

SOCIAL MEDIA, E-HEALTH AND CLINICAL PRACTICE: TIPS FOR CLINICIANS, GUIDELINES, AND EXPLORING PATHOLOGICAL INTERNET USE

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ABSTRACT.

The patient-centered care features quality, affordable, and timely care in a variety of settings – technology is a key part of that – particularly among younger generations and child and adolescent patients. The consumer movement related to new technologies is nearly passing clinicians by, as new ways of communicating with others (text, e-mail, Twitter, Facebook) revolutionizes how we experience life and access healthcare. This paper explores a continuum with healthy, innovative behavior on one end (e.g., social media) and pathological Internet use on the other end – and the range of self-help and e-mental healthcare options being used. Specifically, it focuses on how social media adds to, yet may complicate healthcare delivery, such that clinicians may need to adjust our approach to maintain therapeutic relationships, interpersonal/clinical boundaries, and privacy/ confidentiality. We suggest planning ahead to discuss expectations about online communication between doctors and patients as part of the informed consent process, offer other do's and don'ts for patients and clinicians, and review applicable guidelines. More research is needed on consumer and patient use of technology related to healthcare, as is an approach to basic and advanced measurement of outcomes.

1. INTRODUCTION

The patient-centered healthcare movement and developments in child and adolescent psychiatric care have interesting intersections, in general, and some specific to the use of technology. We aim to deliver quality, affordable, and timely care in a variety of settings (Institute of Medicine, 2001; Council, Geffken, Valeras, Orzano, Rechisky & Anderson, 2012), with a patient-centered medical home model (PCMH; Rosenthal 2008), and with financing realigned by the affordable care act (ACA; Crabtree, Nutting, Miller, [Stange](#), Stewart & Jaen, 2010). The field of child and adolescent psychiatry is rapidly trying to adjust to the use of social media and patient-doctor texting, e-mailing and such. This falls a bit out of its regular research paradigm (e.g., neurobiology, autism, genomics), and even beyond clinically based innovations (e.g., dyadic therapy for woman/infant; Institute for Healthcare Improvement's Triple Aim, Triple P Positive Parenting Program) (Dossett, Shoemaker, Nasatir-Hilty, Daly & Hilty, 2015; Bisognano, Cherouny & Gullo, 2014; Tsivos, Calam, Sanders & Wittkowski, 2014). In order to understand social media, we need to understand the person behind the patient, and why/how they do what they do (Miles & Mezzich, 2011; Ekman, Swedberg, Taft, Lindseth, Norberg, & Brink, 2011).

The adolescent population and their generation are highly captivated by new technologies. New digital communication includes: e-mail, standard message service (SMS) text messaging, multiple message service (MMS) messaging, instant messaging; proprietary networks like Twitter direct messages, Facebook (Snowdy, Shoemaker & Hilty, In Press) and increasing use of psychiatric apps (Chan, Torous, Hinton & Yellowlees, In Press); Pinterest, Instagram, Tumblr, Snapchat, WhatsApp, YikYak are yet

others. As of January of 2014, 90% of adults have a cell phone and 58% have a smartphone (Pew Research Center, 2014); the rate is probably higher on the smartphones for teenagers. Aside from entertainment purposes, those aged 13 to 54 years in the U.S. use a majority of their smartphone time to socialize and interact with others, manage themselves including their health, and research information (Harvard Business Review, 2013). Internet use has grown exponentially worldwide comprising nearly three billion users. Statistics show that the Asian and Pacific regions account for the majority of Internet users worldwide (44.8 percent), followed by Europe (21.5 percent), North America (11.4 percent), Latin America (7.0 percent), Middle East (3.7 percent) and Oceania (1.0 percent) (Internet World Stats, 2015).

So, one may ask, "How do these new technologies fit in?" The answer may require a different point-of-view of our landscape. As above, we are shifting *from* doctor-, treatment-, or clinic-centered care, to patient-centered care. The older approach might have contextualized Internet-based, mental health (MH) as: 1) health information via websites; 2) support groups and participation in a "community"; 3) formal educational resources with evaluation; 4) tools for self-directed assessment, lifestyle change, or decision-making (e.g., diabetes, depression); 5) one-time medical advice/consultation or general advice in a group led by a professional; and 6) teleMH (TMH) services by video or live Internet-based therapy (Mucic, Hilty, Parish & Yellowlees, In Press). TMH, electronic health record (e.g., Epic MyChart or My HealthVet messaging) and other clinical care models (e.g., collaborative, integrated, and/or stepped care) also provide care multiple points-of-service (Davis, Everett, Kathol, Katon, McIntyre, Scully, Sitzler & Sorel,

2011; Hilty, Ferrer, Callahan & Yellowlees, 2013; Hilty & Yellowlees, 2015; Yellowlees Shore, Roberts, & American Telemedicine Association, 2010), including by asynchronous (Odor et al 2011) and rural child patients (Myers, Vander Stoep, Zhou, McCarty & Katon, 2015). Maybe we need to shift to a person- or patient-centered point-of-view?

