How precision med ed can personalize training to improve care

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When the AMA convened a precision education summit with a dozen nationally recognized leaders in health care, education and technology earlier this year, AMA Chief Academic Officer Sanjay Desai, MD, put a question to the group: What do you think of when you hear the term “precision medical education?”

“I think of an oxymoron,” responded Charles G. Prober, MD, founding executive director of the Stanford Center for Health Education and senior associate vice provost for health education at Stanford University. “One of the problems we have is a lack of precision.”

Many medical schools, Dr. Prober noted in an AMA Innovations in Medical Education webinar that shared some of the learnings from the summit, take a one-size-fits-all approach to education, and this has downstream effects on patients.

“The endgame of precision education is precision health,” he said. “We really want to know how to best address the health problems that face our society in general and the patients that are sitting in front of us very specifically.”

The webinar was produced by the AMA Accelerating Change in Medical Education Consortium, which brings medical schools and residency programs together to transform physician training.

Imagine building a house

“I strongly believe that we have to be very prescriptive and proactive about the bricks that we put into the foundation of our educational house,” Dr. Prober said. “We do a disservice to our students and ultimately, therefore, to our residents and to our practicing physicians and indeed to our patients if we don't lay a foundation which everybody understands is the necessary fund of knowledge that you need to be—ultimately—a practicing physician.”
On a practical level, according to a definition shared by Dr. Desai during the webinar, precision medical education is a system that transforms lifelong learning by using data and technology to personalize education, increase efficiency and improve patient outcomes.

“We should figure out what each of our students is passionate about and really wants to drive, in addition to their core medical education—whether it’s basic science or community-based learning or biomedical ethics or health policy, whatever it is—and help those students go down into those deeper dives during their medical school experience,” Dr. Prober said. “But the foundational bricks and the foundational house still has to exist.”

Know these touchstones

Dr. Prober outlined these overarching principles that should drive precision medical education.

**Relevance.** Most of all, “it must be relevant to the improvement of health,” he said.

**Accessibility.** “What I mean by this is that we cannot obfuscate our messages for our students and our residents and others. We have to put them in a way which they can understand and act upon.”

**Equity and inclusivity.** For society to achieve these goals, health care must also.

**Fostering curiosity.** The learning journey requires this “at all levels, from students through residents, into practicing physicians,” Dr. Prober said.

**Cultivating collaboration.** “Medicine, I think we all recognize, is a team sport.”

**Human-centered design.** This “gets back to the idea that the material is accessible to our learners, that they understand it in the context of their educational journey.”

In addition, educators need to make a point of encouraging and perpetuating trainees’ love of learning, Dr. Prober said.

“As we go through this journey, we have to have our learners maintain their growth mindset, always pushing them to identify their passions, to follow their passions and to grow in their educational journey as they live their professional lives,” he said.

The webinar also featured a presentation by Dr. Desai with use cases for precision medical education, as well as a presentation by Marc M. Triola, MD, director of the Institute for Innovations in Medical Education at New York University Grossman School of Medicine, on the use of performance analytics to support precision medical education.