

## **Evaluation of different methods of implementation of the WHO Surgical Safety Checklist in Guinea Background**

The World Health Organisation (WHO) Surgical Safety Checklist significantly improves surgical outcomes in resource poor settings<sup>1</sup>. The key question is no longer 'does the checklist work?' but 'how can we make it work?'

At the invitation of the Guinean government, Mercy Ships is delivering surgical services and healthcare capacity building projects from September 2012 until June 2013. Guinea is one of the poorest countries in the world, ranked 10<sup>th</sup> from bottom in the United Nations, Human Development Index, 2011<sup>2</sup>. Last year Mercy Ships, evaluated Guinea's healthcare capacity and structure<sup>3</sup>. There are two main hospitals, Donka and Ignace Dean. Both have a lack of reliable water and electricity supply; spinals and ketamine are the mainstay of anaesthesia. One hospital performs 3300 operations per year with a mortality 3.2%; the other, 1900 operations with 8.3% mortality. This is the context, for our evaluation of different methods of implementation of the WHO Surgery Checklist.

### **Aims and Objectives**

We aim to assess three different modes of implementation.

1. High intensity on-site training. Surgeons and or anesthetists who are being trained in their own environment in the local hospital setting will be shown how to use the checklist and undergo one-on-one explanation and training.
2. High intensity role-model training. Surgeons and or anesthetists who are training on board our hospital ship for a period of two weeks or more will participate in the use of the checklist and undergo one-on-one explanation and training.
3. Low intensity training. One – three day classroom training

**Primary outcome:** use of WHO checklist at 3 months after completion of training.

Assessment of outcome will be by a visit to each participating hospital at 3 month interval.

Secondary outcome measures will be use of checklist at 12-18 months where applicable;

### **Study design and outline:**

Prospective descriptive observational study in 2 parts assessing modes of implementation of the WHO checklist at 3 months (part 1) and again at 12-18 months (part 2).

**Part 1** December 2012 - March 2013; different methods of training. Then March - June 2013; three month evaluations

**Part 2:** February – June 2014: 12-18 month post-implementation evaluation as part of Mercy Ships routine practice of conducting post-ship deployment assessment visits to all countries we operate in.

### **Statistical Analysis**

This is now a descriptive observational study because there are only 7 main hospitals in Guinea (with only 2 having any surgical specialisation) and so formal statistical analysis is unwarranted.

### **Ethics**

Permission to measure process will be obtained from local hospitals in the same way as it was during Mercy Ships previous assessment of the healthcare system in 2011<sup>3</sup>. And local ethical approval

granted from Mercy Ships. Individual written consent is anticipated to be waived for this observational study.

### **References**

1. Haynes AB *et al.* A Surgical Safety Checklist to Reduce Morbidity and Mortality in a Global Population. *N Engl J Med* 2009;360: 491-9
2. <http://www.un.org/en/development/index.shtml>
- 3 Bullington M. Guinea Health System Assessment, September 2011. (*Mercy Ships report*)