Medical Student Presentations on Family-Centered Rounds: A Workshop to Teach an Art Form

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Abstract

Introduction: Family-centered rounds (FCR) are a common method for daily communication between families and providers in pediatric hospitals. Traditionally, medical education teaches students fundamental oral presentation skills. However, students frequently struggle with synthesizing pertinent information for communication to patients and families, especially without the use of medical jargon. To address this deficit, we created a workshop for third-year medical students on their pediatric clerkship to provide expectations for FCR presentations and allow for directed practice with immediate feedback.

Methods: This 1-hour workshop begins with a preworkshop survey and PowerPoint introductory presentation on FCR. Participants then watch videos of both good and bad history and physical (H&P) performances and discuss the differences. The workshop ends with 30 minutes for small-group H&P practice.

Results: This workshop has increased medical students’ perceived comfort with oral presentations on family-centered rounds, as well as their ability to identify and synthesize pertinent information.

Discussion: The workshop has created a solid foundation for the introduction of medical students to family-centered rounds presentations; however, further development of educational and feedback tools would continue to enhance this learning experience. The creation and maintenance of the workshop relied heavily upon senior resident involvement to serve as small-group facilitators.

Keywords
Family-Centered Rounds, Oral Presentation Skills, Pediatric Clerkship

Educational Objectives

By the end of this workshop, the learner will be able to:

1. Identify goals and key elements of family-centered rounds.
2. Analyze effective methods for presenting on family-centered rounds using simulated oral presentations.
3. Practice synthesizing information into a history and physical presentation appropriate for family-centered rounds.

Introduction

Traditionally, medical education teaches students to collect information needed to write an appropriate history and physical (H&P) and to present this information using fundamental oral presentation skills. Medical education curricula have evolved over the last several years to include standardized patient scenarios that allow medical students to practice gathering a history and honing physical exam skills. Students become comfortable with their ability to collect data from patients or families while performing an H&P on admission, but they often struggle to synthesize the information into an organized presentation to communicate it appropriately to patients and families during rounds. Students often develop their oral presentation skills during their clinical clerkships under the guidance of residents and attending physicians. Presenting patients on rounds can be a daunting task for medical students since expectations may vary with each clerkship experience. A survey study conducted in 2011 demonstrated that exposure
to family-centered rounds (FCR) improved students’ overall presentation experiences. Different techniques for teaching oral presentation skills have been introduced, including simulated presentations, encounter cards, and web-based curricula, but the most effective method remains unclear.

Patient presentations on medical rounds are a vital form of communication between medical providers and patients and their families. Pediatric hospitals frequently use FCR to communicate this important information. Many hospitals are adopting the principle of FCR to focus the communication of information and to allow shared decision making between the medical team and the family. However, these presentations can be significantly different than those required during other clerkships that continue to utilize the traditional patient presentations for rounds. Instead of directing presentations to the medical team, the focus of FCR is on the patient; therefore, they use conversational language with less medical jargon and rely on interactions between the medical team and patient or family. Studies suggest that frequent feedback is important for students to hone their presentation skills; however, there are no clear established expectations of medical student presentations on FCR presented in the literature.

At Cincinnati Children’s Hospital Medical Center (CCHMC), medical students learn their primary pediatric oral presentation skills during their third-year inpatient clerkship. Observations from our faculty and senior residents noted that students were able to collect information from families and patients during the H&P and use it to create an appropriate written note but that they often struggled to identify pertinent information needed to develop a concise oral presentation directed to the patient or family. In spring 2012, we performed a needs assessment of both senior residents and hospital medicine attending physicians in order to identify important components of medical student oral presentations. Synthesis of information into a concise assessment and plan (senior residents = 65.6%, attending physicians = 93.8%), identification of pertinent information (senior residents = 88.5%, attending physicians = 56.3%), and overall organized structure (senior residents = 85.2%, attending physicians = 81.3%) were identified as the most important components of medical student presentations (Figure 1). We also surveyed medical students at the end of their inpatient pediatrics rotation to better understand the most effective methods for improving their presentations. They indicated resident mentorship and attending feedback were the best ways to develop presentation skills.

Figure 1. Summary of needs assessment surveys: senior resident and hospital medicine attending identification of desired components of medical student oral presentations.
This workshop was instituted in the 2012-2013 academic year and has been held monthly since that time. The workshop was also adapted and presented to the incoming 2014-2015 CCHMC interns during their orientation week. Materials were developed based on background knowledge and experience with FCR and the results of needs assessments. The workshop was held within the first week of the pediatric inpatient rotation to establish expectations early and provide opportunities to practice skills. We obtained exemption from the CCHMC institutional review board prior to developing the workshop and survey materials. While the workshop was a required part of the third-year inpatient pediatrics clerkship rotation, participation in the surveys was voluntary, and the surveys did not contain any identifying information so as not to create a conflict of interest with the students' grades.

**Methods**
This workshop is intended to be held with third-year medical students at the start of their inpatient pediatric rotation. Approximately 1 hour is needed, though additional time can be added to allow medical students more time to practice with supplemental H&Ps.

