

# Tool for Situational Analysis to Assess Emergency and Essential Surgical Care in Ethiopia

**Objective:** To assess the gaps in the availability of Emergency and Essential Surgical Care (EESC) at hospitals in Ethiopia.

Key	Category of Data
	General Information
	Infrastructure
	Human Resources
	Interventions
	Emergency and Essential Surgical Care Equipment and Supplies
	Financing
	Information Management
	Surgical Sets

**Involvement of following providers is required to complete assessment:**

1. Hospital Director or CEO
2. Surgeon/IESO
3. OB/GYN (Surgeon/IESO if not available)
4. Anesthetist/Nurse

***If any of the providers listed above are not available, please direct all questions (where applicable) to Hospital Director or CEO.***



# Data Collector

<p><b>Facility Information</b> Fields marked with an asterisk (*) are mandatory</p>	
<b>REGION*</b>	
<b>DATE OF DATA COLLECTION*</b> (dd/mm/yyyy)	
<b>NAME</b> of person(s) filling out form*	
<b>PHONE NUMBER</b> of person(s) filling out form*	
<b>EMAIL*</b>	
<b>NAME and ADDRESS of health care facility*</b> (include city, woreda or zone and region)	
<b>Phone number of health care facility*</b>	

<b>Type of health care facility being evaluated</b>	Primary Hospital	General Hospital	Specialized Hospital	Private Hospital	NGO Hospital	Mission Hospital



# Hospital Director

## Infrastructure

<i>Items</i>	
1. Total population served by this health care facility	#
2. Total number of hospital beds	#
3. Total number of surgical beds (ENT, trauma, GS, orthopedics and others)	#
4. Total number of obstetric and gynecologic beds	#
5. Total number of post-op recovery beds	#
6. Total number of advanced care/ICU beds	#
7. Total number of emergency area beds	#
8. Total number of admissions in a year	#
9. Total number of total surgical admissions in one year (ENT and orthopedics included)	#
10. Total number of obstetric and gynecologic admissions	#
11. Total number of outpatients seen in one year	#
12. What percentage of your patients can reach the hospital within 2 hours of travel?	<input type="checkbox"/> 0 (None) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (All)
13. Who is acting as OT manager?  <i>OT Manager: defined as the person(s) responsible for the surgical and OB/GYN operating theatres</i>	
14. What is the average number of peri-operative, in-hospital deaths per month?	#
15. Over the past month, how often have you had running water?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)
16. Over the past month, how often have you had a regular, 24/7 electricity source?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)
17. Over the past month, how often have you had a generator/back-up electricity source?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)
18. Over the past month, how often have you had internet?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)



## Human Resources

<i>Hospital Staff</i>	
19. Qualified radiologists?	#
20. Qualified pathologists?	#
21. Qualified biomedical technicians?	#
22. Qualified X-ray technicians?	#
23. Trained operating theater nurses?	#
24. Pharmacists (including druggists)?	#
25. Has any continuing medical education been provided to your staff?	<input type="checkbox"/> Yes <input type="checkbox"/> No

## Financing

<i>Health Financing and Accounting</i>	
26. What percentage of your patients have health insurance?	<input type="checkbox"/> 0 (None) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (All)
<i>Budget Allocation</i>	
27. What is your total annual hospital budget?	_____ Birr
28. How much of your annual hospital operating budget is allotted to surgery and anesthesia?  Including medications, consumables (gloves, etc.) and equipment bought for surgery.	<input type="checkbox"/> 0 (None) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (All)



## Information Management

<b>Information Systems</b>	
29. What is the method of record keeping in your hospital?	<input type="checkbox"/> None <input type="checkbox"/> Paper <input type="checkbox"/> Electronic <input type="checkbox"/> Both
30. Are there personnel in charge of maintaining medical records?	<input type="checkbox"/> Yes <input type="checkbox"/> No
31. Are charts accessible across multiple visits for the same patient?	<input type="checkbox"/> Yes <input type="checkbox"/> No
32. How often is data prospectively collected for monthly peri-operative adverse events, such as unexpected return to OT or surgical site infection?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)
33. How often is data prospectively collected for monthly post-operative mortality rate?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)
34. How often are you required to report information to the Ministry of Health or an equivalent agency? <i>If applicable, may check more than one option.</i>	<input type="checkbox"/> Never <input type="checkbox"/> Monthly <input type="checkbox"/> Quarterly <input type="checkbox"/> Yearly
35. Do you use telemedicine?	<input type="checkbox"/> Yes <input type="checkbox"/> No

