Training Doctors to Communicate:
Lessons From Integrating Behavioral and Social Science
Into Medical Education

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Although recent efforts to address behavioral and social science (BSS) gaps within U.S. medical education are well-intentioned, crucial shortcomings plague the successful translation and application of BSS skills into meaningful practice. This article focuses on the role of BSS reforms in medicine and the need for more accurate and relevant assessment measures throughout medical training and licensure. The goal of this article is to encourage communication and other BSS fields to think about and contribute to the development, critique, and improvement of medical training and assessment standards in the United States.

Keywords: medical education, behavioral and social science, curricula, licensing, doctor–patient communication, communication skills training

The 21st century brought major changes to medical education in the United States. Every level from preundergraduate admissions testing to graduate level training, assessment, and licensure has undergone revisions in an effort to adapt to the changing face of health care (Carr, Emory, Errichetti, Johnson, & Reyes, 2007). The current healthcare system values utilizing technology, synthesizing information, collaboration with other specialists, and effective communication (American Medical Association, 2017; Frist, 2005). However, unlike previous generations of medical doctors there is less need for rote memorization and recalling of esoteric material. As Americans gain access to health coverage, it has become imperative for doctors to have the skills to treat, control, and preempt the onset of preventable diseases (Levinson, Lesser, & Epstein, 2010).

Reform initiatives launched in the early 2000s were meant to confront challenges stemming from physicians' lack of interpersonal and communication skills through patient-centered care. Patient-centered care is defined by the Institute of Medicine (IOM, 2001)[3] as "respecting and responding to patients' wants, needs and preferences, so that they can make choices in their care that best fit their individual circumstances" (pp. 48–50). This led to changes in medical education on multiple fronts, in particular, the integration of behavioral and social science (BSS) into the Medical College Admission Test (MCAT), medical education curricula, and the United States Medical Licensing Examination (Carney et al., 2016; Haist, Katsufrakis, & Dillon, 2013; Kaplan, Satterfield, & Kington, 2012; USMLE, 2017a). The underlying goal of these BSS reforms was to equip physicians with the skills to address complex challenges related to patient care, specifically underlying patient behaviors and risk factors (IOM, 2004). According to Bauer, Briss, Goodman, and Bowman (2014), "The chronic disease burden in the USA largely results from a short list of prevalent risk factors—including tobacco use, poor diet and physical inactivity (both strongly associated with obesity), alcohol consumption, uncontrolled high blood pressure, and hyperlipidaemia" (p. 46). By working with patients to develop goals, understand challenges, and personalize treatment options, physicians would be better equipped to prevent and manage chronic diseases such as cardiovascular health, diabetes, cancer, and respiratory conditions by controlling lifestyle risk factors (IOM, 2004; National Research Council & Institute of Medicine, 2013).

However, after adding an additional licensing component and more than a decade of funding from the National Institutes of Health (NIH) to select medical schools, there is little evidence demonstrating systematic measurable improvements to physician communication skills or patient care as a result of BSS reforms. Some studies have even found communication skills training (CST) in medical school to be associated with declines in empathy and less favorable attitudes toward patient-centered care (Bombeke et al., 2011; Butalid, Bensing, & Verhaak, 2014; Fallowfield, Jenkins, Farewell, & Solis-Trapala, 2003). Major questions remain as to whether reforms actually result in (1) more competent and effective physicians and (2) improved care and better health outcomes for patients.

This article focuses on the shortcomings of BSS reforms in medical education, particularly the need for more accurate and relevant assessment measures throughout medical education and licensure. Although communication scholars can provide unique insights to inform initiatives aimed at improving communication and doctor–patient relationships, their voices are notably absent from this conversation. Considering that a significant portion of health communication research is dedicated to overcoming barriers related to communication challenges in medical settings, it is important for scholars to take advantage of this opportunity to inform curricula modifications and shape the future of physician training and practice.

The goal of this article is to encourage communication scholars to engage in critical discussions and contribute meaningful insights, analysis, and evaluation of BSS medical education reforms. By incorporating communication perspectives into patient care initiatives, medical schools and licensing bodies will be able to provide more effective training and assessments that encourage the development of

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[3] As of July 2015, the IOM officially became the National Academies of Sciences, Engineering, and Medicine—Health and Medicine Division.

quality relationships, not simply the performance of prescriptive behaviors. While commentary focuses primarily on the USMLE Step 2 Clinical Skills exam, the issue applies broadly across all medical reform efforts.

