

## Using virtual reality in medicine management education for children's nurses - strengths and pitfalls.

Mrs. Julia Tod, Mr. Peter Smith, Mr. Nelson Selvaraj, Mrs. Angharad Barklam.

### Technical development challenges

First use of 360 video immersive teaching in the school  
Influential in 'selling' the concept of VR and its attributes to teaching staff  
Limitations of a proof-of-concept project, consumer grade hardware and demo video editing software capable of 360 format  
Guidance on use of HMDs (VR headsets) with groups of students unfamiliar with their use.

### Background evidence

Medication errors in nursing is a persistent challenge to safe nursing practice in children's care.

Virtual Reality (VR) could have the capabilities to help prepare student nurses with improved abilities to identify medication errors and respond to real nursing experiences with more confidence.

VR can provide students with a memorable and immersive experience that would otherwise not be possible.



### Student evaluation

#### Strengths

Using VR headsets allowed them to experience the nurse perspective.  
Gained a better understanding of medication errors and nurse accountability.  
Better equipped for practice.  
Immersive experience of opportunity that is not available to them in practice.  
A new and exciting way to learn.  
Could pause and rewind the scenario to take in more detail.

#### Pitfalls

Some students experienced nausea due to motion sickness and video was sometimes blurry.

### Pedagogy

Three scenarios representing a range of error behaviour have been filmed and the contents were unloaded to VR headset.

Piloted within a second-year child field undergraduate nursing cohort.

Principles of experiential learning - Learning through 'reading', 'hearing' and 'visualising'.

It can be an effective supplemental tool for teaching.

### References

- Chen et al 2020 Effectiveness of Virtual Reality in Nursing Education: Meta-Analysis *Journal of Medical Internet Research* 22.9 10.2196/18290  
[doi:10.2196/18290](https://doi.org/10.2196/18290)
- Cobbett S, Snelgrove-Clarke E. 2016 Virtual versus face-to-face clinical simulation in relation to student knowledge, anxiety, and self-confidence in maternal-Newborn nursing: A randomized controlled trial. *Nurse Education Today* Oct;45:179-184.  
[doi: 10.1016/j.nedt.2016.08.004]