Clinical Microsystems Clerkship:
Early Medical Students’ Contributions to Health Systems Improvement
Susan Masters, PhD, Anna Chang, MD, Karen Hauer, MD, PhD, Catherine R. Lucey, MD
UCSF School of Medicine

Innovation Identified

2016-17 UCSF Bridges Clinical Microsystems Clerkship: A Focus on Health Systems Skills and Mentorship

Goals:
- To immerse early learners in a longitudinal, interprofessional and authentic clinical system where students play a role in improving patient experience and health care quality while learning and applying clinical skills
- To strengthen longitudinal student mentorship
- To demonstrate that with appropriate training early learners can contribute to systems quality improvement
- All 152 MS1 students contributed to 82 quality improvement initiatives within 59 clinical microsystems across 3 health systems (UCSF, San Francisco Veterans Affairs Medical Center and Zuckerberg San Francisco General)

Need/Gap Addressed

Curricular Need: Earlier exposure to systems skills through interprofessional team projects to address institutional system quality improvement priorities; stronger longitudinal mentorship.

Health Systems Need: Achieving institutional goals for continuous quality improvement.

Example Outcomes of CMC Projects Demonstrating Students’ Contributions to Systems Improvement:
- Quality: Decrease the time to hormone initiation for transgender veterans
- Safety: Decrease rates of surgical site infections
- Experience: Decrease patients’ left-without-being-seen rates in ED
- People: Create systematic approach for handoffs between pediatric OR to the PACU
- Stewardship: Reduce the proportion of ICU days in Neurosurgery and neurology

Resources Needed and Potential Barriers

Human Resources
- 28 Faculty Coaches supported at 0.2 FTE across departments and sites
- CMC Faculty Directors supported at 1 FTE
- Health Systems Faculty Site Directors supported at 0.8 FTE
- 6 staff FTE (managers and site coordinators)

Technology
- Coaching recruitment website and application
- Student grouping and placing algorithm developed for site/coach assignments
- Personalized student-calendar/schedule system
- Online faculty development resources for coaches

Space
- Adequate space for small group clinical skills and systems lessons at sites
- Adequate space/availability for complimentary simulation center clinical skills training
- Enough clinical microsystems to accommodate all first year student groups

Faculty Development and Department Support
- Systems and QI Faculty Development for coaches
- Extensive communication with departments across sites regarding the CMC to ensure adequate support for coaches and microsystem engagement
- Partnership between SOM/curriculum and health care systems around QI needs that students can help to address

Timeline Proposed

Year 1: Secure funding for Coaches and CMC leadership/staff; meet with exemplar institution to learn best practices; hire leadership; develop/revise core systems and clinical skills curriculum; engage clinical microsystems with faculty to pilot program

Year 2: Pilot components of new curriculum and microsystems projects with a few groups of students; evaluate pilots; finalize plan for comprehensive program including recruiting coaches with microsystems; develop support technology for program

Year 3: Modify curriculum and program based on pilot evaluation data while continuing to run additional pilots; conduct faculty development; plan full program evaluation

Year 4: Place MS1s across microsystems and launch program/curriculum with evaluation and student assessment

Stakeholder Input

“During our QI sessions, my team worked to understand the process and problems present in our microsystem, shadowing and interviewing various healthcare team members for stakeholder buy-in. We also began collecting data for understanding current conditions and a gap analysis, and began a few concurrent PDSA cycles.”

“My group and I along with our coach are creating a vascular rehabilitation program for patients with vascular disease at the SFVA. Modeling it after the cardiac rehab program, we have collaborated with that program’s staff. My team has coordinated the creation of intake forms and data collection forms in the VA database, created the curriculum, recruited the patients, and each one of us have been assigned patients to conduct health coaching during the 12-week long program.”

Institutional Contact

Clinical Microsystems Clerkship:
Anna Chang, CMC Director
Anna.Chang@ucsf.edu

Coaching Program:
Karen Hauer, Associate Dean for Assessment
Karen.Hauer@ucsf.edu

UCSF School of Medicine