incorporated by the viewer without conscious awareness to get oriented in a waiting room or shopping network (e.g., pictures, sound, and pathways). A task-oriented focus with a depersonalized content may occur. Currently, it is assumed that the TP provides “enough” of the physical environment for “social presence,” which permits participants to share a virtual space, get to know one another, and discuss complex issues, even with low-cost systems (Cukor et al. 1998). The same may be true for SM/N.

There are three determinants of successful communication via SM/N and other related technologies. The first is related to user expectations. A task-oriented focus with a depersonalized content may occur with audio only communication—the same is probably true for asynchronous communication. If that is

expected by the user, s/he is comfortable getting to know others known or unknown to them in this fashion. A second issue is whether a person is “present,” that is, meeting a condition of being in/at a specified or understood place. The new term is telepresence, often defined as a person feeling as if they were present in an environment other than their true location; this may be an individual experience or feeling part of a group if others are involved. Finally, there are pitfalls in communication for SM/N with users experiencing a “cuelessness” phenomena/experience or disorientation (Rutter 1984), which leads to higher levels of anxiety (Hilty et al. 2015b).

Online etiquette—or netiquette—is largely ingrained into our culture and provides rules for communicating over the Internet or social networks or devices. It is a social code of network communication. Common parameters include using simple electronic signatures, hijacking a discussion thread, and avoiding multi-, cross-, and off-topic posting. Similar to e-mail, another rule is to avoid typing in all caps or grossly enlarging script for emphasis, which is considered to be the equivalent of shouting or yelling. In the workplace, when someone makes a mistake, it is best to be polite or kind about it. Even if a clinician feels strongly about it, think twice before e-mail/text or making a post. Even with good manners, it may appear poorly to correct everyone else; by private communication in-person, by telephone, or e-mail rather than in public is most likely best.

Shifts in Clinical Paradigms with SM/N

A study employed a survey to assess MH clinicians’ attitudes, finding that 70% are “somewhat or more familiar” with SM/N (Deen et al. 2013). But they do not employ a standard approach to SM/N. Many will simply not engage in SM/N with patients due to time constraints. Others may use an informal, spontaneous approach and discuss SM/N if it spontaneously arises as a point of conversation. The first suggestion is that they verify the identity of the patient and the SM/N account. Second, SM/N, e-mail/ texts, and other electronic communication should only be employed in an established doctor–patient relationship. It is a must to review this as part of the written consent, if possible, prior to initiating electronic communication, and to addend that with new developments. While usage appears to be ubiquitous across generations, attitudes and cautions may not be. Situations which strike attending psychiatrists as problematic may not seem risky to trainees who grew up immersed in and comfortable with SM/N and/or intuitive to any clinician without study. On sites such as Facebook^R or Twitter^R, one must take a step back and think about the ramifications of their post or status update with regards to their colleagues and patients and remember that one does not only represent oneself but their institution as well as their profession.

Patient requests for non-phone contact between visits (e.g., texts and e-mails) are increasing (Hilty et al. 2015a) and SM/N is one of the most common. There are four substantial challenges in the clinical realm of SM/N: (1) it is asynchronous not synchronous, so it cannot be “organized” or structured like traditional care; (2) SM/N does not fit nicely into a clinical care visit/frame and hence there are potential, unique boundary issues; (3) it is conducted over public, private sites, and health system sites making the data “permanent,” but integration and security difficult, if not impossible; and (4) there is overlap between personal and professional life experiences that cause complications, perhaps unlike any other technology. Many do not realize that any information posted online, even if erased, is permanent.

Psychiatrists have long understood the value of the therapeutic frame. Aside from ethical considerations, maintaining boundaries and avoiding dual-relationships with patients allows clinicians to remain firmly in the treating role. This, in turn, empowers patients to reveal embarrassing or painful details within that frame, in part through the trust that doing so will have little consequence on outside relationships (Gabbard et al. 2011). Consideration must be given, therefore, to requests to engage patients outside of what has been so carefully established. Does the request itself represent an unfolding dynamic in session and a desire to stretch boundaries (Gutheil and Gabbard 1993)? If not, it may still prove more difficult for the frame to exist within the same arena in which the patient interacts with friends and family (Facebook^R or messaging applications, for example). If a psychiatrist might hesitate to engage the patient in the midst of their physical social environment, similar questions and ethical considerations might apply to their virtual space.

Given that content posted online is often permanent and searchable even after years, physicians, including medical students and trainees must be aware that their postings can have future implications for their career and professional lives. The Federation of State Medical Boards (FSM/NB) recommends that physicians should use separate personal and professional SM/N sites (such as using a personal e-mail address to log on to a SM/N website (<http://www.fsm/nb.org/Media/Default/PDF/FSM/NB/Advocacy/pub-social-media-guidelines.pdf>)). State medical boards have the authority to discipline physicians for unprofessional behavior exhibited online, which can range from a letter of reprimand to revoking the physician’s license (<http://www.fsm/nb.org/Media/Default/PDF/FSM/NB/Advocacy/pub-social-media-guidelines.pdf>)).

There is confluence and/or overlap of personal and professional information due to the very nature of SM/N—this is very distinct from in-person care, clinical or business video-conferencing, and informal video (e.g., Skype^R, FaceTime^R). Many privacy settings on Facebook^R and other SM/N platforms allow users to designate “Friend” or contact status, but these are not always employed. For patients, this might mean

communications with the psychiatrist are overseen by unintended parties, or even that the presence of the psychiatrist in the patient’s list might directly reveal a treatment relationship. Psychiatrists may also question, with sudden unfettered access to the patient’s account, how much information is ethically appropriate to access. Even correctly chosen privacy settings may not be fail-proof, remain in place with changes in the platform, or withstand approach from the technologically savvy. Patients should not be expected to have the same inherent understanding of privacy risks as their clinicians, thus, considerable education, consent, and documentation seems in order (Yellowlees and Nafiz 2010).

Medical students and residents/fellows/other MH trainees are part of the SM/N phenomenon, sometimes with concerning implications; clinicians and faculty have not been the focus of many studies. In a 2009 survey of 78 US medical schools, 60% reported incidents of students posting unprofessional content online. Discriminatory language (48%), depiction of sexually suggestive material (38%), use of profanity (52%), and violations of patient privacy (13%) were among the incidents reported (Chretien et al. 2009). Only 63% have implemented privacy settings, while those readily visible to the public revealed private details such as sexual orientation, religious views, relationship status, and showed images of the users apparently intoxicated (MacDonald et al. 2010). In 2008, a study found that 68.3% of medical students and 12.8% of residents had Facebook^R accounts. A random subset of ten profiles found that seven included pictures involving alcohol and three had depictions of unprofessional conduct including drunkenness, foul language, overt sexuality, and patient-privacy violations; a small proportion of students had joined online Facebook^R groups with racially charged or sexist titles (Thompson et al. 2008). A recent study revealed that of 281 graduates, 201 had Facebook^R profiles and 40% had unprofessional or potentially objectionable content according to guidelines by the ACGME, American Urological Association, and American Medical Association (2014) (Koo et al. 2017).

SM/N Competencies: Levels of Skills, How to Teach and Evaluate Them

The Approach to SM/N Competencies

SM/N competencies in this article are also based on the ACGME competency framework, with input from CanMEDS and andragogy for the alignment of teaching and assessment methods (Table 3). The SM/N competencies presented here are patient care, medical knowledge, practice-based learning and improvement, systems-based practice, professionalism, and interpersonal skills and communication.

