

Original Publication

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Using Motivational Interviewing to Address Tobacco Cessation: Two Standardized Patient Cases for Pediatric Residents

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Abstract

Introduction: Motivational interviewing (MI) is a well-established evidence-based method of working with patients to promote health behavior change. Standardized patient (SP) simulation allows trainees to practice and receive feedback on clinical and communication skills and may be useful in applying MI techniques to address tobacco use and exposure. **Methods:** We developed two SP cases for pediatric residents to practice addressing tobacco use with parents of their patients. **Results:** Thirty-six residents participated, 26 of whom had prior MI training. Resident postencounter self-reflection identified MI-specific skills, including eliciting the SP's view on positive/negative aspects of smoking, identifying stressors/triggers associated with smoking, eliciting reasons for smoking, asking about motivation/willingness to quit, eliciting benefits of quitting smoking, letting the SP do the talking, and guiding the SP in making a quit plan. On paired-samples *t* tests, resident self-evaluation checklist scores averaged 6.79 out of 8.00 (*SD* = 1.018, *SEM* = 0.165), compared with SP checklist scores, which averaged 7.08 out of 8.00 (*SD* = 1.217, *SEM* = 0.197). **Discussion:** These two SP cases were useful in many ways, allowing residents with prior MI training the opportunity for practice/feedback on skills learned and introducing residents with no prior MI training to MI concepts through experience/feedback. Residents consistently identified using MI concepts on postencounter self-reflection; resident self-evaluation and SP evaluation of residents showed agreement. These sessions could be utilized within a communication/MI curriculum or as stand-alone sessions to introduce MI concepts/techniques for addressing tobacco cessation in the pediatric setting.

Keywords

Motivational Interviewing, Tobacco Use, Pediatrics, Tobacco Smoke Exposure, Secondhand Smoke Exposure

Appendices

- A. Case 1 Sarah Bowman - SP Case Training Materials .docx
- B. Case 2 Rose Duhrrer - SP Case Training Materials .docx
- C. Case 1 Sarah Bowman - Door Note.docx
- D. Case 2 Rose Duhrrer - Door Note.docx
- E. Quitline Services Sample Informational Sheet.docx
- F. Participant Postencounter Checklist.docx
- G. Standardized Patient Checklist.docx
- H. Feedback Guidelines for SPs.doc

All appendices are peer reviewed as integral parts of the Original Publication.

Educational Objectives

By the end of this activity, learners will be able to:

1. Utilize motivational interviewing communication skills.
2. Perform an appropriate interview for tobacco use in a parent of a pediatric patient.
3. Self-evaluate performance using motivational interviewing skills with a tobacco-using parent.

Introduction

Tobacco smoke exposure (TSE) is a well-established cause of morbidity in children, leading to an increased risk for sudden infant death syndrome, pneumonia, asthma, and ear infections.¹ Practice standards and guidelines from the American Academy of Pediatrics recommend addressing TSE with parents and families with every visit, but pediatricians do not consistently do so. Some of the reasons cited for this include lack of time, discomfort in discussing smoking cessation, and the perception that "it's not my job."²⁻⁴ There is a need for education and evaluation on techniques to use in addressing TSE in pediatric practice, as the majority of residents do not receive formal education on addressing TSE with their patients and patients' families.^{5,6}

Motivational interviewing (MI) is a well-established evidence-based method of working with patients to promote health behavior change. A number of studies have demonstrated the utility of MI in addressing smoking cessation, with increased quit attempts and quit rates in the groups receiving MI compared to controls.^{7,8} The most successful curricula include experiential learning with feedback.⁹

Standardized patient (SP) simulation is a training in which an individual portrays a patient in a repeatable, standardized way. SP encounters provide an opportunity for trainees to practice and receive feedback on their clinical and communication skills.¹⁰ We had developed an MI workshop to teach our residents how to address TSE and wanted to create an SP experience to provide an opportunity for residents to reinforce their skills and receive feedback. We felt that the direct observation and structured feedback provided during and after an SP session would reinforce prior learning and provide the experience and feedback integral to a successful curriculum.

