

## Anaesthesia Facility Assessment Tool (AFAT) v1.1

This questionnaire is based on multiple prior efforts to assess surgical and anaesthesia capacity including: The Harvard Humanitarian Initiative Tool<sup>1</sup>, the "International Standards for a Safe Practice of Anaesthesia" most recently revised by the World Federation of Societies of Anaesthesiologists (WFSa) in 2010<sup>2</sup>, the World Health Organization Tool for Situational Analysis to Assess Emergency and Essential Surgical Care<sup>3</sup>, the World Health Organization (WHO) and Harvard Program for Global Surgery and Social Change (PGSSC) Surgical Assessment Tool (SAT) for Hospital Walkthrough<sup>4</sup>, the Surgeons Overseas (SOS) PIPES Surgical Capacity Assessment tool<sup>5</sup>, the Lancet Commission on Global Surgery<sup>6</sup>, the WHO-WFSa International Standards for a Safe Practice of Anaesthesia 2017, and multiple national anaesthesia capacity assessment projects using other tools<sup>7,8</sup>.

The purpose of this questionnaire is to create a data set to help evaluate capacity for anaesthesia care at a national level, and to provide guidance for improving or maintaining standards for the safe practice of anaesthesia. Completion of this survey is **voluntary** and **optional**. This form is intended to be completed by an anaesthesia provider. Ideally, this provider should have first-hand knowledge of the facility that is being reviewed. Data collection must be done in accordance with local protocols and laws, and must not include any patient health information. Providing your personal contact information is optional and would only be used if clarification of your responses is needed.

Data may be entered electronically using an online version of this survey form. Data are stored in a secure RedCap database, jointly maintained by the WFSa and the UCSF Anesthesia Division of Global Health Equity. If you enter data electronically, you will be provided a copy of your survey responses as a pdf and as a raw database file. More information on the [electronic survey tool can be found at the WFSa website](#).

This survey should take approximately 45 minutes. If you are **unsure** of the answer to any question or choose not to answer, please **leave it blank**. You may stop the survey at any time.

<b>GENERAL QUESTIONS</b>	
Date of data collection (dd/mm/yy):	
Contact information of staff completing this assessment (Name, phone and email):	
Country (location of healthcare facility being surveyed):	
Healthcare facility name:	
Healthcare facility region/district:	
Healthcare facility address, including city/town:	
Which of the following terms best describes this healthcare facility? (Select one)	<input type="checkbox"/> Health Centre/Clinic <input type="checkbox"/> District Hospital/First Referral Hospital <input type="checkbox"/> Provincial or Secondary/Regional Referral Hospital <input type="checkbox"/> Tertiary or National Referral Hospital
Which of the following terms best describe this healthcare facility? (Select all that apply)	<input type="checkbox"/> Public <input type="checkbox"/> Private <input type="checkbox"/> NGO/Mission/Charity facility <input type="checkbox"/> University hospital
What is the profession of the person providing information to complete questionnaire?	
<input type="checkbox"/> <b>Physician (specialist) anaesthesiologist:</b> A graduate of medical school who has completed a <i>nationally recognized</i> specialist anaesthesia training program/residency	
<input type="checkbox"/> <b>Non-specialist physician anaesthetist:</b> A graduate of medical school who has <u>not</u> completed a specialist training program/residency in anaesthesia but has undergone some formal anaesthesia training	
<input type="checkbox"/> <b>Nurse anaesthetist:</b> A graduate of a nursing school who has also completed a <i>nationally recognized</i> nurse anaesthetist training program	
<input type="checkbox"/> <b>Non-physician, non-nurse anaesthetist:</b> An anaesthesia provider with no nursing degree, but who has completed a <i>nationally recognized</i> anaesthetist training program	
<input type="checkbox"/> <b>Other:</b> _____	
For how many years have you worked at this facility?	<input type="checkbox"/> <1 year <input type="checkbox"/> 1-3 years <input type="checkbox"/> >3 years <input type="checkbox"/> I have never worked at this facility

