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HEALTH FACILITY ASSESSMENT
FOR SMALL AND SICK NEWBORN CARE
BASELINE COMPLETE REPORT

SAMPLE District Hospital

COUNTRY NAME

Date of HFA Visit – dd/mm/yyyy

HEALTH FACILITY ASSESSMENT FOR SMALL AND SICK NEWBORN CARE BASELINE COMPLETE REPORT

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List of Acronyms

Acronym	Expanded Meaning
BCG	Bacillus Calmette Guerin
CD4	Cluster of differentiation 4
CPAP	Continuous positive airway pressure
DHIS2	District health information system
GP	General practitioner
G6PD	Glucose phosphate dehydrogenase
HBIG	Hepatitis B immune globulin
IM	Intramuscular
IV	Intravenous
KMC	Kangaroo mother care
Ob/Gyn	Obstetrics and Gynecology
PMTCT	Prevention of mother to child transmission

Term	Definition
Not applicable	Does not apply to this facility
Not asked	This question was not asked at this facility
Not recorded	The response to this question was not recorded at this facility

Summary

Facility Overview

Item	Results
Name of facility	X
Type of facility	X
Ownership/operating agency	X
Facility has a specified catchment area	X
Catchment population (yyyy)	X
Urban/rural designation	X
Facility in designated hardship area	X

Small and Sick Newborn Care Patient Services Provided

Item	Results (yyyy)
Annual deliveries	X
Annual neonatal unit admissions	X
Annual neonatal referrals *into* facility	X
Annual neonatal referrals *out of* facility	X

Facility score

	Results (%)
Overall (max=2046)	49
Medical devices and supplies (max=1199)	37
Medical device requirements	34
Laboratory	73
Pharmacy	43
Biomedical workshop	8
Human resources (max=311)	53
People	34
Education	73
Enabling Environment	56
Infrastructure (max=259)	45
Electrical power	52
Medical gases and vacuum	0
Referral	33
Space and design	30
WASH	57
Information Systems (max=143)	52
Data collection	60
Data management	71
Data-driven decision making	50
Foundations	38
Family Centred Care (max=57)	16
In facility	15
Follow-up and development	33
Bereavement	0
KMC	25
Infection (max=60)	52
Prevention	60
Care	75
Detection	39
Governance (max=17)	88
Hospital management	88

I. BACKGROUND

Purpose

The Every Newborn Action Plan (ENAP) set new coverage targets and milestones for 2020-2025.[1] ENAP focusses on the coverage of antenatal, birth, postnatal and newborn care at national and sub-national levels. The ENAP coverage goal for small and sick newborn care is for 80% of districts in every country to have at least one inpatient newborn care unit by 2025.

In addition, the Sustainable Development Goals set out global targets for health to be achieved by 2030. This includes Sustainable Development Goal 3.2 (SDG 3.2) to reduce live births to less than 12 deaths per 1000 live births globally.[2] However, at the current rates of progress, about 60 low- and middle-income countries, primarily in Southern Asia and sub-Saharan Africa, will not meet this target. 38 of these countries, 74% of which are in sub-Saharan Africa, will need to double their current progress to meet this target.[3]

Newborn Essential Solutions and Technologies (NEST360) alliance (16 organisations, 11 in Africa) is working with governments in Malawi, Kenya, Tanzania, and Nigeria to reduce newborn deaths in hospitals by adopting a co-created health systems package with innovative technologies, mentoring for clinicians and engineers, and evidence-based implementation strategies for sustainability.[4] In order to improve survival, health facilities must be ready to provide high quality care to these small and sick newborns.

Health facility service readiness tools are widely used for measuring basic and comprehensive emergency obstetric care (eg United Nations Population Fund's Improving Emergency Obstetric and Newborn Care tool[5]) or wider service provision (eg World Health Organisation's (WHOs) service availability and readiness assessment[6]). Some of these tools include assessment of readiness to provide basic newborn care, especially in maternity services. However, existing tools do not assess service readiness for inpatient small and sick newborns and have particular gaps in assessing WHO level 2 care including for respiratory support, notably CPAP and for newborns requiring more medical devices, and a higher level of nursing and medical care.