One thing stands the test of time, regardless of the point-of-view, and that is “quality” care in psychiatry depends on patient-doctor engagement, the therapeutic relationship, and shared decision-making for treatment (Hilty, Srinivasan, Xiong, Ferranti & Li, 2013). A revision of the biopsychosocial (Engel, 1980) to a bio-psycho-socio-cultural (BPSC) model of care has been suggested (Hilty Ton, Lu & Yager 2014A), as we explore beliefs, norms, and values, and ethnic, culture and language issues that affect health (Hilty Ton, Lu & Yager 2014B), including with technology (Yellowlees, Odor, Iosif, Parish, Nafiz, Patrice & Hilty, 2013). Shared understanding and decision-making equalizes the informational and power symmetry between doctors and patients (Hamann, Leucht, & Kissling, 2003). Stories, though subjective, are well described in their role in healing, in moving people to change behavior, and helping the new generations learn about medicine (Greenberg, Leucht & Kissling, 2002).

This paper will help the reader to understand recent trends and adapt clinical care by:

1. Considering why social media is popular, particularly with younger generations and clinically with child/adol pts.
2. How social media changes care for better and worse (e.g., boundaries, privacy, confidentiality) and
3. How to plan ahead...guidelines, do's and don'ts for patients and clinicians, and

dealing with difficult populations (e.g., pathological use, addictions).

2. MENTAL HEALTH CARE AND HOW TECHNOLOGY IS BEING APPLIED.

Social media: an overview.

The expanding use of social media and advances in digital connectivity dictate that we must, once again, contemplate how best to account for and integrate new trends in technology with existing clinical practice. Social networking has been defined as “web-based services that allow individuals to: 1) construct a public or semi-public profile within a bounded system, 2) articulate a list of other users with whom they share a connection, and 3) view and traverse their list of connections and those made by others within the system” (Boyd & Ellison, 2007). For twenty years, we have grappled with the integration of TMH into existing psychiatric practice and now it is time to evaluate the impact of social media. As it is more nuanced, fluid, and “in the community” instead of in the clinic, we must be mindful of how it works, what it offers, and how to integrate it with effective mental health care.

In a recent survey of the U.S. general population, 78% of Internet users reported to go online at least once a week, with 87% of them checking email at least once per day, and 20% sending instant messages on a daily basis (Cole, Suman, Schramm, Zhou, & Salvador, 2013). Results showed that the majority of Internet users tended to surf the Web (78%), followed by social networking and video-sharing (51%) – more than playing online video games (36%), downloading or watching videos (35%), or downloading or listening to music (33%) (Cole, Suman, Schramm, Zhou, & Salvador, 2013). Time spent online among the general population has increased substantially over the past decade,

from a 9.4 mean hours online per week in 2000 to 20.4 in 2012; pathological users, however, have been estimated to range from 20-80 hours online per week (Shaw & Black, 2008).

The number of people who use social media is on the rise, and the data is staggering. For the month of December 2014, Facebook reported 1.39 billion at-least-monthly users and 890 million daily active users on average (Facebook). Contrast that to 360 million total users just 5 years prior (Facebook). It is also clear that social networking is also less-frequently tied to the home computer, but that smartphone apps and mobile Internet access mean people take their networks with them as they go. Facebook estimates that 745 million people access their accounts from mobile devices on a daily basis (Facebook, 2015). The sheer power and ease-of online networking platforms pique our interests with regards to how they might be used in healthcare.

One can envision dramatically increasing the access to good quality patient information, promoting and de-stigmatizing mental health treatment, facilitating connections to online support groups, and more, all with a few clicks of a button. One might consider the ability to advocate for patients and the profession in-line with one's personal views, a la the Facebook group Doctors for Obama, which rallied support in 2008 for the US president's campaign and continued to maintain dialogue with his administration post-election through the strength of the group's network (Jain, 2009). Others who treat adolescents and young adults might be attracted to the idea of "meeting them where they are," with the opportunity to engage them in a "hip" and familiar medium. A provider may shift from a regular website to one with goals to attract, engage and get to know patients. Going further, one could further engage patients therapeutically

through tools built into the social networking site (e.g., self-screening questionnaires, diaries).

Social media, patient-doctor relationships and impact of technology on communication.

The importance of the therapeutic alliance in successful treatment is well established across disciplines. In mental health treatment, the relationship between the provider and patient is unlike any relationship in one's personal life. Efforts to establish rapport, but with consistent attention to boundaries allows the provider to be seen, not as a friend (importantly), but as a professional to whom patients can feel confident revealing themselves (Frankish, Ryan & Harris, 2012). Effective communication facilitates such disclosure. When the parameters of the therapeutic frame are significantly and repeatedly blurred, the trust that previously long-held secrets will be handled appropriately and with benefit to treatment, begins to erode. The introduction of social media and other digital communications bring with them multiple opportunities to unintentionally jeopardize this process.

The impact of new technology on how we go about formulating an assessment and plan should also be considered. For example, the components of a thorough formulation, to include the biopsychosocial model, should remain the same. Questions arise, however, from increasingly facilitated access to information on our patients through social media applications and the ability to quickly search the Internet for data. At what point does the obligation to thoroughly inform our understandings begin to conflict with a patient's right to privacy? How do we define that data which is 'fair game' and that which should remain privileged? We must also protect patient autonomy and ensure that limitations imparted by new modalities of

communication do not infringe upon the principles of collaboration and informed consent. Finally, treatment planning which includes any new technology must still account for patient safety, appropriate follow-up, and attention to the management of emergency situations.

