**ROLE: Learner Assessment**

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1. **Name your learner assessment activity(ies):**
   - Clinical Performance Examination (CPX) Program

2. **Your role(s):** Describe your role(s) and specifically what you contribute to learner assessment.
   - I am the past Medical Director of the CPX.
     - I worked with Helen Loeser to bring the CPX program from the Southern California Consortium for Clinical Competence to UCSF, which is now a member school of the renamed Southern California Consortium for Clinical Competence. I directed the development and implementation of the CPX exam, a high stakes examination required for graduation in the medical school.
     - Subsequently, I directed the development of 2 practice examinations, the miniCPX-1 and the miniCPX-2, to provide early feedback to students on their clinical skills, prepare students for the CPX and USMLE Step 2 CS, and identify students needing additional clinical skills training.
     - I served as the California Consortium for the Assessment of Clinical Competence co-Director in 2006-08, and Director 2008-2010.
     - I created the CPX Remediation Program and, in collaboration with Anna Chang, MD, the Clinical Skills Guidance Program.

3. **Learners and amount of contact:** Describe types, levels and numbers of learners.
   - All medical students at UCSF at 3 timepoints – transitional clerkship between MS2 and MS3 year, midway through MS3 year, and early MS4 year.

4. **Builds on best practice/evidence:** Describe your preparation including the use of best practice and evidence where available, your professional development, and/or congruence with national, curriculum, and/or program goals and resource utilization.
   - Increasingly, the general education literature on assessment emphasizes the importance of formative assessment for learning, to allow students to develop knowledge and skills through the process of incorporating feedback and practicing to improve their performance. After we initiated the CPX, we also learned from our students that the exam was very stressful due to their unfamiliarity with the testing format and less consistently rigorous assessment of their clinical skills on clerkships. For those reasons, we added 2 miniCPX examinations for earlier clinical skills assessment with more emphasis on formative feedback.
   - We also learned that remediation at the end of the core clerkships in early 4th year is quite difficult for students while they are applying for residency. Consequently, we moved all 3 CPX exams earlier in the curriculum and created the Clinical Skills Guidance Program for early remediation during the third year core clerkships. This program has been very well received by students and has led to improved CPX performance for high risk students. For remediation, we follow the algorithm that we published (Hauer, Irby et al) based on a comprehensive review of the literature on remediation and learning theory.
   - I continue to do professional development through active participation in multiple meetings per year with the CCACC, the group of experts from the 8 California medical schools that jointly develop and administer the CPX.

5. **Goals for assessment:** List goals for assessment. If these are extensive, provide just a few illustrative examples.
   - The goals, objectives and purpose of the CPX programs are described at: [http://meded.ucsf.edu/ume/clinical-performance-exam-cpx](http://meded.ucsf.edu/ume/clinical-performance-exam-cpx)
     - The major learning goals of the Mini-CPX 1 are to give students practice with data gathering, generation of differential diagnoses, communication with patients, and oral presentations in standardized encounters, along with feedback from peers, faculty, and standardized patients.
     - The miniCPX-2 prepares students for the CPX and USMLE Step 2 Clinical Skills Examination, and is used to identify students eligible for the Clinical Skills Guidance Program, a recommended early remediation program.
     - The CPX assesses students’ competence in core clinical skills prior to graduation, prepares students for the USMLE Step 2 Clinical Skills Examination, provides feedback to the curriculum, and identifies...
6. Methods: Describe assessment formats and methods, how these align with objectives, and rationale for choices.

The CPX programs use standardized patients, actors trained to portray patients with common presenting problems in ambulatory and inpatient settings. We use simulation of physical findings. We have used special technology such as a telephone encounter and a standardized (simulated) interprofessional health professional. These methods ensure that all students are assessed using the same methodology that captures essential competencies, provides preparation for the licensing exam, and allows comparison of UCSF student performance to that of students at the other 7 California medical schools.

7. Results and impact: Describe evidence of learner satisfaction, learning outcomes, application of assessment process to other settings at UCSF, impact on educational programs, and/or recognition/honors within the institution.

- Students rate the miniCPX programs greater than 4.0 on a 5 point scale indicating high satisfaction on items related to the overall program, the specific SP cases, and the feedback from SPs, faculty and peers.
- Student pass rates on the USMLE Step 2 CS exam are close to 100% annually.

8. Dissemination: Describe how your efforts have been recognized by others externally through peer review, dissemination, use by others, or awards nationally.

- I have participated in multiple collaborative research projects related to standardized patient assessments that have resulted in multiple presentations at national and regional meetings, and 26 publications in the peer reviewed literature.
- I served as an invited speaker on remediation at the AAMC as the recipient of the Jack Maatsch Visiting Scholar award, and at Stanford University for their foundational clinical skills course instructors.
- I have received 2 large grants (PI on a grant from the Josiah Macy Jr Foundation to study clinical skills assessment nationally, co-investigator on a grant based at UCLA on cancer survivorship, and mentored junior faculty obtain small grants for CPX related research projects.

26 peer reviewed publications (5 most recent):

9. Reflective critique: Describe your reflections, what went well and plans for improvement.

The CPX program is an exciting and dynamic forum for learner assessment. With the upcoming Bridges curriculum, we will be challenged to incorporate novel assessment strategies that reflect the emerging values and skills of the new curriculum, including teamwork and systems based practice. I have enjoyed the opportunities to mentor junior faculty, residents and students on CPX related research projects and leadership development, and I hope to continue this work.