History of BSS Reforms

Federal funding for BSS in medical education was prompted by a 2004 IOM report that found medical schools placed insufficient emphasis on the role of BSS in relation to patient care (IOM, 2004; NIH OBSSR, 2016). Despite BSS advances in areas of adherence, behavior change, decision-making, and illness/disease prevention, very little of this work had translated into clinical practice. For instance, adherence literature from the 1990s identified patient literacy and understanding of discharge instructions as significant contributors to medication nonadherence, treatment noncompliance, and failure to attend follow-up visits (Haskard Zolnierek & DiMatteo, 2009; Lerner, Jehle, Janicke, & Moscati, 2000; Sun et al., 2000; Thomas, Burstin, O'Neil, Orav, & Brennan, 1996; Williams, Counselman, & Caggiano, 1996). Studies found that patient comprehension improved with the addition of illustrations and usage of simplified language and concepts (Austin, Matlack, Dunn, Kesler, & Brown, 1995; Jolly, Scott, & Sanford, 1995). However, despite this knowledge, patient understanding of discharge communication instructions still presents major barriers for patient literacy, understanding, treatment compliance, and medicine adherence (Engel et al., 2009; Naderi et al., 2012; Samuels-Kalow, Stack, & Porter, 2012; Vashi & Rhodes, 2011; Zavala & Shaffer, 2011). The IOM report concluded that "tremendous strides could be made in preventing disease and promoting health if more attention were given to the behavioral and social science priorities" (IOM, 2004, p. 9).

In response to the 2004 IOM report, the Federation of State Medical Boards (FSMB) and the National Board of Medical Examiners (NBME) added an additional assessment in 2005 known as the USMLE Step 2 Clinical Skills (CS) exam (USMLE, 2017b). This exam was meant to ensure all practicing physicians could demonstrate communication competency and provide patient-centered care within an interaction (First, Chaudhry, & Melnick, 2013). However, since its introduction, students have taken issue with the exam specifically its value as a metric for measuring clinical skills (Alvin, 2016; Flier, Henderson, & Treasure, 2016).

Shortcomings of Reforms

Although well-intentioned, the medical community's implementation of current BSS initiatives fails to take into consideration the very same lessons they strive to impart on the next generation of physicians. New testing requirements pay lip service to the ideals and principles of patient-centered care, but do little to change the status quo and instead exacerbate the problem. The medical community's propensity to fix problems by simply adding licensing requirements highlights the inadequacies of current BSS approaches, which continue to be irrelevant in clinical care and practice. Although the primary motivation behind BSS reforms was to assist "physicians in building therapeutic relationships with their patents and increase the likelihood that patients will follow their advice" (IOM, 2004, p. 4), the ways in which communication skills are evaluated during licensure are inherently flawed.

The assessment in question is the Communication and Interpersonal Skills (CIS) subcomponent of USMLE Step 2 CS. The pass/fail exam measures "the ability of examinees to apply medical knowledge, skills, and understanding of clinical science essential for the provision of patient care under supervision" (USMLE, 2017a, p. 3), and identifies students critically lacking in clinical encounters over the course of twelve 15-minute standardized patient encounters conducted within an eight-hour time period. The CIS subcomponent is scored by standardized patients who use a checklist to identify observable behaviors that ensure test takers demonstrate various principles of patient-centered communication (USMLE, 2017a).

Lack of Feedback

One reason why critics question the exam's ability to ensure patient safety or predict future success is its lack of constructive feedback (Alvin, 2016; Flier et al., 2016; Mehta & Kramer, 2005). Research on CST has found that BSS skills are best taught over time with continuing opportunities for repetition and individualized feedback (Levinson et al., 2010). According to Wouda and van de Wiel (2013), communication teaching and assessments should "contain stimulating learning tasks with opportunities for immediate feedback, reflection and corrections, and give ample opportunity for repetition, gradual refinements and practice in challenging situations" (p. 213). Various types of feedback such as self-reflection, video recordings, and direct observation have been found to be useful sources of information helping medical students improve their communication skills (Henry, Holmboe, & Frankel, 2013; Levinson et al., 2010; Maguire & Pitceathly, 2002; Roter et al., 2004; Wouda & van de Wiel, 2013; Zick, Granieri, & Makoul, 2007).