Table 3 An ACGME framework for social media/networking competencies for psychiatric assessment and treatment

| Area/topic | Guiding questions | Novice/advanced beginner (ACGME milestone level 1–2) | Competent/proficient (ACGME milestone level 3–4) |
|-------------------------------------|---|--|--|
| Patient care | | | |
| History-taking | Does informed consent change? What is the best way to screen for what technologies used? | Document if patient is using SM/N and it is discussed Standard history, with questions such as: • Are you using SM/N and for what? • Are you using SM/N for healthcare? | Include SM/N and other technologies in informed consent Screen more systematically with questions such as: • Which SM/N do you use: Facebook, Google+, LinkedIn, Twitter, Tumblr, Instagram, and Pinterest? • Do you use SM/N more or less than other technologies (e-mail/text, apps)? • Do you use SM/N for healthcare? • Do you use SM/N to share/discuss mental health (MH) issues in a forum where you expect others to respond? • Are you aware of risks (e.g., privacy, self-disclosure, cyber-bullying)? |
| Engagement and interpersonal skills | How do we engage them and support their initiative? How do we help the patients reflect, self-assess on the pros/cons of SM/N? How does SM/N affect the therapeutic relationship? | Discuss impact of SM/N use with others if it arises Incorporate SM/N impact on personal and professional life into care | Ask preferences with SM/N and how it has influenced relationships with family, peers, and professional colleagues How is SM/N versus in-person or other technologies for communicating with others? Help patient reflect on link between SM/N use and MH Consider how SM/N affects processes of intimacy, emotion, and perception; (how) does it affect boundaries (see Professionalism)? |
| Mental status (MS) examination | What can use of SM/N tell us about MS at one point in time or longitudinally? | Use SM/N as a parameter of the MS | Compare MS via SM/N to in-person Contact patient with technology or in-person care to check MS? Assess what MS can and cannot be realistically assessed with SM/N |
| Assessment | How do we include SM/N in our overall assessment? Is SM/N being used healthily or does it predict problems (i.e., personality) or overuse (e.g. impulsivity)? | Assess if SM/N use is a relevant issue in personal life and/or healthcare Assess if SM/N “should” be used by a patient and in what manner | Assess SM/N’s role in personal life and healthcare: healthy and/or unhealthy? Consider the need for collateral info from in-person care or others Include SM/N components into in-person evaluation Demonstrate flexibility and decide with the patient the role of SM/N in patient’s needs and preferences |
| Management and treatment planning | What treatment model(s) is(are) best and/or conducive with SM/N? In what ways might SM/N affect the therapeutic alliance? Are there patient-MD differences in use, fluency and communication? | Integrate SM/N into biopsychosocial (BPS) approach Monitor ongoing SM/N use Identify and document memorable and problematic events as they occur If reasonable, focus part of a visit on the use of SM/N and other technologies to talk in-depth | Integrate SM/N into the BPS outline with depth Focus the use of SM/N on one treatment goal to monitor and engage Blend SM/N as a topic in with regular clinical discussions and consider if it affects the therapeutic alliance and/or facilitates reflection between visits Identify safety and risk factors of using SM/N Consider pros/cons of giving advice via SM/N re: medication issues Triage complex, urgent/emergent issues to in-person care |
| Patient and family education | | Understand reliable/healthy and unreliable/unhealthy SM/N options | Recommend how to use SM/N in healthcare (e.g., tips on how to do so, |

Table 3 (continued)

| Area/topic | Guiding questions | Novice/advanced beginner (ACGME milestone level 1–2) | Competent/proficient (ACGME milestone level 3–4) |
|---|--|---|---|
| Administration and documentation | Do patients understand the pros/cons of SM/N use, options, and privacy matters? What is “appropriate” on SM/N and what is not? | Value of using SM/N in healthcare and when to use it | if/when to post emotional/mental issues, and what should be posted and what should not) Offer “good” choices for SM/N use in personal life and healthcare |
| | Is SM/N in policies/procedures? What are the clinic, health system and professional standards related to asynchronous technology? Are there business, financial, and legal angles to SM/N? | Adhere to clinic, health system, and professional requirements for in-person care for documentation and consider amendments for SM/N and other technologies use Seek supervision/advice for non-routine events, if needed | Adhere to policies/procedures and adapt “best practices” in administration for both in-person and SM/N care Develop standard language for consent form, ongoing care and sentinel events on the pros/cons of SM/N use, inclusion in treatment plan and management of sentinel events Consider development of policies/procedures for SM/N and other non-routine telepractice; seek advice in advance to document longitudinally Consider/attend to business and financial issues |
| Medico-legal issues ^{CM} : privacy, confidentiality, safety, data/ security | How do we maintain privacy and security of data for all parties? Is it appropriate to search public information on others, and if so, when? See Professionalism | Identify and adhere to relevant laws and regulations in the jurisdiction(s) of practice and of that of the patient Clarify if SM/N site is public, private or within HER Is aware that others search for information about him/her | Apply in-person relevant laws and regulations in any/all jurisdiction(s) to SM/N, and if necessary, adjust clinical care Educate patient about SM/N and adapt existing laws if none exist for SM/N and other telepractice Obtain clinical and/or legal advice, as applicable Adjusts content and settings of professional (and personal) information available on public sites |
| Interpersonal and communication skills ^{MS-IPSC} | | | |
| Communication | What do we communicate, how and when? What are the best ways to be clear using asynchronous methods in order to avoid/prevent miscommunication? | Be flexible in discussing SM/N use, attempts at communication with provider and understand it Discuss problems if they arise with asynchronous options and arrange alternative options Seek advice on merit and method of responses, if any, to patient’s communication | Discuss scope of communication with SM/N use, clarify expectations, and anticipate problems Educate patient about pros/cons of asynchronous options: scope, timing and agreed upon plan(s) Make brief, clear SM/N communications to acknowledge, clarify, and/or triage to in-person care Clarify potential ambiguous (i.e., multiple) meanings of statements/behaviors |
| Evaluation and feedback | How do we adjust and/or add to regular methods (e.g., faculty, 360°, patient survey)? | Use evaluation parameter(s) as a starting point for decision-making and care Review examples with learner/supervisor | Adjust regular evaluation parameter(s) to incorporate real-time examples Co-review of in situ examples of communication with patients with learner/supervisor |
| Cultural, diversity, and social determinants of health | How do these affect asynchronous methods? What is the impact of: • Technology fluency? • Idioms, “shorthand” expressions, and acronyms? • Generational differences? | Show interest and flexibility in discussing diversity and technology issues Be aware of how social determinants affect in-person care and apply this information to use of SM/N | Ask about the impact of culture and diversity on preferences related to SM/N and other technology use Promote reflection, discussion, and awareness of how social determinants affect interest in, use of, and experience with technology |