We can learn from the application of other technology to medicine about changes related to verbal and non-verbal communication – there have been surprises. For telemedicine by videoconferencing, the critical variable in communication was its ability to simulate real-time experiences in terms of image and interaction – or “presence” (Turner, 2001). Presence is defined as “... the fact or condition of being at the specified or understood place” (Kim & Biooca, 1997). Even TMH or telepsychiatry (TP) by videoconferencing has a few wrinkles, though, as rarely it is more difficult to detect non-verbal cues during interviews; this has been previously described as the “cuelessness” phenomena (Rutter, 1984).

Unconscious trends have emerged from social science studies regarding technology types. A task-oriented focus with a depersonalized content may occur with video (Elford, White, Bowering, Ghandi, Maddigan, St John, & Battcock, 2000). This was also noted in telephone vs. in-person vs. TMH/TP comparisons (Ball, McLaren, Summerfield, Watson & Lipsedge, 1995); on a spectrum of detecting cues, TMH/TP may be in the middle between telephone and in-person communication (Hilty, Nesbitt, Kuenneth, Cruz & Hales, 2002; Cukor, Baer, Willis, Leahy, O’Laughlen, Murphy & Martin, 1998). Information exchange takes place primarily on an audio channel rather than a video channel (Cukor, Baer, Willis, Leahy, O’Laughlen, Murphy & Martin, 1998; Ochsman & Chapanis, 1974; O’Malley, Langston & Anderson, 1996). Participants respond in a “conservative” or “stilted” way

when audio delay occurs with video, satellite or cell phones (Fussell & Benimoff, 1995; Hilty, Luo, Morache, Marcelo & Nesbitt, 2002; Hilty, Ferrer, Callahan, & Yellowlees, 2013) resulting in more interruptions of the interview. Finally, for the same conversation, in-person takes less time than telephone, which in turn, takes less time than videoconferencing (Ochsman & Chapanis, 1974; O’Malley, Langston & Anderson, 1996).

Overall, with social media – and other virtual or asynchronous environments – there are many questions: 1) Do we connect the same way? 2) How do we adjust? 3) What are patients’ and clinicians’ tendencies toward, and ability to communicate by, technology? And 4) What have we been (normally) taking for granted (e.g., in a physical environment, informational cues are incorporated without conscious awareness, like general appearance or how a patient may walk in a reticent way). Participants need to be aware that in the virtual environment, we may miss cues from the in-person physical environment.

3. SOCIAL MEDIA AND KEY CLINICAL ISSUES.

Boundaries and dual relationships.

Consider the hypothetical case of the therapist, who, while browsing his/her own Facebook account one evening, comes across a “friend request” from a current patient with whom he/she is engaged in therapy. The therapist must now consider the implications behind the request, choose whether or not to accept, and determine how best to respond to the patient regarding her decision. Does this request reflect a desire on the part of the patient to push the boundaries of the therapeutic frame, perhaps related to some aspect of his presenting problem or in response to an unfolding dynamic in session (Gutheil & Gabbard, 1993)? A recent study at

Rouen University Hospital in France found 73% of residents in multiple specialties had Facebook profiles, 6% of whom had Friend requests from patients, 4% of which were accepted (Moubarak, 2011).

By avoiding dual-relationships with patients, we establish that we are now, and even after therapy, only in the treating role. Patients are empowered to reveal shameful or painful details to their providers, in part through the trust that doing so will have little consequence on any outside relationship (Gabbard, 2011). While we understand that a true friendship entails a more equal exchange of private information and confidences (Frankish, Ryan & Harris, 2012; Kane & Sands, 1998), patients may not have the same understanding. After all, the newly accepted provider now appears on the same list as the rest of the patient's friends and family. One can see how this sudden integration might impact the ability and willingness to self-disclose.

Requests for other contact between visits (e.g., texts, e-mails) are increasing due to time online (Hilty, Belitsky, Cohen, Cabaniss, Dickstein, Bernstein, Kaplan & Silberman, 2015). Asynchronous written or e-mail language is good for answering yes/no questions, trading a piece of information (e.g., confirming appointment, medication side effect), but it is not synchronous. Emails 'should' be sent during regular working hours to attend to expectation and boundary issues (Hilty, Belitsky, Cohen, Cabaniss, Dickstein, Bernstein, Kaplan & Silberman, 2015). Asynchronous methods do not afford vocal nuances like pitch modulations, changing volume, and meaningful pauses, and there is no accompanying body language; this may lead to misinterpretations and have unexpected consequences. (Interestingly, some of this, too, may be "in play" soon, if patients and doctors begin to send audio- or video-clip messages!)

Privacy for patients.

It is also worth noting the effect on the amount of information available to both parties following an affirmation of 'friend' status. Many privacy settings on Facebook are dependent on this designation. That is to say, the ability to view pictures, wall-posts, send messages, and access various bits of personal information may be granted to 'friends,' while potentially forgetting the sheer range of acquaintances one has included in that same friends list (perhaps to include one's closest friends, one's family members, an old classmate with whom one no longer really associates, a friend of a friend one met at a function once). Patients may now find themselves privy to many details of their providers' personal lives. While many argue that some self-disclosure on the part of the therapist can be useful when strategically applied, most agree that a great deal of disclosure is rarely advised and can become an obstacle (Frankish, Ryan & Harris, 2012). For cases in which examining transference might be valuable to the treatment, the ability to maintain a somewhat neutral presence might be compromised.

