Information Technology and Teaching in the Office
Social Networking in Medical Education: Where Are We Going?
By Richard Usatine, MD, University of Texas Health Science Center at San Antonio

The Internet and cell phones have changed our world forever. There are more ways to communicate with each other than ever before. While there are many pluses to this age of nonstop communication, there are issues of privacy and time that can’t be neglected. I personally walk around with two cell phones on my belt, each on a different network. One is an iPhone so that I can read and respond to multiple e-mail accounts and surf the Internet. The other is a basic phone that I use to keep in contact with my family and friends. Social networking software has now taken us beyond cell phones, text messaging, and e-mail. My Facebook account now allows me to communicate with family, current friends, old friends, students, and colleagues in a way that was not possible 10 years ago.

So, can Facebook and other social networking software be valuable for medical education? There have been a few articles that have addressed this issue. The most comprehensive article is titled “Networking in Medical Education: Creating and Connecting.” In this article, Dr Supe states, “There are three key aspects to social networking that sustain user interest. These are (1) a sense of community, (2) the development of friendships, (3) ease with which they can interact with other users and ultimately learn from them.” She goes on to say that “Networks can be solutions looking for a problem to solve or an opportunity to exploit.” “In an optimized personal network—less is more—you leverage a minimal number of contacts to maximize your work efficiency and effectiveness. Other

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Clinical Guidelines That Can Improve Your Care
Screening for Colorectal Cancer: US Preventive Services Task Force Recommendation Statement
By Diana Heiman, MD, University of Connecticut

In the time since I have graduated from medical school (just over the 10-year mark now), colorectal cancer screening methods have changed dramatically. Colonoscopy was reserved for diagnosis if screening was positive and CT colonography didn’t exist. Fecal DNA testing was a futuristic thought. Our practice recommendations have again changed as they seem to do on an ever more frequent basis.

Last October, the US Preventive Services Task Force (USPSTF) updated their guideline for colorectal cancer screening, putting age limits on screening and also addressing these newer methods of screening that were not available at the time of the last update in 2002. The guideline only applies to patients at “average risk” and do not include patients with inflammatory bowel disease or those with inherited syndromes that lead to a significantly increased risk for colorectal cancer. The guidelines do apply to those with first-degree relatives with colorectal cancer, although you may elect to begin screening at a younger age in these patients depending on the number of first-degree relatives with colorectal cancer and the age at which they were diagnosed. Table 1 outlines the recommendations.

There has been a trend in many parts of the country to move away from fecal occult blood test (FOBT) and sigmoidoscopy and toward colonoscopy for colorectal cancer screening. This trend is not substantiated by the evidence that shows each screening method to be effective. There are also significant concerns about the lack of availability of colonoscopy as the

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nonessential contacts may provide benefits, like a sense of belonging, friendship, or juicy gossip.\textsuperscript{2}\textsuperscript{-} From a narrowly utilitarian perspective, however, the time invested in maintaining these network contacts does not provide sufficient work-related returns.\textsuperscript{3}\textsuperscript{-}

One social network is the FAIMER Institute, which has created international networks of medical educators. This is especially directed toward medical educators and third-world countries looking for support and faculty development.\textsuperscript{2} Another interesting site is the Medical Education Evolution site on Ning (http://medschoolevolution.ning.com). Ning is another type of online social networking group.

Our medical students are already using Facebook, Yahoo groups, and other social networking software. Results from one study reveal that medical students and residents are using Facebook, and about two thirds of users maintain public profiles.\textsuperscript{3} “While there is variation in the types of information provided within profiles, many medical students seem unaware of or unconcerned with the possible ramifications of sharing personal information in publicly available online profiles even though such information could impact their professional lives.” This article gives examples of less than professional communications and photos found on the sites of the medical students and residents in the study.

I was introduced to social networking software through my college daughter and my medical students. When we started our Humanism in Medicine Fellowship, the medical students immediately created a Yahoo group so that we could communicate with each other beyond the world of e-mail and listserves. We are able to track our seminars in the Yahoo group, which we set to automatically send e-mail reminders before each seminar occurs.

I then joined Facebook so that I could see my daughter’s photos online and communicate with her at college. Shortly thereafter, a national group of medical students created the National Association of Student Run Free Clinics as a Facebook group. I happily joined this group. The group was useful to promote the national conference of students and faculty involved in the area of student-run clinics. Because we were planning a student-run clinic meeting in Savannah, Ga, I was pleased to have this Facebook group to advertise our meeting at STFM’s Predoctoral Education Conference.

