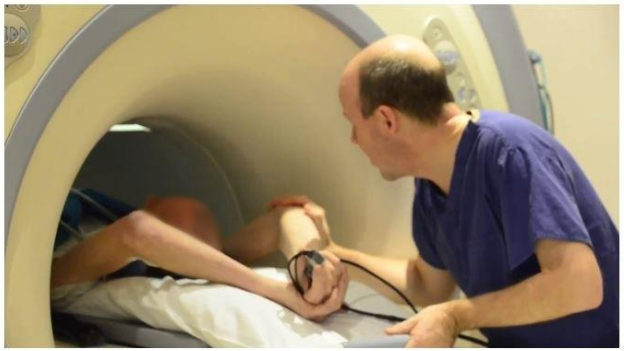
Minimising Claustrophobia and Scanxiety in Radiology



50 cm bore MRI scanner

70 cm bore MRI scanner

VR Headset

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What is Scanxiety?

Scanxiety is a word that combines the words scan and anxiety *(radiologyinfo.org)* *The term started with cancer patients who feel distress and/or anxiety occurring before, during, and after cancer-related imaging/scans and is now this term is widely used by patient requires regular imaging.* *(National Library of Medicine)*

Introduction:

- Counselling and training patients before scanning is a conventional method of managing claustrophobia and "Scanxiety"
- This requires more staff resources and scanner time than standard patients.
- Advancements in scanner technology have improved the patient experience.
- Use of Virtual Reality (VR) is under investigation as a method of assisting anxious patients.

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MRI has historically been seen as an imposing environment for patients. Most efforts and advancements have been aimed at either improving the immediate patient experience or minimising the length of it.

Total scan time has been historically reduced by customising scan parameters according to patient's needs with a trade-off between quality and time, as well as utilising advanced acceleration techniques.

The recent implementation of Deep Learning Reconstruction has broken the links inherent in this traditional trade-off.

Shorter exams with greater image quality opens the door to tolerable exams without compromise.

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Advancements in hardware have improved the patient experience.

Standard bore size has increased by what amounts to a few centimeters but combined with improved bore design has made significant difference to exam tolerance.

Positioning of the patient in the scanner also plays a key role in reducing claustrophobia. In some cases, entering the scanner feet first is a preferable choice for claustrophobic patients.

Options including eye masks and headphones offer distraction from the perceived threats from the immediate environment.

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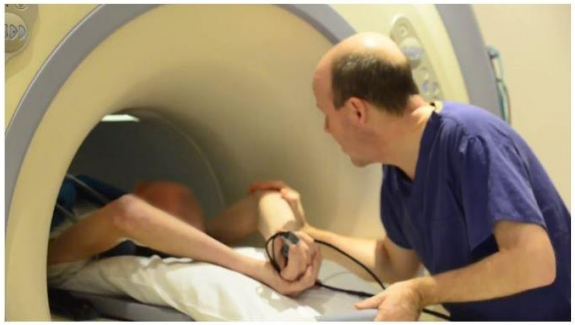
- In much the same way as flight crew and aerophobia passengers, projecting Confidence, Competence and Compassion when dealing with patients is paramount.
- Clear, measured information about the likely challenges and sequence of events before they occur is vital in medicine and especially imaging. Our patient information video, viewed by about 40,000 people per year, have been well received by anxious patients. https://www.youtube.com/watch?v=D02MT9m4rww
- The benefits of maintaining physical contact when moving the patient into position, and audible contact with the patient throughout the scan cannot be underestimated.



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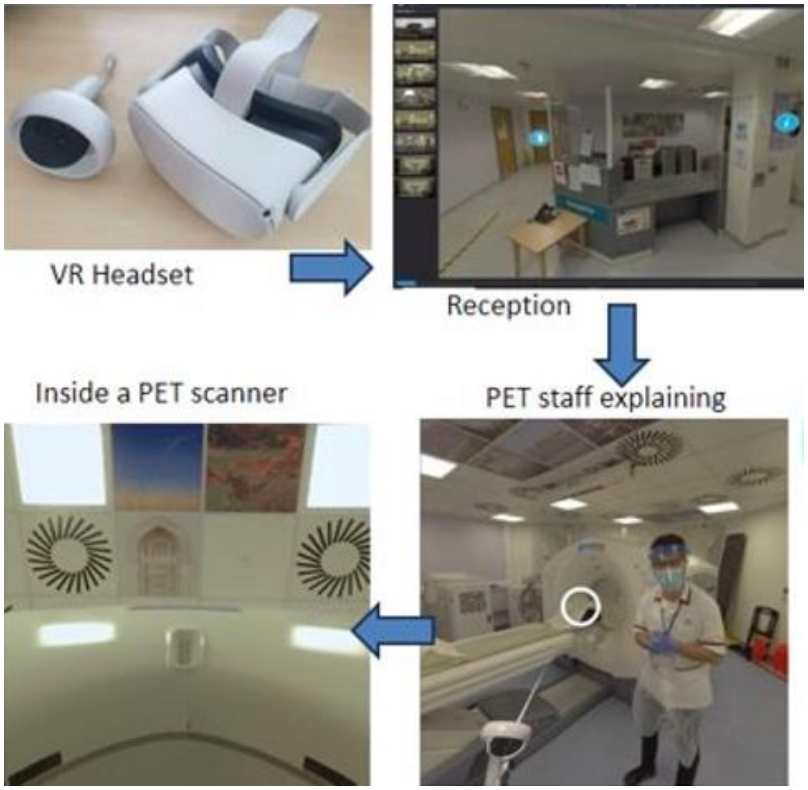
- In PET-CT, the chances of abandoning an exam should be avoided as much as possible because PET-CT involves radioactive tracers and abandoning a scan will mean the patient receives the radiation detriment without the benefit of the scan results.