To fill this measurement gap, a health facility assessment (HFA) tool was systematically developed to assess service readiness for small and sick newborn care, building on existing tools and designed to complement tools for maternity care. Co-design of the HFA was facilitated by NEST360, working with African governments and in partnership with United Nations Children's Fund (UNICEF) and other key experts. The HFA was also designed to be interoperable with other quantitative data collected by NEST360 and partners, including quality improvement data. Data will be used to support data-driven decision-making to improve quality of small and sick newborn care.

Methodology

Tool Development

The HFA was developed in 4 stages:

1. Matrix development including items required for small and sick newborn care based on norms and standards, notably WHO's
2. Mapping existing HFA tool questions against this matrix of required items
3. Co-design of a new HFA tool
4. Refining the HFA, with rollout and learnings in Malawi, Kenya, Tanzania, and Nigeria

Stage 1: Matrix development including items required for small and sick newborn care based on norms and standards, notably WHO's

Moxon et al. developed a list of over 600 key items for service readiness for inpatient small and sick newborn care.[7] The items were identified from existing international guidelines and standards for small and sick newborn care with a focus on drugs, devices and consumables, and guidelines. We expanded this initial list to include additional items and ingredients necessary for providing care for each of the WHO signal functions for newborn care.[8] New items primarily included detailed data on device availability and functionality, consumable supply availability, and facility and neonatal unit staffing. Existing HFA tools were mapped against this expanded list of items in Stage 2.

The WHO standards for small and sick newborn care were not yet available at this stage.

Stage 2: Mapping existing HFA tool questions against this matrix of required items

We identified 16 existing global and national tools that measure service readiness for small and sick newborn care (Table 1). Identified tools were mapped against the expanded list of items. Individual questions were considered to cover the relevant item if the question was an exact or partial match for the item.

Heat maps were developed to identify patterns showing what proportion of items were included in existing questions in each tool.

Tools covered a mean of 13.2% (range 2.2-32.7%) of key items. Global tools covered many key items for medicines, lab testing and supplies, and human resources, but had major gaps in neonatal unit infrastructure and information systems. The Improving Emergency Obstetric And Newborn Care (EmONC) and Every Premie tools were found to cover the highest proportion of key items.[5,9] These tools were used as a basis for development of the new HFA tool in Stage 3.

Table 1: List of all service readiness tools identified and mapped

Kenya	KEMRI Project Clinical Service Review and Supervision Tool - Quality of Neonatal Hospital Care
	KEMRI Project Maternity Structure Tool
	KEMRI Project Neonatal Structure Tool (RedCap)
	Kenya Public Health Checklist Forms
	CPHD health facility capacity assessment form
Malawi	CPAP Project Neonatal Care Indicators Checklist
	CPAP Project Ward Assessment Checklist
Tanzania	Star Rating Tool Hospital
	Star Rating Tool Health Center
	Star Rating Tool Dispensary
Nigeria	Appraising Neonatal Care in Tertiary Centers
Global	WHO: Standards for improving the quality of care for small and sick newborns in health facilities
	SPA
	SARA
	EmONC
	Health Facility EmONC/MNCH Assessment Tool 2016
	Every Preemie Scale Facility Assessment for Inpatient Care of Small and Sick Newborn

Stage 3: Co-design of a new HFA tool

Mapping existing tools in Stage 2 identified major gaps in assessment of service readiness for inpatient small and sick newborn care. A new health facility assessment tool was developed to fill this gap through 3 key stages: 1) initial development of the tool according to the expanded item list; 2) pilot testing and line by line review of the new tool in Malawi and Kenya; and 3) restructuring and expansion of tool according to implementation learnings and identification of gaps during stage 2.

Stage 3A: Initial co-design using the expanded item list

The EmONC and Every Premie tools were used as a basis for development of the new HFA tool. Some maternal components of the EmONC were adapted for neonatal care and all neonatal care components from the EmONC were included. Questions were also adapted from the Every Preemie tool. The new tool was restructured to align with the WHO health system building blocks[10].