Three SP MI curricula have been published at this time in *MedEdPORTAL*. One focuses on women's health issues in military veterans¹¹; two others utilize MI to address smoking cessation. One presents a case in an internal medicine clinic.¹² The only pediatric-focused SP cases addressing tobacco cessation are part of a larger curriculum by Mahoney, Vitale, Eibling, Campbell, and Clifton.¹³ We feel that our two pediatric-focused smoking cessation SP cases provide an important addition to available resources as they can be utilized as adjuncts to existing MI training or as stand-alone experiences.

Methods

We created two SP cases to complement an MI curriculum we developed for pediatric residents, which was subsequently repeated as a required curriculum for new residents each year. In a 1-hour workshop, residents in all 3 years of training were given a 15-minute didactic on basic MI principles and practiced, through role-play of several cases, addressing tobacco smoke with patients or patients' parents.

Development of SP Cases

We created the SP cases in collaboration with Clinical Simulation Center (CSC) leadership. The cases were similar to the workshop cases in that a resident was asked to discuss smoking cessation with a pediatric patient's parent who smoked. In one case, the child was an infant just born in the well-baby nursery, and in the other, the child was a toddler being seen for respiratory distress in the emergency department (ED). We developed the cases following a standard template utilized for all cases run in our CSC.

Information detailed on the course overview included objectives for the encounter, demographic information about the SP character, her educational and family background, her medical history, and her attitude towards smoking. Examinee (trainee) and SP instructions included background on the reason for the encounter (newborn baby, ED visit) and tasks to be completed in the 15-minute session. SPs were given specific directives regarding responses to the examinee's statements, including suggested phrase responses to potential statements. SPs were asked to be responsive to the examinee's tone of voice: for example, "If the trainee is accusatory in tone, be defensive. If they are empathetic and you feel a good rapport, be open to the information and more inspired to quit."

We recruited SPs using the demographics of each case and SP level of expertise. These cases required SPs to give verbal feedback to the residents; therefore, SPs who had been trained in giving feedback were recruited. All SPs attended a 2- to 3-hour training session during which the faculty and CSC leadership reviewed the case materials (Appendices A & B). Some revisions were made to clarify areas of the SP case materials based on the training session and SP input.

Session Details

The residents participating in the simulation cases were oriented to the activity upon their arrival to the CSC. This orientation included description/timing of the SP activity, consent for videotaping, and distribution of secure passwords for each resident. At our facility, all SP encounters are recorded, and the

secure password allows a resident to watch and evaluate his or her performance online via a link provided in an email from the CSC.

Each resident was scheduled for 1 hour to complete the entire exercise, which included a brief orientation (as above) and two SP encounters. In each encounter, the SP (parent) awaited the resident in an examination room without the child present. Information presented to residents at the start of the encounter briefly described the scenario, including the parent they were meeting, and their objectives for the scenario (door notes, Appendices C & D). Basic information on quitline services was provided for the resident's reference and to share with the SP. (Appendix E is a sample of what a quitline information sheet might look like; participants should be given information regarding state-specific quitline services, which is available on each state quitline's website.¹⁴) Resident examinees entered the rooms individually and were given 15 minutes to complete the encounter with the SP. At the end of each session, residents had 5 minutes to complete a self-evaluation form (Appendix F) while the SPs filled out a resident evaluation (Standardized Patient Checklist, Appendix G), which included questions specific to MI (the Motivational Interviewing Checklist) and questions utilized in all SP cases at our institution (the Communication Checklist). After completion of the checklists, the resident was invited back into the room for verbal feedback from the SP concentrating on interpersonal and communication skills (Feedback Guidelines for SPs, Appendix H). Of note, the Motivational Interviewing Checklist questions in Appendix G were identical to those in the resident self-assessment in Appendix F. Sessions were videotaped and were reviewed by residents and faculty supervisors within the following week.