- A Research study at our site is underway to test a virtual tour of the PET-CT procedure and environment to reduce anxiety in claustrophobic patients.

- A Virtual Tour which allows the patient to experience the whole procedure in a safe and immersive way before the real scan and potentially help utilise the scanner and staff time more efficiently.



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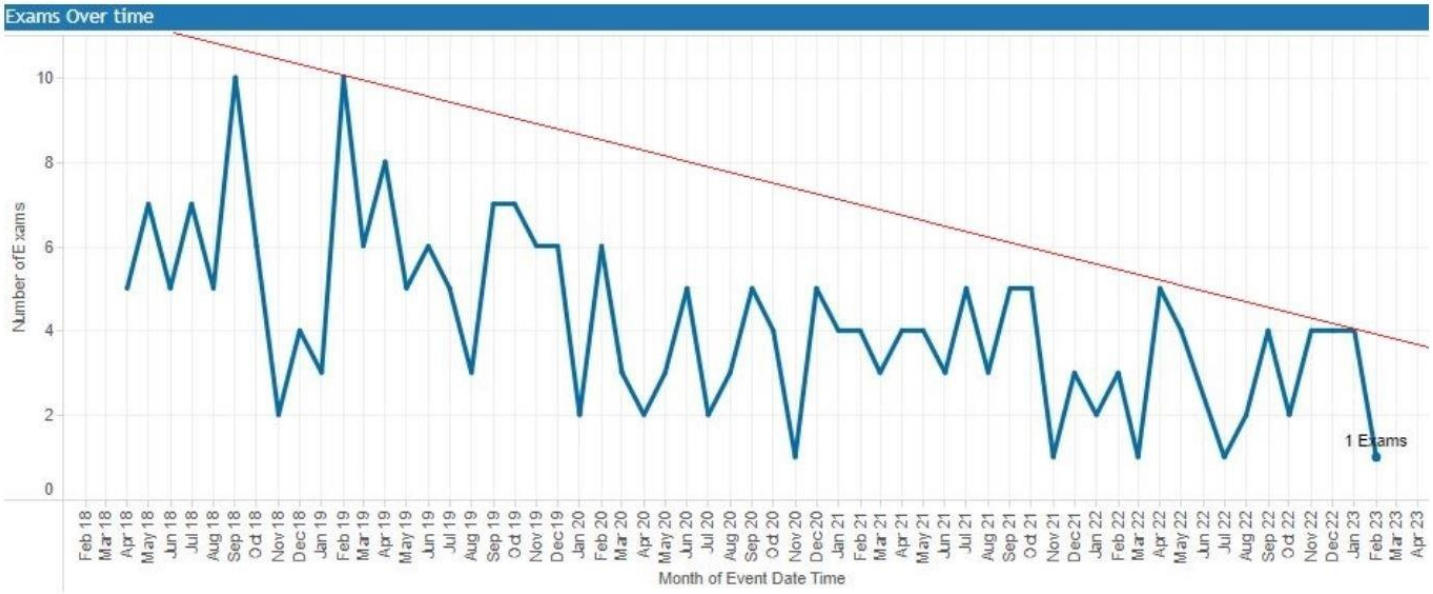
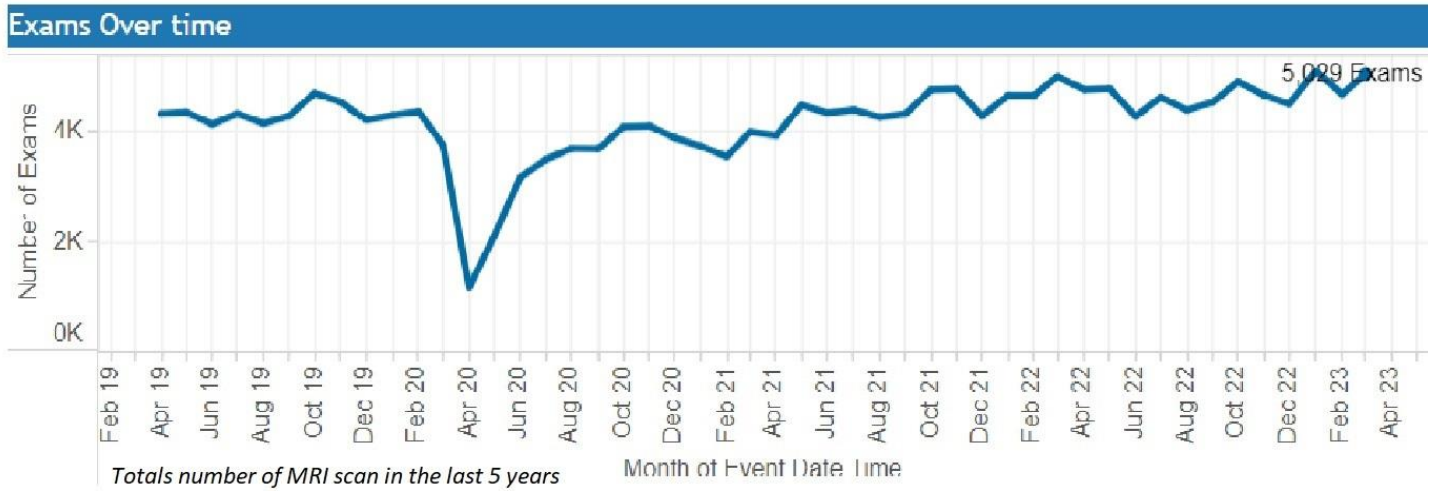


