

'Ah, so *this* is what transfusion is like in the real world....'

Enhancing safety via the evolution of simulation education for medical students



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Aim

In 2016 we altered our approach to transfusion education for 5th year medical students from classroom presentation style to simulation teaching.

- The stimuli for this change were:
- To improve understanding of safe transfusion sampling technique
 - To help students to prepare for pre-transfusion discussions with patients
 - To improve use of class time by moving from passive to active learning

The new learning programme commenced in August 2016 and is a more practical approach to prepare students for a real clinical environment. Preparatory e-learning, small group seminar and simulations are included. This poster describes the simulation element of the programme.

Student feedback has been used to evolve the scenarios. Evaluation is positive.

Methods

The new programme was designed through collaboration between the transfusion and clinical simulation teams.

Simulation design commenced with the identification of desired learning objectives:

- Discuss the risks and benefits of transfusion with a patient for whom red cell transfusion is indicated
- Understand how to order blood and provide a pre-transfusion testing sample
- Demonstrate positive patient identification when taking a blood sample for pre-transfusion testing
- Demonstrate correct labelling of a pre-transfusion testing sample

Two simulations were developed to enable the students to achieve these objectives.

Simulation Scenario One: Exploring pre transfusion discussion and consent with an 'actor' patient

Simulation Scenario Two: Taking a pre-transfusion sample



Scenario Two:
Busy Day of Surgery Area. Three students are briefed to act as patients who are imminently going to theatre. Remaining students are asked to take routine pre-operative transfusion samples (using simulation arms).
'Realities' of a clinical setting are incorporated:
• **distraction:** a 'patient' is 'primed' to be talkative and ask the student about unrelated issues during the procedure; the nurse interrupts the student to ask a question
• **time pressure:** attending nurse informs students that porter is on way to collect patient for theatre
• **background noise:** incoming telephone calls, others in room talking and moving around the clinical area



Scenario One:
Patient has agreed to a transfusion following intra-operative blood loss. Has read patient information leaflet but now has further questions about associated risks and benefits before proceeding. Two or three medical students are invited into a simulated ward setting to discuss this with the patient. The remaining students observe via video-link.

Debrief
=
When learning is derived
from the experience

"Always check patient ID"
"How to avoid misidentification"
"What to do if ID band not on patient"

"Staying calm and communicating properly with patients"

"Knowing how to explain risks vs benefits of transfusion"

"Good communication is key"

"Allow patients to ask questions and listen"

"How to answer all the patient's questions on transfusion"

"Focussing in a busy environment"
"Be able to focus on tasks despite outside distractions"

"Patient safety issues in taking blood"
"Making sure to label tube from patient's wristband"