<b>Research Agenda</b>	
36. How many quality improvement projects were done in the hospital in the past year?	#
37. How many ongoing research projects are being done in the hospital? <small>Exclude resident, intern and student research projects.</small>	#
38. How many papers have been published by hospital staff in the last year? <small>Exclude resident, intern and student research papers.</small>	#



# Surgeon or IESO

## Infrastructure

<i>Items</i>	<b>Minor:</b> any procedure done under local anesthesia <b>Major:</b> any procedure done in the operating theatre under general anesthesia or profound sedation (i.e. spinal anesthesia)
1. Total number of functioning operating rooms?	Minor #
	Major #
2. Total number of surgical procedures per year?	Minor #
	Major #
3. Total number of laparotomies (adult and pediatric) performed per month (on average in the past 6 months)?	#
4. Total number of surgical fracture repairs performed per month (on average in the past 6 months)?	Minor #
	Major #
5. Total number of pediatric (aged less than 15 years) surgeries per month?	#
6. Total number of patients to this facility that you refer for surgical intervention to a higher-level facility per year?	#
7. How far do most patients travel to get to your health facility for surgical services? <small>If estimation is not possible, which woreda do a majority of patients come from?</small>	(km)
8. When referred from your hospital, how far does the average patient travel to access surgical services?	(km)

<i>Operating Room</i>	
9. How many OT tables do you have?	#
10. How many of those tables are regularly used?	#
11. If not in use, why? <small>(e.g. non-functional, surgical services not yet started)</small>	
12. How often do you keep surgery-related records?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)



<b><i>Management Guidelines</i></b>	
13. Do you have management guidelines available for emergency care?	<input type="checkbox"/> Yes <input type="checkbox"/> No
14. Do you have management guidelines available for surgery?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b><i>Laboratory</i></b>	
15. How often do you have access for blood?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)
16. How long does it take to get blood that is in stock after you place an order?	
17. How long does it take to get blood that is <b>not</b> in stock after you place an order?	
18. How often is a Complete Blood Count available (including hemoglobin, hematocrit, WBCs, platelets)?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)
19. What do you have available often?	
20. What do you <b>not</b> have available often?	
21. How often is a full chemistry panel available (including BUN, creatinine, Na, K, etc.)?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)
22. What do you have available often?	
23. What do you <b>not</b> have available often?	
24. How often is the lab able to run all coagulation studies (including PT, PTT, BT, INR)?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)
25. What do you have available often?	
26. What do you <b>not</b> have available often?	
27. How often are you able to screen for an infectious panel (HIV, hepatitis virus, syphilis)?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)
28. What do you have available often?	
29. What do you <b>not</b> have available often?	
30. How often is the lab able to do a urinalysis?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)



<b>Radiology</b>	
31. How many X-ray machines do you have?	#
32. How many of those machines are regularly used?	#
33. If not in use, why? (e.g. non-functional, surgical services not yet started)	
34. How many ultrasound machines do you have?	#
35. How many of those machines are regularly used?	#
36. If not in use, why? (e.g. non-functional, surgical services not yet started)	
37. How many CT scanners do you have?	#
38. How many of those machines are regularly used?	#
39. If not in use, why? (e.g. non-functional, surgical services not yet started)	
40. How many MRI scanners do you have?	#
41. How many of those machines are regularly used?	#
42. If not in use, why? (e.g. non-functional, surgical services not yet started)	
43. How often do you have 24-hour access to radiology imaging services?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)