Some students have asked me to be their Facebook friends, and I have accepted these online relationships. I have not had any inappropriate communications from medical students, and I see nothing in this group that represents a breach in professionalism. When I gave an elective talk to our medical students on a new book that I recently coauthored, the students used Facebook to help promote this speaking event. I appreciated this greatly.

The Family Medicine Digital Resources Library (FMDRL) is a form of social and educational networking that has been successful within STFM for the last 5 years. Faculty members post their educational presentations, curricula, and other educational ideas to share freely with our community of family physicians. As a cofounder of FMDRL with Jacob Reider, MD,
and others, I am delighted to see how this has grown to now encompass more than 1,600 resources with multiple active groups.

FMDRL allows the groups from STFM to have Wikis and discussion groups. Some groups have taken full advantage of this networking software to create growing and evolving ideas and documents. Each user can set up a My FMDRL page with a photograph and some biographical information.

While many medical students are on Facebook and faculty are beginning to join them, there are other social networking sites, including MySpace, Twitter, and Ning. Medical schools are more likely to be using sites and software such as Blackboard to host courses and promote communication between professors and students, but there is a place for social networking software to grow in medical education. A number of student groups in our medical school use Facebook for their student organizations. One such group is doing medical mission work on the border with Mexico. Students use the software Evite to keep track of invitations to social/professional events. Yahoo groups is still a viable option to enhance communication.

What are the downsides to this expansion of social networking? In a discussion held recently on the Predoctoral Education Listserv, a number of faculty members expressed concerns about their individual and family privacy. If you use Facebook with your family members and friends and then become friends with students, the default setting would allow the students to see photographs and information posted by your family members. This may not be acceptable to faculty wanting to keep a wall between their private and professional lives. So far this has not been a problem for me, but I am aware of the issue. The other issue is time. Is there sufficient benefit to justify more time in front of a computer with more messages to read and answer? While in the midst of this discussion on our listserv, one of our colleagues created a Facebook for Predoctoral Educators. Right now, there are 23 members and very little discussion. Will this ever replace or overtake our listserv?

What about blogs? Blogs have been used for students to record the reflections on experiences with in school and or on-away electives. Our students are required to create a blog when they go to India for an away elective. Students provide interesting insight into their experiences in the health care system of India. The explosion of inexpensive high-quality digital cameras has enhanced all online sharing of experiences through images. When we give our students digital cameras to photograph their experiences on their family medicine rotation, their images are shared using Internet software.

Whatever your opinion is of social networking software, it is clearly part of the new generation. We can ignore it or join with our students to reap the benefits of this new technology.

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primary screening method as only gastroenterologists perform the procedure in many areas. The relative sensitivity and specificity of each screening modality is outlined in Table 2. Since the efficacy of the screening methods are similar, the screening options should be discussed with each individual patient, and a method acceptable to the patient should be chosen. Not all patients are willing to have a colonoscopy, but many are willing to collect annual stool cards for FOBT. If FOBT is utilized, the high-sensitivity tests (Hemoccult SENSA and fecal immunochemical tests) are recommended since population modeling of the screening methods suggests that more lives/years would be gained by using the high-sensitivity tests versus traditional FOBT.

The new guideline also presents an excellent summary table that outlines the recommendations screening frequency based upon the method that is chosen. Annual screening with high-sensitivity FOBT is the first option, flexible sigmoidoscopy every 5 years with high-sensitivity FOBT every 3 years is the second option, and, finally, screening colonoscopy every 10 years is the third option. Screening frequency may also become a part of the discussion with the patient as they may wish to only consider screening every 10 years.

For the first time, CT colonography and fecal DNA testing are discussed. There is little available data on screening with fecal DNA testing. In the one study that is available, sensitivity is higher than with Hemoccult II testing, but there were overall more positive results. It remains to be seen if those are true positives or false positives. CT colonography is evolving at this time. Associated with the testing is a radiation exposure that is not present with any other screening. There is a risk of perforation due to colon insufflation, although it is felt to be much lower than with colonoscopy and flexible sigmoidoscopy. Also, as areas other than the colon are imaged, 7%–16% of studies have other abnormalities that are identified. It is unclear if these findings only result in more testing or if they lead to other important conditions being diagnosed at an earlier stage.

This guideline does not address follow-up of patients with adenomatous polyps or colon cancer, only screening asymptomatic individuals. The guideline does recommend against the use of aspirin or non-steroidal anti-inflammatory medications for the primary prevention of colorectal cancer. I’m not sure if your practice will change based upon this updated guideline, but I do recommend looking at the summary table included in the *Annals of Internal Medicine* article. It is a good quick evidence-based reference for colorectal cancer screening in your adult patient population.

