Creating a culture of communication in undergraduate medical education

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ABSTRACT

Quality communication improves outcomes across a wide variety of health care metrics. However, communication training in undergraduate medical education remains heterogeneous, with real-life clinical settings notably underutilized. In this perspective, the authors review the current landscape in communication training and propose the development of communication-intensive rotations (CIRs) as a method of integrating communication training into the everyday clinical environment. Despite its importance, communication training is often relegated to a “parallel curriculum.” Through integration, CIRs can provide opportunities for real-life skills training, decrease parallel curriculum burden, and provide specialty-specific training in preparation for residency. Clear, efficient communication and human connection remain central in a physician’s practice. CIRs reinforce these crucial principles. Potential benefits of a CIR model include role modeling of expert communication techniques; real-time, specific feedback on communication behaviors; development of relationship-centered communication skills and human connection, thereby decreasing burnout; and the opportunity for quality communication practices to become habits in a medical student’s daily routine.

KEYWORDS Communication; curriculum design; curriculum integration; relationship-centered care; undergraduate medical education

Isaiah’s mom focused on Dr. James. The room was quiet. Papers shuffled as Isaiah colored quietly in the next room. The computed tomography image appeared. Dr. James spoke, “The results are as we expected,” he paused. “The tumor has grown.” Isaiah’s mom nodded slowly. Dr. James led the dialogue with ease as he wound through technical scientific concepts, deep emotional questions, and light-hearted stories. Throughout, he worked to help Isaiah’s mom establish a care plan consistent with her goals and to find hope in the midst of a crisis. As he wrapped up, Dr. James spoke again, “I understand it has not been easy, but you have handled this with grace and love. Isaiah is fortunate to have a mother like you.” Isaiah’s mom paused as she zipped up a Spiderman backpack. “Thank you, Dr. James. You have no idea how much that means.” The next patient was a 16-year-old girl with leukemia. Dr. James turned to his medical student, “Sasha is having difficulty adjusting to her diagnosis. Why don’t you take the lead with this visit? You can use some of the communication techniques you saw me use with

Isaiah’s mom. I will jump in when you need help. This afternoon, we can discuss which techniques worked best.”

MAKING A CASE FOR INTEGRATED COMMUNICATION TRAINING

Historically, Dr. James might have simply been praised for his “good bedside manner.” However, we now know that quality communication leads to measurable improved outcomes across a wide variety of health care metrics, including increased patient satisfaction and adherence to medication, enhanced trust in a clinician,^{1,2} improved outcomes in a large selection of chronic diseases,^{3–8} and reduced costs for diagnostic testing and end-of-life care.^{9,10} Conversely, studies demonstrate that failures in communication are associated with increased medical errors,^{11–13} higher readmission rates,¹⁴ decreased outpatient follow-up,¹⁵ and increased malpractice claims.^{16–18} The Institute of Medicine identified two communication-heavy attributes, patient-centered care

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Table 1. Health care team communication concepts with associated entrustable professional activities (EPAs)

Team communication concept	EPA	To actively practice team-based communication, student will:
Differential diagnosis	EPA 2	<ul style="list-style-type: none"> Communicate with team members to verify and refine working diagnosis
Discuss orders	EPA 4	<ul style="list-style-type: none"> Discuss orders with primary team Discuss orders with health care team members (nurse, therapists, technicians) as needed Utilize closed-loop communication
Formal presentation	EPA 6	<ul style="list-style-type: none"> Present formal presentation on rounds Present patient to consultants as needed
Transitions of care	EPA 8	<ul style="list-style-type: none"> Perform handoffs when needed Use standardized hand-off model
Interprofessional teamwork	EPA 9	<ul style="list-style-type: none"> Identify active barriers to team communication Work with team to improve specific gaps in team communication
Urgent/emergent team communication	EPA 9 and 10	<ul style="list-style-type: none"> Learn communication pathways required to activate specific emergent medical responses Identify key team-based communication skills in urgent situations Practice closed-loop communication
Obtain informed consent	EPA 11	<ul style="list-style-type: none"> Assist in the informed consent process Identify team communication pathways required for subsequent procedure
System failures and culture of safety	EPA 13	<ul style="list-style-type: none"> Identify communication-related system failures or near-misses Discuss issue with relevant team member(s)

and interdisciplinary teamwork, as core competencies for all clinicians.¹⁹

Accordingly, medical educators recognize communication training as a core component of undergraduate medical education (UME). Seven of the 13 core entrustable professional activities (EPAs) depend directly on a resident's communication skills (Table 1).²⁰ However, residency program directors and standardized simulation exams consistently identify communication-based skills, including discussion of orders, patient handovers, informed consent, and patient safety/quality improvement, as EPAs in which incoming interns are least adequately prepared.^{21–24} Studies show new interns have difficulty incorporating effective communication, teamwork, and leadership skills into practice, particularly in the acute care of critically ill patients.²⁵ Finally, one survey showed that fewer than half of residents felt confident with advanced communication topics, such as understanding the patient's perspective, end-of-life discussions, delivering difficult news, dealing with the "difficult" patient, cultural awareness, and psychosocial issues.²⁶

