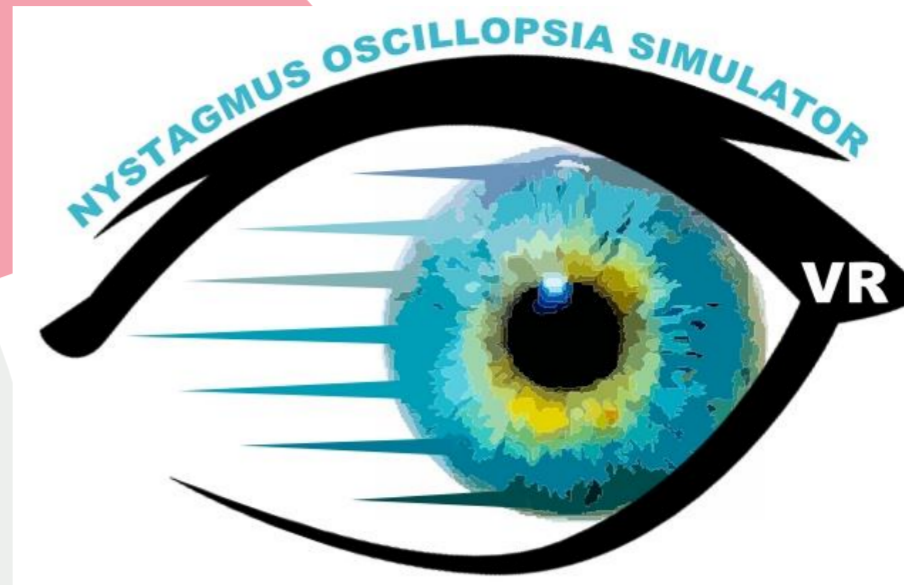


Simulating Nystagmus in Virtual Reality

David Randall, Helen Griffiths, Gemma Arblaster, Anne Bjerre and John Fenner

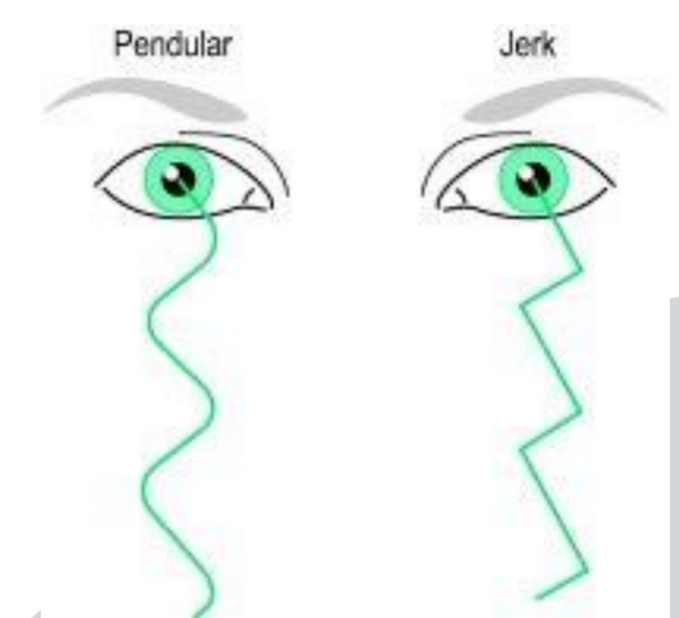
INSIGNEO

Institute for *in silico* Medicine



Background

- Nystagmus is a condition where the eyes move involuntarily
- They see the world constantly moving around them
- A common complaint is that they struggle to communicate the debilitating effects of their condition
- We produced a VR simulation of the condition to aid communication



Depiction of nystagmus eye movements
(Reference: <http://medical-dictionary.thefreedictionary.com/nystagmus>)

Methods

- We tracked nystagmus sufferers' eye movements
- The eye movement data was imported and replicated in virtual reality
- Environments were generated in which to experience nystagmus (oscillopsia)
- App released on Android Play Store and Apple App Store as a free download
- App called "Nystagmus Oscillopsia Sim VR"

