New app aims to help liver disease patients abstain from alcohol

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A mobile phone app which helps patients with alcohol-related liver disease to stay sober could help save hundreds of lives every year, according to researchers from UCL and the Royal Free Hospital who

developed the app.

The study, published in the journal *[JHEP Reports](link)*, found that 57% of those using the AlcoChange app remained abstinent over a three-month period, compared with just 22% of those who did not use the app regularly.

AlcoChange uses several behavioral change strategies, including a mobile phone-based breathalyzer and personalized messages, to help patients abstain, including telling them how much money they will save by not buying alcohol to sending them pictures of loved ones and providing them solutions to overcome cravings. The breathalyzer allows the patients to show their families and friends that they are sober, helping to build trust.

The trial resulted in fewer [hospital](link) admissions among the group using the app—even a year after they had stopped using it.

Dr. Gautam Mehta, first author of the study from UCL Division of Medicine and the Royal Free Hospital, said, "This [pilot study](link) is very promising and if the results are replicated in larger trials, we think that this could pave the way to using [digital tools](link) to provide high-intensity alcohol abstinence support in people's own homes.

"It has the potential to be particularly useful, given that few patients receive medication or talking therapy to help maintain abstinence. Alcohol-related liver disease is an increasing health problem worldwide, with a huge cost to health systems.

"In the group who were using the app, there were fewer hospital readmissions, which ultimately could lead to fewer people dying of this disease, which worldwide kills an estimated three million people every year."

Professor Rajiv Jalan, senior author of the study from UCL Division of Medicine and the Royal Free Hospital, said, "It is exciting to see the positive results of this study. Harnessing digital technology has the potential to revolutionize the management of patients with liver disease as it can be delivered continuously at home, reducing the need for patients having to travel and impacting dramatically on costs of health care delivery."

AlcoChange was developed by Cyberliver Ltd, a UCL spin-out company co-founded by Professor Jalan.

A larger randomized nationwide study has now been launched to establish which patients are likely to benefit the most and evaluate its cost-effectiveness.

Susan (not her real name), 50, from north London, was one of the original participants in the initial AlcoChange study. For Susan an abusive relationship had led to depression and anxiety, which she had sought to numb by drinking.

She said, "I'd ended up as an inpatient undergoing a detox at the Royal Free Hospital because I'd been drinking up to three bottles of wine a day and frankly I jumped at the chance to take part in the study.

"What really helped me was when I clicked on the app to report I was having a craving a picture of my daughter came up which reinforced for me why I wanted to stop drinking. I found it incredibly easy to use and there's nothing like it out there which compares with it. I also loved the breathalyzer part of it. It took a picture of you while you were using it and showed your score so you could prove you weren't drinking to others."

Susan said although she was still struggling with her relationship with

alcohol, she was now getting support from a charity for her addiction.

She added, "I didn't start drinking again until after the trial was over. Personally, it was a great experience for me and to be honest I was gutted when the trial finished. I think for someone like me who is confident using their smartphone it was good to have something so accessible and interactive."

More information: Gautam Mehta et al, AlcoChange: a digital therapeutic for patients with alcohol-related liver disease, *JHEP Reports* (2023). DOI: 10.1016/j.jhepr.2023.100993

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