PBL in the New Curriculum: Four Years for the Price of One
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Rationale
- The need for CHM students to master sciences basic to the practice of medicine will remain a critical aspect of their medical education irrespective of the delivery system.
- Problem-based learning (PBL) allows students to master basic science within a clinical context.
- As a group, students’ performance on the NBME Step 1 licensure exam is highly correlated with their overall performance on their PBL domain content examinations.
- PBL is pedagogically sound, founded on principles of adult learning, including: self-direction, learner independence, relevant “work-oriented” context

Evidence of Effectiveness
- Students master the basic science content they need to pass NBME licensing examinations
- Performance on PBL domain content examinations is highly predictive of students’ performance on the NBME Step 1 test.
- “Mastery level” performance on PBL domain tests has been set at 85% based upon correlation with Step 1 performance.

Curricular Implications
PBL can be used in a wide variety of settings and contexts:
- As a stand-alone course
- As part of an existing course
- Across the 4 years of medical education
- Integrated into clerkships
- As part of team learning

Other implications:
- Easily incorporates evidence-based medicine, ethics, patient safety, and other topics across 4 years of medical school.
- Allows for assessment of learner as team member
- Easily incorporated into discipline-based clerkships to reinforce basic science concepts.

Advantages
- Meaningfulness! Students can master difficult content in the same way physicians do – by learning it in the context of patient cases.
- We do it well. We have over 35 years of experience with the PBL instructional model.
- Our faculty are well-trained as both PBL curriculum developers and as small group leaders.
- The infrastructure is well-developed in the preclinical curriculum and stands ready to implement across 4 years.
- Most PBL work can be accomplished in “small bursts” rather than semester-long courses, making it more amenable to curricular flexibility. This makes it possible to “customize” programming for individual students, particularly when computer-based cases are included.
- Possible to use the same cases to emphasize different points across the curriculum, e.g., basic “normals” in the first year, expanding to more “dysfunction” and treatment during clerkship experiences.
- PBL is integrative by design, drawing from several basic science disciplines in the interest of learning and understanding a patient case. Content is naturally integrated in PBL.

Disadvantages
- Requires a lot of person-power to implement.
- Expansion to other courses that don’t yet have PBL could incur significant upfront and recurring costs.
- Most of the CHM community campuses have little or no experience with delivering the PBL curriculum.
- The CHM community campus structure makes access to basic science faculty a problem that would need to be solved.
- Small groups via video conferencing between the community campuses has not yet been tested and could present challenges.