As a pass/fail exam based on checklists and global ratings systems, there is very little information that can gleaned from USMLE Step 2 CS results that allow tracking of overall competency levels, predictive residency performance, or scoring trends over time (Henderson & Morris, 2016). The score report consists of a sparse performance profile and a pass/fail grade (Douglas-Gabriel, 2016). Mehta and Kramer (2005) explain, "The report simply implies that we have met a very bare minimum requirement without providing any further information. This paucity of feedback underscores one of the critical inadequacies of this examination" (p. 76).

Part of this problem stems from the philosophy behind the pass/fail exam. Although USMLE Step 2 CS passage rates have consistently been at or above 95%, there is little concrete, longitudinal evidence to support arguments that BSS reforms have resulted in better trained physicians (Cohen, 2013; USMLE, 2017b). Rather than seeing the exam as an opportunity to encourage development of advanced communication skills such as trust, empathy, or motivational interviewing, it is merely a way to catch students deficient in clinical encounters. This heightens the risk of patient-centered care assessments becoming elaborate performances of prescriptive behaviors rather than a demonstration of quality relationship building.

Under the current educational system, CST is usually taught in the first few years of medical school with limited opportunities to transfer skills from the classroom to clinical practice (Levinson et al., 2010). The USMLE Step 2 CS CIS subcomponent is usually taken during the fourth year of medical school so unless students go into a residency that requires additional communication training, the USMLE Step 2

CS exam represents the last formal emphasis on CST in a physician's career (USMLE, 2017a). By only using a pass/fail scoring, the system inappropriately portrays BSS competency as an objective binary rather than a subjective continuum that can be improved with practice over time.

Checklists

The second shortcoming of the USMLE Step 2 CS exam lies in its overreliance on checklists. Assessments based on standardized checklists lack the breadth and depth required to integrate various stakeholder perspectives within an interaction. As Epstein (2006) notes, "While researchers focus on the mechanics and techniques of communication, patients seek relationships in which they experience trust, the right amount of autonomy, caring, and expertise" (p. 272).

This disjuncture stems from a divergence in beliefs about the role of communication in medicine. While some researchers believe communication skills are acquired to "perform key tasks" (Maguire & Pitceathly, 2002), others believe it is a core responsibility of physicians to use medical communication to provide emotional labor to patients (Larson & Yao, 2005). The former aligns with current USMLE licensing standards offering a binary, prescriptive approach to communication competency. The latter represents an effort to apply BSS skills to medicine in order to build therapeutic relationships based on holistically addressing patient desires, fears, and anxieties while responding to emotional concerns. This involves fostering quality information exchange, informed collaborative decision-making, and self-management of care (de Haes & Bensing, 2009; Levinson et al., 2010).

While the administering bodies of USMLE claim the CIS subcomponent can accurately measure an examinee's ability to "foster the relationship by listening attentively, showing interest in the patient as a person, and by demonstrating genuineness, caring, concern and respect" (USMLE, 2017a, p. 10), this description suggests that the end goal of the encounter is for an action to be performed, but not necessarily done well. The pressure to demonstrate objective competency based on checklists incentivizes new physicians to put on elaborate performances of caring behaviors, but not actually engage in meaningful relationship building. This means indicators such as eye contact, body language, and questioning behaviors are overemphasized and erroneously equated with communication competency, whereas constructs such as trust, empathy, relational closeness, and immediacy are overlooked. As Mehta & Kramer (2005) put it, "The CS exam elicits the *motions* of a competent exam, but without an experienced clinician observer in the room" (p. 76).

According to Levinson et al. (2010) "These tasks cannot be accomplished by mechanically applying skills. Rather, they require genuine personal engagement and emotional involvement. An expression of sympathy for a patient's emotional distress requires sincerely feeling concern in addition to using the right words" (p. 1311). Street, Makoul, Arora, and Epstein (2009) build on this perspective by positing that the relationship between clinician-patient communication and overall health is mediated by proximal and intermediate outcomes: "Proximal outcomes of the interaction include patient understanding, trust, and clinician–patient agreement. These affect intermediate outcomes (e.g., increased adherence, better self-care skills) which, in turn, affect health and well-being" (p. 295).

Unfortunately for many new doctors, the USMLE Step 2 CS exam has become emblematic of why BSS reforms are seen as a waste of time (Alvin, 2016; End Step 2 CS, 2016; Flier et al., 2016; Henderson & Morris, 2016; Lehman & Guercio, 2013; Mehta & Kramer, 2005). It represents another way for the NBME and FSMB to make money by forcing students to jump through extra hoops with more elective courses and to pay exorbitant fees to sit for a one-day licensing exam, neither of which adds much value to a physician's education, practice skills, or residency ranking (Alvin, 2016).

