How medical schools are driving better BP measurement

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Accurately measuring blood pressure is foundational to hypertension diagnosis and treatment, yet even physicians with decades of experience sometimes struggle to get reliable numbers. The reason is simple: They were never trained adequately.

A grant program put forward by the AMA is funding projects at medical schools across the U.S. that expand and standardize BP measurement training. The centerpiece of each is use of a new online training module developed by the AMA, “BP Measurement Essentials: Student Edition,” which is designed to support existing efforts within health care schools to ensure students are learning the latest evidence-based techniques.

Why med ed needs to change

“Traditionally, medical students only get blood pressure education in the first semester of their first year, and it’s never touched on again,” said Veronica Hill, a nurse practitioner and an instructor of the primary clinical skills course at Alabama College of Osteopathic Medicine (ACOM), one of the grant recipients. “It doesn’t have to be that way. That’s just how people have done it.”

One of the drawbacks to that approach, Hill said, is that students often end up unable to accurately measure blood pressure when they finally get to their clerkships.

“They’re so focused on so many different aspects of patient care that they often just take the medical staff’s word on what a patient’s blood pressure is,” she said. “When we saw that we could implement a project for more than first-year students, that really got our interest.”
Laura Clemmons, DO, assistant professor of family medicine and osteopathic principles and practice at, is the principal investigator on the grant at ACOM.

Making BP training longitudinal

ACOM’s first-year students will complete the “BP Measurement Essentials: Student Edition” and then perform a skills check-off with standardized patients. Besides demonstrating how to accurately measure blood pressure, the module explains the importance of accurate BP measurement, identifies the different categories of BP and goes in depth on self-measured blood pressure (SMBP).

Second-year students will instead complete the “BP Measurement Refresher: Student Edition,” a companion online training module that focuses on how to prepare and position a patient for BP measurement, as well as how to perform BP measurements on manual, semi-automated and automated devices and how to identify the different categories of BP. They too will perform a skills check-off, but theirs will be peer graded.

“We're incorporating that into a team-based learning event,” Hill said. “That’s strategic because at the time they will have already completed the pulmonary course, the cardiac course and the renal course. So they really can understand how high blood pressure incorporates into all three systems.”

Since third-year students haven’t received any of the online training, they will first do a skills check-off to give Hill and her colleagues some benchmark data to help them evaluate the project’s effectiveness.

“It’s been fascinating because those check-offs show our third-year students’ skills are right in line with what the AMA found in its recent test,” Hill said. The AMA tested more than 150 medical students on key BP-measurement skills and found an average score of 4.1 out of 11; ACOM’s student average was 5.

Third-year students will then complete the refresher module, as well as “Self-Measured Blood Pressure Essentials: Student Edition,” the third module in the series, which helps students understand how to partner with patients to measure BP at home.

“We're incorporating that module because that's where third-year students are in their academic journey,” Hill said. “It really encourages patient-centeredness, and that’s who we're training them to be as osteopathic physicians—partners in health.”

The modules, all of which are designated for AMA PRA Category 1 Credit™, are part of the AMA Ed Hub™.
, an online platform with high-quality CME and education that supports the professional development needs of physicians and other health professionals. With topics relevant to you, it also offers an easy, streamlined way to find, take, track and report educational activities.

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