Twenty-four of the 36 residents had completed the educational workshop sessions 5-7 months prior to the simulation, and two who had not completed the workshop had had other prior MI training. For residents who had completed the workshop curriculum, the CSC sessions provided summative evaluation. For residents who had not yet completed the workshop, the video review and feedback provided initial formative evaluation.

Learner Assessment

SP evaluation of residents: In the 5 minutes following the 15-minute simulation, the SP completed the Standardized Patient Checklist (Appendix G) consisting of two halves: the Motivational Interviewing Checklist and the Communication Checklist (see above for full description). The Motivational Interviewing Checklist focused on MI techniques and consisted of the same questions as the resident self-assessment checklist (Appendix F), which the resident completed at the same time. Then, in the 5 minutes following checklist completion, the SP sat with the resident to give verbal feedback.

Faculty evaluation of residents: Completed Standardized Patient Checklists (Appendix G) and resident self-assessment checklists (Appendix F) were reviewed by faculty. Two authors watched the videotapes afterwards and, utilizing a validated MI evaluation tool, the Behavior Change Counseling Index (BECCI),¹⁵ provided additional written feedback to individual residents about their performance regarding their use of MI principles. Residents were also given feedback about the amount of time they spent talking versus the amount of time they spent listening in the encounter.

The overall time line of the sessions was as follows:

- 10 minutes: Learners arrived 10 minutes before their scheduled encounter time for orientation, which provided general information about the process of signing into the system and information about the flow of the encounter.
- 15 minutes: The encounter with the SP took place and was recorded.
- 5 minutes: The SP filled out the Standardized Patient Checklist (Appendix G: Motivational Interviewing Checklist and Communication Checklist) while the resident completed the self-assessment checklist (Appendix F).
- 5 minutes: The learner was invited back into the exam room for feedback from the SP regarding communication.

Results

The learners consisted of pediatric and medicine-pediatric residents ranging from PGY 1 to PGY 4. Thirty-six residents participated in the simulation session. Twenty-four of the residents (years PGY 2 and PGY 3) had completed an MI workshop prior to attending the simulation session. The PGY 1 residents had not completed an MI workshop prior to the SP session; two of the PGY 1 residents had received some MI training in medical school. The facilitators included two general pediatric faculty members, one with expertise in MI and one with expertise in simulation.

At the end of each case, trainees were asked to answer two open-ended self-assessment questions: (1) What do you think went well during the patient interview? (2) What would you have done differently?

Residents felt they did well in the following areas, from most frequently to least frequently cited (the number of citations is given in parentheses at the end of each item; asterisked items [*] are MI-specific skills):

- Establishing rapport (17).
- Being supportive or empathetic (14).*
- Identifying triggers (5).*
- Discussing the positive and negative aspects of smoking (3).*
- Eliciting readiness to quit smoking (3).*

Areas in which residents felt they could have done better included the following:

- Letting the SP talk more (13).*
- Discussing the positive and negative aspects of quitting/assessing readiness to quit (8).*
- Summarizing at the end (6).*
- Sharing knowledge regarding the quitline (4).

The residents' perception of their performance was similar to the SP's perception of the residents' performance on this exercise. On paired-samples *t* tests, resident and SP checklists showed agreement: Resident self-evaluation checklist scores averaged 6.79 out of 8.00 (*SD* = 1.018, *SEM* = 0.165), compared with SP scores (Motivational Interviewing Checklist questions), which averaged 7.08 out of 8.00 (*SD* = 1.217, *SEM* = 0.197).

Discussion

The development of SP cases for tobacco cessation in a pediatric setting is a unique contribution to the literature.

SP cases are a valuable addition to a curriculum because they allow trainees to practice MI communication skills. Implementing MI techniques takes practice and often requires repetition to reinforce the specific skills unique to MI. Although classroom didactic sessions are important in teaching basic MI concepts, experiential learning through a simulated case with subsequent self-evaluation is a valuable addition to a communication curriculum. Facilitators may also choose to use the SP cases as a stand-alone learning session to introduce the types of situations in which MI for tobacco cessation could be useful.

