

# It works: E-learning module fills gaps in BP measurement training

NOV 30, 2022

**Timothy M. Smith**

Contributing News Writer

Blood pressure measurement is the most commonly performed procedure in clinical practice, yet research has shown that medical students routinely fail on more than half the skills required. This cannot come as much of a surprise, however, given that the training they get is usually limited to one-time, textbook-based efforts that occur early in medical school and do not cover self-measured blood pressure (SMBP). Medical education badly needs a solution to address this gap in the curriculum.

A pilot study conducted with medical and nursing students, published in *Medical Education Online*, evaluated a pilot of the AMA's "Student BP Measurement Essentials" e-learning series at the University of North Dakota prior to its launch to determine if its modules can address gaps in blood pressure measurement training.

The results suggest that they do indeed improve students' knowledge of blood pressure measurement skills and their ability to get accurate BP numbers. Researchers found pronounced improvements in patient preparation, positioning and cuff sizing and placement.

University of North Dakota School of Medicine and Health Sciences is a member of the AMA Accelerating Change in Medical Education Consortium.

## What's on med schools' wish lists

"In 2020, we spoke to health care educators and medical students about the current state of BP measurement training in health care schools, gaps and weaknesses associated with the status quo, the ideal state and opportunities," wrote the authors, who include Rupinder Hayer, senior program manager in Improving Health Outcomes at the AMA. The study's other authors are staff at the AMA and faculty from the University of North Dakota School of Medicine and Health Sciences and College of Nursing and Professional Disciplines.

Feedback the authors got was that the ideal state is “an e-learning product that is based on evidence-based guidelines, includes SMBP content, is accessible to students at any time within their education journey, is interactive and [is] available to all health care schools at no cost.”

The first module in the AMA’s free series is “[BP Measurement Essentials: Student Edition](#),” which is the foundational module, designed for students early in their training. The second, “[Self-Measured Blood Pressure Essentials: Student Edition](#),” covers how to partner with patients to improve blood pressure measurement at home. The third, “[BP Measurement Refresher: Student Edition](#),” is designed to be used prior to clinical experiences and repeated as needed.

## Improvement where it matters most

Thirty-three first-year medical and 44 first-year baccalaureate nursing students completed an online assessment before and after viewing the foundational module, which, due to time constraints, was the only module tested. The assessment featured 19 multiple-choice questions evaluating knowledge of BP measurement definitions, processes and classification, as well as four items requiring the student to critique BP-measurement skills depicted in video demonstrations.

The average score on the knowledge questions jumped from 72% pre-test to 85% post-test. In addition, there was at least a 25 percentage-point improvement on questions covering factors that influence BP, cuff size and placement, SMBP measurement protocol and protocol for returning patients.

Revisions were made to all three modules based on the study’s findings prior to their release in March 2021. The e-learning series is now driving better BP measurement at [Alabama College of Osteopathic Medicine](#), [Loyola](#), [Morehouse](#), [UC Davis](#), [University of North Carolina School of Medicine](#) and Keck School of Medicine of the University of Southern California.

“This foundational module should not replace current in-person BP measurement teaching methods,” the authors wrote. “Instead, it should augment classroom time and is likely a useful pre-work assignment.”

Limitations of the study include that it was done in a virtual setting.

The modules are part of the [AMA EdHub™](#), 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.

Learn more about [AMA CME accreditation](#).