<b>Sterilization</b>	
44. How many CSRs do you have?	#
45. How many of those are regularly used?	#
46. If not in use, why? (e.g. non-functional, surgical services not yet started)	
47. How many autoclaves do you have?	#
48. How many of those machines are regularly used?	#
49. If not in use, why? (e.g. non-functional, surgical services not yet started)	





## Surgeon or IESO

<b><i>Transportation</i></b>	
50. How many ambulances do you have?	#
51. How many of those are regularly used?	#
52. If not in use, why? (e.g. non-functional, surgical services not yet started)	

## Human Resources

	<b><i>Workforce</i></b>		<b><i>Full time</i></b>	<b><i>Contracted (short-term)</i></b>	<b><i>Residents/interns/trainees</i></b>
	53. Surgeons?	General	#	#	#
		Ortho	#	#	#
		IESO	#	#	#
		Other specialties	#	#	#
	54. General doctors providing surgery (including obstetrics)?		#	#	#

55. How often is emergency surgical care available after hours/available 24 hours a day (on average in the past month)?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)
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## Interventions

Please ask questions in point in time context i.e. what is able to be done at time of assessment.

Do you perform these procedures?									
	Yes/No	If Yes, how many procedures performed in the past month?	If No, why not?	Do you refer?	If you refer, is it due to... (mark ALL that apply)				
					Lack of skills?	Lack of staff?	Non-functioning equipment?	Lack of supplies/drugs?	Other?
<b>Trauma or injury related</b>									
56. Airway procedures tracheostomy and/or cricothyroidotomy	Y N	#		Y N					
57. Tube thoracostomy for air and/or fluid collections in the pleura	Y N	#		Y N					
58. Basic wound management including thorough saline washing, irrigation and/or debridement	Y N	#		Y N					
59. Repair of lacerations	Y N	#		Y N					
60. Repair of facial and/or scalp lacerations	Y N	#		Y N					
61. Emergency fracture and/or dislocation management:									
a) Splinting of fractures (including POP)	a) Y N	#		a) Y N					
b) Dislocation: traction and/or closed reduction	b) Y N	#		b) Y N					
c) External fixation application	c) Y N	#		c) Y N					
d) Internal fixations of simple fractures and/or dislocations	d) Y N	#		d) Y N					
e) Irrigation and/or debridement of open fractures	e) Y N	#		e) Y N					
62. Initial management of burn cases like resuscitation, oxygen delivering, pain management	Y N	#		Y N					
63. Advanced burn management: escharotomy and fasciotomy	Y N	#		Y N					
64. Skin graft and/or flap	Y N	#		Y N					
65. Exploratory laparotomy for trauma	Y N	#		Y N					
66. Cut-down for vascular access	Y N	#		Y N					
67. Trauma related amputation	Y N	#		Y N					
68. Burr-hole and/or elevation of depressed skull fracture for head injuries	Y N	#		Y N					



<i>Do you perform these procedures?</i>									
	Yes/No	If Yes, how many procedures performed in the past month?	If No, why not?	Do you refer?	If you refer, is it due to... (mark ALL that apply)				
					Lack of skills?	Lack of staff?	Non-functioning equipment?	Lack of supplies/drugs?	Other?
69. Vascular exploration and/or repair/anastomosis for trauma	Y N	#		Y N					
70. Neck exploration for severe neck injuries	Y N	#		Y N					
71. Emergency thoracotomy for severe chest injury	Y N	#		Y N					
72. Management of acute hand trauma (tendon and neurovascular)	Y N	#		Y N					
73. Management of musculoskeletal multiple trauma and complex fractures (e.g. hemi arthroplasty, intra-articular, spine and pelvic fracture)	Y N	#		Y N					