Alternative Assessments

Rather than rely on a one-day assessment of 12 standardized patient encounters to measure communication competency, a possible alternative could be to have medical schools, the FSMB, and NBME track and review the progress of students longitudinally using individualized portfolios based on direct observation. Although standardized patients have traditionally been used to measure clinical skills communication, they are only as informative as their assessment forms. In Blatt et al.'s (2016) study of six standardized patients' "off the record" concerns about 551 student encounters, more than half the students lacked empathy, good listening skills, and connections with patients during their encounters. Additionally, 84% of written comments by standardized patients highlighted problems not identified by traditional assessment forms, such as "odd or off-putting mannerisms, lack of confidence, unprofessional behavior, domineering behavior, and biased behavior" (Blatt et al., 2016, p. 395).

While direct observation is undoubtedly more challenging programmatically for institutions, it could be key in improving physician–patient communication. According to Henry et al. (2013), there is no substitute for direct observation in clinical settings:

> Standardized patients can be useful for teaching basic clinical skills (McGaghie et al. 2011), but they must be supplemented by the evaluation from direct observation of communication skills because trainees behave differently when they know they are talking with an actor. (p. 399)

Portfolios would give administrators the opportunity to not only assess communication performance on a regular basis but also to document incremental changes by providing challenging scenarios, individualized feedback, and opportunities for follow-up (Ammentorp & Kofoed, 2011). An example of a continuum of communication competencies would be Henry et al.'s (2013) 12 skills ranging from basic, intermediate, and complex. Basic skills measure standard clinical procedures, from taking patient histories to coordinating with other healthcare staff. Intermediate competencies begin to target relationship building and individualized patient behavior such as eliciting concerns, delivering results and diagnoses, communicating treatment plans, and improving patient adherence. Complex skill competencies involve moving past prescriptive checklist behaviors and establishing therapeutic relationships built on trust, respect, and empathy with patients, their families, and caregivers (Henry et al., 2013).

These skills are not developed or transferred into clinical practice overnight. In fact, research by Doyle, Copeland, Bush, Stein, and Thompson (2011) found that while communication skills courses improve self-efficacy to handle challenging situations, it is unrealistic to expect significant performance

improvements given the limited time and resources devoted to translating skills into practice. As Levinson et al. (2010) note, too much emphasis has been placed on short-term outcomes of interventions that focus on physician communication behavior rather than on patient outcomes:

> Those changes are only the immediate outcome of the training: improved communication behavior on the part of physicians. The immediate outcome must result in the intermediate outcome: improved knowledge, adherence to treatment, and self-care on the part of patients. That, in turn, must lead to improved health outcomes, as revealed by disease markers or quality-of-life measures—the ultimate outcome. (p. 1313)

By viewing communication skills as a continuum, student progress can be tracked over time, which has been shown to have longer lasting effects and facilitate greater transfer of communication skills to clinical practice (Deveugele et al., 2005; van Dalen, 2013). Portfolios would help resolve this issue by providing ample opportunities for physician learning, remediation, and enhancement of skills throughout medical training, using a variety of challenging real-life situations, role-play, small group discussions, standardized patient encounters, direct observation, and recorded assessments (Deveugele et al., 2005; Lane & Rollnick, 2007; Rees, Sheard, & McPherson, 2004; Smith et al., 2007). Opportunities for feedback would include clinical visits, standardized checklists, faculty comments, patient perspectives, and self-reflection of encounters (Hulsman, Harmsen, & Fabriek, 2009; Turan et al., 2009; Zick et al., 2007).

Applying Insights from the Field of Communication

One of the biggest challenges to BSS reform efforts is the transfer of skills to clinical practice (Curtis et al., 2013). As of now, the current system treats BSS as a burdensome set of prescriptive actions that require elaborate performances on special occasions, but not necessarily during regular clinical practice (Bensing, van Dulmen, & Tates, 2003). Systematic culture change must be adopted at all levels of medicine to combat the pervasive viewpoint that BSS are soft skills with little to no application to clinical practice. To increase the likelihood of acceptance and successful implementation, future changes to curriculum or licensure should be clearly relevant and add demonstrable value to both the individual and profession as a whole. Despite initial positive training outcomes, research has found little support for the effectiveness of CST interventions that lack supportive faculty, emphasis on transfer and application of communication skills, clinical supervision, training of both students and faculty, and long-term follow-up (Ammentorp & Kofoed, 2011; Bylund, et al., 2008; Heaven, Clegg, & Maguire, 2006). NIH-funded researchers at UC San Francisco and Stanford's School of Medicine echo these findings, stating that the most difficult task was not equipping students with BSS knowledge, but providing supportive clinical environments conducive to developing, honing, and applying BSS skills in practice settings (Satterfield, Harman, & Blankenburg, 2016).