Clearly, there remains a significant gap between current UME communication training and communication skills required of physicians. Historically, medical trainees have bridged this gap largely through trial and error.²⁷ However, communication is a technical skill, which "can be taught ... and learned."²⁷ Specific skills such as patient handovers, informed consent, agenda setting, motivational interviewing, cross-cultural communication, and end-of-life discussions require "deliberate practice and feedback," similar to procedural skills training models.^{27,28} Given the importance of

communication in health care, students must learn these skills by procedural training, not by trial and error.

Current landscape in communication training

Currently, communication training in UME remains heterogeneous, with a wide variety of teaching and assessment methods.²⁹ Additionally, opportunities for training in real-life clinical settings are notably underutilized.²⁹ Because of this, students cannot achieve skill mastery in a real clinical environment, and much of the curriculum stands as a separate component, or parallel curriculum.³⁰ Therefore, faculty development and student training in communication are often relegated to the periphery, ultimately resulting in the unintended message that communication is not important in UME curricula.

A culture of communication

The Academy of Communication in Healthcare described effective communication as "much more than the accurate exchange of information.... All communication has not only content and relationship but also situational context."²⁷ The situational context is vital to communication training. Medical students learn communication primarily through daily immersion in a medical world. Nationwide surveys have demonstrated that trainees learn communication skills primarily in the clinical context, through informal apprenticeships, observation, and faculty coaching.³¹ Given this knowledge, Miller et al proposed teaching communication as a procedural skill and recommended cultural change to optimize learning within a real-time clinical environment.²⁸ Communication culture includes verbal, nonverbal, social, and cultural

Table 2. Parallel between writing-intensive and communication-intensive teaching principles*

Educational principle		Writing-intensive curriculum	Communication-intensive rotation curriculum
Not additive, but transformative		<ul style="list-style-type: none"> Does not simply add extra essays Highlights writing skills within current topic 	<ul style="list-style-type: none"> Does not simply add more simulations/workshops Highlights communication within current topic
Cognitive: "Writing (communicating) to learn"	The student learns the medical topic by:	<ul style="list-style-type: none"> Writing about it 	<ul style="list-style-type: none"> Discussing it Teaching it Building relationship with patient
Beginner rhetorical: "Learning to write (communicate)"	Beginner is introduced to:	<ul style="list-style-type: none"> General conventions and features of academic writing Context for use of different styles 	<ul style="list-style-type: none"> Conventions and social norms of clinical communication Basic communication with patients and health care team Formal presentations
Advanced rhetorical: "Learning to write (communicate)"	Advanced learner practices:	<ul style="list-style-type: none"> Writing within conventions of chosen discipline Writing within specific social context 	<ul style="list-style-type: none"> Communication within chosen specialty Leading discussion of advanced communication topics Addressing complex social contexts
Active learning		<ul style="list-style-type: none"> Active learning (writing) is more effective than passive (listening) 	<ul style="list-style-type: none"> Real-life, active communication training is more effective than passive observation or lectures
Learning is not only solitary, but also a social and collaborative phenomenon	Skills improve when they are:	<ul style="list-style-type: none"> Discussed Peer-reviewed Rewritten 	<ul style="list-style-type: none"> Practiced in collaborative, team-focused environments Evaluated in real time Immediately revised and repracticed

*Adapted from McLeod et al.³⁶

interactions. Role modeling, mentorship, and specific feedback are essential for students to adopt and retain long-term successful communication skills in each of these areas.²⁷

Relationship-centered communication

Relationships are central in communication culture and communication training. Relationship-centered communication (RCC) recognizes that human elements of authenticity, empathy, and genuine relationship form the basis of effective communication.³² Furthermore, RCC reinforces compassion and emotional support as important components in the healing process, as patients who sense empathy from their physician have demonstrated improved clinical outcomes.^{33,34}

Therefore, incorporation of RCC is best achieved in a real-life setting, where students build meaningful, multiple-encounter relationships with actual patients and health care team members. Research has demonstrated that a student's compassion and empathy decay over the course of clinical training. However, training and education, if aligned with actual changes in clinical practice, can reinforce neural pathways for empathy and compassion.³³ Thus, a clinically based RCC training program will not only improve a student's communication skills, but can also bolster empathy and

compassion. This aspect of RCC enables the development of healthy emotional habits in a busy clinical setting, in hopes of promoting resilience and decreasing burnout.³⁵