INFRASTRUCTURE						
How many total inpatient beds does this healthcare facility have?	<input type="checkbox"/> <50 <input type="checkbox"/> 50-99 <input type="checkbox"/> 100-299 <input type="checkbox"/> 300-499 <input type="checkbox"/> 500-999 <input type="checkbox"/> >999					
Does this facility have an intensive care unit (ICU) or high-dependency unit (HDU)?	<input type="checkbox"/> Yes <input type="checkbox"/> No					
How many intensive care unit (ICU) or high-dependency unit (HDU) beds does this facility have that can provide mechanical ventilation?	#					
How many intensive care unit (ICU) or high-dependency unit (HDU) beds does this facility have that can provide continuous monitoring?	#					
Does this facility have an inpatient surgical ward?	<input type="checkbox"/> Yes <input type="checkbox"/> No					
a. If yes to the question above, how many patient beds are in the surgical ward?	#					
Does this facility have a post-anaesthesia care unit (PACU) or recovery room (where patients remain while recovering from anaesthesia before going back to the inpatient ward or being discharged if day surgery)?	<input type="checkbox"/> Yes <input type="checkbox"/> No					
a. If yes to the question above, how many patient beds are in the PACU/recovery room?	#					
	<b>Total #</b>		<b>*Functioning #</b> <small>Functioning is defined as in working condition and can be used for patient care</small>			
How many operating theatres/rooms does this health facility have? <i>(This includes operating theatres in the main operating theatre complex as well as remote theatres like obstetrics/gyn, accident &amp; emergency, orthopaedics, etc.)</i>	#		#			
How often are you able to access Internet that is provided by this facility?	<b>Always</b> (100%) <input type="checkbox"/>	<b>Almost always</b> (76-99%) <input type="checkbox"/>	<b>Often</b> (51-75%) <input type="checkbox"/>	<b>Sometimes</b> (26-50%) <input type="checkbox"/>	<b>Rarely</b> (1-25%) <input type="checkbox"/>	<b>Never</b> (0%) <input type="checkbox"/>
How often is oxygen available?	<b>Always</b> (100%) <input type="checkbox"/>	<b>Almost always</b> (76-99%) <input type="checkbox"/>	<b>Often</b> (51-75%) <input type="checkbox"/>	<b>Sometimes</b> (26-50%) <input type="checkbox"/>	<b>Rarely</b> (1-25%) <input type="checkbox"/>	<b>Never</b> (0%) <input type="checkbox"/>
How often is running water available?	<b>Always</b> (100%) <input type="checkbox"/>	<b>Almost always</b> (76-99%) <input type="checkbox"/>	<b>Often</b> (51-75%) <input type="checkbox"/>	<b>Sometimes</b> (26-50%) <input type="checkbox"/>	<b>Rarely</b> (1-25%) <input type="checkbox"/>	<b>Never</b> (0%) <input type="checkbox"/>
How often is electricity available?	<b>Always</b> (100%) <input type="checkbox"/>	<b>Almost always</b> (76-99%) <input type="checkbox"/>	<b>Often</b> (51-75%) <input type="checkbox"/>	<b>Sometimes</b> (26-50%) <input type="checkbox"/>	<b>Rarely</b> (1-25%) <input type="checkbox"/>	<b>Never</b> (0%) <input type="checkbox"/>
How often does this facility offer continuing medical education (CME) or continuing professional development (CPD) to the staff?	<b>Daily/Weekly</b> <input type="checkbox"/>		<b>Monthly</b> <input type="checkbox"/>		<b>Quarterly</b> <input type="checkbox"/>	<b>Annually</b> <input type="checkbox"/>
Have any international organizations or institutions (NGO's, universities, non-profits etc.) worked, volunteered or partnered with this facility in the past 1-year?	<input type="checkbox"/> Yes <input type="checkbox"/> No					
If yes to question above, please list the names of these organizations:						
Has this facility received donations of supplies (including medications, equipment, or disposables) from any international organizations or institutions (NGOs, universities, non-profits etc.) in the past 1-year?	<input type="checkbox"/> Yes <input type="checkbox"/> No					