Social media sites were not designed with protected doctor-patient interactions in mind; rather, they were designed for social networking. Hence, they are not equipped with the various protective measures, which are required of, for example, an electronic medical record (Yellowlees & Nafiz, 2010). Less-obvious issues relating to patient privacy might also arise. Acquaintances of the patient might wonder about the new connection with a known psychiatrist, or vice-versa, a therapist's friends might be able to deduce that the new addition (whose origin the therapist will not divulge upon asking) is indeed a patient. In rural communities with relatively few people, this may be an even bigger issue, especially if the patient expressly

desires to keep her involvement in treatment a secret.

Another question regards accessing patient information in public forums - providers should ask themselves what information about the patient is ethically appropriate to access. After all, a new friend designation suddenly opens up the contents of many patients' accounts for perusal. A novel approach to considering a particular piece of information's privacy is dividing information into the following categories: 1) public-public (that which was clearly designated for public consumption, to include newspapers, opinion blogs, and public registries), 2) public-private (that which might be available publicly, but which was clearly not intended for the general public, to include content commonly found in one's social media account), and 3) private-private (that which is not easily publicly accessible and is not intended as such, to include a private in-person conversation or a private e-mail) (Frankish, Ryan & Harris, 2012).

Privacy for providers.

Many providers across the world, much like their patients, enjoy their own private social media accounts outside of work. Not all practitioners, however, routinely monitor their privacy settings (or set them in the first place) and some are shown engaging in behavior, which might influence the perceptions of others with regards to their character and, perhaps, their professions as a whole. A survey conducted in 2006 and 2007 of then-recent medical graduates in New Zealand found that 65% of graduates had Facebook accounts. Around 63% of those had implemented privacy settings, while 37% of those remaining (those which were readily visible to the public) revealed private details such as sexual orientation, religious views, and relationship status. Another 10% showed

images of the users apparently intoxicated (MacDonald, Sohn & Ellis, 2010).

Research has also been reported about medical students and social media, and at one school, 68.3% of medical students and 12.8% of residents had Facebook accounts (Thompson, Dawson, Ferdig, Black E, Boyer, Coutts & Black N, 2008). A random subset of 10 profiles found that 7 included pictures involving alcohol and 3 had depictions of unprofessional conduct including drunkenness, foul language, overt sexuality, and patient-privacy violations. A small proportion of students had joined online Facebook groups with racially charged or sexist titles. In a survey of 78 US medical schools in 2009, 60% reported incidents of students posting unprofessional content online (Chretien, Greysen, Chretien & Kind, 2009). Discriminatory language (48%), depiction of sexually suggestive material (38%), use of profanity (52%), and violations of patient privacy (13%) were among the incidents reported. Policies on online conduct already in place were reported by 38%, with another 11% actively developing them.

The understandable need for providers to live personal lives outside the public's eye can clash most unfortunately with the accessibility of information available online and the aforementioned patient desire to be informed about one's provider. Problems might even arise for those who choose not to contribute content. With the ability to 'tag' other people in photos posted online, providers might learn they were featured in professionally unbecoming photographs long after many others have seen them (Gabbard, 2011; Silk & Yager, 2003). Privacy settings may be insufficient to prevent such content from being seen by the particularly earnest or technologically savvy users (Shore, Halsey, Shah, Crigger, Douglas & AMA Council on Ethical and Judicial Affairs, 2011).

While providers should strive to respect the privacy of their patients online, it is unlikely that most patients will employ the same standards in reverse. In 2010, approximately 140 million Americans were thought to use the Internet for healthcare each year (Yellowlees & Nafiz, 2010). The expansion of sites featuring physician information and consensus from the literature is now common practice (Gabbard, 2011; Yellowlees & Nafiz 2010; Clinton, Silverman & Brendel, 2010; Gorrindo & Groves, 2008). Available information is seemingly endless and can include profession-related things like reviews from patients (accurate or not), educational background, professional affiliations, and one's CV, but also more personal items like one's political contributions, family genealogy, and even how much was paid for one's home. Since the average user views 1.9 pages of results per search term, it may be prudent for providers to search themselves and be familiar with at least the first few pages of results (Gorrindo & Groves, 2008). Providers should also be aware that information voluntarily posted online is likely permanent and use discretion accordingly (Shore, Halsey, Shah, Crigger, Douglas & AMA Council on Ethical and Judicial Affairs, 2011).

Professionalism and provider image.

Content found online can have far-reaching consequences. Some employers are beginning to utilize Internet and social media searches to screen potential candidates. There have been several news reports depicting medical board reprimands and even dismissals following patient privacy violations (Ginory, Sabatier & Eth, 2012). Another man found his career in jeopardy after content was found linking him to illicit drug use and male prostitution (Ginory, Sabatier & Eth, 2012). Public sentiment seems to suggest that many take notice of what professionals post online

and hold medical providers to a higher standard of conduct. While combing through the lay public's comments on a story about unprofessional online behavior by medical students, Greysen et al found the comments "Anybody who isn't smart enough to figure out what's OK to post on the Internet has absolutely no business being in charge of other people's health," and "As professionals, doctors, teachers, lawyers, etc., are held to a certain standard. If that's not your cup of tea, find a different job" (Greysen, Kind & Chretien, 2010).