Initial design was guided by a June 2019 workshop in Nairobi, Kenya with multi-country teams from Malawi, Tanzania, Nigeria and Kenya, including government, clinicians and data experts. The HFA drafted during the workshop was subsequently refined and then shared with 47 additional global experts in neonatal care, and feedback systematically included.

A priori considerations were also taken into account during this stage (Table 2).

Table 2: Feasibility for large-scale use and a priori considerations for development of a new tool measuring service readiness for small and sick newborns.

Assess level 1, level 2 and transition care for small and sick newborns
Complement maternal and obstetric service readiness tools (eg EmONC)
Feasible to conduct at a facility in one day
Linked to WHO norms and standards for small and sick newborns
Organized by WHO health systems building block linking to the NEST Theory of Change
Enabling prompt feedback to facilities and access to full GIS-linked dataset

Stage 3B: Pilot testing and initial review of the new tool in Malawi and Kenya

The paper tool was pilot tested at two central and district hospitals in Malawi by senior Ministry of Health (MoH) staff. After the initial pilot visits, the paper tool was coded into REDCap to streamline data collection and improve data quality. Through adaptation into REDCap, the tool was further refined.[11] The electronic REDCap tool was used for the second pilot training conducted on tablets at 8 central and district hospitals in Malawi. Malawi MoH staff with expertise in clinical care, biomedical device management and maintenance, human resources, and health and data systems, conducted another line-by-line review and role play before the pilot visits.

After two rounds of pilot testing in Malawi, the tool was reviewed and pilot tested in Kenya. The Kenya Committee of Experts (CoE), which includes senior MoH staff, UNICEF Kenya, and other key stakeholders, completed a line-by-line review of the tool and provided feedback. After this initial review, a second line-by-line review was conducted with experts including Kenya MoH staff, Center for Public Health and Development (CPHD) staff, and a team from Uganda. A third and final round of pilot testing was conducted at three county and referral hospitals in Kenya.

Between each round of pilot testing and review, feedback was incorporated. Existing questions were modified, new questions addressing gaps in the tool were added, and sections were restructured to streamline data collection.

Stage 3C: Restructuring and expansion of tool according to implementation learnings

Synthesizing feedback from pilot learnings and review led to restructuring the tool to improve visit flow during data collection and better align with the WHO health system building blocks. During this stage, key gaps in the tool identified through initial feedback were incorporated. These include expanded sections for governance and leadership, information systems, hand hygiene behaviour, and respectful and family centred care. In addition, supplementary modules were developed to assess service readiness components available primarily at higher level central and referral hospitals. These include more substantial sections assessing lab capacity for microbiology, infrastructure of the biomedical technician workshop, and capacity for preventive and corrective maintenance of devices. These expanded and additional sections were developed by adapting existing WHO and other global tools where possible (Table 1), and through consultation and review with experts within NEST360.

The WHO standards for small and sick newborn care were released during this stage.[12] A line-by-line comparison of the WHO standards and new HFA tool was conducted, and any key gaps in the new HFA tool were addressed.

Stage 4: Refining the HFA, with rollout and learnings in Malawi, Kenya, Tanzania, and Nigeria

This final stage of development involved additional line-by-line reviews with experts, including many mid-level and senior MoH staff in Malawi, Kenya, Tanzania and Nigeria.

After numerous rounds of testing, review and feedback, subsequent line-by-line reviews produced minimal requests for changes. Answer options were noted as appropriate across all country contexts and key gaps in the tool had been addressed.

Training and Data Collection

A four-day training was conducted for 10 representatives from within the Ministry of Health to serve as assessors for the HFA. The trainees had the following expertise: nursing, clinical and technical (engineering, laboratory and pharmacy, health information systems). Assessors were provided with training about the HFA tool content and structure, data quality, tablet use and REDCap software. Assessors conducted pilot visits at central and district hospitals in Malawi and Kenya.

HFA data collection was completed in one day at each site. Data were collected offline using the mobile REDCap application on Android tablets. Data quality and consistency checks were built into the REDCap projects through skip-logic and validation. Data were subsequently synced to the web-

based REDCap server at the end of each visit where additional data quality checks were completed. Data collected on paper were later entered to the web-based REDCap server by a data clerk in the central office.

