Getting to Best: Physician Development as a Developmental Process

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In this issue of the *Journal of Graduate Medical Education*, Rosenbluth and colleagues[1] interviewed faculty and asked them to describe the "best" residents. They identified components of physicians that can be developed over time as well as personality traits. In describing the need for their work, they argue that defining these areas is important because "there are many stakeholders [including patients, fellowship directors, and employers] who value greater differentiation among residents" than competency-based medical education may offer.[1] A competency-based approach seeks to ensure that minimum levels of development are attained to be entrusted with unsupervised practice after training, yet it does not seek "to ensure that all residents will meet a *uniform* [emphasis added] standard of competence before leaving residency," as suggested by Rosenbluth et al.[1]

This raises 2 important points when considering the study by Rosenbluth et al.[1] First, "residents will likely progress through the Milestones at different rates," as noted by the authors.[1] Although it is somewhat unintentional, this variable progression may help to identify those individuals who are "best." They will be the ones who are the most developmentally advanced. Second, because competency-based medical education uses a criterion reference,[2] it is possible that any number of individuals will be developmentally advanced. This begs the question: do stakeholders in health care desire stratification among physicians, or do they actually desire the most well-developed physicians? Stated differently, would they rather have a physician who is the best among a group of minimally qualified physicians or would they prefer any 1 of many physicians from a group of developmentally advanced physicians?

To meet the needs of patients, I believe our primary goal should be to produce the most developmentally advanced physicians during residency training. To reach this goal, a primary focus on the "best" resident may not prove to be the most useful for trainees or for the faculty responsible for ensuring and assessing their professional development. Instead, it may be better to consider physician development as a formative effort that continually focuses on next steps, similar to child development.

The foundation of competency-based education and assessment entails defining the outcomes that are required of training to meet the needs of patients and populations and then working toward achieving these goals.[3] Using a description of "best" to define these end goals is helpful and necessary, yet a focus on the *end* goal alone will not be as helpful as a focus on the *next* goal for facilitating development. Consider the development of reading skills in children, for example. A typical 5-year-old is just beginning to understand that letters make sounds and that those sounds form words. This child will hopefully read a book someday, but telling him to do this now is futile. While he knows that words create stories in books because his parents read to him, reading a book on his own is so many developmental steps ahead of where he is that he cannot consider how he might get there. Instead, it is more useful to focus on the next steps (eg, putting letters and sounds together to form words) that lead to the outcome of interest (ie, reading), rather than the ultimate outcome, to drive his learning and development.

Within the context of a competency-based residency curriculum, this focus on a developmental path or process before outcome works for medical learners as well. Research in self-guided skill development has shown that providing process goals (a focus on how to do something) rather than outcome goals (a focus on the product of doing something) leads to better skill acquisition and retention.[4–6] As an example, Brydges et al[6] found that medical students learning to suture retain skills better when provided with process goals (loading the needle driver two-thirds along its length, entering perpendicular to the skin, taking the same size bite on each side of the wound, and ensuring each throw is down square by either crossing the sutures or the hands) than outcome goals. Their outcome goals focused on broader, less specific instructions to "complete each interrupted suture and knot tie in a timely manner. Be sure to equally space the sutures, evert the skin edges, and ensure that every knot is square."[6]

Only after a focus on process is it useful to bring back the focus on outcome. In fact, it is important to shift to outcome after achieving sufficient success in process to continue to make improvements.[4] Although much of this work investigates the development of motor skills, this strategy seems to be true for cognitive skills as well.[5]

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The utility of focusing on process for optimizing learning and improvement has notable implications for how supervisors approach helping trainees to develop by emphasizing the importance of discussing next steps. The Milestone project facilitates this by defining the developmental trajectories for various physician competencies. In fact, residents and faculty have noted that Milestones provide them with just such a roadmap for learning by defining the process to achieve the outcome.[7,8]

With additional corroboration beyond the work of Rosenbluth and colleagues,[1] how experienced teachers define the "best" residents will be helpful in revising future iterations of Milestones as well as setting individual goals for residents who are developmentally ready to make the shift from a focus on process to a focus on outcome for their continued improvement. While personality traits may not be modifiable, several components of the "best" residents revealed in the study by Rosenbluth et al[1] can be developed during training through learner-centered experiences, feedback, and mentoring. These areas included teamwork, personal improvement, and multiple components of Kennedy's trustworthiness framework, such as knowledge and skill, discernment, and conscientiousness.[9] Indeed, personal and professional development, which includes trustworthiness, has been suggested as a seventh competency domain and interprofessional teamwork as a potential eighth domain.[10,11]

Regardless of the competency of interest to be developed, 2 things seem clear: a focus on "best" helps define the end goal to strive for, but focusing on next steps in development works best until considerable progress has been made toward that ultimate outcome.

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