Title: Simulation Track

Faculty Advisor: Amanda Price & Ian Kane

Purpose: The simulation track provides an opportunity for fellows to develop skills in simulation-based medical education, debriefing, and curriculum development. This will allow them to create a sustainable simulation program within their future medical institution and become a leader in medical simulation.

Learning objectives:
After completion of this track, the fellow will be able to:
-Explain key theories of adult learning, experiential learning, and deliberate practice as they apply to simulation-based medical education
-Design, implement, and evaluate simulation scenarios that align with specific educational objectives
-Apply best practices in scenario development, including case realism, fidelity selection, and psychological safety
-Learn and utilize structured debriefing models to facilitate reflective learning
-Implement simulation to teach and assess crisis resource management (CRM) principles, including leadership, communication, and situational awareness
-Facilitate team-based training to improve interdisciplinary collaboration and patient safety in high-risk environments
-Critically appraise simulation literature and apply evidence-based practices to program development
-Utilize and troubleshoot various simulation technologies, including manikins, task trainers, and virtual/augmented reality platforms

Required Activities:

1. Simulation Training:
    a. Complete OurDay Sim Center Facilitator Training – Email simcenter@musc.edu to be enrolled
    b. Review Debriefing with PEARLS, Simulation in Healthcare Journal
    c. Review Dr. Price's SIM lecture: https://www.musc.edu/medcenter/depts/ch/fellows/source/CommonCurriculum/SimIncorporation.pdf
    d. Complete literature review of the following:
    -Lopreiato JO, Sawyer T. Simulation-based medical education in pediatrics. *Academic Pediatrics*. 2015;15(2):134-142
    -Cheng, A. et al. Technology Enhanced Simulation and Pediatric Education; A Meta Analysis. Pediatrics 2014;133:e1313-e1323.
    -Rudolph, J. Simon, R, DuFresne, MS, Reamer D. There's No Such Thing as "Nonjudgmental" Debriefing: A Theory and Method for Debriefing with Good Judgment. *Simulation in Healthcare*, Spring 2006

-Sagalowsky ST, Wynter S, Auerbach M, et al. Simulation-based procedural skills training in pediatric emergency medicine. *Clinical Pediatric Emergency Medicine*. 2016;17(3):169-178.
-Eppich W, Cheng A. Promoting Excellence and Reflective Learning in Simulation (PEARLS): development and rationale for a blended approach to health care simulation debriefing. Simul Healthc. 2015 Apr;10(2):106-15.

Podcasts:
-CHOP PEM Podcast- Simulation
-Simulcast: SimulationPodcast.com – Sim101

Websites to review:
https://debrief2learn.org/ (has great list of papers as well)
https://virtualresusroom.com
https://ACEPsim.com

2. Simulation Facilitation:
    a. Design and implement one high-fidelity simulation scenario per year
    b. Facilitate at least 3 procedure and 3 resuscitation sims per year.
    c. Participate in at least 2 inpatient mock-code sims per year.

3. Capstone Project:
    a. Create and deliver a longitudinal simulation curriculum (procedure curriculum, subject-specific curriculum, faculty development, medical student/resident education). May include main fellow research project.

Optional Activities:

1. Complete: MedEdPortal: Introduction to Curriculum Development and Medical Education Scholarship for Resident Trainees: A Webinar Series

Assessment:

Successful completion of all required activities and educational research as determined by faculty advisor