Obstetric anaesthetic safety checklist:
Guideline development through team simulation

Bridie James, Helen Bryant, Sarah Nelson, Hilary Swales, Samar Al-Rawi, University Hospital Southampton

Introduction
Pregnancy is a risk factor for difficult and failed intubation (rate 1:300). The number of caesarean sections (CS) performed under general anaesthesia (GA) has steadily declined and has become infrequent (8.2%). This, combined with changes in the working hours of trainees, has lead to some trainees working unsupervised with little experience in administering GAs in the obstetric population. 1

Obstetric theatres are often situated distant from the main theatre complex. NAP 4 recommends the use of checklists particularly when anaesthesia is performed in remote sites. Babolhavaeji et al demonstrated that the use of such checklists can reduce error. 2

Method
A simple Obstetric GA checklist detailing actions before and during induction of an obstetric GA was introduced into the maternity theatres in our hospital. This was initially aimed at facilitating GA procedures and reducing the occurrence peri-operative airway crises. 3

Testing and modifying the checklist in a multidisciplinary simulation environment proved very useful for a number of reasons:
• It reinforced that the ODP is a vital and valued member of the team. 4
• It allowed us a unique insight into the management techniques of our colleagues of varying seniority in a simulated challenging scenario. 5
• Direct involvement by the ODPs also added credentials to the implementation of the tool.

Results
Preliminary feedback demonstrated that all respondents agreed that the checklist was a useful reminder and may help trainees manage a situation where intubation is frequently encountered. 10 respondents (91%) agreed that the checklist improved communication between anaesthetist and ODP.

In the re-audit using the modified checklist 31 obstetric GAs were undertaken. The response rate was 97%. The GA checklist was used in 24/30 (80%) of these cases. Reasons for omission of use included lack of time, the anaesthetist already had their own checklist, one respondent was unaware of the checklist. 6

Suggestions were immediately considered, before re-adjustment as necessary and re-trial. Direct involvement by the ODPs also added credibility to the implementation of the tool. It allowed us a unique insight into the management techniques of our colleagues of varying seniority in a simulated challenging scenario.

The final checklist was deemed to be a success. It has been well used, ratified by the consultant body and engagement of the whole team was instrumental in achieving this goal. We still face some challenges - these include lack of clinical engagement and lack of familiarity due to a high trainee turnover; however with time, regular re-enforcement and the inclusion in the formal trainee induction programme, we hope its use will become part of standard practice.

Discussion
Through repeated team simulation, the benefits and pitfalls of prototype checklists can be identified to facilitate development. In this setting, the format improvement and team approach increased uptake of use from 9% to 80% of obstetric GA cases.

References
5. James, Bridie; Bryant, Helen; Nelson, Sarah; Swales, Hilary; Al-Rawi, Samar. Obstetric GA checklist: Guideline development through team simulation. Obstetric GA Checklist

University Hospital Southampton
NHS Foundation Trust
A general anaesthesia checklist was developed to improve safety in obstetric care.

The initial checklist was under utilised. Lengthy format, poor visual impact and lack of multidisciplinary engagement inhibited success.

Re-design involved team simulation and open feedback to create an improved checklist, with the benefit of enhancing ownership.

The improved checklist was well received and engagement of the theatre team in its evolution was deemed to be instrumental in its realisation.

The huge success of implementation is demonstrated by an increase in uptake from 9% to 80%.