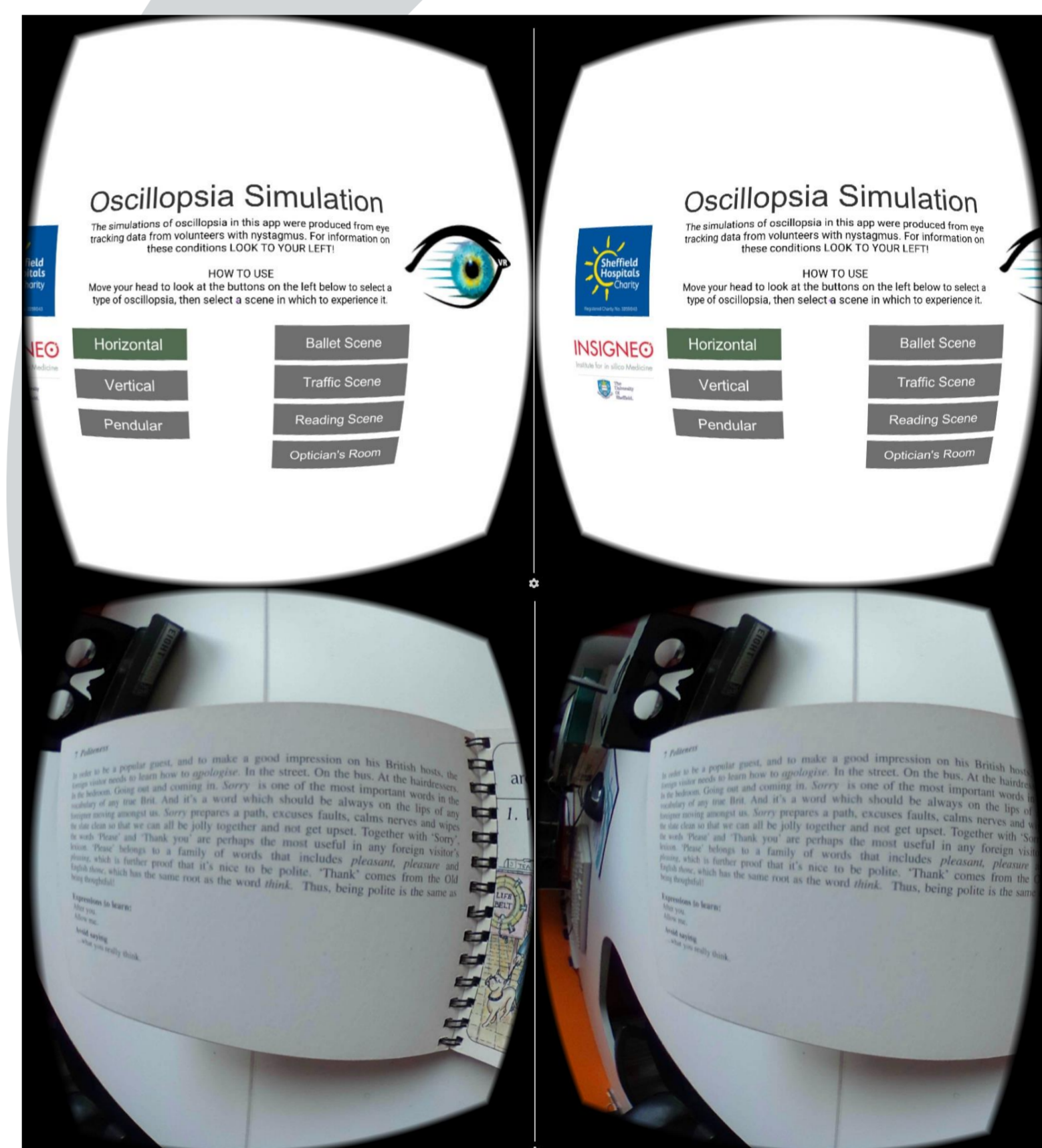