<i>Non-trauma emergency and essential general surgical conditions</i>									
74. Draining superficial abscesses	Y N	#		Y N					
75. Male circumcision	Y N	#		Y N					
76. Vasectomy	Y N	#		Y N					
77. Excision of small soft tissue tumors like lipoma, ganglion	Y N	#		Y N					
78. Relieving acute urinary retention:									
a) Catheterization	a) Y N	#		a) Y N					
b) Closed suprapubic cystostomy	b) Y N	#		b) Y N					
79. Hydrocelectomy	Y N	#		Y N					
80. Rectal tube deflation for sigmoid volvulus	Y N	#		Y N					
81. Explorative laparotomy for acute abdomen									
a) Acute appendicitis	a) Y N	#		a) Y N					
b) Acute perforation	b) Y N	#		b) Y N					
c) Bowel Obstruction	c) Y N	#		c) Y N					

<i>Do you perform these procedures?</i>									
	Yes/No	If Yes, how many procedures performed in the past month?	If No, why not?	Do you refer?	If you refer, is it due to... (mark ALL that apply)				
					Lack of skills?	Lack of staff?	Non-functioning equipment?	Lack of supplies/drugs?	Other?
82. Management of gallbladder pathologies a) Cholecystectomy b) Cholecystostomy	a) Y N b) Y N	# #		a) Y N b) Y N					
83. Repair of hernias	Y N	#		Y N					
84. Anal pathology management: a) Haemorrhoidectomy b) Fistulotomies and/or drainage of perianal abscesses	a) Y N b) Y N	# #		a) Y N b) Y N					
85. Complex surgical infection management: a) Septic arthritis, osteomyelitis b) Pyomyositis c) Surgical management of hand infection	a) Y N b) Y N c) Y N	# # #		a) Y N b) Y N c) Y N					
86. Transvesical-prostatectomy (TVP)	Y N	#		Y N					
87. Cystolithotomy	Y N	#		Y N					
88. Common bile duct (CBD) exploration, biliary bypass procedures and/or T-tube insertion for hepatobiliary pathologies	Y N	#		Y N					
89. Constructing and/or reversal of colostomies, colon resection and/or anastomosis	Y N	#		Y N					
90. Modified radical mastectomy	Y N	#		Y N					
91. Thyroidectomy	Y N	#		Y N					
92. Pediatric emergencies: a) Intussusception b) Colostomy for anorectal malformation c) Management of foreign body swallowing d) Aspiration	a) Y N b) Y N c) Y N d) Y N	# # # #		a) Y N b) Y N c) Y N d) Y N					
93. Cleft lip	Y N	#		Y N					
94. Cleft palate	Y N	#		Y N					

<i>Do you perform these procedures?</i>									
	Yes/No	If Yes, how many procedures performed in the past month?	If No, why not?	Do you refer?	If you refer, is it due to... (mark ALL that apply)				
					Lack of skills?	Lack of staff?	Non-functioning equipment?	Lack of supplies/drugs?	Other?
95. Tenotomy and/or Ponseti cast for club foot	Y N	#		Y N					
96. Neonatal surgery	Y N	#		Y N					
97. Gastric resection for cancers and/or perforation	Y N	#		Y N					
98. Esophageal resection for cancers	Y N	#		Y N					
99. Esophageal resection for perforation	Y N	#		Y N					
100. Pulmonary resections and/or mediastinal procedures for chest pathologies	Y N	#		Y N					



<i>Do you perform these procedures?</i>									
	Yes/ No	If Yes, how many procedures performed in the past month?	If No, why not?	Do you refer?	If you refer, is it due to... (mark ALL that apply)				
					Lack of skills?	Lack of staff?	Non- functioning equipment?	Lack of supplies/ drugs?	Other?
<b><i>Ophthalmic, Oral, Dental Procedures</i></b>									
101. Extraction of primary and permanent tooth	Y N	#		Y N					
102. Incision and/or drainage (periodontal and dental abscess)	Y N	#		Y N					
103. Dental caries treatments and/or scaling	Y N	#		Y N					
104. Replantation of avulsed teeth	Y N	#		Y N					
105. Disimpaction	Y N	#		Y N					
106. Foreign body removal from nose, ears, throat	Y N	#		Y N					
107. Ear and/or eye irrigation	Y N	#		Y N					
108. Reduction of acute TMJ dislocation	Y N	#		Y N					
109. Orofacial infection management	Y N	#		Y N					
110. Cataract surgery	Y N	#		Y N					
111. Tarsotomy (upper eyelid)	Y N	#		Y N					
112. Eye enucleation	Y N	#		Y N					
113. Management of facial bone fractures and/or injury to dentition (interdental wiring, arch bar, IMF and open reduction)	Y N	#		Y N					
114. Myringotomy for otitis media	Y N	#		Y N					
115. Tonsillectomy	Y N	#		Y N					
116. Surgical management of common benign and/or malignant tumors and cyst of oral & maxillofacial regions	Y N	#		Y N					