Data Analysis

All the datasets are stored on servers of the designated country partner during data collection and post data collection. Data cleaning and verification took place at multiple stages. Initial data verification was completed by country teams after tablet-based collection and after syncing to the web-based REDCap server. Data were primarily checked for completeness and illogical responses at this stage.

Subsequently, data quality and cleaning scripts were developed in STATA for each HFA module. These scripts include finding empty fields, identifying and removing duplicate records, correcting structural errors, including typos and capitalisation errors, and cross-checking variables to look for implausible associations and inconsistencies. Missing data were assessed and recoded as appropriate. Variables were grouped and recoded, and new summary variables were derived to streamline data analyses.

Descriptive analyses were organised by WHO health systems building blocks using the facility as the unit of analysis. A 3-page summary report with key data was generated from the descriptive analyses (see summary below).

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II. HFA BASELINE SUMMARY REPORT

Health Facility Assessment Baseline Summary Feedback - SAMPLE
Facility: X Hospital
Assessment Date: dd/mm/yyyy

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Number of annual births (2019): X
Number of annual admissions to neonatal unit (2019): X
Facility level: District Hospital
Approximate population in catchment area: X

Infrastructure

Neonatal Unit Capacity		Designated Areas	
Number of cots	18	Designated area for high risk/acute	Yes
Neonatal unit capacity (incl. cot/radiant warmer/incubator)	19	Designated area for low risk/stable	Yes
Number of babies currently in neonatal unit	14	Inborn isolation area	Yes
% capacity filled	74%	Outborn isolation area	Yes
Frequency of more than 1 baby per cot	Sometimes	Neonatal admissions only to neonatal unit or KMC	Yes
Frequency of more than 1 baby per radiant warmer	Frequently	Area for examination and triage when newborn first arrives	Yes
Electric Power			
Fuel generator available in facility	Yes	Facility connected to electricity grid	Yes
Fuel generator functional	Not recorded	Stable power (no interruption) for last 7 days	No
Battery inverter available in facility	No	Lighting in neonatal unit covered by backup power	All lighting
Battery inverter functional	N/A	Equipment in neonatal unit covered by backup power	Some equipment
Solar power available in facility	No	No equipment damaged from electricity in last year	Yes
Solar power functional	N/A		
Electricity Safety		**Fire Safety**	
Floor free of cables (cables not running across floor)	Yes	Fire extinguisher available in neonatal unit	Yes
Voltage stabilizer on neonatal unit	No	Date of last inspection	31/07/2020
Power audit certification in last year	No	Neonatal evacuation plan available	No

N/A = Not applicable

Respectful & Family Centred Care

Respectful Care		KMC Capacity	
Functioning family toilets available	Yes	Number of KMC beds	3
Functioning bathing facilities available	Yes	Number of KMC beds that sit up	0
Visiting times on neonatal unit	Specific times	Number of KMC reclining chairs	1
Caretakers receive formal counselling before discharge	Yes	KMC beds meet demand	No

Health Facility Assessment Baseline Summary Feedback - SAMPLE
Facility: X Hospital
Assessment Date: dd/mm/yyyy

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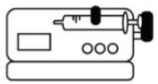
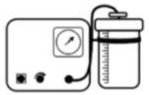
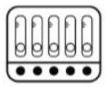
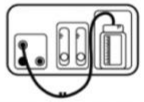
Medical Devices and Supplies

Device and Consumable Availability						
Digital Scale	Digital Thermometer	Radiant Warmer	Incubator	Phototherapy	Glucometer	Syringe Pump
						
0/1 Functional	3/3 Functional	1/1 Functional	0 Available	4/4 Functional	0 Available	0 Available
		Probes		*Spare bulbs*	*Glucosticks*	
		• Available, no stockout		• LED: Not available	• Not available	
				• Fluo: Not available		

Pulse Oximeter	Suction Pump	Flow Splitter	Bottled Oxygen	Oxygen Concentrator	CPAP
					