Table 3 (continued)

| Area/topic | Guiding questions | Novice/advanced beginner (ACGME milestone level 1–2) | Competent/proficient (ACGME milestone level 3–4) |
|--|--|---|--|
| Language issues | How does this affect asynchronous communication? | Identify communication issues that may affect in-person care and these methods | Ask about immigrant/assimilation, generational, and other cultural factors that impact family Anticipate issues, make adjustments, and manage language impact on in-person and asynchronous technology |
| Special populations | Are there differences, and if so, what are they for SM/N? | Notices positive and negative trends in patient populations (e.g., generation Y or Z, autism spectrum) | Proactively reads, more assertively screens, and routine engages about SM/N use or preference for intensive use (e.g., adolescent, veteran with posttraumatic stress disorder) Be aware of trends across asynchronous technologies (e.g., e-mail/text, apps) |
| Professionalism ^{MS-P} | | | |
| Attitude | Are we open to including technology, specifically SM/N, in practice? How does patient use of SM/N affect the provider’s impressions of patient? | Flexible and open to learning about patient’s use of SM/N. Demonstrate capacity for self-reflection Consider all sources of information in sizing up patient, including technology | Understand, educate, and participate on how SM/N impacts care: communication, relationship building, and spontaneity. Role model willingness to engage, if appropriate safeguards are in place |
| Integrity and ethical behavior | What are the pros/cons of interacting with patients via SM/N? How is the therapeutic relationship (e.g., engagement, boundaries) be affected by SM/N? | Maintain integrity by adhering to professional and governmental guidelines Recognize boundary issues with SM/N communication and searching sites Attend to privacy, confidentiality, and professional boundaries associated with SM/N use | Uses clinical judgment and ethical principles to consider the pros/cons of searching for patient information (i.e., does so for emergent situations, but not just out of curiosity). Encourage reflection about personal versus professional contexts and potential micro- and macro-boundary violations Recognize that personal information (e.g. SM/N, property ownership, political activism) is accessible and regularly monitors adjusts personal and professional corridors of information |
| Scope and therapeutic objective(s) | How does SM/N use change (expand) the scope of practice? What use of SM/N is appropriate to include and not include? | Attend to in-person scope issues and observe for how SM/N may alter Keep focus on shared primary objective of care | Practice within scope(s) Provide education/feedback to patient on scope issues Trouble-shoot problems Offer services with components like SM/N included (or not), as licensed, avoid fraudulent statements/practices and market within regulations (e.g., Federal Trade Commission substantiation rule) |
| Systems-based practice | | | |
| Interprofessional ^{MS-IPSC, CM} education (IPE) and team work | What are the educational needs of the team, its members, and/or the system? If we work as a team, who does what? | Learn about SM/N and other technologies, participate in defined role and share information with others | Discuss SM/N issues for patients with other team members to enhance care and communication Work within the team and outline who takes initiative with SM/N (e.g., a care coordinator monitors a Facebook site) |
| Care models | What, if any, technology is used in what model and how? Can SM/N be embedded into the EHR? | If SM/N is part of the treatment plan, incorporate data into care | Give input to administration on (in)efficiencies and opportunities What part, if any, of the “therapeutic hour” is allocated for staff to attend to SM/N, e-mail/text and other technologies as part of care? |

Table 3 (continued)

| Area/topic | Guiding questions | Novice/advanced beginner (ACGME milestone level 1–2) | Competent/proficient (ACGME milestone level 3–4) |
|---|--|---|--|
| Safety (see Patient Care and Professionalism) | How does SM/N interface with safety? How do we ensure patients reach out appropriately for emergencies? How do we reduce errors? | Educate patient to call and/or set up additional appointment for emergencies Seek advice/consultation, when needed | Prevent, identify, and risk stratify potential problems based on past history in order to proactively not include SM/N from treatment plan Educate patient to use in-person or synchronous (e.g., video, telephone) communication for emergencies If SM/N is part of the treatment plan, develop regular plan to check sites |
| Practice-based learning ^{MS-PrBLI} | | | |
| Evaluation approach | In addition to in-person standards, what additions are needed for SM/N? How can structure and process be enhanced? | Learn from/participate in global evaluations from interdisciplinary team about in-person and technology-based care | Be aware that in-person, SM/N, and other technology-based care have similarities and differences; customize approach Develop/promote attitudes and skills for consistency, quality/specificity, and stability of evaluation |
| Quality improvement (QI) | What in-person (and new) standards need be monitored? What methods of assessment/review inform participants? | Participate in chart review, case/M&M conference, and other activities related to in-person and technology-based care | Apply/adapt in-person QI principles to SM/N in order to adjust assessment and/or care Educate participants on technology-specific principles and measures |
| Learning, feedback, and teaching practices | How do evidence-based guidelines (if any) and QI inform clinical, curricula, rotation, supervisory, and continuing education options? | Add technology-based learning opportunities to regular activities | Continue lifelong learning via seminars, cases, and system discussions Seek out technology-specific education Develop additional technology-specific education short- and/or long-term |
| Technology | | | |
| Adapt to technology | What skill(s) are needed for SM/N? What “little” things can be helpful/add value when using SM/N (e.g., smiley face)? | Use basic etiquette Identify differences between in-person, TP and SM/N care Clarify/spell out brief communications Keep SM/N contact proportioned to treatment plan | Acknowledge and/or engage the patient after his/her initiation; initiate (e.g., benign post) if clinically indicated (e.g., for a depressed patient) Expect and plan for differences between participants Prevent, identify, and manage barriers, obstacles and miscommunications Clarify expectations in-person rather than asynchronously Adjust how to “project” self and express empathy |
| Technology operation ^{CM} | What technology knowledge, skill, and experience is needed? | Pilot 1 or 2 SM/N sites with peers to learn communication options | Gain experience with multiple sites and technologies (e.g., Facebook, Google+, LinkedIn, Twitter, Tumblr, Instagram, and Pinterest) Navigate options, if needed, and advise patients |
| Knowledge | Guiding questions | Novice/Advanced beginner | Competent/Proficient |
| Definition of SM/N | What do providers need to know about the definitions and forms of SM/N? | Recall definition of SM/N Name 2 or 3 SM/N platforms with pros/cons | Describe SM/N definitions and various applications, uses, and risks/benefits to patients Professionally familiar with 2–3 SM/N platforms, in addition to personal use Know standard principles and apply them to different settings Serve as resource for others |
| Evidence-base | | | Know the data, concepts, and principles of SM/N protocol from national |

Table 3 (continued)

| Area/topic | Guiding questions | Novice/advanced beginner (ACGME milestone level 1–2) | Competent/proficient (ACGME milestone level 3–4) |
|--------------------------------|---|--|--|
| Problem-solving and prevention | <p>What evidence is there that SM/N use is helpful or harmful to patient care and professional identity?</p> <p>What capability is needed to prevent problems, solve them, and triage issues?</p> | <p>Know basic “do’s or don’ts” of SM/N for clinical care, as adapted from in-person care</p> <p>Recognize and report problems</p> <p>Perform basic diagnostic work</p> <p>Explain how to use product</p> | <p>evidence-based guidelines (if any) and summative/advisory statements</p> <p>Evaluate new products/options</p> <p>Assess performance issues of current systems or products</p> <p>Assess user requirements and determine best match for patients and other participants with technology options</p> <p>Diagnose complex problems and/or resolve non-routine problems that affect team</p> <p>Serve as a resource to others</p> <p>Knows where/when to request technical assistance</p> |
| Patient care | <p>What are the approach, procedures, therapeutic relationship, treatment plan, and other foundational principles?</p> | <p>Ability to answer questions, discuss, and adjust SM/N in comparison to in-person care, including consent, privacy, security/data, safety, and documentation</p> | <p>Ability to answer questions/teach, discuss/clarify, and adjust/develop options for SM/N in comparison to in-person care in additional areas of scope of practice, communication, culture and diversity, ethics, and care models</p> |
| Risks of using SM/N | <p>Is the provider aware of HIPPA and clinical/therapeutic risks of SM/N use by providers and patients?</p> | <p>Identify 1 potential patient risk of SM/N use (i.e., privacy violation)</p> <p>Identify 1 potential provider risk of SM/N use (i.e., boundary or privacy violation)</p> | <p>Identify 2–3 potential patient risks of SM/N use and advises how to prevent, mitigate, or eliminate them (e.g., use privacy settings; avoid self-disclosure; manage cyber-bullying)</p> <p>Identify 2–3 potential provider risks of SM/N use and prevent, mitigate, or eliminate them (e.g., use privacy settings)</p> |

