**Patients think Peek could transform eye health**

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written by:

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Healthcare workers and eye service decision-makers also give positive reviews for the smartphone suite

The Portable Eye Examination Kit (Peek) has real-world potential to transform global eye health, according to new research published in the journal [*JMIR mHealth uHealth*](http://mhealth.jmir.org/2016/2/e30/).

Around 285 million people worldwide are visually impaired, including 40 million blind people. Most visual impairment is avoidable (up to 80% of the time) but there aren’t enough trained specialists and it’s expensive to buy and transport the right equipment. This is especially true in rural areas and in the low-income nations of Africa and Asia.

**Comprehensive eye exams anywhere**

[Peek](http://www.peekvision.org/) is a set of smartphone apps together with a unique hardware adaptor for the phone’s camera, a built-in system to share data with specialists and a training programme. It was developed to be affordable and user-friendly as an alternative way to do comprehensive eye exams anywhere in the world.

Dr Andrew Bastawrous is at the London School of Hygiene & Tropical Medicine and Co-Founder of the Peek Vision Foundation, a UK based charity. He started and is leading the Peek project as it is developed and tested.

In the current study Dr Bastawrous, Sarah Karanja from Amref Health Africa in Kenya and their teams worked together alongside the Nakuru Eye Disease Cohort Study which was part-funded by Fight for Sight.

Patients, healthcare providers and decision-makers in ophthalmic healthcare provision in Kenya were interviewed to help the team understand 1) the context in which Peek would be used; 2) how patients feel about this approach to eye health; 3) the usability of Peek itself; and 4) whether it benefits eye care provision.

The results show a clear positive response towards Peek from all participant groups. The study also highlights some key issues to address if Peek is to be a national and international success.

“There are no mobile eye doctors like you doing the rounds creating awareness on eye issues,” said one patient who took part in the study. “Someone like I will wait until I am sick to seek treatment because there is no one giving people information to help prevent these problems.”

**Access to rural areas**

“It’s portable and one can be able to access rural areas where infrastructure is poor,” said a participating healthcare provider. “You will be able to get to people who could not think of getting help.”

“I can gather data from the field and it gives me some clear information on decisions that I am about to make,” said a stakeholder. “It is able to separate those who need to see a doctor urgently and those who do not.”

**Key challenges to address**

Key issues included the need for government support to deploy Peek, being able to train enough healthcare providers, getting community health volunteers involved, ensuring data protection and having access to low-cost smartphone technology.

“There are multiple human factors that need to be understood because ultimately, the technology has no value when not appropriately used in the right hands, with the right support and right information being generated”, said Dr Bastawrous.

“So it is encouraging to find that Peek is perceived to be valuable as a tool that would increase access to high-quality eye services in rural, hard-to-reach areas. The technology has already [demonstrated its accuracy](http://www.fightforsight.org.uk/news-and-views/articles/news/peek-eye-test-app-works-as-well-as-visual-acuity-charts/), repeatability and consistency and we now know that Peek is an acceptable solution that supports patients’ needs and can help strengthen the eye health system.”

**A real opportunity**

Dr Dolores M Conroy, Director of Research at Fight for Sight, said:

“Mobile technology has great potential to transform eye-healthcare delivery and it’s important that we have this evaluation of people’s views about Peek.

“The technology may be possible, but people have to be able to use it and to want to. Here we can see that they can and do. With the right commitment and backing there will be a real opportunity to overcome the current barriers to universal eye health.”

The research also received funding from The British Council for the Prevention of Blindness, the Medical Research Council, and the International Glaucoma Association the Department for International Development and The Queen Elizabeth Diamond Jubilee Trust.  
  
Read the full press release ([PDF](http://www.fightforsight.org.uk/media/1579/peek-2016-06-21-acceptibility-usability-and-views-jmir-mhealth-uhealth.pdf)) ([text](http://www.fightforsight.org.uk/media/1580/peek-2016-06-21-acceptibility-usability-and-views-jmir-mhealth-uhealth.txt))