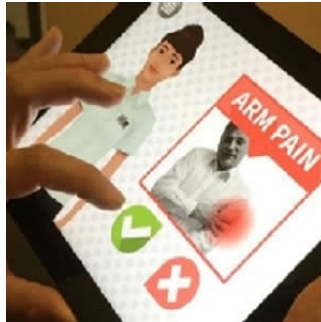**Avatar teaches patients to recognise symptoms of heart attack**

A mobile application ("SAVE app2") that uses an avatar, a nurse named Cora, has been shown to reduce hospital admissions among heart attack survivors. An avatar is a simulated digital character that interacts by talking, and using facial expressions and body language. Cora's role is to teach heart attack warning signs and symptoms, and what to do when they occur.

Results of a randomised controlled trial (RCT) revealed that patients using the app were more likely to call an ambulance when they had symptoms, and had fewer hospital admissions. The findings were presented at EuroHeartCare 2018, the European Society of Cardiology's annual nursing congress.

"Most deaths from heart attacks occur within the first few hours of symptom onset," said Jintana Tongpeth, study author and PhD student, Flinders University, Adelaide, Australia. "The death rate can be halved by getting patients to hospital more quickly. Delays occur mainly because patients don't recognise symptoms or know to call an ambulance."

The app has four sections: 1) heart attack warning sign quiz; 2) heart attack signs and symptoms, showing which symptoms are more common in men versus women; 3) what to do when having a heart attack; and 4) heart attack warning signs test.

During the initial development phase, a pilot study in 10 heart attack survivors found that using the app improved symptom recognition and knowledge about what to do. These results became the preliminary data for a larger, statistically powered RCT.

The trial randomly allocated 70 heart attack survivors to the app plus routine discharge information or routine discharge information alone (usual care group). App users received a tablet computer, with the app installed, to use at home for six months. Knowledge of symptoms and appropriate responses was assessed in both groups at the start of the study and at six months. Ambulance use and hospitalisations during the six month period were recorded.

At the start of the study, patients in both groups had similar knowledge of heart attack symptoms and how to react. At six months, app users had significantly better knowledge of symptoms and how to react than those who received routine discharge information alone.

Notably, some 85 percent of app users said Cora had increased their confidence in recognising heart attack symptoms and knowing how to react. With increased knowledge, app users were significantly more likely to call an ambulance when symptoms occur, compared to the usual care group (89 percent vs. 43 percent, respectively). During the six months app users spent less time in hospital for heart problems than patients in the usual care group (3.6 days vs. 6.4 days on average, respectively).

Professor Robyn Clark, study co-author and professor of acute care and cardiovascular research at Flinders University, said: "Nurses have limited time to provide discharge education and often encounter literacy and language barriers. This avatar app will be an essential tool to help overcome these difficulties. The pictures do not require patients to read, and we are translating the content so that Cora speaks 144 languages."

A larger trial is needed to see if the use of the app translates into quicker treatment and increased survival, according to the research team.

Source: European Society of Cardiology
Image Credit: European Society of Cardiology

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