Background

There have been high profile cases where medical errors have resulted within a culture, where individuals have felt unable to challenge their seniors (1,2). It is suggested that failure to challenge erroneous decisions in clinical care contributes to patient morbidity and mortality (3). “Responsible” followers are those team members with interpersonal skills, which allow for the decisions of leaders to be challenged without contributing to a defensive or risk adverse culture (4). It is vital to identify those effective interpersonal skills and possible barriers to challenging seniors. Previous work suggests that simulation sessions incorporating erroneous decisions, can promote appropriate leadership challenges (5). Uncovering reasons for failure should help to inform future research into overcoming actual or perceived barriers (5). This project attempts to explore this behaviour in a simulation environment and identify barriers to challenging senior anaesthetists to guide further medical education.

Methods

Part 1 We will invite senior anaesthetic trainees (ST3-7) to attend 2 separate focus group sessions, whereby we will explore their own experiences of challenging seniors and potential barriers to challenging seniors

Part 2

We will invite 20 CT1/2 anaesthetic trainee volunteers from our deanery to participate initially in one high fidelity simulation scenario. Candidates will be randomly allocated to one of 2 standardised scenarios (scenario 1: WHO checklist, surgeon requesting administration of wrong antibiotic triggering anaphylaxis and wrong-site surgery. Scenario 2: consultant anaesthetist fixated on intubation despite patient desaturation. Scenarios will be videoed and watched during debriefing and each candidate asked to “think aloud”(6) to identify behaviours and "barrier to challenge". The debrief conversation will be transcribed by secretarial staff (for which we apply for funding), coded and analysed qualitatively using NVivo software. A phenomenological approach to data analysis, contrasting emerging themes with a control group will be adopted. Some quantitative measurements will be undertaken to allow for triangulation.

Part 3

The 20 CT1/2 trainees will be re-invited to attend a further high-fidelity simulation scenario as described above. This time however, they will have received an e-learning module prior to their
attendance at the simulation centre, teaching a successful model of challenging erroneous decisions. The simulation scenarios will be videoed, debriefed using the “think aloud” method, and transcribed and analysed qualitatively and quantitatively as above.

Ethics approval is currently underway (Aintree University Hospital).

**Results and potential impact**

Using a mixed strategy, we will explore the dynamics of the trainee-supervisor-relationship, and its implications to the timely delivery of safe care. We will identify possible barriers and underlying frames, preventing trainees from challenging seniors, the time lag for challenging, explore tools used by trainees (verbal and non-verbal) and develop an e-learning module on effective strategies to challenge erroneous decisions.

This research will be advanced further as a team-skills development workshop, where human factors, Crew-Resource-Management and successful challenging techniques can be incorporated into anaesthetic training and High-Fidelity Simulation Courses.

We endeavour to start the focus group research in September 2014, the first part of the “challenging scenarios” in October, the e-module learning component in November and the second part of the “challenging scenarios” in January 2015.

**References**


6. Fonteyn ME, Kuipers B, Grobe SJ. A Description of Think Aloud Method and Protocol Analysis.