Communication scholars can use their knowledge of organizational change, social networks, and persuasion to inform efforts to change the culture of medicine in order to promote the integration of BSS communication skills into practice. This involves placing more emphasis on faculty and clinical staff to develop supportive environments that do not simply tolerate, but encourage direct observation,

information exchange, individualized feedback, and opportunities to hone communication skills. One example of this could be treating communication skills like an entrustable professional activity (EPA) applied to any other medical procedure. Henry et al. (2013) explains:

> This concept holds that residents must be observed performing key activities at a certain competence level before they can be entrusted to perform them independently (Cate & Scheele 2007). EPAs highlight the distinction between communication competence — residents' ability to communicate effectively — and communication performance — observable (and assessable) activities residents perform during specific resident–patient interactions that are manifestations of their ability to communicate (Frank et al. 2010). In other words, observing and evaluating samples of residents' real-world communication performance provides information about residents' communication competence. (p. 399)

Since very few CST interventions are informed by theory, more emphasis should be placed on finding the right assessment instruments to assess communication constructs and using communication theory and frameworks to address challenges such as culture change, resistance, and relationship development (Cegala & Broz, 2002).

Areas of Application

Enhancing doctor–patient communication can be especially beneficial for addressing areas of vaccine hesitancy and opioid abuse. While physicians can be highly influential figures for parents, many physicians lack the confidence or experience to effectively address patient concerns regarding vaccine hesitancy (Henrikson et al., 2015). More research must be conducted to inform physician communication strategies that help doctors develop relationships with parents built on trust and rapport to ensure the safety of their children and public health.

The second area of application involves opioid abuse and addiction treatment. Physician prescription behavior can play a vital role in determining whether patients are at risk of developing a long-term dependency on prescription pain medication (Shah, Hayes, & Martin, 2017). BSS skills can be useful to inform patient communication regarding strategies for working with patients to help manage chronic pain rather than completely alleviate it. Riley (2017) notes:

> The prescribing of opioids is a behavior that occurs in social context. Influenced by medication marketing and cultural norms, patients often expect their healthcare provider to relieve their pain immediately, not help them manage it. Via negative reinforcement, healthcare providers, even well-intentioned ones, learn that it is easier to prescribe pain meds than to counsel patients in how to manage their pain. (para 3)

Improving physician communication skills and patient-centered care is not easy. Real change requires expanding the scope of traditional assessment and privileging more comprehensive longitudinal measures. Communication scholars can be instrumental in helping fill this gap by designing interventions,

tools, and evaluation criteria to capture higher level constructs of relationship building, including trust and empathy to increase patient self-efficacy, motivation, and information disclosure.

Conclusion

Changing curriculum and licensing exams to encourage physicians to obtain greater knowledge of BSS might seem like an effective way to promote patient-centered care, but it is not going to fix the overarching problem of BSS being misapplied, undervalued, and underutilized in medicine. The problem is a systematic challenge that must involve organizational and institutional culture change at every level of medicine, especially at the top where reforms are initiated.

References

Alvin, M. D. (2016). The USMLE Step 2 CS: Time for a change. *Medical Teacher, 38*(8), 854–856.

American Medical Association. (2017). *Creating the medical school of the future*. Retrieved from https://www.ama-assn.org/innovations-outcomes-consortium

Ammentorp, J., & Kofoed, P. E. (2011). Research in communication skills training translated into practice in a large organization: A proactive use of the RE-AIM framework. *Patient Education and Counseling, 82*(3), 482–487.

Austin, P. E., Matlack, R., Dunn, K. A., Kesler, C., & Brown, C. K. (1995). Discharge instructions: Do illustrations help our patients understand them? *Annals of Emergency Medicine, 25*(3), 317–320.

Bauer, U. E., Briss, P. A., Goodman, R. A., & Bowman, B. A. (2014). Prevention of chronic disease in the 21st century: Elimination of the leading preventable causes of premature death and disability in the USA. *Lancet, 384*(9937), 45–52.

Bensing, J., van Dulmen, S., & Tates, K. (2003). Communication in context: New directions in communication research. *Patient Education and Counseling, 50*(1), 27–32.