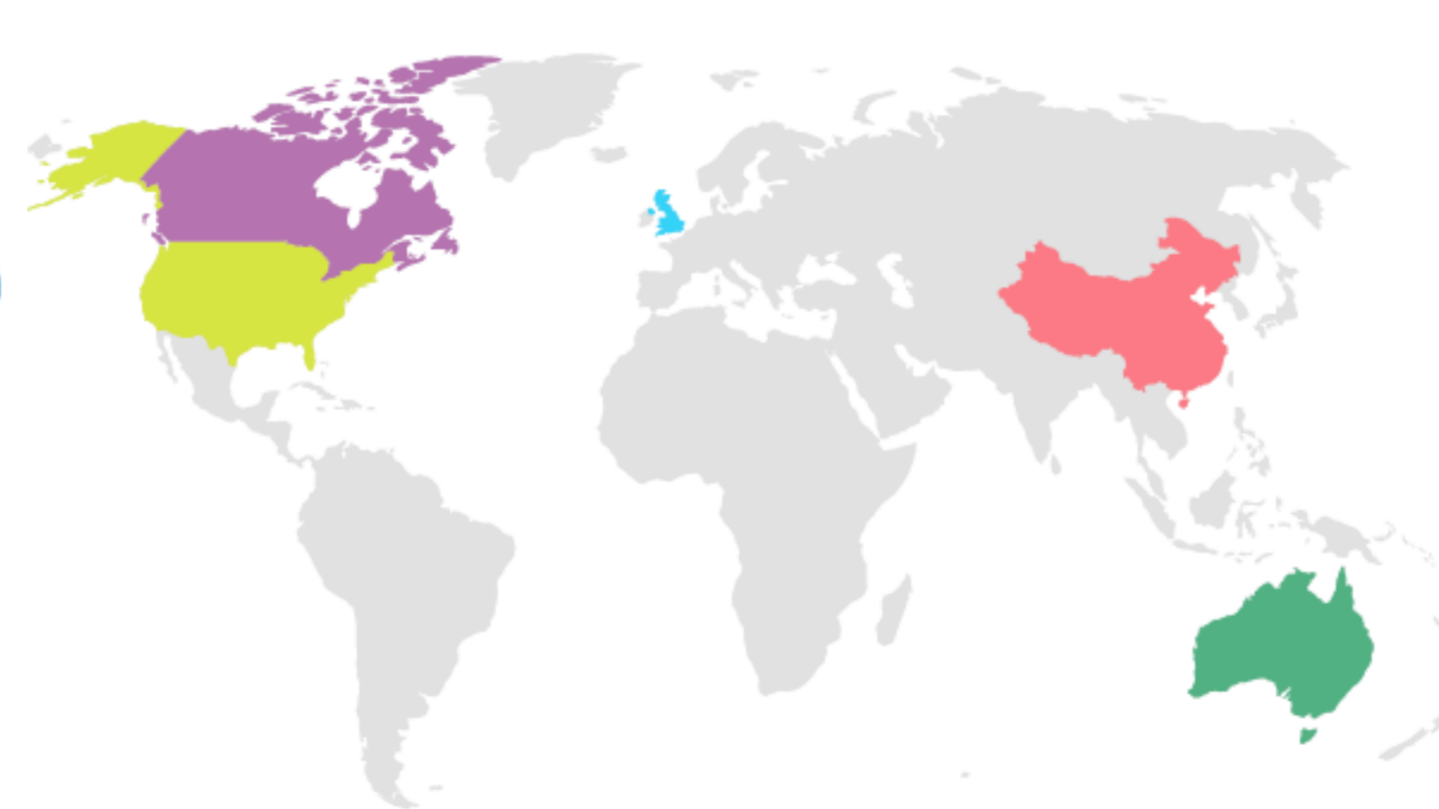
Results