On its face, being held to an expected level of decorum might seem unfair. Providers who lead stressful practices might feel constantly under the microscope without room for reprieve. Others might cite limits on free speech and self-expression. It is helpful, however, to consider the amount of deference afforded to physicians by many (with some cultures more than others) and the responsibility that might entail. People might look to a psychiatrist or therapist for cues in how to respond to a natural disaster or perhaps an interpersonal conflict. On the flip side, those with little contact with mental health providers might see certain conduct as affirming a particular stigma or personal belief (for example, that psychiatrists are simply pill-pushers who don't actually care about their patient's individually). Or perhaps more disturbing, consider the parent of a child in need of mental health care, whose hesitancy to engage available resources is further heightened by witnessing crass and boorish behavior by a psychiatrist online.

The general consensus is mental health providers do have a duty to maintain a certain level of decorum and professionalism when in the public eye (a duty which is perhaps owed to the profession as a whole and to all those whose health might be otherwise negatively affected). With the nature and reach of social media, the concept of "in the public eye" may

extend to anything, which is posted online, particularly when efforts to protect that information are either non-existent or fail. This notion is replicated in many institutional policies as well as in the American Medical Association's Policy on professionalism in the use of social media (Shore, Halsey, Shah, Crigger, Douglas & AMA Council on Ethical and Judicial Affairs, 2011). The latter also dictates a physician's responsibility to identify and bring to their attention the unprofessional behavior of other providers.

Patient safety.

As stated previously, providers wishing to introduce new technologies into clinical practice must do so while continuing to account for the patient's safety, an appropriate plan for follow-up and monitoring, and a clear plan for responding to emergency situations. This would certainly hold true when engaging patients via social media (or via text messaging, chat platforms, e-mail, or any other form of digital communication for that matter). On Facebook, contacts have the ability to send messages directly to one another, to post messages on another contact's personal page (or 'wall') which may then be seen by any audience member fitting criteria of the page owner's privacy settings, and to also post 'status updates' which are then displayed to other contacts in a running 'newsfeed' on Facebook's homepage.

Consider a psychiatrist who has accepted contacts from several patients for the purpose of organizing an online medication group. Suppose one of her patients leaves a post on the psychiatrist's wall to the effect of "Thanks SO much for all your stupid advice. Don't worry, you won't ever hear from me again. By the time you read this, I will be dead!" Existing literature is lacking for clear guidelines on how to handle such an event (Myers & Lieberman, 2013). What should the

psychiatrist's response be in this case? What if the post had been left 2 days prior and the psychiatrist was not in the habit of routinely checking her personal page? Alternately, are the psychiatrist's responsibilities the same if the patient voiced suicidal thoughts in a status update that went unnoticed? It would certainly seem unreasonable to expect her to monitor all of her patient's personal pages (bringing into question again issues of patient privacy). It is also worth mentioning that the above scenario could conceivably occur while using both one's personal account and with a separate professional account, as suggested in some guidelines (below).

Other types of discovery may prove similarly problematic. In many jurisdictions, licensed providers are required by law to report suspicions of child abuse and neglect. If evidence of such presented itself via a patient's photo in the provider's newsfeed, it may be her professional responsibility to investigate further or report her concerns to the appropriate agency. Similarly, the Tarasoff law in the United States assigns psychiatrists a duty to help protect potential targets from harm when their patients issue threats of violence. Similarly to the threat of suicide, the psychiatrist would need to consider how best to respond and to do so in an emergent manner. To throw an additional element into the mix, can we be sure the person we are interacting with online is truly our patient, and not an imposter with access to login information (Yellowlees & Nafiz, 2010)?

These situations are not straightforward, and yet, it is prudent to consider them ahead of time (as much as is possible), rather than scramble in the moment to determine the best course of action. At a minimum, it would seem that establishing clear expectations and rules for communication online with one's patients is essential before entering into such an

arrangement. Things to cover might include the frequency at which the provider will check his or her account, the expected time-frame for response, and what types of emergent information may be inappropriate to communicate online. In addition to a signed contract, a provider might reiterate the rules in print in strategic locations online. Of course, this still may not prevent an angry or attention-seeking patient from violating these rules and precipitating the same levels of distress and frustration nevertheless.

Other things to agree upon beforehand might be establishing what constitutes a boundary crossing or disruption of the frame, rules for things like ‘tagging’ the provider in posts or pictures, and measures to protect privacy, such as agreements not to interact with people in each other’s contact lists. A discussion about potential implications for the patient’s privacy as well as the potential impact to the therapeutic relationship may also be apropos. Ultimately, the decision regarding how and if to implement social media into clinical practice is an individual one, based in part upon how the unique characteristics of one’s practice, patient-base, and intended online endeavor combine to inform the potential risks and benefits. Consultation from a trusted source would likely be worth the effort and highly advised.

4. GUIDELINES AND OTHER SUGGESTIONS FOR CARE AND HOW TO DEAL WITH PATHOLOGICAL USE OF TECHNOLOGY.

Guidelines for patient care related to social media and dealing with pathological use or technology addictions.

