

Simulated on-call: preparing students for practice

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BACKGROUND

Many final year students feel underprepared for their first year of work, particularly out of hours.¹ In 2014 a simulated on-call was designed to help better prepare students for out of hours work.² Although it improved students' self-perceived confidence, peer-feedback at the ASME annual scientific meeting 2014 highlighted the need for a smaller scale design and an assessment of its educational impact. A new on-call simulation has been designed to address these with the following aims:

- 1) Design a smaller simulation suited to use on a wider scale.
- 2) Assess its educational impact.
- 3) Seek student views on the new simulation.

METHODS

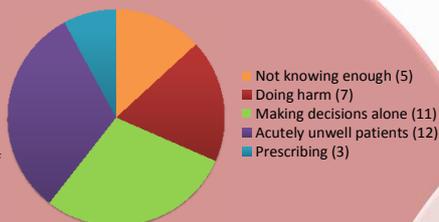
During their academy welcome lecture final year students were asked to anonymously write on paper their biggest fear about being a doctor. Foundation year 1 (F1) doctors in the same hospital were invited to attend a focus group to discuss the most challenging aspects of out of hours work. A new simulated on-call was designed to encompass the recurring themes from both groups.

A trial of concept was undertaken with a small number of students in December 2014. Issues from this were addressed and the finalised simulation took place in March 2015. Student participation was voluntary via a sign-up sheet on the 5th year students' notice board. Educational impact and student views were assessed through thematic analysis of student focus groups after the simulation.

RESULTS

STUDENT FEARS & F1 FEEDBACK

Figure 1: Pie chart of student fears regarding F1. All 46 students participated. Only fears with ≥ 2 student responses have been included. The total number of students represented by the chart is 38.



Challenging aspects of out of hours work highlighted by F1s during the focus group:

- Prioritising
- Handover
- Finding guidelines
- Angry relatives
- Reviewing fluids
- Updating relatives of an unfamiliar patient
- Reviewing acutely unwell patients
- Difficult nursing staff

Scenarios the F1s found daunting at the start of their job:

- Review of a patient who has fallen
- Reviewing blood results
- Abscending patients
- Confused patients
- Agitated patients
- Confirming death

SIMULATION DESIGN



WARD A: A room with 2 beds. Used for 4 actor-based scenarios; a patient who had fallen, a patient who wanted to self-discharge, a confused patient & updating a patient relative.



WARD B: A room with 2 beds and a desk. Used for 7 paper-based and manikin-based scenarios; prescribing fluids, Warfarin & Zopiclone, signing a DNAR form, reviewing an antibiotic prescription, verifying a death, recognising & managing a cardiac arrest.

FACULTY: 4 were required; Ward A nurse, Ward B nurse (also an SHO), Patient 1 (patient who's fallen then becomes a confused patient), Patient 2 (self-discharging patient then becomes a relative)

SETUP:

- 4 students per simulation; 2 students acted together as an F1.
- The session began with a SHO handover; students prioritised and divided jobs.
- While undertaking jobs students were frequently bleeped from the other ward.
- On completion of all jobs, students were fast-bleeped to an acutely unwell patient who arrested mid-scenario. The simulation ended when return of spontaneous circulation was achieved.
- The simulation lasted approximately 1.5 hours with a 30 minute debrief.
- 30 of 46 students participated. 8 sessions ran in total.

EDUCATIONAL IMPACT & STUDENT VIEWS

12 students attended a post-simulation focus group and were asked the following questions. Recurring themes are underlined.

What did you learn from the simulation?

"how to handle & take responsibility & to have to make decisions"

"how to prioritise... In a classroom you could theoretically say 'yes I'd do this' but [in the simulation] you get distracted & realise that it's so easy to do things how you wouldn't have done it theoretically"

What did you gain from the session that you didn't gain from shadowing your F1?

"you crammed different scenarios into a couple of hours whereas on a night shift you might not come across any of them"

[when shadowing] "you may discuss some patients that you see, but you don't sit down & almost critique what you've done, that's really helpful"

"I was making all the decisions... You do it all yourself, which you can't really do when you're shadowing an F1"

What did you gain from the session that you didn't gain from classroom teaching?

[Regarding an unwell patient] "class based teaching is that you do an ABCDE assessment, but doing the sim I never did it...you then discuss it afterwards, that's really stuck in my mind... Since then whenever I've been to review patients you're doing it straight away"

"you're actually on the spot having to think 'what do I do here?' It's so different to just sitting passively 'anyone know the answer to this put your hand up'...you switch off"

"you are put on the spot but within a safe environment, so you don't feel panicked but you know you have to come up with something, apply what you know"

Is there anything that you particularly liked about the simulation?

"I did my night shifts before it, it was so real, it was so like everything that you do & all the cases you get presented"

"it's helped because you've actually done an F1s job in 2 hours & you don't do that anywhere else by yourself"

"this is the most useful session that we've had"

Is there anything that you would change about the simulation?

"make it longer, have more of them"

DISCUSSION

Advantages of this simulation are that it incorporates a high volume of scenarios into a short time period and ensures that all participating students benefit from exposure to the same experiences. It provides students with an opportunity to think independently and have prioritisation practice while under a realistic level of stress. Students also felt more likely to remember what they'd learned long-term as a result of the practical experience & opportunity for reflection. Some students were able to apply some of what they'd learned afterwards on the wards when shadowing their F1.

Disadvantages of the simulation are the number of faculty and the equipment required. Although this is a significant improvement to the 2014 simulation, there is one other simulation documented in literature which involves only one faculty member.³ However, it only provided students with paper-based tasks to prioritise, so whilst the simulation presented here is more labour-intensive, it is more realistic, can encompass a broader range of learning objectives and give students practical experience of a wider range of scenarios.

TAKE HOME MESSAGES

- The simulation allows lots of students to be exposed to the same scenarios in a short time period while maintaining realism.
- It allows students to practice independently.
- Students have practical experience of prioritisation under realistic stress levels.
- Students feel more prepared for practice.

REFERENCES

- ¹Carling J. Are graduate doctors adequately prepared to manage acutely unwell patients? Clinical Teacher. 2010;7:102-5.
- ²J McTait, LE Jenner, A Mahendrayogam, W Spencer. Simulated on-call for final year medical students. Presented at the Association for the Study of Medical Education Annual Scientific Meeting, Brighton, 2014.
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