<b>BLOOD PRODUCT SERVICES</b>						
Are blood transfusions performed at this facility? (If "No" you may proceed to the next section "Information Management")	<input type="checkbox"/> Yes <input type="checkbox"/> No					
	<b>Always (100%)</b>	<b>Almost always (76-99%)</b>	<b>Often (51-75%)</b>	<b>Sometimes (26-50%)</b>	<b>Rarely (1-25%)</b>	<b>Never (0%)</b>
How often can this facility test blood products for blood type (i.e. ABO/Rh type) and perform a crossmatch?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often is <u>whole blood</u> available to patients at this facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often are units of <u>packed red blood cells</u> available to patients at this facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often is <u>plasma</u> available to patients at this facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often are <u>platelets</u> available to patients at this facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Approximately how long does it take to obtain red blood cells (whole blood or packed red blood cells) in an emergency?	<input type="checkbox"/> <15 minutes <input type="checkbox"/> 5-10 hrs		<input type="checkbox"/> <1 hour <input type="checkbox"/> 10-24 hrs		<input type="checkbox"/> 1-5 hrs <input type="checkbox"/> >24 hrs	
What is the <u>primary source</u> of blood used by this facility? (Select one)	<input type="checkbox"/> Voluntary unpaid donors at this facility <input type="checkbox"/> Paid donors at this facility <input type="checkbox"/> Patient family donors at this facility <input type="checkbox"/> An off-site blood bank/storage facility <input type="checkbox"/> Other					

<b>INFORMATION MANAGEMENT</b>						
What is the method of record keeping in this hospital?	<input type="checkbox"/> Electronic <input type="checkbox"/> Paper <input type="checkbox"/> Both <input type="checkbox"/> None					
	<b>Always (100%)</b>	<b>Almost always (76-99%)</b>	<b>Often (51-75%)</b>	<b>Sometimes (26-50%)</b>	<b>Rarely (1-25%)</b>	<b>Never (0%)</b>
How often are charts accessible across multiple visits for the same patient?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often are the details of each anaesthetic (including: preoperative assessment, anaesthetic plan, intraoperative and postoperative management) documented in an anaesthesia record?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often are surgical cases that are done in the operating theatres recorded in a theatre book or logbook?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often are data prospectively collected for patient outcomes (adverse events) post-operatively, such as surgical site infection, stroke, deep vein thrombosis (DVT), etc?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often does this facility conduct morbidity & mortality reviews for quality improvement?	<input type="checkbox"/> As needed	<input type="checkbox"/> Daily/Weekly	<input type="checkbox"/> Monthly	<input type="checkbox"/> Quarterly	<input type="checkbox"/> Annually	<input type="checkbox"/> Never
How often is this facility required to report morbidity & mortality information to the Ministry of Health or an equivalent agency?	<input type="checkbox"/> As needed	<input type="checkbox"/> Daily/Weekly	<input type="checkbox"/> Monthly	<input type="checkbox"/> Quarterly	<input type="checkbox"/> Annually	<input type="checkbox"/> Never

## WORKFORCE

How many of the following providers are currently employed by this health facility?

(If unsure please leave blank; if none please indicate "0")

	Full-Time	Part-Time
<b>Anaesthesia services</b>		
Physician (specialist) anaesthesiologists <sup>1</sup>	#	#
Non-specialist physician anaesthetists <sup>2</sup>	#	#
Nurse anaesthetists <sup>3</sup>	#	#
Non-physician, non-nurse anaesthetists <sup>4</sup>	#	#
Other anaesthesia providers <sup>5</sup>	#	#
<b>Surgical services</b>		
Physician surgeons	#	#
General (non-specialist) physicians who provide surgery	#	#
Non-physicians who provide surgery	#	#
<b>Obstetrics/gynaecology services</b>		
Obstetrician/gynaecologists (physicians)	#	#
General doctors who provide C-sections	#	#
Non-physicians who provide C-sections	#	#
Midwives	#	#
<b>Other services</b>		
Biomedical engineers or technicians	#	#
Theatre (scrub) nurses	#	#