For TMH/TP, we have American Telemedicine Association (ATA) adult guidelines (Yellowlees et al 2010) that review scope, clinical applications, and clinical/administrative/technical procedures

for practice. An ATA Outcomes Guideline was particularly well done (Shore, Mishkind, Bernard, Doarn, Bell, Bhatla & Vo, 2013). There are no specific guidelines for groups of patients, but steps toward a child and adolescent TMH highlights the key issues (Hilty, Shoemaker, Myers, Snowdy, Yellowlees & Yager, 2015), with suggested adjustments on things like patient appropriateness, site locations, therapeutic space, technology, how to select a model of care, and risk management. Suggestions or guidelines for e-prescribing (American Psychiatric Association Electronic Prescribing Guideline, 2013) and using e-mail (Silk & Yager, 2003) have been published.

The American College of Physicians released a comprehensive overview of physician online professionalism, including the following recommendations (Farnan et al 2013), focusing on communication with patients, gathering information, online education and other topics. Although numerous papers insist on the separation of personal and professional (American Medical Association, 2011; Farnan, Snyder Sulmasy, Worster, Chaudhry, Rhyne, Arora & Federation of State Medical Boards Special Committee on Ethics and Professionalism, 2013), others have argued how difficult it can be to separate both types of presence online (Behnke, 2008). In fact, physicians should assume that one’s private profile could be found.

More recently, the Journal of Medical Internet Research provided guidelines for healthcare providers to more proactively take advantage of social media based on a review of over 100 articles, websites, policies and reports (Grajales, Sheps, Ho, Novak-Lauscher & Eysenbach, 2014): maintain professionalism, be authentic within the scope of practice, and follow general etiquette but adapt for professional care. Additional guidelines are available for addressing youth

patients (Mitchell & Ybarra, 2009) and addressing privacy issues (Bishop, Yellowlees, Gates, & Silberman, 2011). Additional ethics codes from the American Psychological Association, American Counseling Association, and the American Psychiatric Association are available for mental health professionals on managing ethical concerns and avoid ethical violations.

Overall, the social media guidelines have several things in common (Table 1). These fall into four categories: 1) Follow standard privacy and confidentiality practices for health and personal (i.e., including provider) information; 2) maintain “good” boundaries (e.g., don’t “Friend” patients) and

be aware of what information is out there about you (e.g., search self once-in-a-while); 3) establish clear expectations about online communication (modes, protocols, absences, emergencies); and 4) discuss all of the above with the patient as part of the informed consent process (e.g., reasons for additional searches). The modern psychiatrist can take advantage of, but also be cautious with, the use of social media by patients. All ages are using social media for the variety of applications, sense of being heard, consumer health (social networking; CHSN), and other health complaints (e.g., suicidal ideation) (Hidy, Porch & Reed, 2013).

TABLE 1. EXISTING SOCIAL MEDIA GUIDELINES: A SUMMARY OF THE COMMON TENETS.

<ol style="list-style-type: none"> 1. Providers should utilize all available privacy settings to protect personal information, but should recognize that these settings may not be infallible. 2. Every effort must be made to maintain patient confidentiality online, while maintaining awareness of unique challenges the online setting may provide. 3. Online searches for patient information should only be done in the interest of furthering patient care, and preferably with the patient’s knowledge and consent. 4. Providers should consider keeping personal and professional information in separate accounts. 5. Providers should consider conducting routine searches for their own information to maintain awareness of available content and their online images. 6. Providers should take care to maintain the same professional boundaries online as they would in face-to-face relationships. 7. Providers and patients should establish clear expectations about online communication, to include expected response time and protocols for planned absences. 8. When unavailable, providers should arrange coverage for established online communications much as they would for their phone, pager, etc. 9. Providers should educate patients regarding the potential risks of connecting via social media and consider establishing a contract before entering such a relationship. 10. Providers should establish clear protocols for managing emergencies that might arise in the course of a social media relationship. 11. Many guidelines explicitly recommend against directly friending a patient online.
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Most importantly, until more research is complete, providers need to use good judgment. We have the same responsibility to extend considerations of privacy to interactions with patients online as we do for in-person care; at a minimum, providers need to protect their electronic devices with the same level of security as their paper charts (Koh, Cattell, Cochran, Krasner, Langheim & Sasso, 2013). A provider runs the same risks as a patient forgetting to log-off his profile - a breach in confidentiality on therapeutic communications could occur. Regarding the notion of performing Internet searches on patients (Clinton, Silverman & Brendel, 2010), while public-public information is generally considered acceptable to access, the failure of a patient to implement the intended privacy settings on a social media account (or in the above case, not having considered the implications of friending their provider) is akin to a patient neglecting to close the blinds on their window, and when we “look in the window” it is an intrusion on patient privacy (Frankish, Ryan & Harris, 2012). Finally,

institutional, local, state and federal policies or regulations with regards to storing and transmitting identifiable health information have to be followed – it generally is not good enough to claim ignorance after the fact.

When patients overdo it with using the Internet: the concept of Pathological Internet Use (PIU) and its definitions, epidemiology and diagnosis.

