

PENN STATE COLLEGE OF MEDICINE

CASE STUDY

Improving Knowledge and Understanding through Multimedia

CHALLENGES

Many older adults need to dial 9-1-1 when emergencies arise but some are unaware of the sequence of events after calling for help. Penn State College of Medicine's Tom Lloyd, Ph.D., professor of Health Evaluation Sciences, wished to test the efficacy of multi-media education for teaching older adults about emergency treatment procedures for chest pain.

STRATEGY

JPL instructional designers worked with Dr. Lloyd and members of the Emergency Medicine department to create a video training program with pre-and post-test questions using an audience response system by which they could determine whether the program achieved its goal of improving understanding of the consequences of calling 9-1-1.

SOLUTION

JPL's Learning Solutions and Media Production teams worked collaboratively with Penn State College of Medicine to identify the sequence of events that routinely occur after calling 9-1-1 for chest pain. JPL and the Emergency Medicine faculty identified five key learning objectives for the program and more than a dozen health care providers that are routinely involved in helping a patient. JPL then created a script to illustrate each step of the process. JPL cast professional talent to play the husband and wife in the training video but used real health care professionals for the rest of the program. The video was shot on location at the Medical Center's emergency facility.



Real-life scenarios in the video "What to Expect When You Call 911" help senior citizens understand what may happen when emergency responders are called to help. The multimedia training program was used to gauge knowledge and influence behavior.

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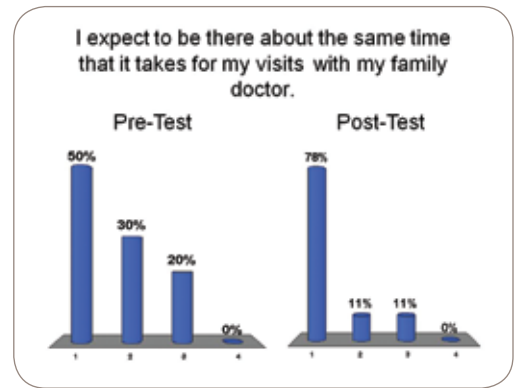
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Participants answered simple multiple choice questions in a pre-test before watching the program. The easy-to-understand questions were provided in a PowerPoint shown by the presenter and participants chose their selections using JPL's audience response system. The questions created were simple Likert scale items, similar to ratings questions. After the video presentation, the audience was presented with the same questions.



Simple survey questions were given to seniors before and after viewing the program to see if the training program influenced their knowledge.

RESULTS

More than 130 seniors from churches, senior centers and other venues were surveyed before and after watching the program. Significant improvements in knowledge and attitudes were measured with respect to understanding of the number of procedures, number of providers, types of communications among the medical team and the patient and family, and pre-hospital care given. A slight change was seen in the participants' understanding of their role and its limits in controlling the treatment process.

While this research project is completed, the training and assessment program may be used in the future in combination with a broad array of programs.

“Multimedia programs, whether delivered by the web or in group sessions, have the capacity to provide needed health education to everyone in society. However, to create successful programs requires embedding clear learning objectives in an engaging script. JPL worked seamlessly with the investigators at Penn State Hershey to accomplish this goal.”

Tom Lloyd, Ph.D.

Professor of Health Evaluation Sciences
Penn State College of Medicine

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