



## Uniform and Individualized Learning Outcomes: The Potential for a New Assessment Paradigm

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“Individualized medicine” has become increasingly popular in recent years, as advances in genetics research (1), technology (2), and the *Precision Medicine Initiative* (3) have promised many exciting possibilities for the future of medicine and health care. The future of assessment in medical education is also very bright. Methodological and technological advances now make it possible to conduct individualized assessments throughout most any medical program.

Currently, most educational programs focus on a uniform education in which the goals (and intended learning outcomes) are the same for everyone. There are many advantages to this approach. For example, establishing and assessing global outcomes is useful for providing measures deemed most important by an institution and/or its accreditor. Further, uniform educational programs also offer opportunities for continuity and longitudinal assessment, both of

which are critically important for discerning whether changes are truly necessary and whether efforts to “close the loop” were successful. The major disadvantage of the uniform approach is that the global outcomes may not be relevant to all students, and may not actually assess issues most relevant to individual students, particularly those preparing for a medical specialty.

Interestingly, most medical education programs (e.g., medical, pharmacy, veterinary, etc.) typically provide unique opportunities for individualized learning to occur during students’ clinical year(s). To some degree individualized learning already occurs due to the wide variety of clinical issues and tasks that students encounter from day to day. However, a formal individualized learning and assessment program with personalized learning objectives (PLOs) could provide three key advantages.

First, PLOs could increase the breadth of knowledge, skills and attitudes (KSAs) assessed, thus simultaneously providing additional, invaluable feedback to students. This should result in stronger, better prepared graduates. The institution and program would benefit by having additional information about how students are faring on a number of other important outcomes.

Second, our goal as educators is to help ensure students possess as few weaknesses as possible by the time they graduate from a program. Of course, weaknesses vary from person to person. Thus, an individualized learning program could conceivably identify each student's relative weaknesses and provide additional opportunities for students to achieve these outcomes before graduation. Residency programs, employers and the general public may benefit, while also having additional assurance that students have been thoroughly trained and provided further opportunities to strengthen their own unique weaknesses.

## Reference

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