## Emergency and Essential Surgical Care Equipment and Supplies

*Please ask questions in point in time context i.e. what is able to be done at time of assessment.*

<b>Capital Outlays</b>					
		Absent	Available with shortages or difficulties	Fully available for all patients all the time	<b>Remarks</b>
	117. Suction pump (manual or electric) with catheter				
	118. Blood pressure measuring equipment				
	119. Scalpel with blades				
	120. Retractors				
	121. Scissors				
	122. Tissue forceps				
	123. Gloves (sterile)				
	124. Gloves (examination)				
	125. Needle holder				
	126. Sterilizing skin prep				

<b>Renewable Items</b>					
		Absent	Available with shortages or difficulties	Fully available for all patients all the time	
	127. Nasogastric tubes				
	128. Light source (lamp & flash light)				
	129. Intravenous fluid infusion set				
	130. Intravenous cannulas/scalp vein infusion set				
	131. Syringes with needles (disposable)				

	Absent	Available with shortages or difficulties	Fully available for all patients all the time	Remarks
132. Sharps disposal container				
133. Tourniquet				
134. Needles & sutures				
135. Splints for arm, leg				
136. Waste disposal container				
137. Face masks				
138. Eye protection				
139. Protective gowns/aprons				
140. Soap				
141. Electrocautery				

<i>Supplementary Equipment for Use by Skilled Health Professionals</i>				
142. Adult McGill forceps				
143. Pediatric McGill forceps				
144. Chest tubes insertion equipment				
145. Tracheostomy set				



Financing

<b>Cost</b>	
146. What is the average out-of-pocket cost to a patient for an open fracture repair (procedure only)?	#
147. What is the average out-of-pocket cost to a patient for a laparotomy (procedure only)?	#
148. What is the average out-of-pocket cost to a patient for a CBC?	#
149. What is the average out-of-pocket cost to a patient for a chest X-ray?	#
150. What is the average out-of-pocket cost to a patient for surgery-associated lodging (e.g. bed, overnight stays) per visit?  <b>Surgery-associated lodging:</b> defined as in a single visit, before returning home (include lodging for patient <i>and</i> lodging for the caretaker)	#
151. What do the most patients pay out-of-pocket for patient and family transportation per visit?  a) Emergency visits  b) Elective visits	
	#
	#
152. What is the average out-of-pocket cost to a patient for surgery-associated medication per visit (e.g. perforated appendix)?	#
153. What is the average out-of-pocket cost to a patient for other necessities (e.g. laundry/food) per visit?	#

Information Management

<b>Research Agenda</b>	
154. How many ongoing research projects does the department of surgery have?  Exclude resident, intern and student research projects.	#

## Surgical Sets

<p>155. How many surgical sets are available for treatment of open fractures?</p> <p><b>Missing:</b> defined as any part of a surgical set that is absent or non-functional</p>	a) Complete #
	b) Incomplete #
	c) If incomplete, what is missing?
<p>156. How many surgical sets are available for laparotomy?</p> <p><b>Missing:</b> defined as any part of a surgical set that is absent or non-functional</p>	a) Complete #
	b) Incomplete #
	c) If incomplete, what is missing?