Declining number of abandoned MRI exams in the last 5 years



Totals number of MRI scan in the last 5 years

Results: Our analysis indicates up to a 50% reduction in the number of abandoned MRI scans at the Churchill Hospital since the introduction of new technology. We assess this as occurring during the time when wider bores and faster scans were introduced.

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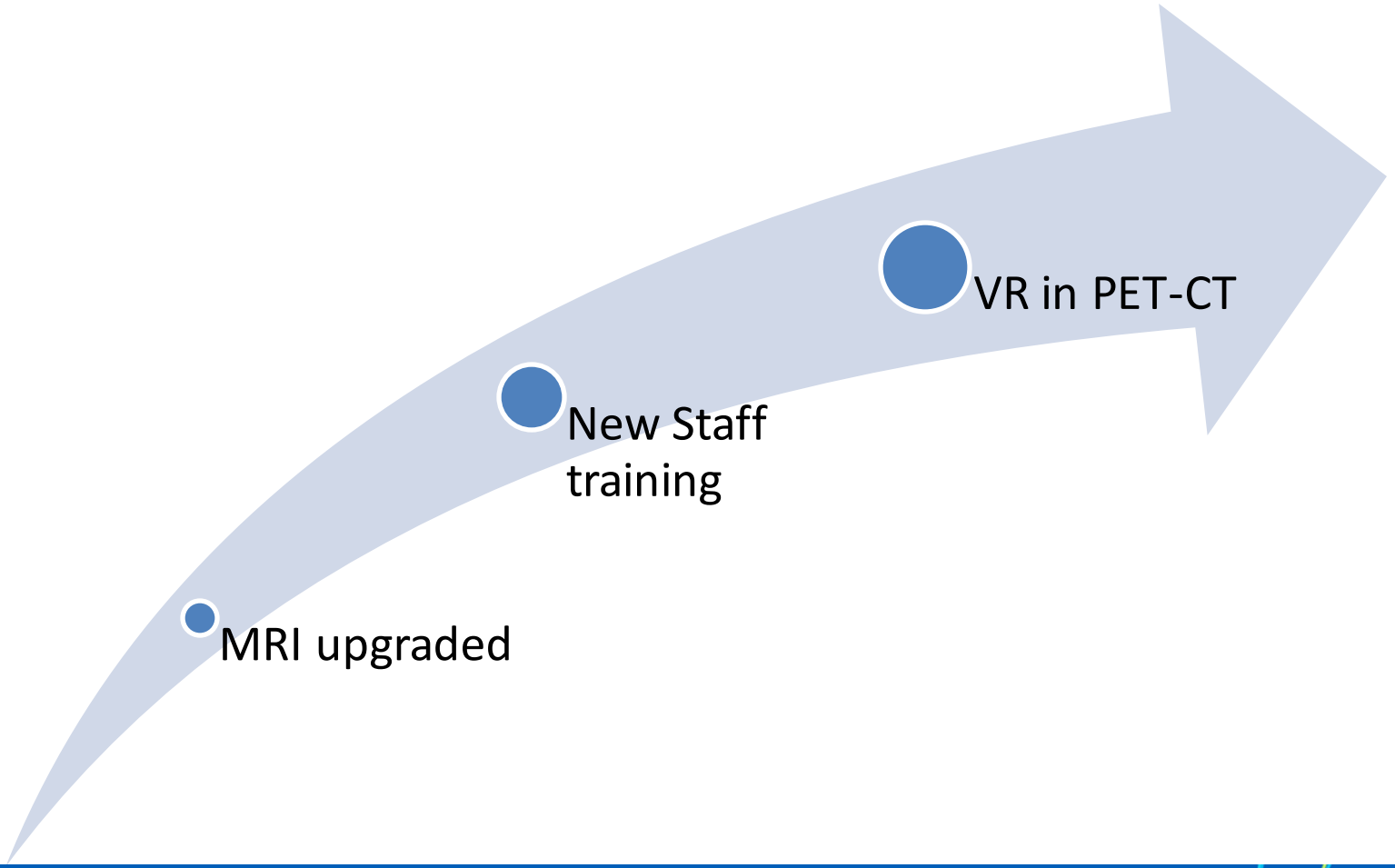
Current implementations



