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### Impact of Medical Improvisation Training on Medical Students' Experience with Communication on Clinical Rotations

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### Background

- Effectively preparing students to communicate with patients, families, and teams is a challenge in medical education
- Techniques from Medical Improvisation have been proposed to teach communication skills in this context
- Limited evidence exists regarding how this training impacts real-life interactions

### Objective

- To provide a Medical Improv based educational training in the pre-clinical year
- To gather medical students' reflections following one year of clinical rotations

### Methods

- We recruited medical student volunteers to participate in an established curriculum (Watson, 2011)
- The course lasted 2 hours per week for 5 weeks
- Students participated prior to beginning clinical rotations
- Participants completed evaluations before and after the course with structured and open-ended questions on experience and self-perceived impact
- We conducted semi-structured interviews one year later after students completed core clinical rotations
- Pre- and post-course surveys were compared using Mann Whitney U test
- Qualitative thematic analysis was performed on interview transcripts

### Results

Table 1. Pre- and Post- Course Survey responses (n=23)

Question:	p-value
I can successfully manage multiple verbal and cognitive tasks when a professional situation requires this of me.	.003
I rarely start planning my response while the other person is still talking.	.08
I excel at reading the body language of others.	.04
I think I have whatever "stage presence" is necessary to excel in my professional life.	<.001
I feel that I would be comfortable when...	
... explaining a medical concept I know to a patient.	.01
... eliciting a patient's perspective on a medical issue.	.048
... discussing a medical concept I know with a peer.	.14
... discussing a medical concept I know with a person in a position of authority over me (e.g. professor, preceptor, research advisor, boss).	<.001
... discussing a medical concept I know with a person who is an expert and likely knows more than me on the topic.	.003
... public speaking when I'm communicating a concept I know to a professional audience.	.008

Scale: 1-Not like me at all; 2-A little like me; 3-Somewhat like me; 4-Very like me; 5-Exactly like me

Figure 1a. Reported communications skills students use regularly

- Building Rapport with Patients**  
"I think things have been going well are establishing rapport...setting things up in the beginning of the interview, and kind of building on that in terms of a trusting relationship."—Student 9
- Building Trust in the Team**  
"Communicating to the healthcare team is all about, can they trust you, can they talk to you?...No one really expects you to know anything, but they do expect you to be able to interact with the team."—Student 6
- Responding When Not Having Answers**  
"Just, like, being able to say, 'You know what, I don't know. Can I get back to you?' or something like that. Because we're kind of always taught, 'You should have answers to things.' So learning that shift was pretty difficult."—Student 5
- Reading Body Language**  
"On surgery...you had to be extra good reading the room...To read people's body language and read the atmosphere and know when to ask a question and when to just not talk because it was a very stressful time during procedure."—Student 11

Figure 1b. Reported communication skills students find challenging

- Responding to Emotion**  
"I was trying to figure out ... how do I make her feel better? She has a chronic, incurable disease and there's really, at the end of the day, there's nothing we can do for her...So trying to find a way to empathize with her, make her feel a little bit better in the moment."—Student 4
- Avoiding Jargon**  
"I've tried to be very intentional in my medical training of not using medical jargon with patients...I find that it's harder to do that the further you get along in your training...the easier it is to get into medical speak, in ways that you don't even realize you're doing."—Student 1
- Giving Serious News**  
"Because I had this good relationship with the family, I wanted to see if I could tell him the bad news....but I was only able to get out two sentences before I just panicked and froze...it really shook my confidence."—Student 8
- Managing Conflict**  
"I felt like I was kind of like this mediator. They weren't arguing, but they weren't communicating very clearly with each other. And they both saw me as someone they could talk to comfortably...I don't know, it was awkward."—Student 10

Figure 2. Reported communication skills improved by Medical Improv

**Flexibility**

"Just being able to have a conversation with somebody without being rigid to my list.... I always go in with a list of questions because I'm so nervous talking to people. I can't think of my next question when I'm in the middle of a conversation...But now I feel like I can just sit down and relax enough that I can let the conversation go. And even if the question is not worded exactly like the question on my paper, I'm okay with it."—Student 2

**Yes-And Approach**

"I will say that the one good skill that I think in a few cases helped me...is thinking more of the kind of a 'yes, and' mentality and kind of the idea of not, not using language that will put down or, kind of, put a halt to what the patient is saying. But something that's more open and positive that asks what they are saying or what their emotions are. I think it's definitely helped me with a few patients when maybe my ideas are not truly aligned with where they're at....I think that concept is overall helpful."—Student 7

**Confidence in Unknown**

"I don't know if I can say concretely that I have new communication skills that were absent before, that they dramatically changed. But I think that, if anything, I had an increased awareness for how I go about conversations that are less comfortable or just more unknown. I think that that was helpful in my clinical time, as a med student, to have slightly better awareness of my own thoughts and feelings in a situation like that. Yeah, I would say that's kind of the biggest benefit I got from the course."—Student 3

**Accepting Mistakes**

"There were so many curveballs in that whole situation. And even though... I didn't handle it as perfectly as I wanted to, I didn't run away. I was still there. I was still present in the moment. I was still able to come back...and have a really wonderful relationship with that family. I think the experience in the improv course really helped me that, because regardless of what kind of fool you made of yourself in the class, you still had to come back. You still had to pick yourself up and do the next exercise...I think that that helped me."—Student 8

**Listening**

"I think being aware of, like, the dynamic of a conversation and, like, who's doing the talking and who's doing the listening. And always making sure people are getting equal opportunities to do both."—Student 11

**Discussion**

Medical Improv shows promise as an enjoyable and effective communication skills training approach for medical students.