**References**


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Editor’s Note: The process of the 2-minute Mini-lecture is to get a commitment, probe for supporting evidence, reinforce what was right, correct any mistakes, and teach general rules. In this scenario, Dr Epling (Dr E) works with a third-year student (MS3) who has seen a woman who has several concerns.

MS3: Dr Epling, I just saw Ms Henderson. She’s 48 years old, and she’s here to follow up on her hypertension, her irregular periods, and her anxiety. She also wants to know about whether she should get a colonoscopy. She—well—I—(falls silent with a pained expression on her face).

Dr E: Wow, you seem a little overwhelmed.

MS3: Dr Epling, I don’t get how you’re supposed to keep all this stuff in your head—there’s internal medicine stuff, GYN stuff, psych stuff, and prevention. To make it worse, every attending seems to say a different thing—some like calcium channel blockers for hypertension, some like HCTZ. I really like the idea of family medicine, but it scares me that I won’t be able to know what I need to, and I’d hate to feel like I’m not doing the best job I can for the patient.

Dr E: I’d hate for you to feel that way, too. Being a patient’s family doctor is a really important job, and we need the smartest students in the country going into family medicine, so it really worries me that you’re this nervous. I know you did pretty well in the first 2 years.

MS3: I think that’s why it’s so frustrating! I had a defined set of things to know, and I knew them. Now it seems like the knowledge is a moving target; it changes and everyone seems to have a different way of doing things.

Dr E: I think it might be useful to talk for just a second about how physicians can learn and keep up to date.

MS3: OK, but I know you’re like a big EBM guy, and I just really don’t get all those statistics, and I don’t think I ever will.

Dr E: OK, now relax. This is not a quiz on likelihood ratios. I’ll bet you know more than you think you do about this. In our office, what ways have you seen the physicians learn new things?

MS3: Well, they look at the textbooks on the shelves or at the Web site “Very-Current-Medicine” Some of you talk to consultants about patients, and some of you look at the library’s EBM sites—they have Cochrane, FPIN [Family Physicians Inquiries Network], Dynamed, Essential Evidence. Some of you even go on MEDLINE and track down articles and look at them. That’s what I mean, everyone does different things.

Dr E: Indeed. And what’s worse is that each physician will look in a different place each time they have a question. Confusing, eh?

MS3: Yes.

Dr E: Well, not if you think about why they’re going to each source. Do you remember the difference between foreground and background questions?

MS3: Foreground questions are more specific, background are more general.

Dr E: Good. Textbooks and Very-Current-Medicine might be good places to go for background questions—to review a topic that you don’t know well—but textbooks aren’t updated frequently enough, and sites like Very-Current-Medicine don’t always give you a real good idea of the quality of the research evidence behind the answers. So they’re not very useful for foreground questions, where you need the best, most current research evidence to answer the question well. If you don’t have time to go hunting for that evidence yourself, then those aren’t real helpful.

MS3: Yeah, I saw some textbooks on the shelf in the doctors’ area from 1980!

Dr E: Yes, well anyway, foreground questions are harder because we have lots of them every day, and it’s important to get them answered well. Dr Sharon Straus wrote an article a few years ago…

MS3: Dr Epling, no stats!

Dr E: I promise, no stats. Just bear with me for a second. She said that physicians might “do EBM” in different ways—there will be those that can do a detailed critical appraisal and statistical review of an article, those that prefer to use high-quality summaries of articles to keep current, and those who model their practice after someone who is very evidence based.

MS3: You mean copy someone else’s practice?

Dr E: Sort of. We do it all the time; we just don’t acknowledge it very often. The key is to look at any information source with a critical eye. So if you have a consultant that you prefer, you might get a sense from her how she makes her recommendations. I’m reminded of a cardiology consultant I know that constantly works details of recent studies and trials into our conversations and is frank about telling me where the evidence ends and where his opinion starts.
MS3: OK. (unsure)

Dr E: So I’ve modeled lots of my practice on my attendings, colleagues, and consultants who I think are the most evidence based. But on a regular basis, I realize I need to update my knowledge, so I use the article summary sites that you mentioned before and do a quick search through those. I concentrate on evidence from systematic reviews first, then look for single studies that might answer the question. The different sites do all this differently. Cochrane has systematic reviews of relatively focused topics, concentrating on therapy questions but now branching into diagnostic questions. Dynamed provides well-referenced and annotated summaries of a wide array of clinical topics. FPIN produces evidence-based answers to important clinical questions from family doctors and grades the evidence and their recommendations clearly. Essential evidence has a library of article reviews, clinical calculators, and guidelines that help you practice evidence-based medicine. I use most of these sites when I’m looking for an answer quickly. I also use Clinical Evidence, which US physicians can get for free from one of the insurance companies, as another evidence-based topic summary.

