Action Planning for Implementing TeamSTEPPS in Health Professions Education

Katherine J. Jones, PT, PhD
Why we need a structured approach to curriculum development...

• It is the responsibility of faculty to plan education experiences, often without having training or experience in such endeavors, and often in the presence of limited resources and significant institutional constraints.

• Ideally, healthcare education should change as our knowledge base changes and as the needs of patients, healthcare professionals, and society change.

Objectives

• Describe the 6 steps of curriculum development
• Begin an action plan to integrate team training into nursing, PT, and OT curricula.
Six Steps

1. Problem Identification & General Needs Assessment
2. Needs Assessment of Targeted Learners
3. Goals and Objectives
4. Educational Strategies
5. Implementation
6. Evaluation and Feedback
1. Problem Identification & General Needs Assessment

**Problem:** Poor communication and lack of teamwork remain root causes of adverse events

- Current Approach
- Ideal Approach

Difference between current & ideal = general needs assessment
2. Needs Assessment of Targeted Learners

Who are your learners

- Students
  - Nursing
  - PT
  - OT

Faculty
Administration
Clinical Instructors and Preceptors

Relevant Context

Previous training
Existing KSAs
Current Performance
Preferences for learning strategies
Characteristics of the learners’ environments (QSEN, PT paradigm shift)
Resources (clinical experiences, information, technology, simulation, role models)
3. Goals and Objectives

- Specific & Measurable…5 elements
  - Who will do how much of what by when?
- 3 Types of Objectives: Learner, Process, Outcome
- Two levels of Objectives: Individual Learner and Program

<table>
<thead>
<tr>
<th></th>
<th>Learner</th>
<th>Process</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Learner</td>
<td>What a student will know, do, value (KSA) after training</td>
<td></td>
<td>At end of pilot, dean will allocate resources for expansion</td>
</tr>
<tr>
<td>Program</td>
<td>What the group will know, do, value (KSA) after training</td>
<td>How many will participate</td>
<td>What a specific group will know, do, value (KSA) after training</td>
</tr>
</tbody>
</table>
3. Goals and Objectives

- Objectives reflect goal of experience (p. 31 IPEC)

**EXPOSURE: Introduction**

- Learner objectives for KSAs
  - Program Exposure Objective: PT, OT, nursing students will average 85% correct responses on the TeamSTEPPS knowledge test by end of training
  - Individual Learner Immersion Objective: The nursing student leading the simulation will initiate a brief at the beginning and a debrief at the end of the experience
  - Program Exposure Objective: PT and nursing students will demonstrate a statistically significant improvement in attitudes toward interprofessional education by end of training (pre – post design)
3. Goals and Objectives

- **Process objectives**
  - Relate to implementation of curriculum
  - 95% of nursing and PT students will participate in an interprofessional simulation
  - 95% of faculty will Agree/Strongly Agree that TeamSTEPPS tools can be used to decrease conflict among faculty
  - 75% of faculty will use SBAR to communicate critical information via email

- **Outcome objectives**
  - At 12 months post graduation, 95% of graduates will Agree/Strongly Agree that team training was effective in preparing them to be a member of an interprofessional team
# 4. Educational Strategies

<table>
<thead>
<tr>
<th>Method</th>
<th>Knowledge</th>
<th>Problem-Solving</th>
<th>Attitudes</th>
<th>Clinical Skills</th>
<th>Non-Clinical Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Readings</td>
<td>+++</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Lecture</td>
<td>+++</td>
<td>+</td>
<td>+</td>
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<tr>
<td>Discussion</td>
<td>++</td>
<td>++</td>
<td>+++</td>
<td>+</td>
<td>+</td>
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<tr>
<td>Problem-based Learning</td>
<td>++</td>
<td>+++</td>
<td>+</td>
<td></td>
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<tr>
<td>Simulation</td>
<td>+</td>
<td>++</td>
<td>++</td>
<td>+++</td>
<td>+</td>
</tr>
<tr>
<td>Reflection/Review of Simulation Video</td>
<td>+</td>
<td></td>
<td></td>
<td>+++</td>
<td>+</td>
</tr>
<tr>
<td>Real Life Clinical Experience</td>
<td>+</td>
<td>++</td>
<td>++</td>
<td>+++</td>
<td>+++</td>
</tr>
</tbody>
</table>

+ = appropriate in some cases, useful as adjunct to other methods
++ = good match
+++ = excellent match
5. Implementation

1. Identify resources
   a. Personnel
   b. Time
   c. Facilities and equipment
   d. Funding

2. Obtain support
   a. Internal (deans, chairs, faculty, CIs, Preceptors, hospital administrators)
   b. External (professional organizations, foundations)

3. Develop structure to support curriculum
   a. Administrative structure with dedicated support personnel
   b. Content committee
   c. Operations committee
5. Implementation

4. Anticipate barriers
   a. Personnel
   b. Time – competing demands
   c. Facilities and equipment
   d. Funding
   e. Attitudes

5. Plan to introduce curriculum
   a. Pilot test
   b. Phase-in
   c. Full implementation
6. Evaluation and Feedback

- Informed by frameworks and theories.

