

Evaluating a Self-Administered Glucose Tolerance Test for Diabetes

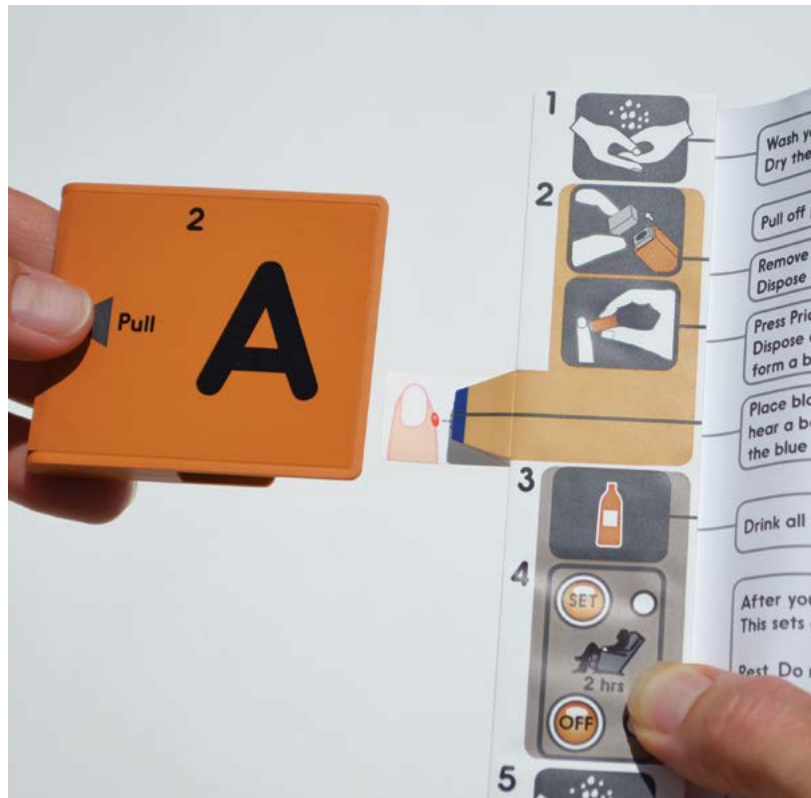
Oxford University researchers have evaluated an at-home alternative to the current clinic-based oral glucose tolerance test. This has allowed SmartSensor telemed Ltd to further development activities.

SmartSensor telemed Ltd has developed a unique disposable device that enables people to self-administer the gold-standard oral glucose tolerance test (OGTT) conveniently at home. An evaluation of a prototype system, conducted at the University of Oxford, found that the device might enable people to test themselves for diabetes in the comfort of their own home.

The study, performed by the NIHR supported Diabetes Trials Unit's Translational Research Group (TRG), found that the device was popular, easy to use, and did not require any special training. The TRG observed that the prototypes tested lacked the necessary accuracy, but concluded that once this was corrected, home diabetes screening could become a real possibility.

SmartSensor found the TRG study invaluable in guiding subsequent development of the Home OGTT system. The study's findings about the ease of using the device without any training and the high level of patient approval suggested that the user-centred device design and its novel user guidance features were very successful, and required little further attention. This allowed the company to focus on improving the test accuracy, by working to refine the sensors and electronics used in the device.

Further trials in 2015 and 2016 have confirmed the high levels of usability and patient acceptance found in the Oxford study. SmartSensor also reports that the accuracy of the Home OGTT system has now improved and that the system is performing well analytically: further studies are now planned, to verify performance ahead of product launch.



OGTT is the most sensitive and specific test for all forms of diabetes, but is difficult to provide at scale and inconvenient for patients. Home OGTT could make significant contributions to the prevention of diabetes and its complications.



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