General Curricular Principles in a Patient Safety Curriculum

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Interprofessional education

- Should be introduced early in the educational process.

- Effective interprofessional teamwork is known to reduce errors caused by miscommunication and poor patient care handover.

Interprofessional education

- Cohesive teams where physicians and other health care professionals work together are associated with improved patient outcomes.

- Students need to be aware of these outcome improvements.

Interprofessional education

- In addition, students need to both understand and experience firsthand the fact that “interprofessional learning consists of more than just sharing the same learning environment: it involves acquiring an understanding of the knowledge base, values and ethos of like-minded individuals and developing respect for each others’ contribution to the learning process”.

Interprofessional education

- We cannot expect that students educated in the current silo model of training will be able to effectively work in interprofessional teams once they have finished their training.

Longitudinal curricular approach

- Practicing and reinforcing safety skills at each level are key elements in effective learning.

- Similar developmental processes have been seen in chess players, adults learning a second language, and adults learning to drive an automobile.

Novice

Rigid adherence to rules

Advanced Beginner

Guidelines for actions based on global characteristics of situation

Competent

Coping with pressure, sees wider context, conscious deliberate planning

Proficient

Holistic, knows what is 'most' important, intuition

Expert

No longer relies on rules, deep understanding, analytical approach to problems

Advanced patient safety educational opportunities for senior students

- Students seeking further knowledge in patient safety should have access to more intensive educational opportunities as electives.
- Further training in advanced competencies could help interested students develop into leaders, researchers, and scholars in the patient safety field.

Teaching methodologies

- Plenaries
- Small-group learning sessions
- Experiential learning
- Simulation
- Standardized patient role-plays
- Case-based learning
- Team-based learning
- Supportive audio-visual material

Assessment strategies

- Abilities as team members, not just individually
- Abilities to see systems-based problems and inefficiencies and to offer systemic solutions through root cause analyses
- Multiple choice questions for patient safety knowledge
- Team-based assessment of groups of interprofessional students as they work through a clinical scenario
- Standardized patient assessment of full disclosure skills
- Quality improvement projects undertaken in the 3rd year of medical school.

Specific Content for a Patient Safety Curriculum

History of the medical error crisis

- IOM's 1999 report alone with an estimated 98,000 deaths per year due to medical errors will be an eye-opener to students, who otherwise are buried in learning basic science, diagnosis, and treatment and have been unaware of the crisis.
- A need to know in the area of patient safety will move this topic up on the students' overcrowded attention list.
- Students should be exposed to this material early in the 1st year of medical school.

Interdisciplinary teamwork skills

- Critical to the success of any patient safety initiative
  - Role clarity
  - Conflict resolution
  - Chain of command
  - Rehearsal of teams to provide care in specific situations (such as acute trauma or codes)

- Other health care provider roles in the system - **1st year**

- Hierarchy, chain of command, team-based care, and leadership skills - **2nd year**

Time and stress management

- Manage one’s time and stress

1st year

Repeated on at least a yearly

- Recognize when another health care team member or an entire team is stressed and thus less effective

3rd year

Health care microsystems

- To see the health care system through a new lens, no longer a silo-based approach to health care.
- Understanding that health care professionals all work in multiple microsystems and being effective in doing so as part of a larger whole are key competencies in patient safety.

1st year

Informatics, electronic medical records, and health care technology

- A working knowledge of these new developments in health care will allow students to interact with them and understand their importance in the provision of patient care.

1st or 2nd year

well before they must actually interact with these systems

Error science, error management, and human factor science

- How medical errors occur
- how humans make mistakes
- environmental factors predisposing medical errors
- principles of how to eliminate the errors from health care systems

2nd year before going to clinical wards where they will see errors in health care systems

Communication skills

- Patient safety communication content needs to focus on
  - written skills such as order and prescription writing
  - chart documentation
  - oral skills such as hand-offs and consults.

2nd year

Before clerckship

Full-disclosure applications

- Students need to be trained in the techniques of full disclosure to patients once an error has occurred.
- Attitudes need to be formed early in students that the admission of mistakes and the ability to say "I don't know" are valued, as these attitudes will allow the culture of medicine to shift to one of patient safety and continuous learning from mistakes.

2nd year with standardized patients using simulated clinical scenarios

Risk management and root cause analysis

- Risks and hazards have the potential for causing injury/harm to patients.
- Accurate identification of the root causes of events must precede identification and implementation of appropriate interventions.
- This information is essential to give health care providers the tools to address problems in patient safety in a systematic, organized, and methodical manner.

2nd year

implemented into the quality improvement projects in their 3rd year

Outcome measures and continuous quality improvement

- Teaching students to monitor outcome measures and to critically examine failures in the system as soon as they occur will lead to improved quality of care.
- Lessons from industry—in particular, Toyota—can be used in health care and health care education to this end.

2nd year - through the use of clinically based examples, which will allow them to actively practice these kinds of skills

in the 3rd and 4th years of medical school, students should be given continuous quality improvement projects, which will allow them to put their knowledge to work in real clinical settings

Medication errors and reconciliation

- Students should be proficient in the recognition and prevention of medication errors and reconciliation, as errors are frequent, often systems based, and amenable to effective countermeasures if examined with a patient safety lens.

The clerkship year seems the reasonable time to introduce this subject

Barriers to Implementation

Barriers to Implementation

- Most physicians believe they provide safe patient care and do not make mistakes.
- In a survey given to more than 1,000 doctors, nurses, and residents in urban teaching and nonteaching hospitals, one third of ICU staff stated that they have never made an error.
- Only one third reported that errors are handled appropriately, and more than half reported that they find it difficult to discuss mistakes.

Barriers to Implementation

- Educational models are predominantly driven by individual, silo-based performance on examinations that preferentially reward memorization and recall of knowledge over application.

- Changing assessment strategies to look at interprofessional cooperation and problem solving

Barriers to Implementation

- Third is the struggle to carve out the time and commitment necessary for a successful, longitudinal, patient safety curriculum from an already full curriculum.