1/1 Functional	2/2 Functional	2/2 Functional	0 Available	3/3 Functional	2/2 Functional
Probes	*Catheters*		*Nasal prongs*		*Nasal prongs*
• Reus: Available, no stockout	• Size 5/6/8/10: Available		• 1mm: Available, no stockout		• Available, no stockout
• Cons: Available, no stockout			• 2mm: Available, no stockout		

Available = available at time of visit, Not available = not available at time of visit, no stockout = no stockout for last 4 weeks

No associated consumables tracked for device

Guidelines	Available	Accessible	Equipment Maintenance	
Thermal protection	Yes	No	Regular maintenance provided	Yes
Breastfeeding standards	Yes	Yes	Maintenance frequency	Monthly
KMC practice	Yes	Yes	Preventive maintenance system	Yes
Oxygen therapy	Yes	Yes	Corrective maintenance system	Yes
Fluids, volumes, medications	Yes	Yes	# Biomed techs/engineers	0
Phototherapy treatment	No	No		

Health Facility Assessment Baseline Summary Feedback - SAMPLE
Facility: X Hospital
Assessment Date: dd/mm/yyyy

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Human Resources

Staffing					
**includes pediatricians and neonatologists*	Nurse	Clinical Officer	Gen. Doctor	Spec. Doctor*	Data Clerk
Assigned exclusively to neonatal unit	9	0	0	0	0
On duty at time of visit	4	0	0	0	N/A
On duty the night before	1	0	0	0	N/A
Ratio of babies / staff during visit	14 / 4	N/A	N/A	N/A	N/A

Information Systems

Registers and Reporting	
Neonatal unit admissions register	Yes
Neonatal unit discharge register	Yes
KMC register	Yes
Inpatient clinical/medical notes	Yes
Electronic summary data submitted (DHIS2)	Yes
Mortality Audits	
MPDSR/mortality audit team in place	Yes
Mortality audit/MPDSR at least every 3 months	Yes

Infection Prevention

Wash			
No regular water shortage in neonatal unit	Yes	Staff toilets cleaning frequency	Daily
Backup water available in neonatal unit	Yes	Sharps container available	Yes
Sinks functioning in neonatal unit	Some	Red, yellow, and black bins available	Red only
Soap or hand sanitizer available	All areas	Trash bins collected at least once per day	Yes
Hand washing wall chart available	No	Autoclave available	No
Hand washing wall chart accessible	N/A	Autoclave functioning	N/A

Sharps container	Waste bin discarded meds.	Waste bin infectious	Waste bin anatomical	Autoclave	Soap	Sink	Handwashing guidelines
Available	Not available	Available	Not available	Not available	All areas	Some functioning	Not available

Laboratory and Pharmacy

Laboratory able to perform		In stock for last 3 months	
Culture on samples of blood	Not available	Gentamicin	Yes
Sensitivity on samples of blood	Not available	Benzylpenicillin	Yes
Culture on samples of CSF	Not available	Phenobarbitone	Yes
Sensitivity on samples of CSF	Not available	Caffeine or aminophylline	Yes
Serum bilirubin test	Available today	Vitamin K	Yes

III. HEALTH SYSTEMS BUILDING BLOCKS

1.INFRASTRUCTURE

1.A Facility Infrastructure

1.A.1 Patient Numbers and Beds

Item	Results
Number of beds in facility (in all departments)	X
Number of beds in the labor ward for maternity patients	X
Number of beds on the postnatal unit for maternity patients	X
Number of beds on the postnatal unit for newborns	X
Number of joint maternity and newborn beds on the postnatal unit	X
Number of beds in the neonatal unit	X
Number of beds dedicated exclusively to neonates in the pediatric unit	X
Refused admission or refered a neonate because of inadequate neonatal unit beds in the last year	X

1.A.2 Power and Water

1.A.2.1 Available Sources of Power

Item	Fuel Generator	Battery Inverter	Solar Power
Backup power available	Yes	No	Yes
Number of backup power sources available	3	0	3
Backup power sources functional at time of visit	Some	Not applicable	All
Maintenance contract in place	No	Not applicable	No

1.A.2.2 Condition of Power Systems

Item	Results
Facility connected to the electricity grid	Yes
Facility has an energy management plan	Yes
Power outage (exceeding 30 minutes) in the last 7 days	No
Sufficient fuel to run the fuel generator at the time of visit	Yes