A review of the scientific literature shows rates between 1%-40% in different countries, though there is considerable heterogeneity between studies published (Carli & Durkee, In Press; Table 2). There are an array of terms that have emerged in recent years to describe this phenomenon, including, but not limited to: Internet addiction, Internet addiction disorder, excessive Internet use, problematic Internet use, computer addiction, cyber addiction, net addiction, compulsive Internet use, Internet dependence, Internet overuse, Internet related disorder, Internet behaviour dependence and pathological Internet use.

TABLE 2. OVERVIEW OF STUDIES USING COMPARABLE METHODOLOGIES TO MEASURE THE PREVALENCE OF PATHOLOGICAL INTERNET USE AMONG ADULT AND ADOLESCENT POPULATIONS.

STUDY	SAMPLE SIZE	COUNTRY	POPULATION	PREVALENCE
<i>Adult population</i>				
Kheirkhah et al., 2010	N=1,856	Iran	General population Mean age=20.25, SD = 4.19 years	22.8%
Bakken et al., 2009	N=3,399	Norway	General population Age range=16-74 years	1.0%
Huang et al., 2009	N=4,400	China	College students Mean age=20.19, SD =1.26 years Age range=16-30 years	9.5%
Leung 2004	N=699	Hong Kong	General population Age range=16-24 years	37.9%

<i>Adolescent population</i>				
Siomos et al., 2012	N=2,017	Greece	Students Mean age=15.05, SE=.05 years Age range=12-19 years	15.2%
Siomos et al., 2008	N=2,200	Greece	Students Mean age=15.34, SD =1.66 years Age range=12-18 years	8.2%
Fisoun et al., 2012	N=1,270	Greece	Students Mean age=15.99, SE=.05 years Age range=14-18 years	5.3%
Gong et al., 2009	N=3,018	China	Students Mean age=15.8, SD=2.1 years Age range=11-23 years	5.0%
Lin et al., 2009	N=1,289	Taiwan	Students Mean age=17.46, SD=1.00 years Age range=16-19 years	23.4%
Johansson & Gotestam, 2004	N=3,237	Norway	Students Mean age=14.9 years Age range=12-18 years	1.9%
Wang et al., 2013	N=10,988	China	Students Mean age=17.2 years Age range=13-23 years	7.5%
Li et al., 2014	N=24,013	China	Students Mean age range=7.58–15.92 years	6.3%

Footnotes:

1. All used the Young Diagnostic Questionnaire (YDQ), with scoring based on 5/8 items.
2. All studies were cross-sectional.

Despite this heterogeneity, there are some universal components that constitute a PIU definition. These components usually involve characteristics related to the inability

of a person to control Internet use, preoccupations, urges or behaviors with marked distress and functional impairments. Until we know more, it is yet unclear, but

likely that some patients had pathology that simply took a turn toward the Internet (e.g., a gambler who now gambles mainly by the Internet) and some patients who appear to never have had a problem; that seems unlikely, though, and the Internet may have “unmasked” an underlying behavior, trait/personality or more aptly showed a state/disorder. The Diagnostic and Statistical Manual, Fifth Edition (DSM-5; American Psychiatric Association, 2013) has integrated behavioural addiction (non-substance-related addictive disorders) as an official diagnostic category, while including Internet gaming disorder into the appendix pending further research.

The Young Diagnostic Questionnaire (YDQ) was developed per DSM-IV diagnostic criteria for pathological gambling, based on Internet usage over the past six months (Young et al 1998). Clinical impairment or distress is indicated by: (1) preoccupation with the Internet; (2) need for longer amounts of time online to achieve satisfaction; (3) repeated unsuccessful efforts to control, cut back, or stop Internet use; (4) restlessness, moodiness, depression, or irritability when attempting to cut down or stop; (5) staying online longer than originally intended; (6) jeopardizing or risking the loss of a significant relationship, job, or

educational/career opportunity; (7) lying to others to conceal the extent of use; and (8) escaping from problems or of relieving a dysphoric mood. The Internet Addiction Test (IAT) may apply better to social media, as this 20-item measure assesses psychological dependence, compulsive use, withdrawal, daily routines, productivity, social life and feelings; face validity, reliability and internal consistency ($\alpha=0.88$) (Young, 2008).

PIU and social media: emergency trends.

There are sociodemographics and other variables that have been linked with pathological users (Table 3). These include: age of first exposure to the Internet, gender, Internet access at home, city residence, living in metropolitan areas, higher family income levels and migrant status (Byun, Ruffini, Mills, Douglas, Niang, Stepchenkova, Lee & Blanton, 2009; Kuss, Griffiths, Karila & Billieux, 2013). In addition to these factors, parental involvement, or lack thereof, appear to be a strong indicator of PIU among adolescents. Research shows that adolescents who perceive that their parents do not understand them, know what they do with their free time or do not pay attention to them have an exponentially higher risk of PIU (Durkee et al 2012).

TABLE 3. POTENTIAL RISK FACTORS FOR OVERUSE OR PATHOLOGICAL USE OF SOCIAL MEDIA BY ADULTS AND CHILDREN/ADOLESCENTS.

<p>Sociodemographics</p> <ol style="list-style-type: none"> 1. Age (younger). 2. Urban residence. 3. Higher family income levels. 4. College or advanced education. <p>Family/social/lifestyle factors</p> <ol style="list-style-type: none"> 5. Parental lack of involvement (i.e., what do the kids do with free time?) 6. Teenagers whose “parents do not understand them.” 7. Parental discord.
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8. Social stress.

