Study finds older adults are less accurate in health portal performance

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Long gone are the days when your doctor called with basic test results. The internet changed medical communication, putting patients in control of reading their labs and numbers inside electronic patient portals. Many

would say progress for sure, but for older adults, there just may be a digital disconnect.

A new study from the University of Houston reveals that while older adults have become more likely than younger adults to utilize online health care portals, they tend to experience more problems navigating such systems.

"The study suggests that older adults are less accurate in their using online patient health care portals as compared to younger adults. Older adults made more errors while navigating a health website to read their lab results, communicate with providers and schedule an appointment as compared to younger adults," reports Steven Paul Woods, professor of psychology, in the *Journal of the International Neuropsychological Society*.

"We also observed that cognitive functioning played a significant role in the age-related problems with using these online patient portals."

Woods and former doctoral student Anastasia Matchanova conducted the research among 49 younger (18–35 years) and 35 older adults (50–75 years). All participants completed the Test of Online Health Records Navigation (TOHRN), an experimenter-controlled website on which participants were asked to log-in, review laboratory results, read provider messages and schedule an appointment. Participants also completed a cognitive battery, self-report questionnaires and measures of health literacy and everyday functioning.

"Internet navigation can place demands on several brain networks and cognitive abilities that commonly decline with age. For example, we use visual and motor skills to navigate the contents on a page using a keyboard, mouse or touchscreen, memory to recall passwords and relevant search terms, and executive functions to problem-solve, plan

and carry out specific goals online," said Woods. "As these portals become more prevalent, it's important to ensure that they are accessible and usable for older adults and other groups that may experience cognitive changes."

In prior work Woods found that people with human immunodeficiency virus, or HIV, had difficulty navigating online patient health portals, which was due to cognitive problems in the areas of memory and executive functions. The current study extends those findings to older adults, who can also sometimes struggle to perform other activities of daily living on the internet, including online financial management and transportation.

The findings may one day inform studies that help older adults and other cognitively vulnerable groups more easily manage their health and daily activities online.

"Future studies might examine the possible benefits of both structural (e.g., human factors web design enhancement) and individual (e.g., training and compensation) cognitive supports to improve the navigability of electronic patient health portals for older adults," said Woods.

More information: Anastasia Matchanova et al, Does neurocognition contribute to age-related deficits in the online navigation of electronic patient health portals?, *Journal of the International Neuropsychological Society* (2023). DOI: 10.1017/S1355617722000650

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