CM = based on submission for CanMEDS TP competencies

MS = U.S. Milestones; consistent with non-TP, regular competencies of the Accreditation Council of Graduate Medical Education (ACGME)

PC patient care, K medical knowledge, PrBLI practice-based learning and improvement, SBP systems-based practice, P professionalism, IPSC interpersonal skills and communication, TP telepsychiatry, SM/N social media/networking, PA psychiatric apps, e-BH e-mental health, MS-PC milestones patient care, PE physical examination

These were also defined by using milestone levels of the Dreyfus model: levels 1–2—novice/advanced beginner; levels 3–4—competent/proficient; and level 5—expert; no research has been done to align those levels with milestones to date, but this system is a starting place. The current approach was simplified to two levels—down from three for TP—just the novice/advanced beginner and competent/proficient; the emergence of technology is happening so fast that it seemed unrealistic that an expert level is common.

The first area described in the SM/N competencies, patient care, is perhaps the most important, and divided into two parts: (1) clinical—history, interviewing, assessment, and treatment; and (2) administrative-based issues related to care—documentation, EHR, medico-legal, billing, and privacy/confidentiality. Systems-based practice includes outreach, interprofessional education (IPE), clinicians at the medicine-psychiatric interface, geography, models of care, and safety. Attitude,

integrity, ethics, scope of practice, and cultural and diversity issues were grouped within professionalism. An additional domain, technology, was added to include some behavioral, communication, and operational aspects. Communication, knowledge, and practice-based learning are included for completeness, although many skills in this domain are similar to skills needed for in-person care. Content in the domains overlaps to a degree.

Example SM/N Competency: Patient Care

This competency is divided into history-taking, engagement and interpersonal skills, mental status (MS) examination, assessment, management and treatment planning, patient and family education, administration and documentation, and medico-legal issues such as privacy, confidentiality, safety, data protection/integrity, and security. The history-taking area

includes screening for (novice/beginner), and assessing and managing use (competent/proficient). For the latter, this may include reflection on the pros/cons of the use of SM/N and considering options within treatment (if applicable). This would be documented in the consent form—or more broadly—technology is a regular part of the informed consent process. The competent/proficient clinician would also screen systematically across technologies (SM/N, e-mail/text, apps, other) and specific type of SM/N used, such as Facebook^R, Google+^R, LinkedIn^R, Twitter^R, Tumblr^R, Instagram^R, or Pinterest.^R It is helpful to know if the patient uses SM/N for miscellaneous life issues, healthcare and/or MH care, as well as if s/he is aware of risks (e.g., privacy, self-disclosure, potential for cyber-bullying)? Our goals are both to empower patients, and promote purposeful use of technology if it is used therapeutically.

Example SM/N Competency: Privacy (Patient Care), Interpersonal and Communication Skills, and Professionalism (e.g., Doctor-Patient Boundaries)

As mentioned above, medico-legal issues are framed as part of the Patient Care domain, but they do overlap with the Interpersonal and Communication Skills and Professionalism domains. There are many important themes and perhaps these are better addressed by the Guiding Questions of these domains (Table 3):

- How do we maintain privacy and security of data for all parties?
- What do we communicate, how and when?
- What are the best ways to be clear while using asynchronous methods in order to avoid/prevent miscommunication?
- How does patient use of SM/N affect the provider's impressions of patient?
- How do cultural differences and language affect asynchronous communication methods?
- What is the impact of:
 - Technology fluency
 - Idioms, “shorthand” expressions, and acronyms?
 - Generational differences?
- How is the therapeutic relationship (e.g., engagement, boundaries) affected by SM/N?
- Is it appropriate to search public information on others, and if so, when? About 20% of clinicians reported searching patients and 60% believed it could enhance clinical care (Deen et al. 2017).

Teaching SM/N Competencies

An approach to teaching SM/N competencies involves a wide range of methodologies, settings, and participants (Table 4).

Many of these plans are consistent with teaching fundamentals of in-person and/or TP care, but because SM/N and other technologies are asynchronous, some plans shift the context and approach to teaching. For example, how do trainees “organize” SM/N, e-mail/text, and app contacts throughout the week “into” supervision “in time” or as part of a caseload? Since the material is relatively new, it cannot just be quickly dealt with by a “curbside consultation” approach; indeed, it may be required to set aside time to think about boundaries, policies, and other issues. Another example might be charting a series of ongoing asynchronous contacts along with therapy themes and clinical impulsivity (e.g., self-mutilation, purchases); this may require in-depth therapy supervision on cases not already triaged in that direction. Furthermore, SM/N unlike TP, does not allow faculty to supervise a clinical evaluation or consultation real-time or at a distance.

The AADPRT taskforce on Professionalism and the Internet developed a curriculum based on vignettes designed to teach psychiatry trainees about online-related issues (DeJong et al. 2012). It consists of several vignettes organized around nine issues: liability, confidentiality and privacy; psychotherapy and boundaries; safety issues, mandated reporting; libel; conflict of interest; academic honesty; netiquette and professionalism remediation. One teaching method is to employ case-based learning using real-life examples or vignettes from the curriculum (Table 4). It is important to draw from trainees' own experience with the Internet. Interactive methods like role-plays can be used for flushing out the issues, to practice communication skills, identify options for decisions, and propose solutions for patients. Group input and feedback from peers and faculty helps everyone participate. Trainees can follow-up with self-directed, problem-based learning according to their needs (Flickinger et al. 2015).

There are several opportunities to teach trainees “in real time” in the clinic when interacting with patients. In child and adolescent psychiatry, parents and teenagers may often ask the physician about use of cell phone texting and/or e-mails to communicate (e.g., to share the child's IEP). Faculty should use these instances to model appropriate conversation with the families about use of these devices for communication and if not already discussed as part of the consent process, it should go that direction and be documented. All parties should be linked to clinic, department, and health system policies—if in place—and to review them periodically as asynchronous technologies have not yet “stuck” in parties' knowledge bases and are constantly evolving.