General individual/personality factors

9. Loneliness.
10. Low life satisfaction.
11. Low well-being.
12. Low social support.
13. Low academic achievement.
14. Dysfunctional social behaviors.
15. Psychological stress.
16. Medical illness (e.g., neurological disorders).
17. Hostility.

Adult-specific historical/developmental factors

18. Insecure attachment style.
19. Lack of familial love.
20. Child maltreatment experiences.

Adolescent-specific historical/developmental factors

21. Negative life events.
22. Harm avoidance.
23. Low reward dependence.
24. Low emotional stability.
25. Low conscientiousness and resourcefulness.

Common psychiatric conditions or co-conditions

26. Depression.
27. Anxiety (e.g., social phobia).
28. Obsessive-compulsive disorder and/or other compulsivity.
29. Sleep disorders.
30. Attention deficit hyperactivity disorder (ADHD) and.
31. Dissociation (e.g., dissociative experiences, depersonalization).
32. Substance use: alcohol.
33. Schizophrenia.

In two extensive systematic reviews and meta-analyses of PIU (Byun, Ruffini, Mills, Douglas, Niang, Stepchenkova, Lee & Blanton, 2009; Kuss, Griffiths, Karila & Billieux, 2013), key psychosocial and psychopathological factors related to this phenomenon were accentuated. Results showed that there were shared psychosocial traits among adult and adolescent pathological Internet users. These factors included:

loneliness, low life satisfaction, low well-being, low social support, low academic achievement and dysfunctional social behaviors. Adult-specific populations were linked with an insecure attachment style, lack of familial love and child maltreatment experiences. Adolescent-specific populations were associated with online social interaction, negative life events, harm avoidance, low reward dependence, low emotional stability,

and low conscientiousness and resourcefulness.

There is overwhelming evidence suggesting PIU is significantly associated with neurological complications, psychological distress, social problems and parental discord (Lam et al 2015). The scientific literature suggests 86% of those diagnosed with PIU also meet the diagnostic criteria of another DSM-IV disorder (Block 2008). In an examination of adult and adolescent populations (Byun, Ruffini, Mills, Douglas, Niang, Stepchenkova, Lee & Blanton, 2009; Kuss, Griffiths, Karila & Billieux, 2013; Carli, Durkee, Wasserman D, Hadlaczky, Despalins, Kramarz, Wasserman C, & Kaess, 2013), unambiguously shared psychopathologies have emerged among pathological users. These include: depression, anxiety, compulsivity, sleeping disorders, attention deficit hyperactivity disorder (ADHD) and hostility. Adult-specific disorders include dissociative experiences, depersonalization and alcohol abuse. Adolescent-specific populations were shown to be linked with social phobia, phobic anxiety, schizophrenia, psychoticism, obsessive-compulsive disorder, affective disorder, substance and alcohol use.

Many important questions remain: 1) What is the relationship between PIU and social media, exactly? 2) What is the relative weighting or impact of experiences, behaviors, traits and states – studies with ANOVA are needed? 3) If PIU and other disorders co-occur, how do we assess and treat them similarly or differently? 4) What is the relationship, specifically, between PIU and substance use (Fisoun et al 2012)? 5) How dangerous is PIU (e.g., suicidality among adolescent populations). The linkage between PIU and self-injurious behaviors, suicidal ideation and suicide attempts may be the degree of impulsivity, in general (Carli & Durkee, In Press; Kaess, Durkee, Brunner,

Carli, Parzer, Wasserman C & Wasserman D, 2014).

5. CONCLUSIONS.

Technology both facilitates and affects current evidence-based care, sometimes for the better and sometimes for the worse, and providers need to stay abreast of changes in contemporary practice. Continuing education and discussing the many issues involved with patients and families, as well as peers, is suggested. One other area of exploration is related to training the next generation of clinicians. There are many key issues for educating medical students, residents and others (Dejong, Benjamin, Anzia, John, Boland, Lomax & Rostain, 2012; Hilty, Belitsky, Cohen, Cabaniss, Dickstein, Bernstein, Kaplan & Silberman, 2015). The most essential pieces would be building a culture where trainees and faculty – of all disciplines – can learn together, address concerns and move forward with best practices.

The evidence base will grow rapidly and many areas need development. First, tiering of evidence would be desirable particularly in areas related to adults and then child and adolescent-specific issues. Second, qualitative studies may be more important in this era due to the complexity involved with social media than quantitative measures. Third, we must ask “good” questions to continue apprising ourselves of developments as social media, Facebook and texting will impact a patient’s illness, interpersonal communication, and relationships with healthcare professionals “on the fly.”

Guidelines or stances by professional bodies may help, but only if they remain up-to-date and do not follow a decade behind to deal with the fear of the unknown in taking positions. Some medical associations (Canadian Medical Association) support the conservative use of social media; some

oppose it (e.g., American) though the U.S. community has an array of supporters; and others firmly oppose it (British Medical Association; American Medical Association). Future research will be required to understand the synergies between social media and evidence-based practice, as well as develop institutional policies that benefit patients, clinicians, public health practitioners, and industry alike.

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TABLES/FIGURES.

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