Blatt, B., Plack, M., Simmens, S., Lopreiato, J., Berg, K., Klevan, J., . . . Lewis, K. (2016). Do standardized patients have concerns about students not captured by traditional assessment forms? *Teaching and Learning in Medicine, 28*(4), 395–405.

Bombeke, K., Van Roosbroeck, S., De Winter, B., Debaene, L., Schol, S., Van Hal, G., . . . Van Royen, P. (2011). Medical students trained in communication skills show a decline in patient-centred attitudes: An observational study comparing two cohorts during clinical clerkships. *Patient Education and Counseling, 84*(3), 310–318.

Butalid, L., Bensing, J. M., & Verhaak, P. (2014). Talking about psychosocial problems: An observational study on changes in doctor–patient communication in general practice between 1977 and 2008. *Patient Education and Counseling, 94*(3), 314–321.

Bylund, C. L., Brown, R. F., di Ciccone, B. L., Levin, T. T., Gueguen, J. A., Hill, C., . . . Kissane, D. W. (2008). Training faculty to facilitate communication skills training: Development and evaluation of a workshop. *Patient Education and Counseling, 70*(3), 430–436.

Carney, P. A., Palmer, R. T., Fuqua Miller, M., Thayer, E. K., Estroff, S. E., Litzelman, D. K., . . . Satterfield, J. M. (2016). Tools to assess behavioral and social science competencies in medical education: A systematic review. *Academic Medicine, 91*(5), 730–742.

Carr, J. E., Emory, E. K., Errichetti, A., Johnson, S. B., & Reyes, E. (2007). Integrating behavioral and social sciences in the medical school curriculum: Opportunities and challenges for psychology. *Journal of Clinical Psychology in Medical Settings, 14*(1), 33–39.

Cegala, D. J., & Broz, S. L. (2002). Physician communication skills training: A review of theoretical backgrounds, objectives and skills. *Medical Education, 36*(11), 1004–1016.

Cohen, J. J. (2013). Will changes in the MCAT and USMLE ensure that future physicians have what it takes? *Journal of the American Medical Association, 310*(21), 2253–2254.

Curtis, J. R., Back, A. L., Ford, D. W., Downey, L., Shannon, S. E., Doorenbos, A. Z., . . . Engelberg, R. A. (2013). Effect of communication skills training for residents and nurse practitioners on quality of communication with patients with serious illness: A randomized trial. *Journal of the American Medical Association, 310*(21), 2271–2281.

de Haes, H., & Bensing, J. (2009). Endpoints in medical communication research, proposing a framework of functions and outcomes. *Patient Education and Counseling, 74*(3), 287–294.

Deveugele, M., Derese, A., De Maesschalck, S., Willems, S., Van Driel, M., & De Maeseneer, J. (2005). Teaching communication skills to medical students, a challenge in the curriculum? *Patient Education and Counseling, 58*(3), 265–270.

Douglas-Gabriel, D. (2016, August 6). $1,300 to take one test? Med students are fed up. *The Washington Post.* Retrieved from https://www.washingtonpost.com/local/education/thousands-of-medical-students-fight-against-pricey-required-skills-exam/2016/06/08/a5b64a56-2357-11e6-aa84-42391ba52c91_story.html?utm_term=.587d58d138d5

Doyle, D., Copeland, H. L., Bush, D., Stein, L., & Thompson, S. (2011). A course for nurses to handle difficult communication situations. A randomized controlled trial of impact on self-efficacy and performance. *Patient Education and Counseling, 82*(1), 100–109.

End Step 2 CS. (2016). Retrieved from http://www.endstep2cs.com/

Engel, K. G., Heisler, M., Smith, D. M., Robinson, C. H., Forman, J. H., & Ubel, P. A. (2009). Patient comprehension of emergency department care and instructions: Are patients aware of when they do not understand? *Annals of Emergency Medicine, 53*(4), 454–461.

Epstein, R. M. (2006). Making communication research matter: What do patients notice, what do patients want, and what do patients need? *Patient Education and Counseling, 60*(3), 272–278.

Fallowfield, L., Jenkins, V., Farewell, V., & Solis-Trapala, I. (2003). Enduring impact of communication skills training: Results of a 12-month follow-up. *British Journal of Cancer, 89*, 1445–1449.

First, L. R., Chaudhry, H. J., & Melnick, D. E. (2013). Quality, cost, and value of clinical skills assessment. *The New England Journal of Medicine, 368*(10), 963–964.