How often are the following providers available for clinical care at this health facility?	Always (100%)	Almost always (76-99%)	Often (51-75%)	Sometimes (26-50%)	Rarely (1-25%)	Never (0%)
Physician (specialist) anaesthesiologist <sup>1</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anaesthesia residents/trainees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Non-specialist physician anaesthetists <sup>2</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nurse anaesthetists <sup>3</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Non-physician, non-nurse anaesthetists <sup>4</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other anaesthesia providers <sup>5</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Surgical provider (Physician or non-physician)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Obstetrician/Gynaecology provider (Physician or non-physician)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Theatre (scrub) nurses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often are non-physician anaesthesia providers at this facility supervised onsite by physician anaesthesiologists?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do physician anaesthesiologist trainees work at this facility as part of their training?	<input type="checkbox"/> Yes <input type="checkbox"/> No					
Do non-physician anaesthetist trainees work at this facility as part of their training?	<input type="checkbox"/> Yes <input type="checkbox"/> No					
On average, what is the approximate <u>nursing provider to patient</u> ratio in the ICU/HDU?	<input type="checkbox"/> 1:1-2	<input type="checkbox"/> 1:3-4	<input type="checkbox"/> 1:4-5	<input type="checkbox"/> 1:5-10	<input type="checkbox"/> <1:10	<input type="checkbox"/> NA
On average, what is the approximate <u>nursing provider to patient</u> ratio in the surgical ward?	<input type="checkbox"/> 1:1-2	<input type="checkbox"/> 1:3-4	<input type="checkbox"/> 1:4-5	<input type="checkbox"/> 1:5-10	<input type="checkbox"/> <1:10	<input type="checkbox"/> NA
At any given time, what is the approximate care <u>provider to patient</u> ratio in the PACU/recovery room?	<input type="checkbox"/> 1:1-2	<input type="checkbox"/> 1:3-4	<input type="checkbox"/> 1:4-5	<input type="checkbox"/> 1:5-10	<input type="checkbox"/> <1:10	<input type="checkbox"/> NA

<sup>1</sup>Physician (specialist) anaesthesiologist - graduate of a medical school who has completed a nationally recognized specialist anaesthesia training program/residency

<sup>2</sup>Non-specialist physician anaesthetist - a graduate of a medical school who has not completed a specialist training program/residency in anaesthesia but has undergone some formal anaesthesia training

<sup>3</sup>Nurse anaesthetists - a graduate of a nursing school who has also completed a nationally recognized nurse anaesthetist training program

<sup>4</sup>Non-physician, non-nurse anaesthetists - anaesthesia provider with no nursing degree, but who has completed a nationally recognized anaesthetist training program

<sup>5</sup>Other anaesthesia provider - a provider who does not fit within any of the aforementioned definitions

