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Can 360° Immersive Videos Enhance Medical Students' Readiness for Primary Care Placements?

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Festival of Learning and Teaching 2024

Meet our team

Dr Viral Thakerar - Patients, Communities and Healthcare GP Placement Lead

Dr Agalya Ramanathan – General Practitioner and Teaching Fellow in Primary Care Medical Education

Dr Aaliya Mohammed – General Practice Specialist Trainee

Dr Arti Maini - Director of Undergraduate Primary Care Education

Dr Ravi Parekh - Director, of the Medical Education Innovation and Research Centre

Dr Gautham Benoy – Teaching Fellow in Primary Care Medical Education

Dr Calum Parr – Specialised Foundation Programme FY2 Trainee Doctor

Dr Aisha Yahaya - General Practitioner and Principal Teaching Fellow in Digital Health & Primary Care

Dr Rebecca Wright – General Practice Specialist Trainee

Dr Hamish Clark - General Practice Specialist Trainee

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Festival of Learning and Teaching 2024

Some background behind this project

Hospital environment

Patient Contact

Developing Skills

What do medical students look forward to about clinical placements?

Being Part of the Team

New Learning

Seeing Surgery

No Lectures

Some background behind this project

Not knowing things

High pressure situations

Making Mistakes

What are medical student concerns about clinical placements?

Feeling Lost

Travel

Unapproachable Staff

Some background behind this project

These opinions were gathered from early year Imperial medical students (**year 1 and 2**) at the end of their “Patients, Communities and Healthcare” (PCH) module.

The PCH module involves a component where **students spend some at a GP surgery.**



There was a general sentiment of **feeling underprepared for their clinical placements** prior to entering the primary care environment.

So how can we prepare students for clinical placements, without actually going to placement?



Some literature that supports the use of 360 Videos for clinical training:

“...360-video is a valuable adjunct to traditional simulation activities, it can be used to create learning opportunities that are **consistent, reproducible, and accessible outside of the usual classroom setting.**”

Donnelly et al - Preparing students for clinical placement using 360-video

“...participants did tend towards the illusion of being in the consultation room depicted in the virtual reality and that the **virtual consultation taking place was really happening.**”

Pan et al - The Responses of Medical General Practitioners to Unreasonable Patient Demand for Antibiotics - A Study of Medical Ethics Using Immersive Virtual Reality

“...those viewing 360 media reported significantly **higher immersion, motivation, and empathy scores.**”

Jacobs et al - Learning from 360-degree film in healthcare simulation: a mixed methods pilot

What are our Project Aims?

- To develop immersive videos for students to prepare for primary care clinical placements using diverse patient perspectives
- Evaluate the impact of immersive videos on students' psychological preparedness for primary care placements

So what have we filmed so far?

360 Video Tour of a GP Surgery

We've made two 360-video undertaking a **tour of a GP surgery**.

The first is ***premises-focused***, and tours the rooms students would see, including clinic rooms, reception, waiting room, medical storage etc.

The second is ***staff-focused***, and involves interviews with GPs and staff at the practice.

This video was shown to the **year 1 medical students** as part of their curriculum to be **viewed in a 2D format or optionally in the 360-video** format if they had access to a virtual reality (VR) headset.



How are we assessing the impact of the 360 videos?

360 Video Tour of a GP Surgery

The **year 1 students** were invited on a voluntary basis to view the video again in a 360-video format using a VR headset and then participate in a groups focus group interview.

Our questioning prompts aimed to explore the following themes:

- Preparedness
- Anxiety
- Nervousness about what to expect
- Immersion/Realism of the experience
- Familiarity with the GP surgery
- Emotions felt
- * Role of immersive videos in medical school



What have we learnt so far?

360 Video Tour of a GP Surgery

Four students participated in our focus group and the following key themes were noted:

- **Freedom:** Students could explore the clinical environment, in 360°, without judgement.
- **Familiarity:** The immersive video enabled students to feel increased familiarity with the clinical environment and staff roles.
- **Engagement:** Immersive videos were exciting and engaging.
- **Immersion:** The immersive format felt realistic and allowed greater attention to details, helping students to better understand the environment.



What have we learnt so far?

360 Video Tour of a GP Surgery

Freedom: Students could explore the clinical environment, in 360°, without judgement.



“So, on my first GP Day... I wasn’t noticing like the subtle signs and ways a GP practice is run. [In the 360 video]..**you can look around, nobody is talking to you**, while in an actual GP practice you’re meant to be observing so can’t do that.”

“[In the 360 video] you are in a **risk-free environment**. There’s no, **mistakes are fine**, you can just reset... **you can take time, you can check things**”

“I think that would be quite helpful, especially for **somebody who’s never been in a GP** or are not sure where to start.”

What have we learnt so far?

360 Video Tour of a GP Surgery

Familiarity: The immersive video enabled students to feel increased familiarity with the clinical environment and staff roles.



“I feel like if I had this before my GP placement, **I would be a lot more familiar when I go into the surgery.**”

“This video, you **got to hear conversations between the staff** which is like a big difference. I feel like for people who like, you know, that could help them figure out what to say when they get there or know what to expect when they get there”

“It **gives you a sense of comfort**, because it allows you to **know who’s going to walk through the door.**”

What have we learnt so far?

360 Video Tour of a GP Surgery

Engagement: Immersive videos were exciting and engaging.



“...this is something that is more peculiar, **you don’t do this every single day**, so there’s the **added excitement** with the kit that **makes it more interesting**, so I think you **pay more attention** to something special.”

“...we’re like **really excited** because they [1st year medical students] would take advantage of it a lot and **even getting used to technology** from really early will like help”

“I think the **3D adds more excitement** to it. So, you’re looking forward to it even more.”

What have we learnt so far?

360 Video Tour of a GP Surgery

Immersion: The immersive format felt realistic and allowed greater attention to details, helping students to better understand the environment.



“...video of a busy environment, it would **make it more realistic** and then you can possibly **know how to handle your emotions better** in a stressful environment”

“Watching the video **felt immersive** and it almost felt the advice was more understood and I was **more attentive** to it than had I watched a video. ”

“I think **2D you focus on the person** talking and **3D I focus on the environment.**”

What are we doing now?

- Need to **film more videos** in different contexts.
- Evaluate the impact of these and **gather more information** from the students.
- Aiming to **implement the videos into the curriculum** of the early year medical students, with the **aim of improving their preparation for primary care placements**.
- Consider interactivity through WondaVR



What to film next?

360 Video of a Clinical Consultation

Have **written scripts** to simulate the following consultations and are in **planning stages on filming these:**

- A 31 year old patient presenting to the GP surgery with back pain.
 - Filming this video twice – A consultation representing good **clinical communication skills** and a consultation with poor **clinical communication skills**
- A 74 year old patient with Alzheimer's Disease attending the GP surgery with a relative for a review.
 - Filming this video as an example of a **3-way consultation**



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Thank you



https://www.youtube.com/watch?v=D_vDFFdKLYg

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