There are a number of faculty development issues with SM/N. The current generation of medical educators may not be as familiar with it as the trainees, so programs to bridge that gap must be developed. Hence, competencies for practicing medicine in the digital era have become equally essential for trainees and faculty. Since much of the faculty development initiatives are now shared by the

Table 4 Teaching and assessment methods for development of clinical SM/N skills/competencies

| Teaching and/or learning method | Context(S) | Competency domain(s) addressed | Learner assessment methods |
|--|--|--|--|
| Didactic teaching All methods | Dependent on venue/setting | Patient care, systems-based practice, technology—primarily knowledge at the pre-competency and competency levels Provides content knowledge, but less effective for developing attitudes and skills | Written tests: multiple-choice and short-answer questions Audience participation system |
| Brief didactic | Clinical setting with SM/N issue for in-person or TP pt. (e.g., patient makes disclosure using non-secure technology and encourages clinician to answer; privacy) | Focus: solve immediate question/dilemma (e.g., emergency, privacy) Focus: engage/help learners contextualize day-to-day events and gain further education | Application to context Written tests: multiple-choice and short-answer questions |
| Grand rounds or longer didactic | Classroom in person, by video, or webinar | Focus: provide overview of research, trends and relevance of SM/N—an asynchronous mode along with e-mail/text and mobile apps—in contrast to synchronous modes (e.g., in-person, TP or telephone) | |
| Case-based learning Brief vignettes Complex, multi-step cases | Individual, pair/share and problem- and/or team-based learning about SM/N issue for those with primary in-person, TP, or other technology-based care (e.g., patient discusses suicidal ideation; how to triage this) | Patient care, system-based practice, technology—knowledge for all levels of competency, depending on the complexity of the case Focus: deepen content knowledge and begins to apply and generalize knowledge to real-life examples. Focus: in-depth cases are a good way to scaffold pre-competency to competency level Focus: good for complex clinical situations to develop steps of treatment/management plans (e.g., emergency) Focus: effective for highlighting key asynchronous events that are random, ill-timed between clinic visits (and supervisory hours), and less likely to emerge in in-person or TP care | Case-based written tests: multiple-choice and/or short-answer questions (e.g., next best step is...) Oral presentation either with pre-assigned case (similar to flipped class) or in session case. |
| Clinical care with patients (see patient care in Table 3) Observing faculty | Live patient interview in-person or TP (e.g., initial evaluation) in which SM/N use arises, is screened for and/or the focus of the conversation | Patient care, communication, technology—primarily at the pre-competency level Useful for pre-competency level introduction Can also be used to demonstrate more complex skills by the learner or role modeling by the faculty Foci: develop interviewing skills, decide with patient on scope and manage new events related to technology. Identify use of SM/N by patients, purpose, and impact. Documents. Give options of appropriate (or not) use, in general, and in the therapeutic relationship Educate patient about routine use, cautions with, and common errors/pitfalls (e.g., to send suicidal, homicidal comments to SM/N websites); avoiding negative behavior websites (i.e., how to be a “better” anorexic). Create a culture whereby key issues about SM/N use can openly be discussed. | Evaluation by observation supplemented by video and chart review Researches and analyzes trends in SM/N. Develops and disseminates policies related to similarities/differences of technologies to in-person care. |
| Group observed or co-interviewing | | Patient care, communication, professionalism, technology—primarily | Mini-CEX (Clinical Evaluation Exercise) |

Table 4 (continued)

| Teaching and/or learning method | Context(S) | Competency domain(s) addressed | Learner assessment methods |
|--|---|--|--|
| | Group interview room (in-person or TP): learners take-turns with assessment; group and supervisor feedback. Can also use separate room or 2-way mirror. | at the pre-competency and competency levels Systems-based practice—primarily pre-competency level Focus: good context to adapt develop interviewing skills, decide with patient on scope, and manage new events related to technology Focus: allows for group members to employ knowledge to screen, evaluate, and plan SM/N options (i.e., some may have extensive SM/N experience and share this in vivo) Focus: allows for group/discussion and reflection so can be used to explicitly address elements of professionalism; and also to reflect on cultural and social factors Focus: builds consensus on pros and cons of TP | completed by faculty on each learner and direct verbal feedback. Peer-recorded written evaluation; peer review |
| Professional reflection, monitoring, and hygiene related to patient care and supervision | Reviews own personal and professional information to identify publically available information to patients Supervision: shares findings in individual regular and/or in-depth therapy supervision (or group supervision) | Systems-based practice, practice-based learning—all levels of competency Synthesis of complex cases Focus: awareness of policy-oriented factors or areas of more advanced knowledge gaps Focus: systems-level thinking and health planning and resource allocation Corrects inaccuracies, prevents/manages boundary violations Inquires if patient has accessed others' (including clinicians') personal/professional information on-line and uses clinical judgment to consider the pros/cons of searching for patient information Adjusts to be congruent with projecting self | Oral presentation in supervision, group and/or didactics (e.g., grand rounds) Chart review (e.g., adjustment to treatment plan) Pre- and post-review of provider's SM/N site Review/adopting new policy on SM/N for clinic Feedback through peer review process. |
| Weekly caseload supervision which encourages reflection, discussion and decision-making | Unexpected events between live visits (e.g., patient friends trainee; patient reviews trainee's information) Supervision: shares findings in individual regular and/or in-depth therapy supervision (or group supervision) On-line review of patient and/or trainee information | Patient care, communication, systems-based practice, professionalism, technology—primarily pre-competency to competency levels Develops attitudes and skills more so than content knowledge Good to assess events and review decision-making on correspondence Focus: evaluate meaning of events, including transference and countertransference Focus: development and adjustment of management plans (e.g., triaging events and next steps; preserving privacy and boundaries) Focus: tentative plan to discuss issues with patient and collect information on reactions, meaning and such | Reflection in real time Feedback in real time on case presentation and decision-making Review of updated treatment plans Follow-up report on interventions and impact Longitudinal, cumulative evolution of clinical relationship |
| In time supervision in-person or at distance on critical incident (e.g., emergency) | Expected and/or unexpected event(s) (e.g., SI, aggressive posturing or threat, sexual overtone on SM/N site) | Patient care, systems-based practice, professionalism—primarily pre-competency to competency levels Provides content knowledge and skills more so than attitudes Focus: immediate adjustment of management plans (e.g., triage patient to | Timeliness of request for supervision Initial assessment of potentially emergent situation and plan of action Feedback in real time Follow-up report on interventions and impact |

Table 4 (continued)

| Teaching and/or learning method | Context(S) | Competency domain(s) addressed | Learner assessment methods |
|--|--|---|---|
| | | live visit, if necessary, for dangerous assessment Focus: engage emergency response systems including authorities for duty to warn) Focus: engage/help learners contextualize day-to-day events and gain further education | Chart review (e.g., documentation related to specific language of SM/N, triage and response |
| Simulation—with video or standardized patients | Use of standardized patients or pre-taped video clips | Patient care, communication, systems-based practice—primarily competency to advanced competency levels Focus: ability to watch/reflect on own performance and style Focus: ideal for more advanced skills that require start-stop and in-action reflection and feedback (e.g., administering tools; challenges with safety/risk; practicing use of interpreter; trouble-shooting communication problems) | Feedback in real time OSCE |
| Research and quality improvement Case write-ups Literature reviews Quality improvement projects | By trainee with mentorship. Can be for individual feedback or submission for conference presentation or publication projects | Systems-based practice, practice-based learning—all levels of competency Focus: synthesis of complex cases Focus: awareness of policy-oriented factors or areas of more advanced knowledge gaps Focus: good introduction to administration and use of evaluation and outcome metrics Focus: systems-level thinking and health planning and resource allocation | Written or verbal discussion and feedback. Feedback through peer review process. |
| Role as educator—learning through providing education specific to SM/N Provide didactic sessions | Learner participates/leads discussions on SM/N | Systems-based practice, practice-based learning—all competency levels Develops attitudes and skills more so than content knowledge Focus: learn to work with an interprofessional team Focus: adapt communication to multiple people Focus: develop advanced skills, such as enhancing capacity and competencies in distance staff (e.g., teaching to use technology, or assessment tools, or in physical exam) | Reflection journal for observation. Evaluation forms completed by distal participants. Feedback solicited from participants |
| Group and interprofessional learning (e.g., journal club) | Live or via web | Systems-based practice, practice-based learning—all competency levels Focus: develop attitudes and skills more so than content knowledge Focus: enhance interprofessional and collaborative skills Focus: build professionalism skills Focus: establish community of practice and outreach relationships | Evaluation forms completed by distal participants. |