The suggested workshop timeline is as follows:

- **0-15 minutes:** Students complete preworkshop survey. Introduce FCR using PowerPoint presentation.
- **15-30 minutes:** Workshop videos and discussion.
- **30-60 minutes:** Small-group H&P practice.

Access to Microsoft PowerPoint is needed to present the slides for the didactic portion of the workshop. The videos are embedded into the PowerPoint presentation, but appropriate audio- and video-playing software is necessary.

At least one person familiar with the goals of the workshop should be present to lead the didactic portion of the workshop and to answer questions pertaining to FCR. Senior resident volunteers can serve as small-group facilitators. The ideal facilitator-to-student ratio is one small group facilitator for every three students to allow for more opportunities for students to practice and receive individualized feedback. The small-group facilitators should have experience presenting on FCR and should be able to recognize key points for feedback. They should also be able to give feedback to not only the presenting student but also the other students in the group.

In our execution of this workshop, two primary senior residents led these workshops and were responsible for identifying small-group facilitators. As fellow residents, they were successful in recruiting a core group of motivated residents. E-mails were sent approximately 1 week before the workshop to recruit senior residents for each workshop, and reminder e-mails were sent the day prior to ensure attendance. At the end of each academic year, rising second-year residents interested in being a facilitator were asked to first observe the workshop. In the next session, they were then paired with an experienced small-group facilitator. The new facilitator was asked to lead the group and was then given immediate feedback from the experienced facilitator.

If using the medical student presurvey (Appendix O), distribute this at the beginning of the workshop prior to starting the PowerPoint presentation. Alphanumeric identifiers can be used to pair surveys in order to keep respondents anonymous. The post-rotation medical student survey (Appendix P) can be used at the end of the students' inpatient pediatrics clerkship. At our institution, we had the most success distributing the postevaluation surveys at the National Board of Medical Examiners' SHELF exam at the end of the clerkship. The students should include their unique identifier at the top in order to pair survey results.

After facilitator introductions, the Medical Student Presentation Workshop PowerPoint (Appendix C) should be played for the didactic portion of the workshop. The embedded video vignettes History of Present Illness Weak and History of Present Illness Strong can be viewed as they appear in the presentation (also included as Appendix D and Appendix E, respectively). Afterwards, the Facilitator Guide...
for Workshop Videos (Appendix B) can be used to guide group discussion about the differences between the videos, highlighting the key information of both effective and less-effective qualities of each video. This same process should occur for the embedded Assessment and Plan Weak and Assessment and Plan Strong videos (also included as Appendix F and Appendix G, respectively), again utilizing the Facilitator Guide for Workshop Videos to guide group discussion about the differences between the two videos. The remaining PowerPoint slides conclude the didactic portion of the workshop.

For the interactive practice portion of the workshop, two to three medical students should be paired with one small-group facilitator to allow time to practice oral presentations using the H&P resources included. The facilitator can divide the H&P into sections for the students and allow the students to take turns practicing presenting the individual sections. Following each section, the facilitator should pause and allow the other medical students in the group to give feedback to the presenting student. The facilitator should utilize the Facilitator Guide for Practice H&P Small Group Breakout Session (Appendix A) to guide feedback and discussion. If time allows, additional H&Ps can be used for practice. The Ivan Topee H&P (Appendix H) was used at our institution during these workshops; however, several supplemental H&Ps for common pediatric diagnoses were also created (Appendices I-N).

Due to a lack of existing standard objective methods for assessing medical student presentations, we studied student self-assessments of their presentation skills using a pre-post survey design. Students completed a survey at the beginning of the workshop (Appendix O) and again at the end of their inpatient rotation (Appendix P). Factors assessed included comfort level with presentations, organization of presentations, difficulty identifying key information, difficulty developing an assessment, and difficulty developing a plan.

Results

We collected 90 survey observations, 36 of which had pre and post matches (Table 1). In the preworkshop survey, the third-year medical students recognized that identification of pertinent information was a limitation in their ability to develop an appropriate presentation. At least 50% of students perceived a significant improvement in all of these categories from the presurvey to the postsurvey.

<table>
<thead>
<tr>
<th>Question</th>
<th>N</th>
<th>Pre Mdn</th>
<th>Post Mdn</th>
<th>Change Mdn</th>
<th>p</th>
<th>% (n) with improved scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comfort level with presentations</td>
<td>36</td>
<td>4 (3, 4)</td>
<td>5 (4, 5)</td>
<td>1.0 (0, 1)</td>
<td>&lt;.001</td>
<td>64% (23)</td>
</tr>
<tr>
<td>Organization of presentations</td>
<td>36</td>
<td>4 (4, 4)</td>
<td>4 (4, 5)</td>
<td>0.5 (0, 1)</td>
<td>.011</td>
<td>50% (18)</td>
</tr>
<tr>
<td>Difficulty identifying key info</td>
<td>36</td>
<td>2 (2, 3)</td>
<td>4 (3, 4)</td>
<td>1.0 (1, 2)</td>
<td>&lt;.001</td>
<td>67% (24)</td>
</tr>
<tr>
<td>Difficulty developing assessment</td>
<td>36</td>
<td>2 (2, 4)</td>
<td>4 (2.5, 4)</td>
<td>0.5 (0, 2)</td>
<td>&lt;.001</td>
<td>50% (18)</td>
</tr>
<tr>
<td>Difficulty developing plan</td>
<td>36</td>
<td>2 (2, 3)</td>
<td>3 (2, 4)</td>
<td>1.0 (0, 1)</td>
<td>&lt;.001</td>
<td>61% (22)</td>
</tr>
</tbody>
</table>