# OB/GYN (Surgeon/IESO if not available)

## Infrastructure

	<b>Items</b>	<b>Minor:</b> any procedure done under local anesthesia <b>Major:</b> any procedure done in the operating theatre under general anesthesia or profound sedation (i.e. spinal anesthesia)
	1. Total number of surgical OB/GYN procedures per month (on average in the past 6 months)?	Minor # <hr/> Major #

<b>Management Guidelines</b>	
2. How often do you have management guidelines available for obstetrics?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)
3. How often do you have management guidelines available for maternal delivery?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)

## Human Resources

	<b>Workforce</b>	<b>Full time</b>	<b>Contracted (short-term)</b>	<b>Residents/trainees</b>
	4. OB/GYNs?	#	#	#
	5. Midwives?	#	#	#

6. How often are OB/GYN services available for 24 hours a day (on average in the past month)?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)
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**Interventions**

*Please ask questions in point in time context i.e. what is able to be done at time of assessment.*

Do you perform these procedures?									
	Yes/No	If Yes, how many procedures performed in the past month?	If No, why not?	Do you refer?	If you refer, is it due to... (mark ALL that apply)				
					Lack of skills?	Lack of staff?	Non-functioning equipment?	Lack of supplies/drugs?	Other?
<b>Obstetrics</b>									
7. Caesarean section	Y N	#		Y N					
8. Abdominal hysterectomy	Y N	#		Y N					
9. Repair of uterine perforation or rupture (intractable PPH)	Y N	#		Y N					
10. Normal delivery	Y N	#		Y N					
11. Manual removal of the placenta	Y N	#		Y N					
12. Vacuum-assisted delivery	Y N	#		Y N					
13. Repair of genital laceration/injury	Y N	#		Y N					
14. Comprehensive abortion care	Y N	#		Y N					
15. Surgery for ectopic pregnancy	Y N	#		Y N					
16. VIA	Y N	#		Y N					
17. Cryotherapy for precancerous cervical lesions	Y N	#		Y N					
18. Cervical biopsy	Y N	#		Y N					
19. Endometrial biopsy	Y N	#		Y N					
20. Tubal ligation	Y N	#		Y N					
21. Incision of hymen for imperforate hymen with hematocolpos and/or hematomata	Y N	#		Y N					
22. Surgical management of pelvic organ prolapse	Y N	#		Y N					
23. Surgical management of major benign and/or malignant gynecologic conditions	Y N	#		Y N					
24. Repair of obstetric fistula	Y N	#		Y N					

**Emergency and Essential Surgical Care Equipment and Supplies**

*Please ask questions in point in time context i.e. what is able to be done at time of assessment.*

**Supplemental Equipment for Use by Skilled Health Professionals**

	Absent	Available with shortages or difficulties	Fully available for all patients all the time	Remarks
25. Vaginal speculum				

**Financing**

<b>Cost</b>	
26. What is the average out-of-pocket cost to a patient for a C-section (procedure only)?	#
27. What is the average out-of-pocket cost to a patient for surgery-associated lodging (e.g. bed, overnight stays) per visit?  <b>Surgery-associated lodging:</b> defined as in a single visit, before returning home (include lodging for patient and lodging for the caretaker)	#
28. What is the average out-of-pocket cost to a patient for surgery-associated medication per visit?	#
29. What is the average out-of-pocket cost to a patient for other necessities (e.g. laundry/food) per visit?	#

**Information Management**

<b>Research Agenda</b>	
30. How many ongoing research projects does the department of obstetrics have?  Exclude resident, intern and student research projects.	#



**Surgical Sets**

<p>31. How many surgical sets are available for caesarean delivery?</p> <p><b>Missing:</b> defined as any part of a surgical set that is absent or non-functional</p>	<p>a) Complete #</p>
	<p>b) Incomplete #</p>
	<p>c) If incomplete, what is missing?</p>



# Anesthetist/Nurse

## Anesthetist/Nurse

### Infrastructure

<b>Quality and Safety</b>	
1. <b>For anesthetist/nurse to answer:</b> How often is the WHO surgical safety checklist utilized in the operating rooms?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)
2. <b>For data collector (if able):</b> Calculate the # of times the checklist is used in a random selection of 20 charts: <i># of charts with completed checklist ÷ 20</i>	#