TP telepsychiatry, *SM/N* SM/N, *PA* psychiatric apps, *e-BH* e-mental health

program director, vice-chair of education (if one is in place), and chair, it may be helpful to involve trainees in teaching faculty about the latest SM websites, e-mail/text trends, and how apps are used. Portals for this effort might be quality improvement, scholarship/research projects, and other professional development opportunities. In 2012,

Albert Einstein College of Medicine of Yeshiva University was awarded a 2-year grant to educate their faculty and medical students on using SM/N appropriately and effectively, as part of Education and Training to Professionalism Initiative by the Institute on Medicine as a Profession (IMAP) and the Josiah Macy Jr. Foundation.

Teaching on E-mail/Text: Case Vignette and Recommendations for Faculty and Programs on Privacy and Patient-Mother-Teacher Privacy and Confidentiality

Case Vignette 1

Gina is a second-year child and adolescent psychiatry fellow (Gina) who is working with a 15-year-old teenage girl who has a history of depression. Gina has been in contact with the patient's schoolteacher (Teacher) who agreed to share patient's individualized education program (IEP) over e-mail. One day, while responding to Gina's e-mail about the patient's progress, the teacher copied patient's mother on the e-mail. Today, Gina received an e-mail from the patient's mother to discuss something urgent with Gina prior to the patient's next therapy session, which is also today.

Questions:

1. How should Gina respond to patient's mother?
2. Should she reply by e-mail or call mother?
3. Should Gina share with the patient that her mother made contact?
4. Should she call the teacher to discuss what happened?

Given that Gina has not had a discussion with the patient or mother about online communication, it is best for her to not respond to mother via e-mail. Physicians must keep privacy issues in mind if using e-mails or texts with patients. One must carefully think about the purpose of bringing these methods of communication into the treatment framework with their patients. It is recommended that one should consider the risks and benefits of this approach, including thinking about obtaining informed consent—ideally from the start of treatment or in this case, from this point on—from the patient and mother. The plan should be documented in the chart, along with a potential plan for texts/e-mails with regard to the pros/cons, alternatives, and shared decision (Clinton et al. 2010; DeJong and Gorrindo 2014).

Gina reached out to her supervisor for guidance, and they decided that Gina might want to call the patient's mother and explain that they should have a discussion about whether or not to use e-mails in future communication and/or discuss urgent matters over the telephone. It also seemed imperative to speak with the teacher about sharing her e-mail, so gaining informed consent from the parents for communicating with the teachers in the future is a priority; this is often part of the consent process in beginning treatment. It is also important that the supervisor is familiar with nuances associated with the use of technology and is able to think through the situation with the trainee.

Another issue is that some emails are encrypted according to the Health Insurance Portability and Accountability

Act (HIPAA), but Gmail and others are not; texting does not meet HIPAA standards of protecting electronic health information, either. Hence, the information shared over texts may not be private and could be harmful for a patient, whether accessed by the patient, employers, or others. Some organizations have developed specialized e-mail/texting systems within the EHR, but even then correspondence to Gmail would not work. Therefore, another thorough discussion with the patient is indicated about the pros/cons of this as well as the alternatives.

Commentary and Suggestions

Faculty as supervisors may be variably prepared to manage this type of situation. The core issues are (1) time management and “fitting” these events in the supervisory frame; (2) knowledge/familiarity with SM/N, e-mail/text, and other technologies; (3) privacy and confidentiality; and (4) knowledge and teaching of clinic, department, health system policies. If there is no mention of this in a curriculum (Table 4) in terms of lectures, case-based discussions, and other modalities, the challenges are even greater.

The clinic, department, and health system is challenged with standardizing adult and child and adolescent clinic care, documentation, and supervision. There may or may not be policies in place—even if there is one, many participants are not aware of it or cannot teach it systematically and reliably.

Teaching on Safety Issues: Case Vignette and Recommendations for Faculty and Programs on Trainee Response to a Suicidal Post as Alerted by Patient, Friend, or Parent

Case Vignette 2

A 17-year-old Hispanic American male has seen a psychiatric resident Henry since last year for twice a month therapy for depression and anxiety; his mood is improving with now only 2–3 criteria of major depression most weeks and no suicidal ideation. His mother attends every other month for one of the visits. The patient is doing okay in school, has a leadership role in an after school organization, and is gay. The patient has a Facebook^R page and has many friends; he is aware of settings for close friends versus others and acquaintances, though settings have “dropped” or disappeared once and a few others found out his sexuality. He has been the receptacle of some bullying at school and rarely on his Facebook^R page. An incident last week, his mood dipped and he posted, “I might as well give up and just be dead” on his page on a Thursday. His sister relayed it to their mother who relayed it to Henry who decided to wait to discuss this at the next appointment on Monday. The family could not locate him Friday evening, as he “stayed with a friend on Thursday night.”

Questions:

1. How should Henry respond to patient or the patient's friend or parent?
2. How should Henry assess the lethality of the post?
3. What are the clinic, program, department, and health system protocols for managing this event?

The first step for Henry may appear to be *to ascertain the relative risk* of the post by collecting information from any/all sources of information: the patient (or friend or parent). All would agree this is important. As with regular clinical care, though, the validity and reliability of the response(s) may come into play. And, such as the case, we then have to incorporate the MSE to inform the assessment—but what if the SM/N post and parties are talking over the telephone, e-mailing/texting, or using another technology? Therefore, many would suggest the first step is *identifying the locale of the teenager* in order to send resources to secure the environment and/or triage them to a secure, clinical environment. There is some risk of over-responding, but that risk may be justified, particularly if the context of the post is ambiguous (e.g., the patient is brand new; the content; shorthand, emoticon, or acronym). Hence, the evaluation is the second step. Some of this may depend on clinic, program, department, and health system protocols—however, some may not have a SM/N policy, in general, much less have integrated it with emergency outpatient policies.

Another issue is whether it is okay for a physician to respond with a post or use the SM/N modality, to acquire any of the information above, and/or to manage/triage the situation. This could be debated: pro, stay in contact, clarify even if there are complications; con, all of this is very delicate and subject to public scrutiny later. We may also suffer a confidentiality breach even if Henry does not reveal any patient details. But what if his profile mentions which fellowship residency program he is in?