*Likert-scale responses coded as 1 = very poor, 5 = very good.

Data presented as median (25th percentile, 75th percentile).

There was a significant improvement in perceived length of presentation being just right preworkshop to postworkshop (Table 2). Preworkshop, 57% (20/35) of the subjects perceived the length of their presentations to be just right, whereas postworkshop, the percentage increased to 91% (32/35), p = .003.

<table>
<thead>
<tr>
<th>Pre</th>
<th>Post</th>
<th>n</th>
<th>%</th>
<th>p^</th>
</tr>
</thead>
<tbody>
<tr>
<td>Just right</td>
<td>Just right</td>
<td>18</td>
<td>51%</td>
<td>.003</td>
</tr>
<tr>
<td>Just right</td>
<td>Too long or short</td>
<td>2</td>
<td>6%</td>
<td>.003</td>
</tr>
<tr>
<td>Too long or short</td>
<td>Just right</td>
<td>14</td>
<td>40%</td>
<td>.003</td>
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<tr>
<td>Too long or short</td>
<td>Too long or short</td>
<td>1</td>
<td>3%</td>
<td>.003</td>
</tr>
</tbody>
</table>

*One of the 36 matched subjects was missing pre length question response. This table includes 35 subjects with pre and post data.

^p value from McNemar’s test.
Discussion

We successfully developed and implemented a workshop to orient third-year medical students to FCR that was well received by the students and has continued monthly for 3 years. Students' feedback indicates that the workshop provides a comprehensive introduction to FCR and clearly outlines expectations for their oral presentations, providing tools for success as they embark on their inpatient rotation.

We learned several important lessons to improve future interventions. Protected time for the medical students to participate in the workshop was crucial. The workshop was typically held during a routine conference time, such as a 1-hour noon conference during the first week of the medical students’ inpatient pediatric rotation. The workshop was listed on the medical students’ overall educational calendar, and they were sent a reminder e-mail the day prior to the scheduled session. It was a required workshop by the medical school clerkship, which helped improve medical student attendance.

A lower ratio of medical students to facilitators allowed for a nonthreatening environment in which to practice presentations and receive feedback. Due to clinical responsibilities, there were some months when it was difficult to recruit enough senior residents to serve as small-group facilitators. During that time, we either had larger groups of medical students or invited hospital medicine fellows and faculty members to serve as small-group leaders. When fewer facilitators were available, there was less time for each student to practice sections of the presentation and receive individualized feedback. To mitigate this problem in the future, we plan to transition to a core group of faculty facilitators to provide more consistent feedback between sessions.

Our goal was to create a workshop that outlined general expectations for presentations. There is inevitably some variability between attending physicians that can affect how certain findings are presented. While this is mostly unavoidable, appropriate faculty development and understanding of the basic content presented to medical students can help to mitigate the variation in medical student presentation expectations. The workshop was presented at a hospital medicine faculty division meeting with review of the needs assessment surveys describing overall faculty expectations of medical student presentations. The current workshop model relies on senior residents to act as small-group facilitators. Because of clinical responsibilities and scheduling conflicts, it may be more feasible to have a core group of attending physicians or fellows act as small-group facilitators. In addition, the workshop was presented to incoming first-year residents at their orientation to help familiarize them with FCR presentations as well as to give them an understanding of what was expected of the third-year medical students.

Additionally, while the workshop provided a general introduction to FCR presentations, we believe we could improve the effectiveness of our teaching if students received consistent FCR feedback throughout their inpatient rotation. While the majority of medical students perceived improvements in their oral presentations on FCR, surveying students at the end of the clerkship may be confounded by other experiences during the rotation. Improvements cannot be attributed to the workshop alone. To address this concern, we considered the development of an evaluation tool to be used throughout the month to provide ongoing formative feedback for FCR presentations as a supplement to the workshop. However, the validation of a new tool and inability to standardize evaluators proved difficult. The incorporation of tools used at other institutions may be a more effective next step.

We achieved our goal of providing targeted feedback of FCR presentations to our third-year medical students early in their inpatient pediatric clerkship through an effective and sustainable workshop. The workshop provides baseline expectations to ease the transition into the rotation and allow students to feel more prepared to engage in learning during rounds.

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Ethical Approval
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References