Evaluation of an Artificial Intelligence Programme to Improve the Clinical Practice of Donning and Doffing PPE

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1.Introduction

- The COVID-19 pandemic highlighted the need for improving the approach to PPE donning/doffing training. PPE protocols have been frequently updated during the pandemic and an increased number of people have required training to adapt practice.
- Many IPC teams have struggled with capacity to deliver the volume of training. There is also a need for training to actively engage the participants to maximise their learning.
- Working with CorrMed Limited, the Blue Mirror Artificial Intelligence (AI) training app has been identified as a potential technology to support this approach.

2. Methods

This evaluation aims to assess the Blue Mirror (BM) app technology in terms of:

- Do staff like the learning approach
- Does the Blue Mirror app actively engage staff
- Is the Blue Mirror app easy to use
- Does Blue Mirror app assist with memory retention
- Does Blue Mirror app provide scalable training to overcome the capacity challenge of delivering face-to-face training
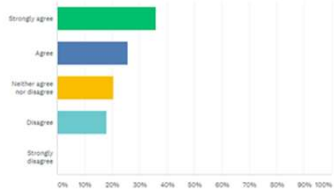
Resources required for use:

- IPad version 8 (as app is not compatible with older versions)
- Blue Mirror App
- Blue Mirror Trained Clinical Administrator who can load the required PPE protocol on to the IPad
- Flexi Arm Stand for IPad
- PPE required for donning and doffing
- Hand rub
- Bin for waste PPE

Process During Evaluation

- 40 Staff were individually provided with the Blue Mirror app loaded onto Ipad with PPE Provided
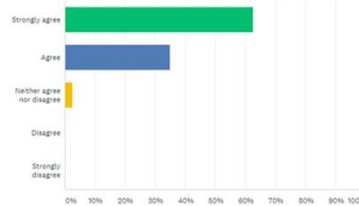- Staff used the app to don and doff AGP PPE and completed a questionnaire on their immediate feedback

Think about the Blue Mirror System, was it easy to use?

What Type of PPE Training have you completed previously?
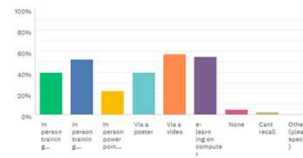
ANSWER CHOICES	RESPONSES	
In person training Demonstration	40.00%	16
In person training practical	52.50%	21
In person power point presentation	22.50%	9
Via a poster	40.00%	16
Via a video	57.50%	23
e-learning on computer	55.00%	22
None	5.00%	2
Cant recall	2.50%	1
Other (please specify)	0.00%	0
Total Respondents: 40		

Would you recommend the Blue Mirror System as a training tool?

Thinking about your previous PPE Training (Not the Blue Mirror system), did you find that it supported your memory retention?

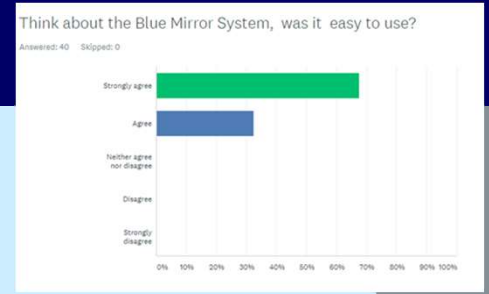Using the Blue Mirror system for PPE training supported your memory retention of the order to don and doff PPE?

> 97.5% Agree that the Blue Mirror app supported memory retention vs 61.5% of previous training methods
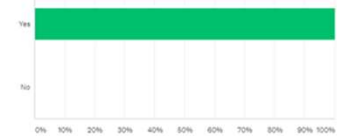
3. Results

- 40 staff from a range of staff groups used the app and completed the questionnaire.
- 100% of staff who evaluated the app would recommend Blue Mirror app as a training tool.
- 67.5% strongly agreed and 32.5% Agreed the system was easy to use.
- Blue Mirror app vs Previous Training methods, staff reported that the Blue Mirror system supported Memory retention more so than traditional methods.

4. Discussion

Thee Blue Mirror app is adaptive it can be used in a multitude of clinical settings, it's use would be beneficial in care/nursing homes, GP Practice, mental health trusts as well as the acute trust setting. The app ensures consistent standard delivery of training, training can be completed at any time of day-without a trainer present. The app has the ability to collect compliance data. Bespoke PPE protocols can be loaded on to the app which can be changed as required. Further work is required to assess if the app improves memory retention of PPE donning and doffing when compared to traditional training approaches. Further evaluation is required across different clinical settings.

Feedback from users: The system is very engaging you have to participate, exciting way to train, I enjoyed using the system and it is fun!

IPS Infection Prevention Society

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