- Decide Type and Level of Evaluation
  - Types = Formative and Summative
  - Levels = Individual and Program

- Identify Evaluation Questions
  - Relate to your objectives
  - Evaluate KSAs

- Choose evaluation design
  - Posttest only
  - Pretest-posttest
  - Pretest-posttest with a control group
  - Randomized Pretest-posttest with a control group
6. Evaluation and Feedback

- Choose Methods and Instruments
  - Questionnaires using rating scales
  - Open-ended comments
  - Focus Groups
  - Individual interviews
  - Direct observation
- Ethical Concerns
  - Educational studies usually exempt except when videotaping...then need informed consent
- Data Collection
- Data Analysis
- Report Writing
Comparison of Errors Occurring During Interprofessional Simulation by Educational Methods

- Initial Hand Hygiene Not Done: 32 (EEE) vs. 8 (IPE)
- NG Tube Not Clamped: 8 (EEE) vs. 3 (IPE)
- PRAFO Position Not Discovered: 9 (EEE) vs. 4 (IPE)
- Heel PU Not Discovered: 6 (EEE) vs. 0 (IPE)
- PRAFO Education Not Delivered: 8 (EEE) vs. 6 (IPE)
- Sacral PU Not Discovered: 6 (EEE) vs. 4 (IPE)
- Tubes/Lines Dislodged: 2 (EEE) vs. 0 (IPE)
- PRAFO Not Reapplied Correctly: 1 (EEE) vs. 0 (IPE)
- Oxygen Not Lowered: 0 (EEE) vs. 0 (IPE)
- HOB Not Elevated: 4 (EEE) vs. 1 (IPE)
- Patient Not Positioned to Relieve Pressure: 8 (EEE) vs. 8 (IPE)
- Top Rails Not in Place at End: 8 (EEE) vs. 3 (IPE)
- End Hand Hygiene Not Done: 16 (EEE) vs. 9 (IPE)
Interdisciplinary Education Perception Scale (IEPS) Pre- and Post-simulation 2011

- SPT Pre-Sim (n=45) - SPT Post-Sim (n=45) - SN Pre-Sim (n=64) - SN Post-Sim (n=64)

*Wilcoxon Signed Ranks Test

<table>
<thead>
<tr>
<th>Likert Scale: 1 = Strongly Disagree - 5 = Strongly Agree</th>
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<tbody>
<tr>
<td>Competency &amp; Autonomy (alpha=.81)</td>
</tr>
<tr>
<td>Perceived Need for Cooperation (alpha=.44)</td>
</tr>
<tr>
<td>Perception of Actual Cooperation (alpha=.83)</td>
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</tbody>
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* *p<.001  * *p=.004
“Communication is key. It is important to share information with each other across disciplines and not assume the other team members know what certain equipment is and such. I assumed the nursing students had seen a PRAFO before so I didn't think to educate them on what they were and how to apply them." 

“As a team, you have that many more eyes to watch for possible errors or mistakes. But the only way that this becomes an advantage is for the mouths below them to speak up about what they see.”
Nursing Student Reflections

“I learned that physical therapists have knowledge about some things nurses do not. Putting all of our knowledge together greatly benefited the patient.”

“I learned it is imperative for PT and nursing to talk freely about the patient's status before, during and after the PT intervention. We were kind of scared of each other at first so in debriefing it helped to understand that we can talk freely and we should talk freely about anything and everything pertinent to the patient's status.”

“More brains equal less mistakes.”
Deliverable: Elevator Speech (red font)

• 1.A. Define your problem
• 3.B. Write one program level learning objective:
• 4.Educational Strategies. Choose an initial strategy to address your problem that matches your goal of exposure, immersion, or competence.
• Elevator Speech
Elevator Speech

“TeamSTEPPS is an evidence-based team training program that is being implemented in hospitals and integrated into undergraduate health professions education. We have chosen to focus on solving the problem of ________________________________
by exposing / immersing / ensuring competence of (who) __________________________ in interprofessional teamwork. We plan to use the educational strategy(s) of ________________.
It is important that we integrate teamwork training as an interprofessional educational strategy because teamwork is a core competency of patient-centered care and lack of teamwork and poor communication puts patients at risk.
We need you to support our efforts by ____________________.”
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