<b>SERVICE DELIVERY</b>						
	<b>Always (100%)</b>	<b>Almost always (76-99%)</b>	<b>Often (51-75%)</b>	<b>Sometimes (26-50%)</b>	<b>Rarely (1-25%)</b>	<b>Never (0%)</b>
How often are patients evaluated by an anaesthesia professional (physician or non-physician with nationally recognized anesthesia training) prior to administration of anaesthesia?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often is the WHO Surgical Safety Checklist (or locally-modified version) used in the operating room prior to each surgical case?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When indicated, how often are prophylactic antibiotics given prior to skin incision in the operating theatre?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often is <u>continuous</u> pulse oximetry used to monitor patients for the <u>entire duration</u> of anaesthesia care in the operating theatre?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often is capnography (end tidal carbon dioxide) used <u>continuously</u> to monitor patients for the <u>entire duration</u> of anaesthesia care in the operating theatre?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often is a circuit "disconnect alarm" utilized during mechanical ventilation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often is the patient's circulation <u>continuously</u> monitored either by palpation, auscultation, or display (on a monitor) of the heart rate for the entire duration of anaesthesia care in the operating theatre?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often is blood pressure measured at least every 5 minutes while providing anaesthesia?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
For cases requiring general or neuraxial anaesthesia, how often is a designated anaesthesia provider (other than the surgeon) continuously present inside the operating theatre with the patient?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often are audible monitor signals and alarms available AND on at all times in the operating theatre?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often is there capability for measurement of inspired/expired volatile gas concentration in the operating theatre?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often is this facility able to provide mechanical ventilation for postoperative patients who require ventilator support outside the operating theatres?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often is a trained assistant (e.g. operating room nurse or technician) available to assist the anaesthesia provider in theatre?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there a "handover protocol" for transfer of care from one anaesthesia provider to another in the operating theatre?	<input type="checkbox"/> Yes <input type="checkbox"/> No					
How often are pain scores assessed by a healthcare provider in the first 24-hours post-operation?	<input type="checkbox"/> Hourly	<input type="checkbox"/> Once every 2-4 hrs	<input type="checkbox"/> Once every 4-6 hrs	<input type="checkbox"/> Once every 6-12 hrs	<input type="checkbox"/> Once every 12+ hrs	<input type="checkbox"/> Never
<b>If this facility does not have a PACU/recovery room, skip the next 6 questions.</b>	<b>Always (100%)</b>	<b>Almost always (76-99%)</b>	<b>Often (51-75%)</b>	<b>Sometimes (26-50%)</b>	<b>Rarely (1-25%)</b>	<b>Never (0%)</b>
When patients are present in the PACU/recovery room, how often are personnel trained to administer analgesic medications AND recognize airway and hemodynamic compromise physically present in the PACU/recovery room?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often is <u>continuous</u> pulse oximetry available for continuously monitoring a patient for the entire duration of care in the PACU/recovery room?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often is NIBP measurement available for all patients in the PACU/recovery room?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often is oxygen immediately available in the PACU/recovery room?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often is suction immediately available in the PACU/recovery room?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often is a self-inflating bag-mask immediately available in the PACU/recovery room?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are open fractures surgically repaired at this health facility?	<input type="checkbox"/> Yes <input type="checkbox"/> No					
Are laparotomies (e.g. uterine rupture, ectopic pregnancy, acute abdomen, intestinal perforation, traumatic injuries) performed at this health facility?	<input type="checkbox"/> Yes <input type="checkbox"/> No					
Are Caesarean sections performed at this health facility?	<input type="checkbox"/> Yes <input type="checkbox"/> No					
Are surgical cases performed on children (age < 5 years old) at this health facility?	<input type="checkbox"/> Yes <input type="checkbox"/> No					
Is epidural anaesthesia performed at this facility?	<input type="checkbox"/> Yes <input type="checkbox"/> No					

## LOGBOOK QUESTIONS ABOUT SURGICAL CASES

Please use the theatre logbook and/or morbidity and mortality logbook/data to answer the following section. If you do not have access to the logbook, please leave these questions blank.

How many <b>total surgical cases</b> were performed in the operating theatres of this facility <u>in the past 12 months?</u>	#
How many <b>post-operative</b> , in-hospital deaths occurred (i.e. deaths before discharge in patients who have undergone a surgical procedure in the operating theatre) at this facility <u>in the past 12 months?</u>	#
How many <b>intraoperative</b> deaths (i.e. deaths in theatre) occurred at this facility <u>in the past 12 months?</u>	#
How many open fracture repairs were performed at this facility <u>in the past 12 months?</u>	#
How many laparotomies (e.g. uterine rupture, ectopic pregnancy, acute abdomen, intestinal perforation, traumatic injuries) were performed at this facility <u>in the past 12 months?</u>	#
How many Caesarean sections were performed at this facility <u>in the past 12 months?</u>	#
How many surgical cases were performed on children (age < 5 years old) at this facility <u>in the past 12 months?</u>	#

## MEDICATIONS

How often are the following medications available when needed for anaesthesia, surgical, or analgesia care at this facility?

