Mastery Learning in medical education…

… expects "excellence for all" and entails the acquisition—indeed of a specific learning time—of knowledge, skill, and professionalism competencies at high achievement standards with little or no variation among learners

… produces, when coupled with deliberate practice, powerful educational outcomes (e.g., readiness for patient care), often with collateral effects (e.g., cost savings) for individuals and programs

… frequently occurs with deliberate practice in a medical simulation laboratory but can also be achieved in other educational settings (e.g., classroom)

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… frequently occurs with deliberate practice in a medical simulation laboratory but can also be achieved in other educational settings (e.g., classroom)

… increases professional self-efficacy among medical learners who master clinical skills (e.g., clinical procedures, communication with staff, patients, families)

… may require periodic refresher training to ensure maintenance of learning outcomes

… can translate into improved patient care practices and patient safety outcomes

… aligns with the current emphasis on measurable UME graduation expectations (i.e., entrustable professional activities) and GME achievement milestones

How Mastery Learning Works: An Outline of a Mastery Learning Program

Motivated Learners

Pretest

Curriculum: lecture, video, demonstration, and deliberate practice with feedback

Posttest

FAIL

PASS

Perform skill with patients and advance to next unit. Goal: constant improvement

Mastery Learning of Patient Handoff Skills: An Example of Mastery Learning and Deliberate Practice

At pretest learners do not meet the MPS set at 90% by an expert panel

MPS = 90%

Most learners meet the MPS at immediate posttest

At final posttest all learners meet or exceed the MPS

Seven learners do not meet the MPS and return for additional deliberate practice

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