PROPOSED SOLUTION BASED ON ESTABLISHED MODEL: COMMUNICATION-INTENSIVE ROTATION

Medical educators need a communication curriculum that fosters a communication culture through building relationships in a clinical context—a curriculum that avoids the disconnect and added burden of a parallel curriculum and ensures an authentic experience within the nuances and context of clinical practice. To address this need, we turned to a long-standing curricular model used in undergraduate universities: writing-intensive (WI) classes. WI classes recognize the need for students to be proficient writers across multiple disciplines, especially in their field of study, and require students to write frequently, resulting not only in experienced writing skills, but also in increased understanding of the subject material.³⁶ We proposed the development of communication-intensive rotations (CIRs), modeled after a WI curriculum. *Table 2* demonstrates the parallel of WI and CIR educational principles.

Table 3. Sample workflow of a typical communication-intensive rotation day, compared with a typical year 3 clerkship day

Element	Traditional clerkship teaching	Communication-intensive rotation
Student presentation	<ul style="list-style-type: none"> • Pertinent medical data • Medical assessment and plan 	<ul style="list-style-type: none"> • Pertinent medical data and plan • Assessment of communication barriers • Plans for communication with patient and team
Sample discussion of case and probing question from attending	<ul style="list-style-type: none"> • “Mrs. Jones will need better blood pressure control. Based on the pathophysiology of her comorbidities, which medication is the best choice?” 	<ul style="list-style-type: none"> • “We need to start Mrs. Jones on a new medication. What would be the best way to tell her? Explain the new medication to her? Determine her understanding of the plan?”
Walking rounds: communicating with patient and team	<ul style="list-style-type: none"> • Attending discusses medical plan with patient or team member 	<ul style="list-style-type: none"> • Student leads discussion with patient or health care team • Attending assists as needed, emphasizing communication concepts
Health care team communication	<ul style="list-style-type: none"> • Resident/attending communicates with team members and consultants • Student observes 	<ul style="list-style-type: none"> • When appropriate, student communicates with team members and consultants • Resident/attending assists
Afternoon student discussions*	<ul style="list-style-type: none"> • Student reviews current patient case • Student researches and presents relevant medical topic 	<ul style="list-style-type: none"> • Student reviews communication in current case • Student leads discussion on related communication concept
Informal teaching* or “chalk talk”	<ul style="list-style-type: none"> • Medical topic related to current patient 	<ul style="list-style-type: none"> • Communication concept related to current patient • Attending feedback from morning patient discussions
Attending as role model	<ul style="list-style-type: none"> • Models medical decision-making • Reinforces/corrects student thought/action in real time 	<ul style="list-style-type: none"> • Models medical and communication practices • Reinforces/corrects communication behaviors in real time
Role of resident	<ul style="list-style-type: none"> • Teach medical “chalk talk” • Model/discuss medical decision making 	<ul style="list-style-type: none"> • Teach communication “chalk talk” • Model/discuss communication techniques

*Afternoon activities alternate as needed.

Logistics of a successful CIR

Using the WI model, a CIR rotation focuses on teaching, practicing, and refining communication skills required for any aspect of patient care within the context of a clinical rotation. With this design, the CIR format is flexible enough to adapt to almost any specialty. *Table 3* describes the workflow of a typical CIR day, compared with a typical year 3 clerkship day. *Table 4* provides examples of specific concepts faculty may choose to emphasize.

Historically, the role-model method of communication training has been praised for its authentic experiences, but has fallen short of optimal communication training due to lack of standardization. The CIR framework makes use of meaningful real-life experiences, but combats the lack of standardization by overlaying a standardized communication curriculum within the rotation. Often, faculty who practice effective communication are not aware of the specific effective skills they use, nor how to teach that skill to another.³⁷ Thus, faculty receive standardized training in how to model, teach, and critique specific communication skills. The school’s responsible department delivers curriculum support,

provides faculty development, leads student communication small groups, and assists with scheduling.

Teaching and assessing communication as a health care procedure

Communication educators have compared health care communication to a technical medical skill, such as suturing.^{27,28} A beginning student learns didactics, studies technical points, and observes as the attending explains the procedure. An advanced student assists and eventually performs the procedure, with the attending present to supervise and redirect. Throughout, the student practices in simulation; however, a trainee is not deemed to have “mastered” the skill until he or she can reliably perform it in an actual clinical environment. CIR students follow a similar progression. Initially, they learn communication concepts and techniques. They observe a difficult conversation and discuss it with the attending. As the students progress, they contribute to or lead conversations, with the attending present to guide, redirect, or take over as needed, with the goal of skill mastery in an actual clinical environment.