<b>Operating Room</b>	
3. How many anesthesia machines do you have available for the operating theatres?	#
4. How many of those machines are regularly used?	#
5. If not in use, why? (e.g. machines not functional, surgical services not yet started)	
6. How often do you have an oxygen cylinder or concentrator supply with mask and tubing?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)
7. How often is a pulse oximetry used in the operating theater?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)
8. How often do you keep anesthesia-related records?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)

<b>Management Guidelines</b>	
9. How often do you have management guidelines available for anesthesia?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)
10. How often do you have management guidelines available for pain relief?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)



<i>Supplies</i>	
11. How often do you have a functioning <b>adult</b> pulse oximeter available?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)
12. How often do you have a functioning <b>pediatric</b> pulse oximeter available?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)
13. How often do you have <b>adult</b> blood pressure monitoring available?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)
14. How often do you have <b>pediatric</b> blood pressure monitoring available?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)
15. How often do you have <b>adult</b> ECG monitoring available?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)
16. How often do you have <b>pediatric</b> ECG monitoring available?	<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)

## Human Resources

<i>Workforce</i>		<i>Full time</i>	<i>Part time</i>	<i>Contracted (short-term)</i>	<i>Residents/interns/trainees</i>
17. Anesthesiologists physicians?		#	#	#	#
18. Other anesthesia providers:	BSc. anesthetists?	#	#	#	#
	MS anesthetists?	#	#	#	#
	Level 5 anesthesia nurses?	#	#	#	#
	Nurses?	#	#	#	#
	Health officers?	#	#	#	#
19. General doctors providing anesthesia?		#	#	#	#
20. How often is anesthesia care available for 24 hours a day (on average in the past month)?		<input type="checkbox"/> 0 (Never) <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% (Always)			





## Interventions

Please ask questions in point in time context i.e. what is able to be done at time of assessment.

Do you perform these procedures?									
	Yes/No	If Yes, how many procedures performed in the past month?	If No, why not?	Do you refer?	If you refer, is it due to... (mark ALL that apply)				
					Lack of skills?	Lack of staff?	Non-functioning equipment?	Lack of supplies / drugs?	Other?
<b>Anesthesia and Critical Care</b>									
21. Basic traumatic life support (BTLS)	Y N	#		Y N					
22. Advanced traumatic life support (ATLS), Pediatrics advanced life support (PALS)	Y N	#		Y N					
23. Local anesthesia	Y N	#		Y N					
24. General anesthesia:									
a) With intubation	a) Y N	#		a) Y N					
b) Without intubation	b) Y N	#		b) Y N					
25. Spinal anesthesia	Y N	#		Y N					
26. Epidural anesthesia	Y N	#		Y N					
27. Peripheral nerve blocks	Y N	#		Y N					
28. Procedural sedation	Y N	#		Y N					
29. LMA/advanced airway	Y N	#		Y N					
30. Mechanical ventilation	Y N	#		Y N					
31. Fiber optic intubation	Y N	#		Y N					
32. Blood patch	Y N	#		Y N					
33. Central venous catheter insertion	Y N	#		Y N					
34. Arterial catheter insertion	Y N	#		Y N					



## Anesthetist/Nurse

### Emergency and Essential Surgical Care Equipment and Supplies

*Please ask questions in point in time context i.e. what is able to be done at time of assessment.*

<b>Capital Outlays</b>					
		Absent	Available with shortages or difficulties	Fully available for all patients all the time	Remarks
35.	Resuscitator bag valve & mask ( <b>adult</b> )				
36.	Resuscitator bag valve & mask ( <b>pediatric</b> )				
37.	Stethoscope				
38.	Thermometer				
39.	Oropharyngeal airway ( <b>adult size</b> )				
40.	Oropharyngeal airway ( <b>pediatric size</b> )				

<b>Supplementary equipment for use by skilled health professionals</b>					
41.	Endotracheal tubes ( <b>adult</b> )				
42.	Endotracheal tubes ( <b>pediatric</b> )				
43.	IV infuser bags				
44.	Laryngoscope Macintosh blades with bulbs & batteries ( <b>adult</b> )				
45.	Laryngoscope Macintosh blades with bulbs & batteries ( <b>pediatric</b> )				