1.A.2.3 Water

Item	Results
Main water source	Piped water from municipality
Location of water source	Onsite
Reliable backup water supply available	Yes
Main sources of backup water	Borehole (Hand pump),Well (Electric pump),Tank
Seasonal severe water shortage	No

1.A.3 Oxygen Systems, Fire Safety, and Other Infrastructure

1.A.3.1 Fire Safety

Item	Results
Facility conducts regular fire drills (at least once per year)	No
Functional accessible emergency exit door available	Yes

1.A.3.2 Oxygen Systems

Item	Results
Walled/piped oxygen available at the facility	No
Bulk liquid oxygen tank available at the facility	No
Bulk liquid oxygen tank functioning at time of visit	Not applicable
Oxygen plant available at the facility	No
Oxygen plant functioning at time of visit	Not applicable

1.A.3.3 Sterile Supply Department

Item	Results
Facility provides an onsite or offsite dedicated decontamination area or sterile supply department for medical devices and other equipment	Yes
The dedicated decontamination area or sterile supply department is operated by a licensed decontamination management service	Yes

1.A.4 Physical Areas Available

1.A.4.1 Relevant Physical Areas Available at the Facility

Item	Area present	Water*	Electricity*
*Yes = functioning at the time of the visit; No = not functioning at the time of the visit			
Labor and delivery ward	Yes	Yes	Yes
Postnatal unit	Yes	Yes	Yes
General operating theatre	Yes	Yes	Yes
Maternity theatre	No	Not applicable	Not applicable
Neonatal corner	No	Not applicable	Not applicable
Special newborn care unit	No	Yes	Yes
Neonatal intensive care unit	No	Not applicable	Not applicable
Paediatric ward	Yes	Yes	Yes
KMC unit	Yes	Yes	Yes
Laboratory	Yes	Yes	Yes
Blood bank	Yes	Yes	Yes
Pharmacy	Yes	Yes	Yes

1.A.4.2 Newborn care

Item	Result
Neonates admitted to the pediatric ward	No
Locations where small and sick newborns receive care	See details below
Dedicated newborn area	Special newborn care unit (separate neonatal unit)
Labour and delivery ward	No
Pediatric ward	No

Item	Result
KMC unit	Yes
Other:	Not applicable

1.A.5 Communication Systems and Infrastructure

1.A.5.1 Communication Methods Available for Referrals

Item	Available & Functional	Used for Referral
Landline telephone in the maternity area	Not available	Not applicable
Landline telephone in the neonatal area	Not available	Not applicable
Landline telephone elsewhere in facility	Not available	Not applicable
Cell phone (owned by facility)	Available and functional	Used
Cell phone (provided to individual staff)	Not available	Not applicable
Public telephone in the vicinity	Not available	Not applicable
Two-way radio	Available but not functional	Not applicable
Internet connection in the maternity area	Not available	Not applicable
Internet connection in the neonatal area	Not available	Not applicable
Internet connection elsewhere in facility	Not available	Not applicable

1.A.5.2 Communications Infrastructure

Item	Results
Dependable cell phone signal at the facility	Very dependable
Dependable internet signal at the facility	Somewhat dependable
Facility has access to a closed user group (CUG) system	No
Facility has policy to reimburse staff who use their cell phones for work-related calls	No
Locations with functioning computer available	See details below
Neonatal unit	No
KMC unit	No
Materinity ward	Yes
Postnatal unit	No
Paediatric ward	No
None of the above	No

1.A.6 Transportation

1.A.6.1 Transport for Referral

Item	Results
How newborns are transferred into this facility from another facility	By hand
How newborns are transferred out of this facility to another facility	By incubator/radiant warmer,By hand
Estimated distance to nearest referral facility (in kilometers)	X
Estimated time required to drive to the nearest referral facility (in minutes)	X

1.A.6.2 Available Modes of Transportation

Item	Total Available	Total functional
Motored vehicle ambulances (a four wheeled vehicle e.g. car, truck, lorry)	8	3
Motorized tricycle ambulances	3	2
Motorcycles	0	0
Bicycle ambulances	0	0
Motorized boats	0	0
Non-motorized boats (e.g. paddle boat, canoe)	0	0
Animal drawn carts	0	0
Stretchers (not part of ambulance)	0	0
Other:	0	0