Table 4. Specific relationship-centered communication skills*

Concept	Description
Generate rapport	<ul style="list-style-type: none"> • Social comment or nonmedical question related to patient history or current state, i.e., previous vacation or detail from chart
Attend to comfort	<ul style="list-style-type: none"> • Ensure readiness to start encounter • Ensure privacy • Consider patient's pain, room temperature, lighting, bathroom needs
Elicit all concerns and summarize	<ul style="list-style-type: none"> • Compile the list of concerns using open-ended questions • Ask "what else?" until patient says nothing
Negotiate agenda	<ul style="list-style-type: none"> • Establish patient's priorities out of list of concerns • State clinical concerns/priorities
Ask for perspective	<ul style="list-style-type: none"> • ICE acronym: ask about ideas, concerns, and expectations
Minimize interruption/allow other to speak	<ul style="list-style-type: none"> • Avoid interrupting the patient/family • Listen to gain understanding, not to formulate reply
Respond with empathy	<ul style="list-style-type: none"> • PEARLS acronym: Use responses that reinforce partnership, emotion, apology/acknowledgment, respect/validation, legitimization, and support
Tell/teach	<ul style="list-style-type: none"> • Tell clinical perspective with the patient's perspective in mind • Teach/tell as part of a dialogue/conversation instead of a monologue/information download
Communicate plan	<ul style="list-style-type: none"> • Offer a plan using plain language • Welcome input
Elicit barriers	<ul style="list-style-type: none"> • Elicit preferences, goals, barriers, and understanding
Teach back	<ul style="list-style-type: none"> • Ask an open-ended question to get summary of understanding and promote adherence • Use opportunity to clarify and collaboratively adjust the plan as needed
Next steps and support	<ul style="list-style-type: none"> • Elicit final questions • State what will happen next, concluding with statements of support and appreciation • Document patient's personal/communication needs

*Ideally, faculty will focus on demonstrating/teaching one to two skills at a time.²⁷

Similar to technical skills, mastery of communication skills requires repetition. Miller et al recommended that residents maintain a communication log and perform faculty-supervised family meetings, a paradigm almost identical to the historical practice of procedural logs.²⁸ Unlike technical skills, however, formal assessment of patient-centered communication skills has remained difficult to standardize. A

newly developed assessment tool, "Assessment of Communication and Consultation," shows promise in assessing a student's "integrated clinical communication skills with the emphasis on patient-centered communication."³⁸

Timing and environment

Because communication, like writing, is a skill, it is important to build intentional redundancy and practice into the curriculum. Therefore, we propose multiphase CIR planning. An early clinical CIR, based on the "beginner rhetorical" model in [Table 2](#), lays a foundation for appropriate communication skills throughout clinical years. We believe this CIR would be most useful if offered after a student's first clerkship, when he or she has had time to adapt and to observe the importance of clinical communication. This CIR would be in a communication-heavy specialty (e.g., primary care, geriatrics, palliative care). A follow-up CIR during the fourth year, based on the "advanced rhetorical" model in [Table 2](#), allows students to focus on communication concepts most applicable to their chosen specialty, while solidifying knowledge and refining skills through continued feedback. For example, emergency medicine CIRs might focus on compassionate, efficient communication within stressful environments.

Integration of communication, medicine, and daily practices

Communication training is most impactful when it is closely aligned with, and immediately applicable in, the learner's daily life. In a CIR, the student integrates medical and communication concepts in an authentic setting. This combination of medicine, communication, and the daily environment is important because it mirrors the student's future career. A CIR requires the student to consistently employ quality communication within a busy day-to-day environment, in which scientific concepts and medical decisions blend into conversations with patients, families, and health care staff. With this foundation, students can develop expert communication habits that continue into their future careers.

CONCLUSION

Data have established the importance of quality communication in health care and the necessity of communication training in UME.¹⁻²⁶ More importantly, clinicians sit in rooms with patients and family members like Isaiah's mom, who are frightened of a new diagnosis, who need to understand complex medical concepts, and who need compassionate support. Human connection is the foundation of communication. Communication, in turn, is the foundation of quality patient care. Therefore, we must build a culture in which effective communication skills and human connection are emphasized within a daily clinical environment. Implementation of UME communication training with these principles in mind is currently ongoing at our institution,

with plans to include real-life clinical communication training, overlaid with standardized communication curricula, including simulation and small group practice. We believe this combination will reinforce the use of effective communication in daily clinical practice, better prepare students for successful team leadership in patient care, and bolster the development of human connection, the essential piece of communication.

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