Flier, L. A., Henderson, C. R., & Treasure, C. L. (2016). Time to eliminate the Step 2 Clinical Skills Examination for US medical graduates. *JAMA Internal Medicine, 176*(9), 1245–1246.

Frist, W. H. (2005). Health care in the 21st century. *New England Journal of Medicine, 352*(3), 267–272.

Haist, S. A., Katsufrakis, P. J., & Dillon, G. F. (2013). The evolution of the United States Medical Licensing Examination (USMLE) enhancing assessment of practice-related competencies. *Journal of the American Medical Association, 310*(21), 2245–2246.

Haskard Zolnierek, K. B., & DiMatteo, M. R. (2009). Physician communication and patient adherence to treatment: A meta-analysis. *Medical Care, 47*(8), 826–834.

Heaven, C., Clegg, J., & Maguire, P. (2006). Transfer of communication skills training from workshop to workplace: The impact of clinical supervision. *Patient Education and Counseling, 60*(3), 313–325.

Henderson, C. R., & Morris, N. P. (2016, March 29). Why are we wasting future MDs' time and money with this pointless test? *Los Angeles Times.* Retrieved from http://www.latimes.com/opinion/op-ed/la-oe-0329-henderson-morris-step2cs-exam-20160329-story.html

Henrikson, N. B., Opel, D. J., Grothaus, L., Nelson, J., Scrol, A., Dunn, J., . . . Grossman, D. C. (2015). Physician communication training and parental vaccine hesitancy: A randomized trial. *Pediatrics, 136*(1), 70–79.

Henry, S. G., Holmboe, E. S., & Frankel, R. M. (2013). Evidence-based competencies for improving communication skills in graduate medical education: A review with suggestions for implementation. *Medical Teacher, 35*(5), 395–403.

Hulsman, R. L., Harmsen, A. B., & Fabriek, M. (2009). Reflective teaching of medical communication skills with DiViDU: Assessing the level of student reflection on recorded consultations with simulated patients. *Patient Education and Counseling, 74*(2), 142–149.

IOM (Institute of Medicine). (2001). *Crossing the quality chasm: A new health system for the 21st century.* Washington DC: National Academies Press.

IOM (Institute of Medicine). (2004). *Improving medical education: Enhancing the behavioral and social science content of medical school curricula* (P. A. Cuff & N. Vanselow, Eds.). Washington DC: National Academies Press.

Jolly, B. T., Scott, J. L., & Sanford, S. M. (1995). Simplification of emergency department discharge instructions improves patient comprehension. *Annals of Emergency Medicine, 26*(4), 443–446.

Kaplan, R. M., Satterfield, J. M., & Kington, R. S. (2012). Building a better physician— The case for the new MCAT. *The New England Journal of Medicine, 366*(14), 1265–1268.

Lane, C., & Rollnick, S. (2007). The use of simulated patients and role-play in communication skills training: A review of the literature to August 2005. *Patient Education and Counseling, 67*(1–2), 13–20.

Larson, E. B., & Yao, X. (2005). Clinical empathy as emotional labor in the patient–physician relationship. *Journal of the American Medical Association, 293*(9), 1100–1106.

Lehman, E. P., & Guercio, J. R. (2013). The Step 2 Clinical Skills Exam—A poor value proposition. *The New England Journal of Medicine, 368*(10), 889–891.

Lerner, E. B., Jehle, D., Janicke, D. M., & Moscati, R. M. (2000). Medical communication: Do our patients understand? *American Journal of Emergency Medicine, 18*(7), 764–766.

Levinson, W., Lesser, C. S., & Epstein, R. M. (2010). Developing physician communication skills for patient-centered care. *Health Affairs, 29*(7), 1310–1318.

Maguire, P., & Pitceathly, C. (2002). Key communication skills and how to acquire them. *British Medical Journal, 325*, 697–700.

Mehta, N. P., & Kramer, D. B. (2005). A critique of the USMLE Clinical Skills Examination. *MedGenMed, 7*(2), 76.

Naderi, S., Barnett, B., Hoffman, R. S., Dalipi, R., Houdek, L., Alagappan, K., . . . Silverman, R. (2012). Factors associated with failure to follow up at a medical clinic after an ED visit. *American Journal of Emergency Medicine, 30*(2), 347–351.

National Research Council & Institute of Medicine. (2013). *U.S. health in international perspective: Shorter lives, poorer health* (S. H. Woolf & L. Aron, Eds.). Washington DC: National Academies Press.

