Fellowship Program in Simulation & Crisis Management in Anesthesiology

GOALS & OBJECTIVES

Fellowship Program Objectives

The fellowship program is a structured program with focus on enhancing competency in crisis resource management and prepare 'Crisis Leaders in Anesthesiology'. It serves to bridge the gap between CanMEDS roles and the competency of crisis leadership. The other equally important focus is on nurturing a fellow to become a simulation educator in creating an immersive, safe learning environment through simulation-based medical education. They would receive training for both adult and pediatric clinical scenario focused simulation, and crisis management. The fellows are awarded with the certificate of Simulation Master & Crisis Leader in Anesthesiology after successful completion of training and the exit exam. The key objectives for the fellows are:

Educational

1. Describe the principles of andragogy & pedagogy in relation to simulation-based education, experiential learning and reflective practice[8-10].
2. Describe the principles of crisis resource management, non-technical skills and their relevance to human factors and critical event management in Anesthesiology.
3. Describe the swiss cheese model of accident causation and apply the knowledge in constructing a safe environment of perioperative patient care[11].
4. Distinguish multimodal simulation methodologies and identify scenario specific utility.
5. Demonstrate scenario writing skills and effective debriefing skills in order to facilitate a safe learning environment with enhanced learner engagement in a simulation-based exercise.

Clinical

1. Provide anesthetic management of patients including preoperative assessment and postoperative acute pain management for various specialities and sub-specialities under supervision.
2. Attain competency in simulation-based training and critical events management following Miller's stages of 'knows' and 'knows how' to 'shows how' and 'does'[12].
3. Design modules of critical events in peri-operative clinical areas based on **I-CARE** model: **I**dentify problem--**C**all for help--**A**ssess patient--**R**eview plan--**E**xecute plan (Appendix D).

4. Organize and conduct simulation-based learning activities in adult and pediatric clinical scenarios for anesthesia residents, in collaboration with the Residency Program and Simulation Program.
5. Identify areas of clinical improvement and design simulation-based exercise for residents and faculty as a quality improvement tool.
6. Design interprofessional simulation project to influence patient related outcomes

Research

1. Understand the principles of ethics for research on human subject.
2. Conceptualize and develop a simulation-based educational research project with relevance to critical event management. The project would promote outcome-based education.
3. Organize a quarterly online simulation club with focus on recent advances in the science of simulation-based learning and human factors.
4. Disseminate research knowledge in scientific meetings and department rounds.

Fellowship Program Curriculum

The fellows would have intense teaching in the initial 3 months with didactic modules and hands-on learning in a workshop format. These educational sessions would be conducted bi-weekly with alternate didactic session and I-CARE workshops. I-CARE workshops involves a full day of simulation-based learning involving 4-5 clinical scenarios.
They would also have the opportunity to observe Residency Program simulation sessions. After 3 months they are expected to engage in more independent learning and contribute to educational and research activities involving faculty and residents.
Following is the curriculum and schedule:

Week 1: Principles and Practice of Crisis Resource Management
: Non-Technical Skills in OR
: I-CARE model of critical event handling
Week 2: I-CARE Workshop
Week 4: Principles of andragogy and pedagogy
: Simulation-based exercise as a Quality Improvement tool
: Evidence for Simulation-based Clinical Systems Testing (SbCST) and clinical outcome improvement.
Week 6: I-CARE Workshop
Week 8: An introduction to simulation-based scenario writing
Week 10: I-CARE Workshop
Week 12: Effective feedback and debriefing skills.

Weekly assignment schedule split (unevenly) into the below. This is subject to change at the discretion of the Fellowship Director.

- Subspeciality days [2 – 3 days] in specialty anesthesia. Fellows are assigned one-on-one with specialty anesthesia staff.
- Service days [2 days] in the operating room performing adult anesthesia lists. Fellows are assigned to an OR list and operate independently while being covered by anesthesia staff operating in another adjacent OR
- Non-clinical days (NCDs) or academic days [1 day]: This granted according to the fellow's academic engagement (research, teaching, journal clubs etc..).

On call duty – on average:

- 2 weekdays and 1 weekend per month.
- Fellows are assigned on-call at the Juravinski hospital from 5:00 pm- 8:00 am.
- Fellows are assigned with anesthesia staff working in the OR.
- The next day is post-call