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OxfordVR technology a world first success in automating psychological therapy using virtual reality (VR)

In a world first, OxfordVR has successfully automated psychological therapy in virtual reality for patients with mental illness. Users are guided by a virtual coach instead of a real-life therapist, allowing the treatment to reach many more patients. It is also the first time a digital therapeutic of any kind has successfully been shown to help patients with schizophrenia and mood disorders with psychotic symptoms.

The technology, called gameChangeVR[™] is a 6 week, fully automated, virtual reality treatment that delivers cognitive behavioral therapy (CBT) inside safe, immersive, virtual scenarios. In the largest ever clinical trial of VR for mental health published today in *The Lancet Psychiatry*, gameChange was shown to help patients with schizophrenia and mood disorders with psychotic symptoms who suffer anxiety and distress in everyday situations. The virtual reality treatment reduced anxious avoidance and distress, improved paranoia and enhanced quality of life when used in conjunction to standard of care drug therapy. The biggest benefits were experienced by those with the most challenging psychological problems. Patients used the VR in the comfort of their own homes, or at their local mental health clinic.

Access to effective psychological therapies has been hampered by a shortage of clinicians. The problem is especially acute for people with severe mental health difficulties such as schizophrenia and mood disorders with psychotic symptoms. Patients are keen to try psychological interventions, but seldom receive them. Automated VR, with an in-built virtual coach, offers an innovative and effective way out of this impasse. Techniques are implemented consistently and outcomes replicable, scalable and rapid. gameChange results are delivered in just 6 weeks, with one 30 min VR session per week, compared to standard treatment durations for traditional CBT of 60 mins a week for 16-26+ weeks.

"gameChange can practically scale clinical outcomes far beyond what was thought possible even 5 years ago, effectively offering the ability to treat millions of patients with severe forms of mental illness." says OxfordVR CEO, Deepak Gopalakrishna.

gameChange was developed by a multi-partner collaboration between OxfordVR, the University of Oxford and Oxford Health NHS Foundation Trust to target the intense fears associated with everyday situations suffered by patients with psychotic symptoms. For many patients, these fears develop into a severe agoraphobia that means they avoid leaving the home, severely disrupting relationships with family and friends, their education, and careers. gameChange is designed to treat this agoraphobia and help patients re-engage with day-to-day activities such as riding a bus, ordering a coffee or shopping for groceries. It takes them from a housebound existence to life back in the world outside.

During the trial the patients who benefitted most significantly were those who found it hardest to leave the house, and those with most psychiatric symptoms, such as severe anxiety, depression, delusions, and hallucinations. These patients experienced large benefits – for example, being able to

undertake activities they had previously found unthinkable. These benefits were maintained at the sixmonth follow-up. Patient feedback showed that the treatment was very popular, with very high uptake rates.

'We are delighted that gameChange has produced excellent results for people with some of the most challenging mental health problems. Individuals who were largely housebound have got back outside. Using today's affordable and easy-to-use consumer VR equipment, we think gameChange will lead a transformation in the digital provision of evidence-based psychological therapy, with deployment at scale for treatments that really work.' **OxfordVR scientific co-founder, Professor Daniel Freeman** (lead researcher, Department of Psychiatry, University of Oxford).

OxfordVR is reshaping the future of mental healthcare, fusing deep scientific evidence with emerging technology to create powerful new therapeutic tools for some of the world's most challenging mental health conditions. Emerging technology such as virtual reality allows OxfordVR to affordably scale gold standard treatments like CBT and improve patient quality of life in as little as 6 weeks. gameChange represents the culmination of more than 25 years of clinical research conducted by Professor Daniel Freeman of Oxford University, scientific co-founder of OxfordVR.

gameChange patient testimonials

'gameChange therapy changed my life. I'm more confident in myself. I'm more confident around other people. I see gameChange helping everyone. I think everyone's going to be using it.' gameChange trial participant A

'If anyone has the opportunity to do the virtual reality treatment, I really would recommend it because it's made a lot of difference to me. After seven years of illness, I do feel so much better. I've been able to make eye contact with people more, without feeling really anxious, I've been able to walk down a street without worrying about anyone walking towards me. I'm now able to go into a café. I feel much more confident about going on a bus. I just feel so much more confident than I was.' gameChange trial participant B

About OxfordVR

OxfordVR is a digital therapeutics company that develops evidence-based immersive treatments using virtual reality for serious mental illness. A spin out of Oxford University, our treatments are built on more than 25 years of research from Professor Daniel Freeman of Oxford University. The company has amassed a strong foundation of clinical validation through multiple clinical trials and real-world deployments since its inception in 2017. OxfordVR is dedicated to improving world class access to mental health using immersive technology to automate gold-standard treatments like cognitive behavioural therapy (CBT) without the need to rely on increasingly scarce and expensive clinical resources. <u>www.oxfordvr.org</u>

About gameChange

gameChange was designed in collaboration with people with lived experience of psychosis, with over five hundred hours of patient feedback, facilitated by the McPin Foundation, a mental health research

charity that champions lived experience in research. Over six sessions comprising three hours in VR, users practise being in simulations of everyday situations: a café, shop, pub, street, doctor's surgery, and a bus. Treatment is personalised: patients can choose what they work on and when, and find the "sweet spot" of safety and challenge in order to overcome their fears. <u>www.gamechangevr.com</u>

gameChange was trialled is the largest ever clinical trial of VR for mental health with 346 patients with psychosis in nine NHS Trusts across five English regions - Bristol, Manchester, Newcastle, Nottingham, and Oxford. Results from the trial were published for the first time today in *The Lancet Psychiatry*: "Automated virtual reality therapy to treat agoraphobic avoidance and distress in patients with psychosis (gameChange): a multicentre, parallel-group, single-blind, randomised, controlled trial in England with mediation and moderation analyses."

https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366(22)00060-8/fulltext

Videos for media use from the gameChange trial can be found here:

- OxfordVR: gameChangeVR Therapeutic Overview Video
- Bus Scenario
- Doctor's Office Scenario
- <u>Café Scenario</u>

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