MS3: Do you ever do a MEDLINE search?

Dr E: I try not to.

MS3: I heard that!

Dr E: Now wait, what I mean is that I try not to do a MEDLINE search too often, because it takes a decent amount of work. So that’s my last option. If I can’t find the answer in the summary sites, I go to PubMed and use the “Clinical Queries” filter or the “Systematic Review” filter to help me find the best information. Then I use those criteria we talked about in EBM to figure out if the article is well done and how to interpret those findings.

MS3: I think I have those worksheets around somewhere.

Dr E: Good. You can also find different worksheets on the Web—there are several different sites. But I don’t expect you to be an expert in detailed critical appraisal. When you’re in practice, know where to go and whom to ask for help with critical appraisal.

MS3: So, it sounds like you’re saying you don’t have to know everything, just know where to find it.

Dr E: And that your relationship with medical knowledge is just like your relationship with your patients in family medicine—it gets richer, deeper, and more refined as you work on it. I personally would rather have a doctor that knows how to keep up and find the right answers over a doctor that thinks he/she knows it all already.

MS3: OK, so, I have to tell you about Ms Henderson.

Dr E: Right. Let’s see how much we need to find out about her.

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Editor’s Note: Dr Epling has declared several potential conflicts of interest. He has done work for FPIN and InfoPOEMS (now called Essential Evidence) in the past. He is currently writing a Cochrane systematic review and is an ongoing contributor to Clinical Evidence. Some of the ideas presented here are taken from material created by the Evidence-based Medicine Working Group and the Information Mastery Working Group.

Alec Chessman, MD, Medical University of South Carolina, Editor
Evidence-based Answer

Multidisciplinary approaches that utilize compulsory aerobic physical activity and reduce sedentary behavior can reduce weight in obese children (SOR B, based on heterogeneous randomized controlled trials [RCTs]). Brief primary care-based counseling has not been shown to have an impact (SOR B, based on heterogeneous RCTs), although more intensive approaches may hold some promise.

Two recent systematic reviews on the topic summarize the difficult conundrum for clinicians and society at large. A 2005 Cochrane review concluded that the mismatch is remarkable between the prevalence and significance of childhood obesity and the knowledge base from which to inform preventive activity. A 2006 systematic review concluded “the evidence base on strategies for prevention and treatment is limited at present and virtually nonexistent for the developing world.”

Studies of multidisciplinary interventions show some promise, however. Planet Health was a school-based RCT with 1,290 students participating in an interdisciplinary intervention over 2 school years. Initiatives included decreasing television viewing, decreasing consumption of high-fat foods, increasing fruit and vegetable intake, and increasing moderate and vigorous physical activity. The outcome was a reduction in obesity for girls only. Over 2 years, the prevalence of obesity in girls in the intervention group decreased from 23.6% to 20.3% and increased from 21.5% to 23.7% in girls in the control group.

In a multidisciplinary clinic-based program, 55 motivated children who were 8 to 12 years old and 20% to 100% overweight (plus their families) participated in 16 weekly treatment meetings followed by monthly meetings for 1 year. Participants were divided into three groups: one that increased physical activity, one that decreased sedentary behavior, and one group attempting both strategies (combined group). Specific initiatives included diet modifications (a “traffic light” diet with “green,” “yellow,” and “red” foods), reducing television and media use, treating the family, encouraging family self-monitoring, and multiple family consultations. The reducing sedentary behavior group had a greater decrease in percentage overweight than did the combined and the physical activity groups (-18.7% versus -10.3% and -8.7%; P < .05). All groups improved fitness during treatment and follow-up. These results support the goal of reducing time spent in sedentary activities to improve weight.

In 2007, a narrative systematic review with the focus on practice-relevant guidance found 28 good quality studies: 11 showing interventions with an effective outcome on one or more measures of adiposity and 17 ineffective on similar measurements. Compulsory physical activity emerged as the one characteristic that was consistently effective.

Brief counseling interventions in the primary care setting have failed to have an effect on obesity. Quality studies are few and small. In one study, 44 overweight teens were randomized to routine counseling on healthful eating and physical activity or to a computerized, individual weight-management program and weekly to biweekly phone calls focusing on reducing sedentary behavior, increasing physical activity, and individualized goal setting. This intensive primary care intervention did show some measurable effects of lowered body mass index (BMI) compared with the control group at 4 months (56% of treatment group lowered BMI versus 16% of control group, P < .02).

