

MEDICAL STUDENT CURRICULUM PATIENT SAFETY/QUALITY IMPROVEMENT INITIATIVE

First Year Educational Goal: Understand patient safety fundamentals including the importance of an organizational culture that promotes teamwork and safety, the public focus on patient safety and adverse events, patient safety terminology, and the human impact of adverse events.

First Year Educational Objectives

After completing the patient safety and quality improvement curriculum in the **first year of medical school** the student will be able to:

1. Understand and describe the importance of a culture of safety and quality.
 - Discuss reasons why patient safety and quality are priority health care issues.
 - Describe how organizational culture impacts safety and quality.
 - Understand how teamwork skills are key to patient safety.
 - Discuss the impact of cultural differences on the implementation of safety and quality programs.
 - Describe barriers to optimizing patient care safety and list strategies to overcome those barriers.
 - Introduce quality improvement techniques.
2. Discuss the epidemiology of medical adverse events.
 - Discuss the frequency and distribution of medical adverse events.
 - Define active failure, latent failure, adverse event, preventable adverse event, and near misses.
 - Describe ways to categorize and measure adverse events.
3. Identify the key national quality improvement and patient safety organizations and describe their activities.
 - Describe and discuss key patient safety organizations including IHI, National Patient Safety Foundation, NSQIP_[RLW1].
 - Compare and contrast the role of voluntary safety organizations with the role of licensure boards and specialty boards in patient safety.
 - Contrast voluntary with mandatory reporting of adverse events and near misses.
4. Describe the physical, emotional and financial impact of adverse events on patients and providers.
 - Discuss how medical adverse events have a tremendous impact on the lives of individual patients.
 - Discuss how medical adverse events have a tremendous impact on the personal and professional lives of physicians and other providers.
 - Discuss the role of transparency, disclosure of errors to patients and a “blame-free environment” for providers when responding to medical adverse events.

Second Year Educational Goal: Understand key aspects of methods to improve patient safety and clinical quality as well as the interaction between quality improvement efforts in the medical malpractice tort system.

Second Year Educational Objectives

After completing the patient safety and quality improvement curriculum in the **second year of medical school** the student will be able to:

1. Describe common quality improvement methodologies used to prevent adverse events.
 - Compare and contrast quality assurance and quality improvement.
 - Define and discuss sentinel events and root cause analysis.
 - Describe and discuss common techniques for clinical process improvements (i.e., PDSA, DMAIC and “Lean/six sigma”).
 - Contrast structure, process and outcome measures for clinical performance.
 - Describe how reliable processes are key to consistent quality and discuss methods used to insure reliable systems.
2. Understand the important role of effective communication and teamwork skills in preventing adverse events.
 - Demonstrate the role of interdisciplinary care teams and the importance of effective clinical collaboration to clinical outcomes.
 - Discuss the ethical, professional and medical legal issues surrounding disclosure of medical adverse events.
 - List points of high risk for communication failure in clinical care (such as interdisciplinary communication, shift hand-offs, etc.) and describe techniques to prevent failed communication in those settings.
3. Describe how information from non-healthcare industries such as air transportation, nuclear power and the chemical industry can be used to help improve attempts to reduce adverse events.
 - Describe why the aviation industry is frequently used as a model for healthcare safety efforts. Compare and contrast highly reliable organizations with highly safe organizations and highly productive organizations.
 - Describe “human factors engineering” and discuss how it relates to patient safety.
 - Describe and demonstrate the importance of the environmental patient safety assessment.
 - Describe the importance of adverse event reporting and responding actively to “near miss” events.
4. Analyze the effectiveness of the medical malpractice tort system in responding to adverse events.
 - Describe the key elements of the medical malpractice tort system.
 - Describe the strengths and weaknesses of the medical malpractice tort system as a mechanism to improve patient safety.

Third Year Educational Goal: Recognize and describe adverse event and patient safety challenges unique to different specialties and be able to apply strategies and techniques designed to prevent or mitigate those events.

Third Year Educational Objectives

After completing the patient safety and quality improvement curriculum in the **third year of medical school** the student will be able to:

1. Identify and analyze common clinical adverse events.
 - Compare and contrast the common patient safety and adverse event issues on each clerkship specialty (for example, diagnostic errors in medicine, teamwork and communication failure in surgery, and medication errors in pediatrics) and list strategies to prevent and mitigate those adverse events.
 - Describe the mechanism for reporting adverse events at clinical rotation sites and complete a Shands UF patient safety report.
 - Identify and discuss patient safety opportunities encountered on clerkships.
 - List resources students and physicians can use for support after an adverse clinical event.
2. Differentiate the impact of system failures and human factors in the development of adverse events and discuss approaches to preventing and mitigating those events.
 - List system and process issues encountered on clerkships that could impact patient safety.
 - List human factor issues encountered on clerkships that could impact patient safety.
3. Identify and describe system level improvements which will improve patient safety and reduce adverse events.
 - Describe the importance of audit/feedback and reminder systems in improving patient safety.
 - Describe how protocols, standard orders, use of defaults, redundancy and scheduling of tasks can be used to promote and enhance patient safety.
 - Describe how electronic medical records can be used to improve patient safety. Recognize the limits of electronic medical records with regard to patient safety.
 - Discuss the gap that exists between safe clinical care systems and “real life”. Define why the gap exists and what can be done about the gap both at individual and system levels.
4. Identify and be able to apply individual strategies and approaches to improve patient safety and reduce adverse events.
 - Describe the importance of individual efforts at the micro-system level to prevent and mitigate adverse events (i.e., use of checklists, avoiding banned abbreviations, ensuring adequate handoffs, etc.).
 - Discuss the relative strength of different strategies used to improve patient safety.

- Describe and be able to apply strategies and techniques that reduce the risk of memory failure, faulty information synthesis and communication lapse as they relate to patient safety and adverse events.

Fourth Year Educational Goal: Demonstrate competence in key patient safety and quality improvement skills and conduct an individual project related to patient safety in the student's specialty choice area.

Fourth Year Educational Objectives

After completing the patient safety and quality improvement curriculum in the **fourth year of medical school** the student will be able to:

1. Demonstrate teamwork and communication skills in a multi-disciplinary environment.
 - Complete a patient safety simulation exercise emphasizing team work and communication skills.
 - Describe strategies to reduce communication failure (such as the use of structured communication and read-back rules).
 - Describe cultural and interdisciplinary factors which lead to communication failure and discuss strategies to avoid those failures.
 - Describe and discuss the importance of a blame-free culture in reducing adverse events.
2. Successfully complete a root cause analysis exercise including recommendations to prevent future adverse events.
3. Describe the appropriate role of transparency and delivering apologies for adverse events. Demonstrate the skills involved in delivering bad news to patients and families.
4. Analyze the patient safety issues commonly encountered in the student's future area of specialty choice.
 - Complete an individualized patient safety project emphasizing the prevention and mitigation of adverse events commonly seen in the student's chosen specialty area.