	Always (100%)	Almost always (76-99%)	Often (51-75%)	Sometimes (26-50%)	Rarely (1-25%)	Never (0%)
Ketamine IV/IM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Meperidine (pethidine) IV/IM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Morphine IV/IM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Morphine PO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nalbuphine IV/IM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paracetamol (acetaminophen) IV or PO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NSAIDs IV or PO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fentanyl IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tramadol PO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oxycodone PO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Codeine PO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Methadone PO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gabapentin PO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lidocaine 1% or 2% IV/SQ	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lidocaine 5% intrathecal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bupivacaine intrathecal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diazepam IV/IM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Midazolam IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Naloxone IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Propofol IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thiopental IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nitrous Oxide	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Isoflurane	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Halothane	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sevoflurane	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ether	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Succinylcholine (Suxamethonium) IV/IM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rocuronium IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vecuronium IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cisatracurium IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pancuronium IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Atracurium IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## MEDICATIONS (continued)

How often are the following medications available when needed for anaesthesia/surgical or analgesia care at this facility?

	Always (100%)	Almost always (76-99%)	Often (51-75%)	Sometimes (26-50%)	Rarely (1-25%)	Never (0%)
Neostigmine IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hydralazine IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Furosemide IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dextrose 50% IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aminophylline IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hydrocortisone IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ergometrine IV/IM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Metaraminol IV/IM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Epinephrine IV/IM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Atropine IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ephedrine IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Phenylephrine IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Norepinephrine IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dopamine IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dobutamine IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Milrinone IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Amiodarone IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Magnesium IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nitroglycerin IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calcium chloride IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Potassium chloride IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oxytocin IV/IM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Misoprostol PO or intravaginal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dantrolene IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intralipid IV (for local anaesthetic toxicity)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mannitol IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tranexamic acid (TXA) IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insulin IV or SQ	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## EQUIPMENT

For the following pieces of equipment, please indicate the total number that are present at this facility and are designated for anaesthesia/surgical care in the operating theatres (i.e. the total # for all operating theatres). \*Do not include equipment personally owned by providers.

Pulse oximeters	#
Laryngoscopes	#
Non-invasive blood pressure monitors	#

How often are the following equipment available and in functioning\* condition when needed for anaesthesia or surgical care in the operating theatres?  
(\*Functioning is defined as in working condition and can be used for patient care)

	Always (100%)	Almost always (76-99%)	Often (51-75%)	Sometimes (26-50%)	Rarely (1-25%)	Never (0%)
Adult self-inflating breathing bag/mask	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paediatric self-inflating breathing bag/mask	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manual or electric suction pump	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stethoscope	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thermometer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pulse oximeter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adult pulse oximeter probe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paediatric pulse oximeter probe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## EQUIPMENT (continued)

How often are the following equipment available and in functioning\* condition when needed for anaesthesia or surgical care in the operating theatres?

(\*Functioning is defined as in working condition and can be used for patient care)

	Always (100%)	Almost always (76-99%)	Often (51-75%)	Sometimes (26-50%)	Rarely (1-25%)	Never (0%)
Portable oxygen concentrator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oxygen tanks with tubing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Central oxygen generation plant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adult Laryngoscope (blade sizes 3-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paediatric Laryngoscope (blade sizes 1-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bougies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eye protection for staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IV infusion/drug injection equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Suction catheters (e.g. Yankauer suckers)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adult Endotracheal tubes (sizes: 6.0-8.0)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paediatric Endotracheal tubes (sizes: 3.0-5.0)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adult Laryngeal mask airways (sizes: 3, 4, 5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paediatric Laryngeal mask airways (sizes: 1, 1.5, 2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oral airways adult size	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oral airways paed size	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nasal airways	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Operational power generator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Functioning Autoclave	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hand sanitizer or soap	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Glucose measurement device	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Haemoglobin measurement device	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supplies for emergency cricothyroidotomy/tracheostomy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Functioning ultrasound machine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Functioning X-ray machine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Refrigerator for medications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Air conditioning in operating theatre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Operating table with tilting function	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Work surface for meds in theatre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intra-arterial blood pressure monitor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Automatic, non-invasive blood pressure monitor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manual, non-invasive blood pressure cuff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Neuromuscular transmission monitor (for assessing neuromuscular block)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adequate operating theatre lighting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Volatile anaesthetic vaporizers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bellows or bag to inflate lungs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Face masks of various sizes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
O2 supply failure alarm; inspired oxygen analyzer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Continuous waveform capnography	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spot check capnography	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Defibrillator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Electrocardiograph monitor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Electrocardiograph electrodes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IV pressure infuser bag	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Isotonic crystalloid IV fluid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IV Cannulas (18g, 20g, 22g, and 24g)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Magill forceps	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nasogastric tubes (10-16F)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