Bright Bodies, an intensive, family-based weight-management program designed for inner-city youth (www.brightbodies.org) showed a sustained drop in BMI of 1.7 units over 12 months in the intervention group compared with an increase of 1.6 units in the control group. These numbers come from a trial of 209 overweight children, with 60% completing 6 months and 53% completing 12 months.

Data on longer term maintenance is rare. A recent 2-year follow-up was published of 206 children ages 7 to 12 who had undergone a 5-month intense weight loss program. Over 2 years BMI scores decreased 0.04, 0.04, and 0.05 units in the intervention groups (behavioral skills maintenance alone, social facilitation maintenance treatment alone, or both together) and increased 0.05 units in the control group, a statistically significant difference with minimal clinical significance.

Pediatric obesity is a complex problem that needs to be addressed at many levels, most of which occur outside the physician’s office. For an extensive review of all the best available evidence and consensus expert committee guidelines, please refer to the December 2007 supplement of Pediatrics.

References


SOR—strength of recommendation

LOE—level of evidence

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HelpDesk Answers are provided by Evidence-Based Practice, a monthly publication of the Family Practice Inquiries Network (www.fpin.org)
Stuttering Withdrawal of Life Support Better for Surviving Family

Clinical Question: Is there an association between the method of withdrawing life support and the satisfaction of the surviving family members?

Setting: Inpatient (ICU only)

Study Design: Cross-sectional

Funding: Government

Synopsis: The authors identified nearly 600 patients in 14 hospital intensive care units (ICUs) in which the patient was removed from life support with the expectation that the patient would die. These researchers used solid chart audit methods. Trained auditors used a standardized chart extraction protocol to audit the patients’ medical records. Additionally, 5% of the charts were re-audited to ensure high levels of agreement among reviewers. One to 2 months after the patients’ death, the researchers surveyed the surviving family members using a validated survey. Unfortunately, the response rate was only 40%, so the overall results may not be real. Slightly more than half the patients had life support withdrawn on the same day. When more family members were involved in decision-making or when there was a spiritual advisor, the duration of withdrawal was longer. Among patients with longer ICU stays, slower withdrawal of life support was associated with higher family satisfaction. During the last week of life, approximately 3/4 of the patients remained intubated, yet more than 80% were extubated before death. Extubation before death was associated with higher levels of family satisfaction. Finally, sequential withdrawal of support is associated with higher family satisfaction. (LOE=2c-)


Generic and Brand-name Drugs Equally Effective for Cardiovascular Disease

Clinical Question: Are generic and brand-name drugs equally effective in the treatment of adults with cardiovascular disease?

Setting: Various (meta-analysis)

Study Design: Systematic review

Funding: Government

Synopsis: Concern remains among clinicians and patients about the equivalence of generic and brand-name drugs. These investigators, with the help of a professional librarian, searched MEDLINE, EMBASE, and International Pharmaceutical Abstracts for studies comparing brand-name drugs and their generic versions on at least one cardiovascular drug. Clinical equivalence was reported for 10 of 11 RCTs of diuretics, five of seven RCTs of calcium-channel blockers, three of three RCTs of antiplatelet agents, two of two RCTs of statins, one of one RCT of ACE inhibitors, one of one RCT of alpha-blockers, one of one RCT of class-I anti-arrhythmic agents, and five of five RCTs of warfarin. When the data were pooled, the 95% CI crossed 0 (no effect) for each drug class, with small to very small effect sizes. The aggregate effect size was -0.03 (95% CI=0.15–0.08), which is very small indeed. More than half the 43 editorials published during the same period expressed a generally negative opinion about the clinical equivalence of generic drugs.

Bottom Line: In the management of adult cardiovascular disease, current evidence firmly demonstrates that generic equivalents are as clinically effective as their brand-name counterparts, including beta-blockers, diuretics, calcium-channel blockers, antiplatelet agents, statins, angiotensin-converting enzyme (ACE) inhibitors, alpha-blockers, anti-arrhythmic agents, and warfarin. Interestingly, more than half the editorials published in various journals during the same period as this systematic review expressed negative opinions about the value of generic drugs. (LOE=la)


LOE—level of evidence. This is on a scale of 1a (best) to 5 (worst). 1b for an article about treatment is a well-designed randomized controlled trial with a narrow confidence interval.

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