A recommendation by the AAMC is that all public discussions about a patient should satisfy the “PRIP test”—privacy, respect, intent, and perception. The boundaries between professional and personal spheres can blur online, which is why it becomes important for physicians to keep the two separate and conduct themselves professionally in both. This test was suggested in response to ill-advised comments or venting to fellow trainees, for example, which violate patient respect and trust. Even well-intended humor may lead to harmful events. The appropriate response for the resident would be to manage his/her feelings privately, in supervision or in therapy. This type of professionalism breach—or a response to suicidal ideation—may have significant negative impact on the program, clinic, department, health system, and profession.

Returning to the case, physicians may feel tempted to engage in patient-targeted googling as well, especially under

unique circumstances such as safety concerns (e.g., when a patient is brought to the emergency room after her friends saw a concerning post on Facebook^R, but the patient denies this). Before searching for a patient online, a clinician must carefully consider the intent and purpose of this search, anticipated effects of gaining information online, and how this may impact the physician-patient relationship. The physician may want to obtain consent from the patient before searching them online; however, given that information posted online is public information, it can be accessed without a release if thought to be essential for treatment (Gabbard et al. 2011). It is the physician's duty to act in the patient's best interests while minimizing any risk of exploiting them (Clinton et al. 2010).

Commentary and Suggestions

Faculty as supervisors are typically quite well-prepared to manage emergencies for an outpatient clinic, but this type of situation involves significant e-management issues. The core issues are (1) triage steps...being clear of the priority to find the locale first, most likely and not get distracted by the SM/N issue; (2) knowledge/familiarity with SM/N, e-mail/text, and other technologies; (3) if there is no way to ascertain locale, skill in contacting an experienced medical director, and/or administrator to consider e-intervention (i.e., specialized way to find local or have an experienced crises operator manage the communication by SM/N); and (4) knowledge and teaching of clinic, department, health system policies. This would seem to be a basic or core requirement in a SM/N curriculum (Table 4) or a site-based curricula (e.g., outpatient, emergency department) Table 5.

The clinic, department, and health system is challenged with integrating traditional policies with SM/N policies (or mere components). It may also require collaboration with emergency/crisis response teams, other components of the health system, and/or community resources.

Social Media/Networking: Implications for Departments and Academic Health Centers (AHCS)/Institutions

SM/N Competencies as Part of a Broader e-BH Curriculum for Care and Training

Institutions may want/need to develop an approach to SM/N competencies as part of the broader e-health and e-BH care, education, and administrative movement (Hilty et al. 2015c). An outline of an overall e-curriculum for psychiatric education includes these new technologies and medical informatics ones (Torous et al. 2017). Technology options may be preferred to traditional in-person care by people, patients, families, and caregivers (Table 1). Technology provides flexibility

Table 5 Synopsis of clinical and professional guidelines on the e-BH spectrum of care: person/patient-centered health information to e-mail/text[†], social MEDIA/networking to internet-based/telemental health options

General

1. Maintain professionalism at all times—follow institutional policies, “assume that all information exchanged is public and posted in a medium no different than a newspaper,” and maintain a disclaimer.
2. Be authentic, have fun, and do not be afraid—“the only way to create meaningful relationships over social media is to be genuine.”
3. Ask for help—pay attention to “how people interact (e.g., etiquette)” and “mimic the social media service and community’s practices (so long as they are professional).”

Traditional TMH care guidelines

4. The adult ATA TMH Guidelines (ATA 2009, 2013).
5. The children and adolescent ATA TMH Guideline (ATA 2017).

Key considerations for website health information, texting and e-mail.

6. Health information on the Internet for persons, patients, and caregivers is rarely regulated. When possible, seek out information from organizations/institutions/businesses that have some oversight/expertise (e.g., the National Institutes of Health; specific disorder agencies like the Depression and Bipolar Support Alliance).
7. Be cautious, due to unclear privacy/confidentiality issues, about use of new digital communication from one user to another using standard protocols (i.e., e-mail, SMS text messaging, multiple messaging service (MMS) messaging, and instant messaging). The issues appear to be similar for proprietary networks (e.g., Twitter direct messages, Facebook Messenger, Epic MyChart electronic medical record messaging, My HealtheVet electronic medical record messaging).
8. Requests for other contact between visits (e.g., texts, e-mails) with asynchronous modalities is good for some things (e.g., answering yes/no questions, trading a piece of information) but not other things (i.e., emergencies, complex decisions). Attend to expectation, boundary, and nuances in communication of one mode versus another.
9. Use e-mail, text, instant messaging only for patients who maintain in-person follow-up.

Social media

10. Be mindful of privacy, professional image, confidentiality, and expectations for use in general (Recupero et al. 2005; Frankish et al. 2012) and for social media (Koh et al. 2013); follow institutional policies.
11. Consider pros/cons of gathering information about patients: intent, use, and implications.
12. Physician-produced blogs, microblogs, and comments: “pause before posting” and “step back” to consider what is conveyed to the public about the physician and the profession.

Professionalism beyond social media

13. Contextualize decision-making in terms of professionalism and follow the lead of organizations have specifically made recommendations about professionalism and social media (e.g., The American College of Physicians, Canadian Medical Association (CMA), and British Medical Association (BMA) (Farman et al. 2013; American Medical Association, 2011).
 14. Separate personal and professional life (CMA 2015), if it can be done (BMA 2013; Grajales et al. 2014).
 15. Contextualize approaches based on education/training/supervisory issues (DeLong et al. 2012).
- #### Internet-based videoconferencing guidelines
16. The American Telemedicine Association Practice Guidelines for Video-Based Online Mental Health Services cover teleMH (TMH) services (ATA 2013).
 17. Follow state (e.g., licensing laws), federal, and other regional.
 18. Verify provider and patient information.

around particular obstacles: geographic distance from services; special needs (i.e., autism-spectrum, sensory, and motor disabilities); and immobility (i.e., housebound due to physical disabilities or MH problems like panic disorder or phobias)(Hilty et al. 2015b, d).

The spectrum of low- to high-intensity services mentioned above may be characterized by several factors singly or in combination like the level of technology, care coordination, intensity and duration of care, and acuity/need. Adding a spectrum of low-intensity e-BH services offers flexibility, but may require new workflows for care, documentation, billing, and training. Informed consent starts the discussion of expectations and clinician management of the “therapeutic frame,” privacy issues, and data integration (i.e., public, private, and health system sources).

There are many implications for SM/N, e-curricula, and TP training for programs, departments, and institutions (Torous et al. 2017). Clinicians are faced with e-mail/text, EHRs, SM/N, telephone/video therapy, and a range of other technologies. As clinical informatics has emerged across medicine, educators and clinicians have begun to understand the importance of it in residency training, medical student education, and faculty development to ensure the competencies are on target and measurable. This movement—along with a commitment to CBME in preparing learners for practice and for meeting societal needs (Frank et al. 2010)—could prompt us to take e-health and TP seriously far beyond GME into undergraduate ME (UME), faculty development, IPE, and other sectors. SM/N can aid in professional development, too, as surveys show that physicians actively use an average of 2–4 h of professional-leaning networking sites per week (e.g., Sermo, LinkedIn); this extends to more popular sites, with 40, 25, and 20% physician participation in YouTube, Blogging, and Twitter, respectively (Barreto and Whitehair 2017). Networking and promoting one’s scholarship is also increasing (Markham et al. 2017).

