

# Online game helps doctors improve patients' blood pressure faster

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An online game that teaches doctors and nurses blood pressure-lowering options resulted in their patients reaching a normal blood pressure faster than patients whose healthcare providers received the same information in a traditional online posting, according to research in *Circulation: Cardiovascular Quality and Outcomes*, an American Heart Association journal.

Researchers found that patients of clinicians playing the [game](#) lowered their [blood pressure](#) to their target level in 142 days compared to 148 days for those who read an online posting.

"The competition proved to be a powerful incentive," said B. Price Kerfoot, M.D., Ed.M., study author and associate professor of surgery at Harvard Medical School and staff surgeon at the Veterans Affairs Boston Healthcare System.

The game used "spaced education," a technique invented by Kerfoot that Harvard is seeking to patent. Information is emailed in the form of a question, with a correct answer and explanation provided immediately after a response is submitted. The questions were emailed and adaptively reinforced for a year—hence the term "spaced education."

"Clinicians may be familiar with the guidelines, but often that knowledge isn't translated effectively into practice," Kerfoot said. "Spaced education appears to engage learners in such a way that translates evidence-based guidelines into clinician practice patterns."

Testing can help with retention."

Researchers randomly assigned clinicians in eight Veterans Affairs medical centers in New England to the game or a traditional online posting with email reminders. Forty-eight clinicians completed the game and 47 read the online posting.

Those in the game competed against other participants and could see their progress as they completed tasks.

"The study shows that an easy-to-use, low-cost tool can influence doctors and benefit patients," said Alexander Turchin, M.D., M.S., a co-first-author of the study and director of informatics research in the Division of Endocrinology at Brigham and Women's Hospital in Boston, Mass. "Once you've designed the emails, you can send it to 10 people or to every single doctor in the United States without increasing your costs."

For each doctor who participated in the game, 2.3 additional patients reached [normal blood pressure](#) during the study, Kerfoot said.

"If you train one clinician you can impact many [patients](#). There is a strong amplification effect."

Clinicians can enroll in the spaced education game for free at [Qstream](#), a company Harvard launched to develop and disseminate the spaced education methodology outside of its firewalls.

Provided by American Heart Association

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