

'Virtual On Call' – simulated medical education for undergraduates transitioning to their foundation years

~~XX~~
Manchester University NHS Foundation Trust
Word Count: 1138

Development of the Initiative

As foundation year doctors, we initially struggled to manage and prioritise our on call tasks. This highlighted a gap in our medical school education which directly prepared us for the transition from student to doctor. With this in mind, we created an innovative teaching programme which aimed to simulate an on call in a realistic setting with acute clinical scenarios for the students to manage in a timely fashion: the 'Virtual On Call'.

Prior to developing the programme, we spoke to final year students to identify whether there would be an interest in this new teaching style as they were often quite apprehensive when shadowing junior doctors' on calls. Insights from other foundation doctors were also gained, especially regarding typical acute scenarios encountered during on calls.

Many scenarios were created including responding to a patient with a high early warning score, managing hyperkalaemia, and being called to a diabetic patient with a low BM. In developing the cases, we ensured to include relevant clinical information, observations and investigations.

With the appropriate permission from the undergraduate lead at the University of Manchester's medical school, the pilot teaching scheme ran between February and May 2019. It was made available for fifth year students as we felt this cohort would benefit the most from the teaching and help in their imminent transition to foundation year doctors. The response was overwhelmingly positive which prompted scheduling extra teaching sessions to cope with the high demand.

Aims and Objectives

The main aims of the project were to increase student confidence in prioritisation of on call tasks, management of acute scenarios and their ability to handover using an SBAR approach. These aims linked in with desired attainments of final year medical students as outlined in GMC's Outcomes for Graduates.

We felt the best way to achieve these aims was for students to be immersed in the experience in an authentic setting. The on call was therefore organised to take place across four medical and surgical wards in Manchester Royal Infirmary.

Simulated On Call Session

The students were given full instructions, maps and contact details for us, as the senior doctors if they required guidance. Once they arrived to each case on the ward, full history, examination findings and relevant investigations were provided, alongside the patient's drug chart and medical notes for the student doctor to complete. They were expected to document as if they were the junior doctor on call, with a clear plan made and relevant medications prescribed or omitted in the drug chart.

Whilst managing scenarios, students would receive further bleeps to which they had to call 'switchboard' to be put through to the relevant party; be that the biochemistry laboratory informing of abnormal results, to a nurse's concern about a patient with chest pain.

Handover

The on call session would end with a final bleep asking students to come to handover regardless of how much they had managed to achieve with their tasks. At this point, the leaders of the session took on the role of night foundation year doctor and night medical registrar. The students would be asked to each handover one case using an SBAR approach, highlighting outstanding tasks for the foundation doctor and escalating to the medical registrar for further review and management if appropriate.

Debrief

The debrief section was important for students to reflect on the scenarios and to discuss areas of improvement. They were asked to prioritise the cases based on which they would attend to first if they had been given the jobs at the same time. Often, there were differing opinions, demonstrating the importance of case by case debrief. Each case was discussed in detail, including how the students interpreted the case information in terms of diagnosis and acute management plan. Their documentation and prescribing skills were also reviewed, before discussing how they handled the on call in general which included their ability to handover and interactions with the multidisciplinary team.

Feedback and Evaluation

Prior to the start of the simulated session, students completed questionnaires ranking their confidence from 1-5 (5 being extremely confident) in four domains: prioritising on call tasks, managing acute scenarios, ability to respond to bleeps and ability to handover. We also asked them to write down their main concerns about the prospect of an on call on the wards. At the end of the debrief, the same questionnaire was repeated to see if the teaching session had improved their confidence and helped to alleviate their worries.

Ten sessions took place in the Spring of 2019 with 36 students participating. Pre-session 10% felt very confident and 0% felt extremely confident across all four domains. Students' key worries prior to the session included feeling out of their depth when confronted with acute scenarios, concerns of effectively communicating with seniors and being on their own for the entire on call. Post-session 61% reported that they were very confident or extremely confident across all domains, showing a significant improvement.

Feedback on the teaching has been incredibly positive: overall 90% of students reported the teaching as 'excellent' in all domains of usefulness, relevance and content, with the remainder reporting as 'very good'. Many students commented asking for the session to be integrated into their formal teaching.

Limitations, Achievements and Lessons Learned

Our key aims were to improve students' confidence in handling acute scenarios, which were clearly met as shown by the feedback. Some limitations included time restraints (the students were mainly available in the period after their final exams and prior to their

elective), and limited resources i.e. bleeps and recruiting willing foundation doctors to lead the sessions. Further improvements would be to expand with the use of simulated patients.

Since the teaching sessions, we have collated the students' feedback and presented our findings to the undergraduate team at Manchester Royal Infirmary. We have both received certificates in recognition of "the development and delivery of the "Virtual On Call" pilot during the 2018/2019 year".

From developing a new teaching programme, we have learned the immense value of collaborating with a multidisciplinary team, including support from administration staff and advice from seniors.

Upon selection for oral presentation, our project was peer reviewed at Peer Teachers in Practice's North West Summer Showcase. The showcase gave us the opportunity to share our educational initiative and gain invaluable feedback, including how we could develop the task-orientated debrief to include teaching on clinical reasoning, bias and decision making.

With the positive feedback from peers and students, we have handed our project over to the senior clinical education fellow within the trust to take the project forward, with hopes to incorporate the 'Virtual On Call' into the medical school curriculum.