## EQUIPMENT (continued)

How often are the following equipment available and in functioning\* condition when needed for anaesthesia or surgical care in the operating theatres?

(\*Functioning is defined as in working condition and can be used for patient care)

	Always (100%)	Almost always (76-99%)	Often (51-75%)	Sometimes (26-50%)	Rarely (1-25%)	Never (0%)
Catheter for bladder catheterization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spinal needles (22g, 25g)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Peripheral nerve stimulator (for regional anaesthesia)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Epidural placement supplies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sterile gloves	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Examination gloves (non-sterile)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Syringes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Infusion pumps	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Electric warming blanket	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Infant incubator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adult anaesthesia breathing circuits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paediatric anaesthesia breathing circuits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Traps	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sterilizing skin preparation solution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blood gas analyzer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often is <u>disposable</u> equipment used, then cleaned and reused (e.g. endotracheal tubes, LMAs, etc)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often do anaesthesia providers at this facility use their own (personally-owned) equipment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often can non-functioning equipment (suction machines, vitals monitors, autoclaves) be repaired onsite by staff at this facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How many anaesthesia machines are available at this health facility?	Total #:			Total # <u>functioning &amp; available for use:</u>		
How many mechanical ventilators are present <u>outside</u> of the operating theatres in this facility?	Total #:			Total # <u>functioning &amp; available for use:</u>		

## COMMENTS

Please provide any additional comments or concerns below:

### References

- Chao, T. E. *et al.* Survey of Surgery and Anesthesia Infrastructure in Ethiopia. *World J. Surg.* (2012). doi:10.1007/s00268-012-1729-3
- Merry, A. F., Cooper, J. B., Soyannwo, O., Wilson, I. H. & Eichhorn, J. H. International Standards for a Safe Practice of Anesthesia 2010. *Can. J. Anaesth.* **57**, 1027–1034 (2010).
- World Health Organization. Tool for Situational Analysis to Assess Emergency and Essential Surgical Care. Available at: <http://www.who.int/surgery/publications/QuickSitAnalysisEESCSurvey.pdf>. (Accessed: 4th April 2017)
- WHO, Harvard PGSSC. WHO-PGSSC Surgical Assessment Tool (SAT) Hospital Walkthrough Tool. Available at: [http://docs.wixstatic.com/ugd/346076\\_b9d8e8796eb945fe9bac7e7e35c512b1.pdf](http://docs.wixstatic.com/ugd/346076_b9d8e8796eb945fe9bac7e7e35c512b1.pdf). (Accessed: 7th June 2017)
- SOS PIPES Surgical Capacity Assessment tool. *Surgeons Overseas* Available at: <https://www.surgeonsoverseas.org/resources/>. (Accessed: 4th April 2017)
- Meara, J. G. *et al.* Global Surgery 2030: evidence and solutions for achieving health, welfare, and economic development. *Lancet* (2015). doi:10.1016/S0140-6736(15)60160-X
- Hodges, S. C. *et al.* Anaesthesia services in developing countries: defining the problems. *Anaesthesia* **62**, 4–11 (2007).
- Evans, F. M. *et al.* Availability of Essential Anesthetic Medicines in Resource-Poor Countries in Africa and Central America. Scientific Abstract. American Society of Anesthesiologists. (2017)