Transforming induction for medical students with the use of in situ simulation

L Bowen , C Priest, Z Brown, M Young, A Gosal, C Oliver, P Davies, A Samuels
Gloucestershire Academy, University of Bristol, Redwood Education Centre, Gloucestershire Royal Hospital, Gloucester GL1 3LN

BACKGROUND

Induction is key for the preparation of medical students on a new clinical attachment. Whilst there is no published data exploring medical students' perception of non-speciality induction, a similar process for junior doctors has been described as being formulaic and uninspiring (1). An interactive induction programme for medical students was shown to be helpful, and leave them feeling more confident in starting their attachment (2).

In situ simulation involves conducting simulation in the clinical environment and is expected to increase fidelity and therefore learning (3). It has been argued that in situ simulation is more effective for educational purposes than other types of simulation settings (4). To date its use in induction has not been evaluated.

By their final placement of medical school, the induction process and simulation training are familiar to students. We looked at an innovative way of combining these two separate entities to improve the student experience of induction.







AIM

The aim of this study was to incorporate in situ simulation into the induction programme for medical students and assess the impact of this novel idea on students' experience.

METHOD

Control Group (N=7)

Regular induction to clinical environment

Post induction questionnaire (N=4) and focus group (N=3) to evaluate experience

Intervention Group (N=7)

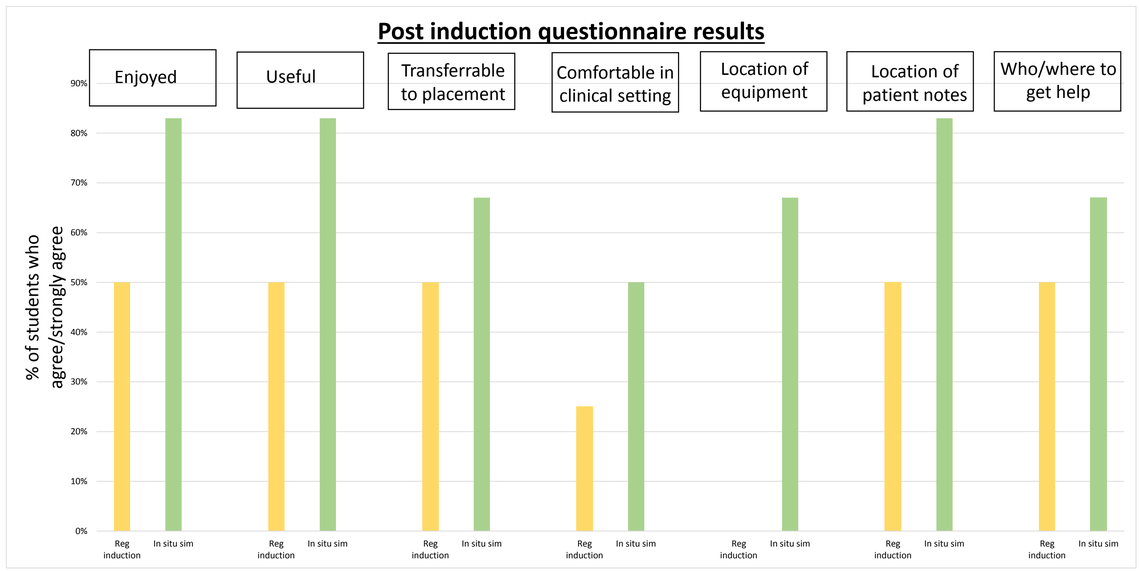
Regular induction to clinical environment + **in situ simulation**

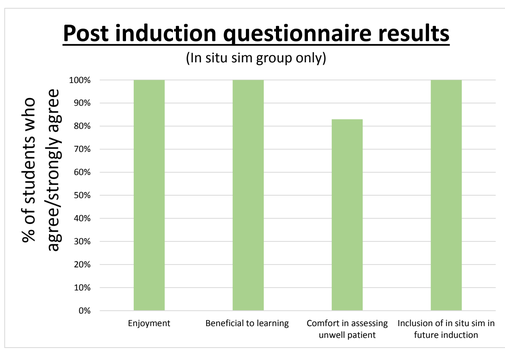
Post induction questionnaire (N=6) and focus group (N=4) to evaluate experience

We evaluated whether students enjoyed their induction, found it a productive use of their time and if they thought they had learnt useful information that was transferrable to their new clinical placement

Questionnaires were analysed quantitatively by comparing scores within different categories and qualitatively by using thematic content analysis. Focus group discussions were analysed using thematic content analysis

RESULTS





- **100%** of students enjoyed it
- **100%** of students found it beneficial to their learning
- **83%** of students felt comfortable assessing an unwell patient in their new clinical environment
- **100%** of students think it should be included in future induction

Focus group discussion themes from both control and intervention groups
What do students value in induction to the clinical environment?

STRUCTURE
Lack of formal induction
Need for official/ formal induction to the clinical environment

" I didn't have an induction… sort of introduced myself"
"Wasn't a formal induction"
"Don't feel there was a formal induction"

FAMILIARITY
Environment
Orientation
People
Practical

" Writing on blood bottles, filling out forms was useful"
"Found it useful to have a look around"
"Include more practical things.. Getting around …"

TEAM
Initiative
Engagement
Sense of belonging
Welcoming

" My F1 on the ward was the most useful"
" Lucky with my team"
"Team were so lovely… integration"
"I emailed in advance"

Sim only questionnaire data
"It was full of learning points "
"I think it has improved my induction to the Emergency department"
"A novel idea… having done it I think it would be useful to do"
"Involving other members of the team working on that ward… useful for them to come and join"

DISCUSSION

We believe that immersion into the clinical environment early on in placement is key and the use of in situ simulation facilitates this whilst also being beneficial to students' learning. We have shown that all students who participated in the simulation enjoyed it, found it beneficial to their learning and think it should be included in future induction.

Interestingly, the focus groups showed that students from both groups identified similar values which they feel are important in induction to the clinical environment.

Difficulties we encountered in running the simulation should be taken into account for future developments. Practically running an in situ simulation in the clinical environment poses some challenges; we found space and staff on wards were limited and equipment was often prioritised for clinical use. Whilst these issues make running in situ simulation in clinical environment difficult, they also bring an added level of realism to the scenarios.

We must ensure that patient safety and staff clinical duties remain a priority but the more we integrate simulation into induction and clinical practice for our students, the better we will be at facilitating this.

CONCLUSION

We have demonstrated that the use of in situ simulation as an educational tool is beneficial to students' induction programme as well as their own learning. We share an idea that can be easily transferred to other universities, hospitals and professional bodies. We would like to encourage others to further develop this idea and integrate in situ simulation into future induction programmes for students.

REFERENCES

1. Stanton E, Lemer C. The art of NHS induction. BMJ. 2010 Feb 3;340:c274.
2. Williams, N., Ioannou, Y., Stewart, C., Gulati, P. and Singh, S., 2015. An innovative interactive medical student induction programme in paediatrics. *Medical teacher*, *37*(2), pp.200-201.
3. Sørensen JL, Navne LE, Martin HM, Ottesen B, Albrecthsen CK, Pedersen BW, Kjærgaard H, van der Vleuten C. Clarifying the learning experiences of healthcare professionals with in situ and off-site simulation-based medical education: a qualitative study. BMJ open. 2015 Oct 1;5(10):e008345.
4. Sørensen JL, Østergaard D, LeBlanc V, Ottesen B, Konge L, Dieckmann P, Van der Vleuten C. Design of simulation-based medical education and advantages and disadvantages of in situ simulation versus off-site simulation. BMC medical education. 2017 Dec;17(1):20.