A Change in Culture Related to Technology, Faculty Development, and Patient Care

Faculty display a wide spectrum of behavior, attitudes, and skills in employing social media. It is important in this era of increasing integration of technology and medicine for faculty, departments, and AHCs to skillfully navigate social media for clinical acumen, teaching/training administration, and professional advancement. At a minimum, departments, AHCs, and other provider organizations employing clinicians should create a set of social media policies and an annual training mechanism to update faculty on the common risks of unprofessional behavior and HIPAA violations. However, there is also a real opportunity to be proactive in equipping psychiatry faculty with the tools to become proficient and even expert users

of social media for clinical, career development, and institutional public relations purposes.

AHCs generally see a technology platform upgrade as essential, but prefer to wait on anything considered “innovative” without funding. A common argument against adopting technology is competing interests of care, training, and research. However, business, technology, banking, and even SM/N sites (e.g., dating) have learned that in order to survive, they must adjust to people’s preferences for electronic and online modalities. Businesses readily address change in stepped fashion to remain viable, find new markets, and to match products with user needs (Kotter 1996). Similarly, movements in medicine point to systems and providers to understand the person behind the patient, their needs/actions, and their behaviors (Miles and Mezzich 2011; Ekman et al. 2011), preferably at a population level.

One basic question is, “What are the significant barriers to making e-BH a part of regular care?” Many would argue that the field of medicine has to make a significant paradigm shift, at least in terms of technology in the context of patient-centered care (PCC) as per the IOM (Institute of Medicine 2000, 2001). Many organizations have already made recommendations about professionalism and SM/N (e.g., British Medical Association (BMA), Canadian Medical Association (CMA)) (BMA 2013; CMA 2015; Farnan et al. 2013; Grajales et al. 2014). The Council of Emergency Medicine Residency Directors Social Media Task Force also recommended that each residency program develop a SM/N policy, in accordance with the designated institutional officer, public affairs, legal/privacy officer, and information technology departments of a health system (Pillow et al. 2014).

Paradigm Shifts in Medicine, Leadership, and Institutions

The main, current barrier to technology-based care may be clinicians themselves and attitudinal barriers of today’s healthcare leaders and decision-makers. These people sometimes support and drive innovation, but may also inadvertently stifle it with non-incremental, conservative approaches and resistance to change, often citing financial risk as a rationale. Leaders in healthcare, research, and education need practical data, advice, and incentives to make this paradigm shift. If technology facilitates work, is efficient, and at least offers a cost offset, change may occur. From an infrastructure perspective, increasing numbers of health systems already have excellent access to broadband networks and are running their own EHR and administrative information systems. Addressing the change management issues and ensuring the technology infrastructure is in place, as supported by a relevant policy environment and clinical guidelines, helps create an overall platform for technology-based, value-added clinical, education, and research components.

But the most significant paradigm shift in the US model of healthcare would have to be related to reimbursement. There is trending toward greater TP and limited telephone care (e.g., hematology and thromboembolic diseases) reimbursement. Veterans affairs and other capitated or managed care organizations see the utility and efficiency of low-end technology use. But technology is not high on the radar of value-based care (VBC) and accountable care organizations (ACOs) that are driven by the Center for Medicare and Medicaid Service (CMS) and the Affordable Care Act (ACA) (Hilty et al. 2017a). Physicians are a crucial leverage point in these systems, complemented by interdisciplinary teams and stepped care models (Hilty et al. 2015e). This shift also requires faculty development for teaching, supervision, and evaluation (Litzelman et al. 1998; McLean et al. 2008; Skeff et al. 2007; Srinivasan et al. 2011).

Discussion

This is the first set of SM/N competencies to be put forward, as only informal guidelines based on input from the fields of healthcare are currently in place. Unlike the TP ones, these are framed into novice/advanced beginner and competent/proficient levels; an expert level was not included and this would need exploration (Hilty et al. 2015c). These competencies do not fit our traditional, hierarchal UME, GME, and CME structural framework about skills and expertise, which assumes a progression from medical student, early resident, late resident/fellow, early career clinician, and experienced clinician. Nor can we fall back on traditional generational assumptions to quickly organize these competencies. Furthermore, across MH disciplines, there is great variability of levels of clinical skills (Hilty et al. 2017b). Nonetheless, this approach appears broadly applicable to interdisciplinary, interprofessional, and international groups. We have attempted to identify, describe, and delineate behaviors for the competencies that can be measured and evaluated. Furthermore, we have provided an approach to select, align, and contextualize teaching methods to achieve the desired outcomes. Finally, the use of ACGME domains is one reasonable approach (ACGME 2013), but others might work just as well.

Many clinicians, leaders, and other stakeholders may not see SM/N as a central component of clinical care. However, this technology appears to significantly affect people's and patients' lives and may also contribute to patient care. Child and adolescent psychiatrists and training directors are confronted with it daily, though, so health systems may have to attend to it. Certainly, there are a number of patient care domain issues to attend to like privacy, professionalism, and documentation. Competencies can help clinicians consider how and when to include SM/N into clinical care and

education. Clinicians/faculty are at the crux of this paradigm shift, since they supervise trainees. One disturbing study revealed that digital professionalism deteriorated during core clinical clerkships—in terms of behavior, privacy, and attitudes (Mostaghimi et al. 2017)—which indicates that a better culture of training at all levels is needed.

New paradigms are needed to shape our response to technology adaptation, in order to prevent unnecessary disruptions and organizational that limit change (Armstrong et al. 2004; Bowe et al. 2003; Christensen et al. 2007). A training movement that influences clinicians/faculty may be coupled with a traditional quality and performance improvement approach. An outline of institutional competencies for TP adaptation for AHCs has already been published (Hilty et al. 2015c).

There are many actual and potential limitations to this initial attempt to establish a set of competencies, the approach to teaching them, and the basic plan to evaluate them. First, broader consensus, preferably through a modified Delphi approach of experts, is suggested—organizations like the American Medical Association, American Psychiatric Association, American Telemedicine Association, the Coalition for Technology in Behavioral Sciences, Telebehavioral Health Institute, American and Canadian Psychological Associations, and other MH/behavioral science organizations. Second, the metrics of a more detailed approach to evaluation need to be spelled out; all competencies need to be measurable. Third, it is not realistic to expect SM/N competencies to “work” without faculty development at the organization level (e.g., AHC and of partnering sites) and across disciplines, as well.

Conclusions

SM/N is moving into mainstream medical education and clinical care due to its relevance to people, patients, families, and caregivers. Younger generations—which include a number of medical students, psychiatry residents/fellows, and other MH trainees—are part of this movement and many patient populations are far ahead of clinicians, faculty, and administrators. The role of SM/N “in” care will take time, research and evaluation to determine, but more education and training for SM/N and other e-BH technological competencies appear to be needed now. Teaching methods for SM/N competencies require additional planning, use of cases, and other interactive activities to engage the learner and teacher in clinical events over time, with more emphasis on sequential rather than a cross-sectional integrated learning context. Training programs, contemporary medical education frameworks, and quality performance initiatives are needed system-wide, both in cross-sectional and longitudinal trajectories. Qualitative evaluation of participants is suggested to iteratively improve the process. SM/N competencies, their implementation, and

impact need much more research and institutions need an integrated approach to these technology developments for this new era of care, partly to shift attitudes and support faculty, training, and staff development.

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