Teaching Residents to “Teach-Back”: Does a Structured Curriculum including Simulation Improve Pediatric Resident Communication Skills?

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What is “Health Literacy”? 

• **Literacy**: The ability to read, write, compute, think critically to achieve one’s potential
• **Health literacy**: The ability to find, understand and use health information, make good health decisions, and navigate the health care system.
  – U.S. Dept. of Education, 1993
  – U.S. Dept of health and Human Services, 1998
  – i.e. reading OTC labels to determine dosages and drug interactions, reading a chart to determine healthy weights
• 36% of the U.S. population have poor health literacy skills

What is “Teach-Back”? 

• Asking parents to repeat in their own words what they need to know and / or do.
  – **Not** a test of the patient, but of how well you explained.
  – A chance to check for understanding and, if necessary, re-teach the information.
  – “…One of 11 top patient safety practices based on the strength of scientific evidence.”
  – AHRQ, 2001 Report, Making Health Care Safer

Impact of Health Literacy Awareness and Context of Care

• Key factors that may:
  – Reduce hospital re-admission rates
  – Increase both patient satisfaction and patient outcomes.
  – Reduce medical errors

Study Question

• Does a multi-modal educational intervention including simulation for pediatric residents improve:
  – Communication skills
  – Use of “teach-back”
  – Awareness of context of care?

References:
Issenberg SB et al, Medical Teacher 27: 10-28 (2005)
Structured Simulation Session – child with asthma, a complex psychosocial history and mom with low health literacy

Individual Feedback to Residents

Large Group Didactic Session – reflection on simulation session with discussion of context of care, health literacy and “teach-back”

Structured Simulation Session – child with asthma, a complex psychosocial history and mom with low health literacy

Assessment Methods: Context of Care and “Teach-Back”

- Simulation sessions video recorded
- Individual videos reviewed and scored using evaluator checklist modified from a validated tool* – Scored by 2 MDs (RS, MB) and a Social Work Manager (SK)

Study Design

Assessment Methods: Context of Care and “Teach-Back”

- Transcripts of simulation session scored using:
  - **FOG**: Measures the readability of English writing and estimates the years of education needed to understand a text.
  - **SMOG**: Measures the reading grade that a person must have reached if he/she is to understand fully the text that is being read.
  - **Language Ease**: Measures the difficulty or ease of a piece of reading material. Higher scores indicate reading/language ease

Results: Context of Care and “Teach-Back”

<table>
<thead>
<tr>
<th></th>
<th>Initial Simulation Session</th>
<th>Follow-up Simulation Session</th>
<th>P-value</th>
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</thead>
<tbody>
<tr>
<td>Use of &quot;Teach-Back&quot;</td>
<td>6.8</td>
<td>5.8</td>
<td>0.001</td>
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<tr>
<td>Barriers to Keeping</td>
<td>7.8</td>
<td>6.5</td>
<td>0.011</td>
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<tr>
<td>Appointments</td>
<td>7.8</td>
<td>6.5</td>
<td>0.011</td>
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<tr>
<td>Ability to Obtain</td>
<td>8.3</td>
<td>7.2</td>
<td>&lt;0.001</td>
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<tr>
<td>Prescribed Medications</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Concerns that Parent may</td>
<td>9.2</td>
<td>8.3</td>
<td>0.31</td>
</tr>
<tr>
<td>be overwhelmed or depressed</td>
<td></td>
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<td></td>
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</tbody>
</table>

*Schwartz et al. JAMA. 2010;304(11):1191-1197

Results: Language Analysis

<table>
<thead>
<tr>
<th></th>
<th>Initial Simulation Session</th>
<th>Follow-up Simulation Session</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade Level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FOG</strong></td>
<td>8.35</td>
<td>7.62</td>
<td>0.007</td>
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<tr>
<td><strong>SMOG</strong></td>
<td>8.24</td>
<td>7.52</td>
<td>&lt;0.001</td>
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<tr>
<td>Syntax</td>
<td></td>
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<td></td>
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<tr>
<td><strong>Language Ease</strong></td>
<td>82.0</td>
<td>84.1</td>
<td>0.024</td>
</tr>
</tbody>
</table>

Resident Feedback

- Residents “uncomfortable” with simulation
- “Knew what you wanted” at the follow-up session
- Actors depressed and withdrawn – difficult to focus on other areas of context of care
Study Limitations

• Simulation
  – Increased learner anxiety may heighten learning
  – May not be a true representation of practice patterns
• Actors more depressed and withdrawn than anticipated
• Discrepancy amongst reviewers in video scoring

Further Studies

• Assessment of the sustainability of the educational intervention
  – Continuity clinic observations assessing use of “teach-back” and eliciting parent’s understanding of disease process
  – Assessments by current and new investigators
• Assessment of the effect of the intervention without the use of simulation

References

• Nuovio J, Bartele EJ and Pathman A. Assessing residents knowledge and communication skills using four different evaluation tools. Medical Education 40: 630-639 (2006).
• Alan Schwartz, PhD; Saul J. Weiner, MD; Ilene B. Harris, PhD; Amy Binns-Calvey, BA. An Educational Intervention for Contextualizing Patient Care and Medical Students’ Abilities to Probe for Contextual Issues in Simulated Patients. JAMA. 2010;304(11):1191-1197.