THE EFFECT OF A VIRTUAL REALITY IMMERSIVE EXPERIENCE UPON ANXIETY LEVELS IN PATIENTS UNDERGOING CARDIAC CATHETERISATION: THE VIRTUAL CATH TRIAL

1Holly Morgan*, 2Sean Michael Gallagher. 1Dr; 2University Hospital of UK

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Introduction Patients undergoing cardiac catheterisation are understandably anxious. This is due to a lack of familiarity with both the hospital environment and the planned procedure. Anxiety may negatively affect their patient experience. Appropriate patient information can help improve understanding and reduce anxiety. In particular, video-based patient information prior to cardiac catheterisation has been shown to improve patient’s knowledge and reduce peri-procedural anxiety. Generic video-based patient information about the cardiac catheterisation procedure is widely available. Ideally any patient information delivered pre-cardiac catheterisation has been shown to improve patient’s knowledge and reduce peri-procedural anxiety. The immersive nature of VR allows patients a unique opportunity to prepare for the procedure and environment within which they will be treated. To date, the use of VR to prepare patients for invasive cardiac procedures has not been studied.

Aim The aim of this study is to assess whether the use of an immersive VR experience decreases peri-procedural anxiety in patients undergoing cardiac catheterisation. We will also assess whether the VR experience improves overall patient satisfaction.

Methods With the help of a local media company, a VR cardiac catheterisation video was produced (figure 1 depicts a screenshot from the VR video). The video is watched with a VR headset to create a 360 immersive experience. We are undertaking a single-centre randomised control trial comparing the use of an immersive VR experience 1 week prior to catheterisation with standard pre-procedural care. Pre-procedural anxiety levels and procedural knowledge are assessed by questionnaire, using the validated six-item short-form of the Strait Trait Anxiety Inventory (STAI). A satisfaction questionnaire is also completed before the patient is discharged.

Results Data collection is currently underway and is due to finish in April 2019. Preliminary review of pilot results shows trend towards reduced anxiety in VR cohort (n=45; 21C, 24VR; anxiety scores 21.5 v 17.6) Informal feedback suggests patients enjoy the VR experience and find it a helpful adjunct
Conclusion We aim to assess whether the use of an immersive VR experience improves patient familiarity with cardiac catheterisation, thereby reducing peri-procedural anxiety. If confirmed, we plan to make the immersive VR experience available to all patients undergoing angiography in our centre. Further work includes expanding the VR resource to cover other cardiac procedures.

Conflict of Interest None