Effectiveness of Feedback Given by Standardized Patients During an Introductory Physical Examination Course

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Introduction
Conducting a physical examination (PE) is one of the core clinical skills that must be learned as part of becoming a competent medical student. Early correction of PE items done incorrectly using specific feedback could be an effective way of starting students off with good habits.

We developed a program using both senior medical students and Standardized Patients (SPs) to develop a program to teach comprehensive PE skills to first year medical students. SPs were trained to give feedback focused on skills that students did incorrectly, in a specific manner, and write that feedback in a learning prescription.

Objectives
1) Can SPs concentrate feedback on skills done incorrectly, as opposed to not done?
2) Can SPs give specific feedback in writing?
3) Is specific feedback more effective than general feedback?

Methods

Introduction to Physical Exam Course
- 143 students during end of first semester
- 8 weeks in first semester of MS-1 year:
  - Weeks 1-6 = didactic + practice on friend
  - Week 7 = formative on SP in 60 minutes
    - 5 minutes of feedback
  - Week 8 = summative on SP in 45 minutes

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Methods

SP tasks
- Formative session (week 7)
  - Score history and PE on 45 item checklist
  - Provide verbal feedback:
    - Focus on specific items
    - Focus on items done incorrectly (vs. not done)
  - Provide written feedback
    - Learning Prescription
      - Focus on specific items
      - Focus on items done incorrectly (vs. not done)

Analysis
- Copy of Learning Prescription
- Recorded item number for specific items (ex. bicep reflex) and general items (ex. cardiac exam)
- Compared checklist results week 7 (formative session) to checklist results week 8 (summative session)

Results
6408 checklist items were available for analysis (99.6%)

Table 1. Number of items scored as incorrect and not done was relatively low.

<table>
<thead>
<tr>
<th></th>
<th>Week 7</th>
<th>Week 8</th>
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</thead>
<tbody>
<tr>
<td>Incorrect</td>
<td>654 (10%)</td>
<td>537 (8%)</td>
</tr>
<tr>
<td>Not done</td>
<td>982 (15%)</td>
<td>257 (4%)</td>
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Table 2. SPs were able to give more specific than general feedback, and were able to give more feedback on items done incorrectly rather than items not done.

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
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<tbody>
<tr>
<td>Specific item?</td>
<td>368 (77%)</td>
<td>108 (23%)</td>
</tr>
<tr>
<td>Item done incorrectly?</td>
<td>301 (40%)</td>
<td>268 (27%)</td>
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Table 3. Students were slightly less likely to correct an incorrect item or item not done if they received specific feedback.

<table>
<thead>
<tr>
<th>Initial score in week 7</th>
<th>RR of getting correct in week 8 if given specific vs. general feedback</th>
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<tbody>
<tr>
<td>Done incorrectly</td>
<td>0.91 (Pearson, P= 3.39)</td>
</tr>
<tr>
<td>Not Done</td>
<td>0.94 (Pearson, P=N.S.)</td>
</tr>
</tbody>
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Conclusions
- SPs can produce specific feedback focusing on items which are done incorrectly
- Specific feedback does not appear to be more effective than general feedback