Defining readiness for unsupervised practice in CBME: how can milestone progression data help?

Reference:

Tags
Clinical domain
General

Educational domain
Assessment
Program evaluation
Education research
(Post)graduate (Residency training)

Background
Since 1 July 2013, the ACGME in the US requires evaluation of trainees (residents) using Educational Milestones (observable developmental levels of behaviour) mapped to their 6 competency domains:

- Patient Care
- Medical Knowledge
- Interpersonal and communication skills
- Practice based learning and improvement
- Professionalism
- Systems Based Practice

The milestones are organized across 5 levels from beginner to expert–

The Pediatric group has defined their milestones using the Dreyfus model of expertise development

Level 1 – novice (early medical student)
Level 2 – advanced beginner
Level 3 -competent
Level 4 – proficient
Level 5 – master (seasoned expert practitioner)

The ACGME set a target (not a requirement) for achievement at graduation at level 4
Pediatric group developed milestone descriptors for their 21 subcompetencies that sit across the 6 domains.

The Pediatric Group have not yet defined their explicit benchmarks for assessment; they wanted to use empirical evidence as the basis for setting milestone achievements for pediatric trainees across pediatric programs.

**Purpose**

To describe clinical skills progression during pediatric residency by analyzing the distribution of milestone assessments by subcompetency and year of training (PGY1, PGY2 and PGY3) to determine reasonable milestone expectations at time of graduation.

**Type of paper**

Research: Cohort study (prospective; multi-institutional)

**Key Points on the Methods**

Multi-institutional prospective cohort study 47 of the 199 US (24%) paediatric programs participated covering 2030 paediatric residents. Participating and non-participating programs and residents were comparable on a range of demographic variables.

Descriptive statistics – for subcompetency milestone ratings by year of training.

**Key Outcomes**

Fewer than 21% of residents achieved a 4 (proficient) or higher in all 21 subcompetencies.

Most residents (79%) achieved a 3 (competent) or higher in all 21 subcompetencies.

Overall the study group of residents combined (using mean as the measure) progressed in their milestone ratings across the 3 years of training. Found that variation in milestone rating was greater in PGY1 than PGY3.

There appears to be less grade inflation using milestones than the traditional 5 point Likert scale.

**Key Conclusions**

The authors conclude...
- Trainees enter training with a wide range of skills but as they advanced skill variability decreased
- Most graduating pediatric residents were still advancing on the milestone continuum towards proficiency and mastery and
- An expectation of level 4 or above in all categories is unrealistic
- An expectation of level 3 or more is more realistic
- Milestone data can be used to identify key areas that should be specifically targeted during training.
Spare Keys – other take home points for clinician educators

The importance of using empirical evidence/data to guide and validate important policy decisions like what the required levels of achievement for graduating trainees. The great opportunity to use these types of data to enable trainees and programs to benchmark themselves against peers and identify areas of strength and areas for improvements.

Shout out

Commend the LEARN group for doing the study.