- App downloaded by >500 people worldwide
- Top countries for downloads shown on maps below:

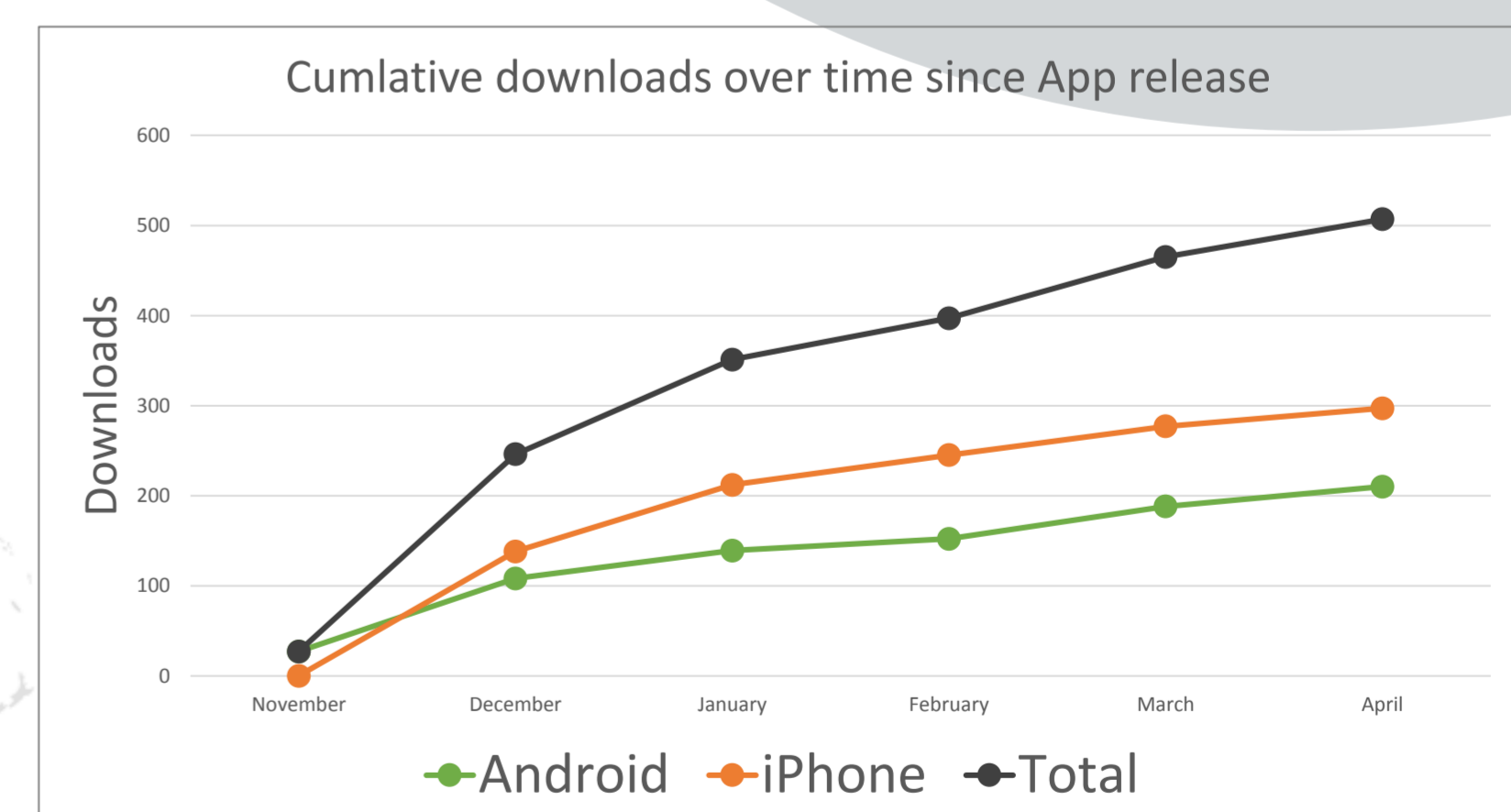
Android



iPhone



In-app screenshots with a separate display shown to each eye



Please download the app and try it with one of the headsets at our stall...

Search for **Nystagmus Oscillopsia Sim VR** on your app store.

Acknowledgements

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