SimApp

The platform that helps plan, deliver and measure regional simulation activities and the impact they have on learning, behaviour and healthcare systems.

1. Background

Simulation Based Medical Education (SBME) supports the development of competencies in technical skills and Human Factors (the ‘non-technical’ / communication / teamwork skills) for all staff and plays a vital part in enhancing these skills essential for managing clinical crises that are seen every day in healthcare. SBME can also be a useful tool to discover latent safety threats (system-based threats to patient safety that can materialise at any time and are previously unrecognised by healthcare providers). Currently in Wessex there are limited resources to help educators and clinicians plan sessions, measure the impact on the individuals learning and the resultant ‘shop floor’ behaviour leading to the wider departmental & system changes that can improve patient care. There is currently no convenient way of consistently measuring latent threats, the frequency of regional sim activity and trends in learner outcome.

Kirkpatrick Levels
1. Impact on Reaction
2. Impact on Learning
3. Impact on Behaviour
4. Impact on Systems

2. The problem

- Time is precious for clinicians and educators - preparing sessions can be onerous
- There is a need for organising self, team, environment and logistics
- No standardisation of scenario template – lots of fragmentation regionally & nationally
- Silo mentality of SBME (lots of good practice in ‘silos’ but not much collaboration)
- No current regional or national affordable simulation database that is user friendly
- No robust way of measuring regional SBME activity
- No robust way of measuring latent safety threats discovered through SBME regionally
- No robust way of measuring feedback and impact of sessions (on a Kirkpatrick level)

3. The Solution

- Creation of the SimApp to facilitate delivering effective SBME in conjunction with the online resource centre of simwessex.co.uk
- Simulation scenario building function – standardised template, customisable in the users own workspace profile and ability to publish to the resource centre for sharing
- Ability to plan and register for simulation sessions
- Initial feedback function for participants who are sent further feedback questions at a later date to establish whether the learning changed practice (Kirkpatrick levels)
- Resource centre contains a scenario database that the app publishes to, image resources, a course directory, calendar and area to highlight latent safety threats for wider learning.

4. Developing the SimApp & Resource centre

- Worked with the software and digital design company Target Ink
- Meeting to discuss problems and ways to overcome them
- PDSA cycles completed by using a web interface (WebFlow) to make adjustments to the prototype resource centre and app
- Regular conversations and meetings with the developer and QI team

5. Beta testing

- Trusted regional contacts across multiple specialties to test the app and resource centre to look for bugs and provide feedback
- PDSA cycles completed to improve the interface

6. The Journey

- Both authors completed Individual HEE Wessex Simulation QI Fellowships in 2017-2018
- Apple HQ visit and discussion about the potential opportunity to develop a resource like this
- Successful application to the QI Support Fund to finance this project
- Developed a quality provider that is new to the NHS but keen to work with us for the long term
- Involved collaboration between simulation centre, Emergency Medicine, Critical Care, Paediatrics and Anaesthetics departments as well as the Medical Director of Portsmouth Hospitals NHS Trust as stakeholders.

Impact

Highlighting discovered latent safety threats to others will help plan future sessions and, influence changes to the system with the long term aim of improving patient safety

7. Challenges

- Initial involvement of a University IT Department – they were unfortunately unable to meet timeframes of the project
- Using a provider that are not medical and new to the NHS – this has some good points though – adaptability and flexibility
- Intellectual Property of the concept tied to Health Education England to ensure the resource is self sustaining
- Working to a timeframe in something we are not familiar with (web / app design) and the project will continue into 2020

8. Outcomes & Plans for the future

- Resource centre to go live first on simwessex.co.uk
- Once the interface is working effectively and has been peer reviewed / beta tested the app will go live across region and selected providers in the UK then roll out to other NHSE deaneries
- License premium features to other organisations / countries
- All revenue to go back into the project to pay for development and hosting
- Beginning of Phase 2 – using the app and resource centre to measure the impact of the project and learning achieved from the sessions and highlighted latent safety threats. Results of Phase 2 to be presented at the 2020 Quality Improvement & Patient Safety conference.

Queries to info@simwessex.co.uk