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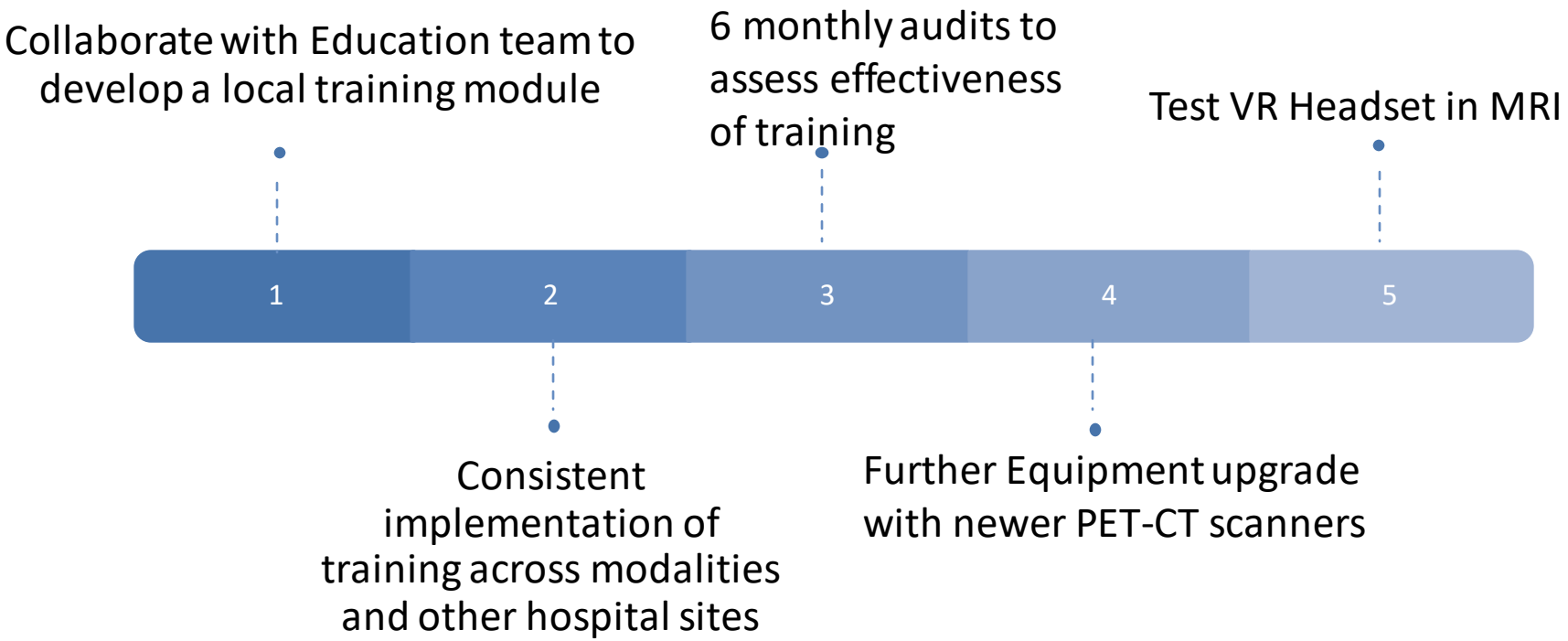
Future Improvement plans



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Thank you

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