Scenario evolution and outcomes

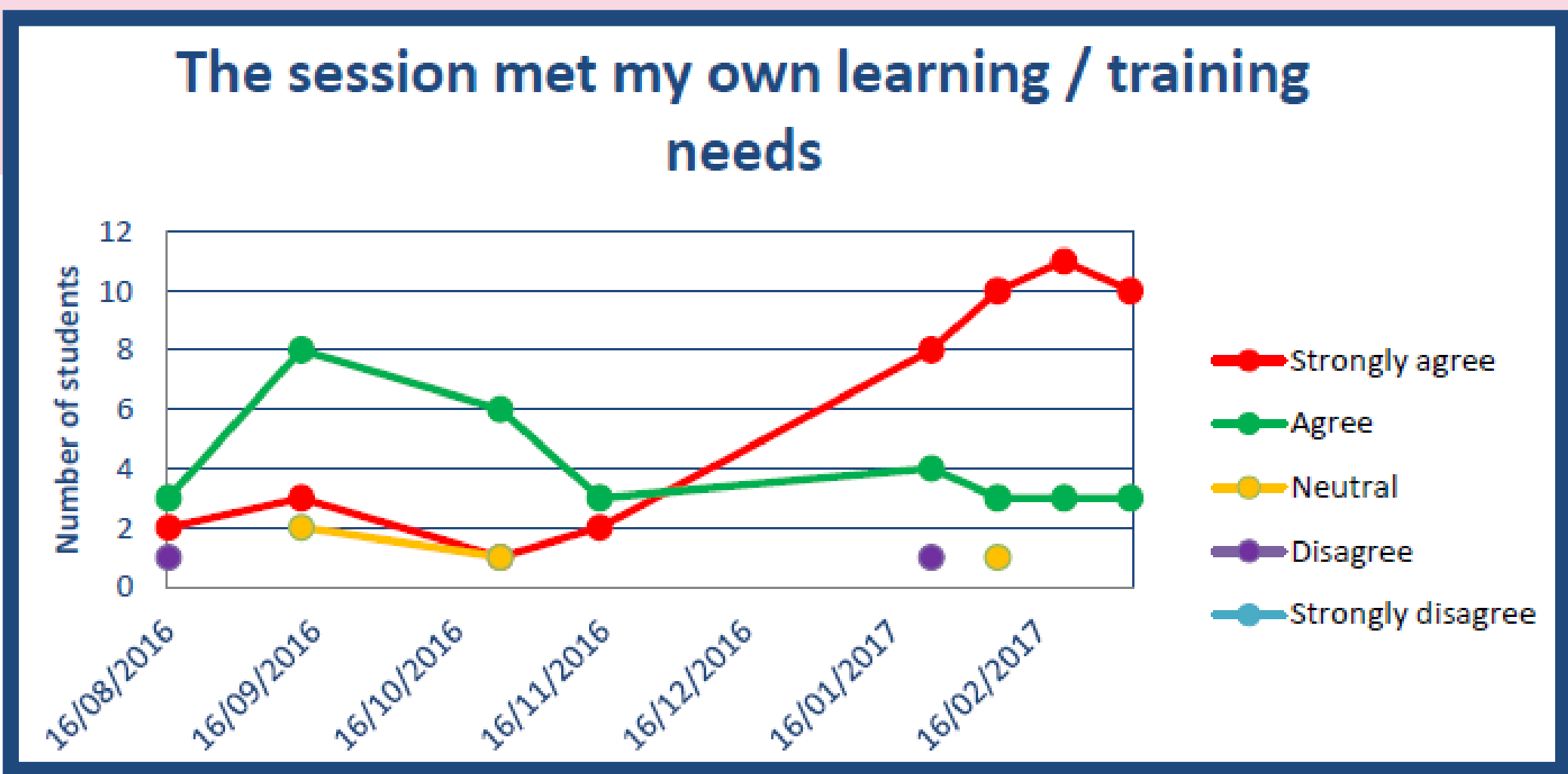
Student evaluation has been monitored closely. Resultant changes have been made. Scenario One has remained largely unchanged whilst Scenario Two has been significantly revised.

Scenario Two (pre-transfusion sampling) is focused on safe patient identification and sample labelling. We initially designed this to exclude the requirement for the student to perform the venepuncture as we thought this would distract from the learning objectives. However, this led to uncertainty amongst the students as to what was expected of them.

Following a number of revisions, Scenario Two is now evaluating well and meeting the required objectives. The critical improvements to achieve this have been:

- adding in the act of venepuncture to allow students to experience the 'continuous process' of patient ID, sample drawing and immediate labelling
- redesigning the situation to be more 'clinically' authentic

This improvement is demonstrated in the graph below which shows response of students over the year as to how well the session met their own learning / training needs:



Conclusions

- Feedback from students and those delivering the teaching indicates that this method appears to offer a more authentic learning opportunity. It is anticipated that this will be more practically useful for students in a real clinical environment
- This new educational style is appreciated by both students and educators
- The transfusion team benefit by developing skills in clinical simulation teaching
- The impact of the change has not been formally evaluated

"A bit more time for debriefing"

"Longer / more sessions"

"Brilliant"

"Really well structured and I really liked the format of the session and then feedback"

"Maybe a bit more briefing pre 2nd scenario regarding forms to fill in; great session, thanks!"

Key

- Students' responses to question "what key points from today's session will you use in your future clinical practice?" from collated feedback 2016/17
- Students' responses to question "do you have any suggestions for improving either the structure or the content of the sessions?" from collated feedback 2016/17