## Anesthetist/Nurse

<i>Items</i>	<i>Yes</i>	<i>No</i>	<i>Remarks</i>
46. Functional Anesthesia Machine			
47. Anesthesia machine			
48. Ambu bag			
49. Oral airways			
50. Nasal airways			
51. Perfuser			
52. Patient monitor			
53. Patient monitor for transport			
54. Esophageal stethoscope			
55. Blood or Fluid pumper			
56. Warming blanket			
57. Mechanical ventilator for transport			
58. Suction machine			
59. Capnogram			
60. Portable pulse oximeter			
61. Blood warmer			
62. Stethoscope			
63. Manual BP apparatus			
64. Oxygen gauge			
65. Oxygen cylinder			
66. Bougie (Adult)			
67. Bougie (Pediatric)			
68. Stylet (Adult)			
69. Stylet (Pediatric)			
70. Anesthesia trolley			
71. Oxygen concentrator			
72. Double lumen tube 35- 42			
73. Suction tip			



<i>Items</i>	<i>Yes</i>	<i>No</i>	<i>Remarks</i>
74. Urinary catheter			
75. Spinal needle 22-26			
76. Epidural set			
77. Tegaderm			
78. Insulated nerve block needles			
79. Central venous catheterization set			
80. Arterial line set with module			
81. Defibrillator			

<b>Pharmaceuticals</b>			
<b>Local Anesthetics</b>			
82. Lidocaine 1% with adrenaline			
83. Lidocaine 2% with adrenaline			
84. Lidocaine 1% without adrenaline			
85. Lidocaine 2% without adrenaline			
86. Bupivacaine 0.5%			
<b>General Anesthetics</b>			
87. Halothane			
88. Isoflurane			
89. Sevoflurane			
<b>Paralytics</b>			
90. Succinylcholine			
91. Rocuronium			
92. Vecuronium			
93. Pancuronium			
94. Atracurium			
95. Cisatracurium			



<i>Pharmaceuticals</i>				
		<i>Yes</i>	<i>No</i>	<i>Remarks</i>
<b>Sedatives</b>				
96.	Thiopental			
97.	Ketamine			
98.	Propofol			
99.	Etomidate			
<b>Analgesics</b>				
100.	Pethidine			
101.	Fentanyl			
102.	Sufentanil			
103.	Morphine			
104.	Alfentanil			
<b>Benzodiazepines</b>				
105.	Diazepam			
106.	Midazolam			
<b>Diuretics</b>				
107.	Furosemide IV			
<b>Vasopressors</b>				
108.	Noradrenaline			
109.	Dopamine			
110.	Dobutamine			
111.	Phenylephrine			
112.	Adrenaline			
113.	Ephedrine			



<i>Pharmaceuticals</i>			
	<i>Yes</i>	<i>No</i>	<i>Remarks</i>
<b>Beta-blockers</b>			
114. Labetolol			
115. Metoprolol			
116. Propranolol			
117. Esmolol			
<b>Steroids</b>			
118. Hydrocortisone			
119. Dexamethasone			
<b>Anti-emetics</b>			
120. Ondansetrone			
121. Metaclopramide			

<i>Pharmaceuticals</i>				
		<i>Yes</i>	<i>No</i>	<i>Remarks</i>
<b>IV Fluids</b>				
	122. Normal Saline			
	123. Dextrose in Normal Saline			
	124. 5% Dextrose			
	125. Ringer's Lactate			
<b>Miscellaneous</b>				
	126. Naloxone			
	127. Salbutamol inhaler			
	128. Dantrolene			
	129. Atropine			
	130. Glycopyrrolate			
	131. Neostigmine			
	132. Aminophylline			
	133. Lidocaine IV			
	134. Hydralazine			
	135. Amiodarone			
	136. Intralipid			
	137. 40% glucose			

**Information Management**

<i>Research Agenda</i>	
138. How many ongoing research projects does the department of anesthesia have?  Exclude resident, intern and student research projects.	#

