

Simpler is Better:

Methods of improving the design of a surgical safety training course for Obstetric teams in Cape Town, South Africa

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Background

Surgery is a significant area of unmet need in LMICs, especially in Africa^[1]. A third of surgical procedures in Africa are caesarean deliveries^[2]. The health gains from improving surgical safety in LMICs are substantial. Poor teamwork is a major contributor to unsafe surgery, thus an ethnographic study was conducted in a maternity hospital in Cape Town. Identified deficits included, but were not limited to:

- Lack of multidisciplinary training
- Lack of continued education on surgical safety
- Inadequate participation in WHO safe surgery checklist
- Steep hierarchy

Aims & Objectives

A team of researchers at Oxford have aimed to develop a training intervention to rectify these deficits and improve teamwork among obstetric surgical teams in this understaffed, low-resource context. It must be:

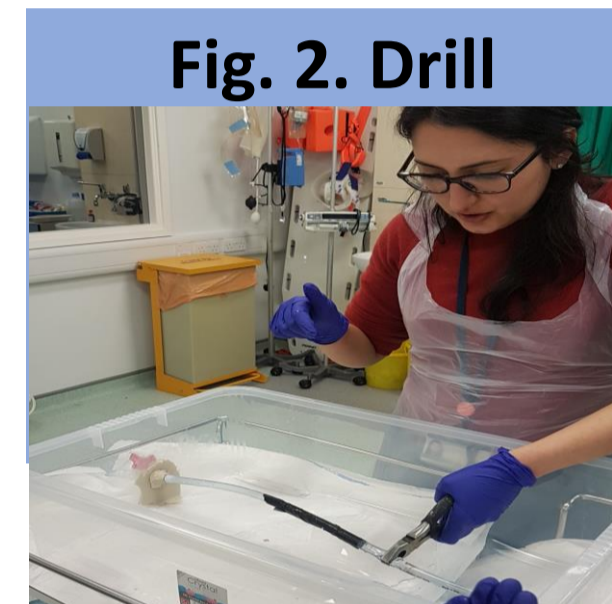
- Low fidelity
- Low cost
- Widely applicable



My SSM fits into a wider study by Dr. Rowan Duys (UCT), Dr Tinashe Chandauka (OXF), and Professor Peter McCulloch (OXF)

Methods & Recommendations

The exercise simulates a real life surgical crisis requiring effective communication between the team members. The drill incorporates the WHO safe surgery checklist in Fig. 1 and in the sign-out in Fig. 3. In Fig. 2 a severed hose (representing a major intrabdominal vessel) runs through the plastic box (abdominal cavity) and must be repaired by the surgeon using the materials provided. Training in leadership, problem solving, communication skills, and situational awareness can enhance the performance of the team in completing the drill and in a real surgical crisis.



My recommendations from assessment of the exercise video footage include ensuring its simplicity and emphasising the use of the WHO safe surgery checklist. The checklist should be distributed to all team members in 1 and 3. The exercise should not take longer than 10 minutes. Where feasible, more life-like equipment should be used. The lead anaesthetist could take the role of the instructor. Team members who are observing and not actively participating in the drill could assess the participants communication and awareness.

Materials

The simulator design is portable and uses low cost materials (<£25) that are widely available in most developing countries. Materials include:



- Plastic box
- 20L container
- 5m hosing
- Scissors
- String
- Pliers x 2
- Duct tape
- 2 fish tank valves
- Window piping
- Gloves x 2

Fig. 4. The prototype simulator.

Acknowledgements & References

With thanks to Dr. Chandauka for the research and design of the simulation. With thanks to Ms. Ansar and Ms. Shakir for participation in the simulation.

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2. Biccard, B. M. *et al.* Articles Perioperative patient outcomes in the African Surgical Outcomes Study: a 7-day prospective observational cohort study. (2018).