These two SP sessions were useful for our residents on a number of levels. For those who had previous MI training, the CSC sessions allowed them to practice, apply, and receive feedback on MI skills learned. One of the basic principles of MI is reflective listening in which the provider guides the patient through a behavioral change by carefully listening and then offering prompts to encourage the patient to self-motivate and reach solutions. We found that when residents did have MI training prior to the CSC session, they consistently spoke less but were more effective on guiding a patient to quitting, which is consistent with successful implementation of MI techniques. Residents without MI training spoke more and were less effective in reaching the goal of the CSC session.

On self-reflection, residents consistently identified using MI principles or identified MI techniques as areas in need of improvement. Furthermore, our residents' self-evaluations and SP evaluations of residents using the same checklist showed agreement. Even if resident and SP evaluations had not been so closely aligned, we feel that the information garnered would still be useful. We feel that these cases successfully allowed residents to practice MI techniques, as the BECCI was easily applied in our evaluation of our residents' performance with these cases. We had the opportunity to provide additional feedback to residents by watching their videotapes; however, if this had not been possible, we feel the SP evaluation of the residents using the checklist would have been sufficient.

Although our SP sessions were conducted in a CSC, these cases could be utilized by a training program without a CSC, as there was no high-tech equipment required during the session. The included case materials could be used to train any individual to portray the patient and complete the activity. However, additional training may be needed for that individual to provide verbal feedback. Resident review of the videos was useful but is not necessary if proper technology is not available. Additionally, even though these cases were created for use in a pediatric training environment, they could be adapted for utilization in other contexts with other specialties, including internal medicine, family medicine, emergency medicine, and obstetrics and gynecology. The informational sheet on quitline services that is provided to participants should reflect state-specific quitline services. Information on all state quitlines may be found at <https://www.naquitline.org>, by accessing the quitline map,¹⁴ or by accessing an individual state's quitline website.

There were several limitations in using SPs in a CSC for MI training. First, working in a simulated environment did not allow for measurement of actual behavioral change by patients. Second, there were several SPs trained to perform the cases, and although all residents experienced both cases, they all did not necessarily have the same SP for each case. Since all SPs received the same training from our team, we expected the resident experience to be similar for all trainees. Last, although we assume the cases could easily be adapted and applied to other specialties and with nonresident trainees, we did not try this.

Scheduling all residents to complete two SP sessions can be challenging, as not all residents are available on any given day (e.g., some may be on a night rotation, postcall, or vacation). We were fortunate to have a well-established CSC with adequate staffing to accommodate multiple groups of residents on different days.

Although the SPs provided feedback to the residents and the residents also completed a postencounter self-assessment, individualized resident feedback from faculty with expertise in MI would be ideal. Since all of our resident encounters in the CSC were videotaped and one of the authors was an MI expert, we were able to provide every resident with specific feedback to help develop his or her MI skills further. As other training programs implement these cases, they may find it challenging to provide such feedback if they do not have an MI expert. In addition, watching the sessions (either videotaped or live) and providing feedback to trainees requires an additional time commitment from faculty.

While the sessions may be completed without any prior MI training, we feel they are most useful for those participants who have had some MI training, as the checklists and feedback are focused on MI-specific skills.

In the future, areas of focus could include SP feedback regarding the potential challenges in the execution of the SP role since we found that some SPs were easier than others to engage in a conversation about quitting. To address this, the case materials were revised to include clear directions and training notes for the SP response when asked about smoking cessation/motivation in order to improve standardization. Lastly, it would be useful to evaluate these scenarios when used in a setting outside of a CSC to assess their ease of implementation and their generalizability.

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Prior Presentations

Boykan R, Blair R, Messina CR. Motivational interviewing to improve quitline referrals—a resident education initiative. Presented at: Pediatric Academic Societies 2018 Meeting; May 8, 2018; Toronto, Ontario, Canada.

Ethical Approval

Reported as not applicable.

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