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Boston University
NEW TECHNOLOGY HELPS AMNESICS REMEMBER

Boston, Mass.--Memory aids that may help some amnesics remember better are now being studied as part of a $1.5 million grant from the National Institutes of Health awarded to Boston University School of Medicine (BUSM) and the new Memory Disorders Research Center at the Boston Veteran's Administration Medical Center (BVAMC) in Jamaica Plain. Researchers are attempting to use computer programs tailored to an individual's memory loss and daily routine to produce behavioral changes in the amnesic. The Center is directed by Laird Cermak, M.D., Ph.D., a professor of neurology at BUSM.

Memory loss is a common disorder following brain injury. However, exact numbers are hard to determine since amnesia is difficult to assess. Amnesia, which cannot be cured, is most commonly caused by a head injury. Anoxia, a lack of oxygen to the brain, or stroke, tumors and Korsakoff disease (the combination of chronic alcoholism and thiamine deficiency) can also cause memory loss.

To tailor a computer program specifically to the amnesic, the Center assesses the extent of a patient's memory loss through a set of standardized memory tests and personal interviews with the amnesic and his or her family. "We realize that our patients' ability to remember is not going to get any better, but that doesn't mean that they can't be helped," say Cermak. "Although there is no known therapy to improve memory, we hope that with computers programmed to meet their specific needs, amnesics will be able to live more productive lives without the constant attention of family and friends," he says.

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One way a computer can be programmed to aid amnesics requires minimal effort on the patients' part because it describes a series of tasks that they want to complete for that day. For example, the first thing on the list could say "call your mother." The computer will display the command "call your mother," explain the reason for the call and provide the phone number. Once the task is completed, the computer will ask, "Did you call your mother?" By answering "yes" with a touch of a computer key, the program will then go on to the next instruction. Without being asked to respond after the task was performed, the amnesic might call his mother over and over again, forgetting that he has already done so. The program will then go on to the next task and continue until everything on the list has been completed.

In most cases, amnesics can remember how to perform routine tasks such as dialing the phone or washing clothes, but they may have difficulty remembering when they need to perform these tasks. That's where the computer comes in. The computer is more useful than other traditional memory aids, such as notebooks or diaries, because the latter demand constant monitoring by the patient.

This newly developed Center is the only center in the country devoted solely to amnesics whose memory loss is not progressive and is not accompanied by other disorders. In addition to studying why amnesics forget and how they can become more self-sufficient, the Center provides a place for family members to receive counseling. It is funded through a grant from the National Institute of Neurological and Communicative Disorders and Stroke.

BVAMC is a teaching hospital affiliated with BUSM.