NIH OBSSR (National Institutes of Health Office of Behavioral and Social Science Research). (2016). *Behavioral and Social Science Consortium for Medical Education.* Retrieved from https://obssr.od.nih.gov/scientific-initiatives/bss-consortium/

Rees, C., Sheard, C., & McPherson, A. (2004). Medical students' views and experiences of methods of teaching and learning communication skills. *Patient Education and Counseling, 54*(1), 119–121.

Riley, W. (2017). *Opioid abuse is a behavioral and social systems problem.* National Institutes of Health Office of Behavioral and Social Science Research. Retrieved https://obssr.od.nih.gov/opioid-abuse-is-a-behavioral-and-social-systems-problem/

Roter, D. L., Larson, S., Shinitzky, H., Chernoff, R., Serwint, J. R., Adamo, G., . . . Wissow, L. (2004). Use of an innovative video feedback technique to enhance communication skills training. *Medical Education, 38*(2), 145–157.

Samuels-Kalow, M. E., Stack, A. M., & Porter, S. C. (2012). Effective discharge communication in the emergency department. *Annals of Emergency Medicine, 60*(2), 152–158.

Satterfield, J. M., Harman, S., & Blankenburg, R. (2016). Behavioral and social science teaching opportunities in hospital medicine. In *Integrating Behavioral and Social Sciences into Healthcare Education.* Bethesda, MD: National Institutes of Health Office of Behavioral and Social Science Research.

Shah, A., Hayes, C. J., & Martin, B. C. (2017, March 17). Characteristics of initial prescription episodes and likelihood of long–term opioid use—United States, 2006–2015. *Morbidity and Mortality Weekly Report.* Retrieved from https://www.cdc.gov/mmwr/volumes/66/wr/mm6610a1.htm

Smith, S., Hanson, J. L., Tewksbury, L. R., Christy, C., Talib, N. J., Harris, M. A., . . . Wolf, F. M. (2007). Teaching patient communication skills to medical students. *Evaluation and the Health Professions, 30*(1), 3–21.

Street, R. L., Makoul, G., Arora, N. K., & Epstein, R. M. (2009). How does communication heal? Pathways linking clinician–patient communication to health outcomes. *Patient Education and Counseling, 74*(3), 295–301.

Sun, B. C., Adams, J., Orav, E. J., Rucker, D. W., Brennan, T. A., & Burstin, H. R. (2000). Determinants of patient satisfaction and willingness to return with emergency care. *Annals of Emergency Medicine, 35*(5), 426–434.

Thomas, E. J., Burstin, H. R., O'Neil, A. C., Orav, E. J., & Brennan, T. A. (1996). Patient noncompliance with medical advice after emergency department visit. *Annals of Emergency Medicine, 27*(1), 49–55.

Turan, S., Elcin, M., Uner, S., Odabasi, O., Sayek, I., & Senemoglu, N. (2009). The impact of clinical visits on communication skills training. *Patient Education and Counseling, 77*(1), 42–47.

USMLE (United States Medical Licensing Examination). (2017a). *Step 2 Clinical Skills (CS): Content description and general information.* Retrieved from http://www.usmle.org/pdfs/step-2-cs/cs-info-manual.pdf

USMLE (United States Medical Licensing Examination). (2017b). *Performance data.* Retrieved from http://www.usmle.org/performance-data/

van Dalen, J. (2013). Communication skills in context: Trends and perspectives. *Patient Education and Counseling, 92*(3), 292–295.

Vashi, A., & Rhodes, K. V. (2011). "Sign right here and you're good to go": A content analysis of audiotaped emergency department discharge instructions. *Annals of Emergency Medicine, 57*(4), 315–322.

Williams, D. M., Counselman, F. L., & Caggiano, C. D. (1996). Emergency department discharge instructions and patient literacy: A problem of disparity. *American Journal of Emergency Medicine, 14*(1), 19–22.

Wouda, J. C., & van de Wiel, H. (2013). How to attain expertise in clinical communication? *Paediatric Respiratory Reviews, 14*(4), 213–218.

Zavala, S., & Shaffer, C. (2011). Do patients understand discharge instructions? *Journal of Emergency Nursing, 37*(2), 138–140.

Zick, A., Granieri, M., & Makoul, G. (2007). First-year medical students' assessment of their own communication skills: A video-based, open-ended approach. *Patient Education and Counseling, 68*(2), 161–166.