

## Oral Presentation # 1

### Knowledge reinforcement and learner satisfaction of simulation-based training *versus* image-based lectures for management of normal delivery and shoulder dystocia.

Reynolds A<sup>1</sup>, Bastos LF<sup>2</sup>, Ayres-de-Campos D<sup>1,2</sup>, van Meurs WL<sup>2,3</sup>, Macedo-Pinto I<sup>4</sup>,  
<sup>1</sup>Departamento de Obstetrícia e Ginecologia, Centro de Simulação Biomédica, Faculdade de Medicina, Universidade do Porto, <sup>2</sup>Instituto de Engenharia Biomédica, Porto, <sup>3</sup>Department of Anesthesiology, University of Florida College of Medicine, USA, <sup>4</sup>Faculdade de Psicologia e de Ciências da Educação, Universidade do Porto

The aim of this study was to evaluate the impact on knowledge reinforcement and learner satisfaction of a simulation-based training session *versus* an image-based lecture, for normal delivery and shoulder dystocia management. Thirty training midwives participated in the study. Three weeks after a 3-hour "labor and delivery" theoretical class, trainees were randomly assigned to one of two groups. Four were excluded after randomization. The first group (n=12) participated in a 30-minute image based lecture and the second group (n=14) was divided in pairs attending a 30-minute birthing simulator session (Noelle®, Gaumard, Inc., USA). Both classes focused on management of normal delivery and manoeuvres for shoulder dystocia resolution.

A 10-question multiple-choice test was performed just before (pre-test) and after (post-test) both sessions. Learner satisfaction was studied by adding a 6-question questionnaire to the post-test, with a 7<sup>th</sup> additional question applied to the lecture group after they attended a compensatory simulation session one week later. Satisfaction score was obtained through a five point Likert scale. For statistical analysis the "one-way" ANOVA tests were used setting significance at  $p < 0.05$ . Simulation group post-test mean was significantly higher than in the lecture group: 7.21 *versus* 5.83 ( $p = 0.03$ ). Mean score progression between tests was also higher in the simulation group, but the difference did not reach statistical significance: 3.14 *versus* 2.33 ( $p = 0.28$ ). There was no difference between groups in learner satisfaction (4.16 *versus* 4.09,  $p = 0.61$ ). However, the lecture group, when questioned after their compensatory simulation session, considered simulation to be a much more useful tool (mean score was 4.6).

We concluded that this study suggests better reinforcement of knowledge in simulator-based sessions as compared to image-based lectures, for post-graduate training of normal delivery and shoulder dystocia management. A higher study sample size is needed to confirm this result.

## Oral Presentation # 2

### Does simulation training improve communication with a simulated patient during an obstetric emergency?

Chris Bartlett, Denise Ellis, Jo Crofts, Mark James The SaFE Study

Obstetric emergencies differ from anaesthetic emergencies; during most obstetric emergencies the patient is not anaesthetised. Simulation is increasingly used for obstetric training; however it is difficult to include communication with the patient using human patient simulators (HPS).

**METHOD:** 140 staff from 6 hospitals were randomized into 24 teams. Teams underwent one of four obstetric training courses; a one day clinical course in local hospitals or at a simulation centre, or a two day clinical and teamwork course in local hospitals or at a simulation centre. Training at the simulation centre used HPSs; training locally used patient-actors. Teams were evaluated pre and post-training managing an eclampsia and PPH drill. The team's communication with the patient was evaluated by the patient-actor during the drill using a 5-point Likert scale.

Results	Communication Score [Median(mean)Range]		
	Pre-Training (n=23)	Post-Training (n=24)	
Eclampsia	4 (3.8) 2-5	5 (4.5) 2-5	P=0.005
PPH	4 (3.5) 1-5	4 (4.2) 2-5	P=0.005

Communication with the patient improved following training. However, during PPH communication was significantly better following training with a patient-actor compared to training with a HPS (Mann-WhitneyU  $P = 0.035$ ); with a trend to improvement in eclampsia ( $P = 0.071$ ). Teamwork training did not affect communication (PPH:  $P = 0.686$ , eclampsia:  $P = 0.626$ ).

**CONCLUSION:** Simulation training can improve the patient-actor's perception of communication during obstetric emergencies. Communication with the patient was better following training with a patient-actor than training with a HPS. Using a patient-actor can offer additional benefits in communication training. Integration of patient-actors and mannequins may be useful in obstetric simulation training.