

Knowledge is power in Penn State blood pressure study

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When it comes to chronic diseases, knowledge is power, according to Penn State researchers who will test an education program on patients with high blood pressure to help them manage their disease.

The project, spearheaded by William Gerin, professor of biobehavioral health, and Chris Sciamanna, professor, department of medicine, Penn State College of Medicine, received \$1.5 million from the National Heart, Lung and Blood Institute as part of the National Institutes of Health's American Recovery and Reinvestment Act funding for this study.

"It is interesting, and problematic, that most researchers who study how to lower peoples' blood pressure tend to ignore patient education," said Gerin.

Gerin and his colleagues created an intervention in which [patients](#) with [high blood pressure](#) are taught about the disease and its adverse effects. A computer-based technique called Self-Paced Programmed Instruction was used to quiz patients periodically on what they have learned. If they get an answer wrong, they are not punished, but instead receive more opportunities to answer the question -- as many as necessary -- and they are also given hints.

"We're emphasizing to people that we're not testing them," said Gerin. "Rather, the information is just for their knowledge, and to help them stay in control of their health. This approach has shown to be effective in

teaching all types of materials, simple and complex."

The intervention has a second component, which is the use of home blood pressure monitors that record blood pressure at intervals throughout the day.

"We know that certain interventions that don't rely on drugs can have an effect of lowering blood pressure in patients, such as the use of home blood pressure monitors," said Gerin. "The same is true for patient education. We hypothesize that both components given together will work in tandem to create a more effective intervention that will provide greater benefits to more patients."

A pilot study of the educational intervention showed dramatic results. Nearly all of the participants increased their scores from no more than 75 percent correct to 95 or 100 percent within a few months. Gerin notes that the study size was small and the more comprehensive test he is performing now involving 250 patients at Penn State Milton S. Hershey Medical Center will be a better gauge of the intervention's effectiveness. In addition, the pilot study measured only the increase in patients' knowledge, not its effects on blood pressure, which is the focus of the current project.

Provided by Pennsylvania State University

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