1.A.6.3 Supportive Infrastructure for Motor Vehicles

Item	Results
Routine preventive maintenance schedule available	No
Person responsible for providing corrective maintenance to motor vehicles when needed	Yes
Funds available today for maintenance/repair if needed	No
Fuel management plan available	Yes
Sufficient fuel available to transport newborns at time of visit	Yes
Driver available to transport newborns at time of visit	Unknown
Nurse/paramedic available to transport newborns at time of visit	Yes

1.B Neonatal Unit Infrastructure

1.B.1 Neonatal Unit Capacity and Transfer

1.B.1.1 Neonatal Unit Capacity

Item	Results
Frequently = more than 2 times/week; Sometimes = less than once/week; Rarely = less than once/month; Never = less than once/three months	
Neonatal care provided 24 hours a day/7 days a week	Yes
Capacity of neonatal unit if 1 baby per cot, incubator or radiant warmer	X
Number of cots	X
Number of mobile baby cots with castors	X
Number of functional mobile baby cots with castors	Not recorded
Number of stationary baby cots without castors	X
Number of functional stationary baby cots without castors	X
Mattress available for every baby cot	Yes
Number of mattresses available	Not applicable
All baby cots have insecticide treated bednets	No
Distance between the closest two cots (in centimeters)	X
Number of babies currently in unit	X
Percent neonatal unit capacity filled	X
Percent neonatal unit beds filled	X
More than one baby per cot	Sometimes
More than one baby per radiant warmer	Frequently
More than one baby per incubator	Not Applicable (no incubator)

Item	Results
More than one baby per phototherapy light	Sometimes
Number of babies currently under phototherapy lights in the neonatal unit	X
Percent available phototherapy lights filled	X

1.B.1.2 Neonatal Transfers

Item	Results
Neonatal transfer method from the labor ward to the neonatal unit	See details below
Carried by hand	Yes
Carried by KMC	No
Transferred in an incubator/radiant warmer	No
Transferred in a cot	No
Other transfer method:	Not applicable
None specified	No
Neonatal unit is in the same building as the labor ward	Yes
Walk time from labor ward to neonatal unit	Less than a 5 minute walk
Neonatal unit is in the same building as the maternity theater	No
Walk time from maternity theater to neonatal unit	Less than a 5 minute walk

1.B.2 Neonatal Unit Dedicated Spaces

Item	Results
*Adequate space means there is enough space for all visitors.	
Neonatal Unit Areas	
Areas available in neonatal unit	See details below
High risk/acute area	Yes
Low risk/stable area	Yes
Area for those admitted outside the facility	No
Isolation room	Yes
Dedicated area for exam and triage upon newborn arrival	No
Other:	Not applicable
Nurses Station	
Nurses station or staff work area within the neonatal unit	No
Place for staff to sit (e.g. chair, bench)	Not applicable
Nurses can see every baby from the nurses' station	Not applicable

1.B.3 Neonatal Unit Temperature, Lighting, Oxygen Systems, Water and Fire Prevention

Item	Results
Neonatal Unit Temperature	
Functional heating arrangements in neonatal unit	Electric space heater
Electric space heaters	2
Space heaters placed appropriately	Yes
Functional room thermometer within neonatal unit	Yes
Number of rooms within the neonatal unit that have functional room thermometers	1
Ambient room temperature (°C) on day of visit	
Temperature of Room 1	Not recorded
Temperature of Room 2	Not applicable
Temperature of Room 3	Not applicable
Temperature of Room 4	Not applicable
Temperature of Room 5	Not applicable
Temperature of Room 6	Not applicable
Temperature of Room 7	Not applicable
Temperature of Room 8	Not applicable
Temperature of Room 9	Not applicable
Temperature of Room 10	Not applicable
Draught observed coming from any windows	Yes
Comments on draught from any windows	Broken window
Lighting	
Adequate lighting during the day	Yes
Adequate lighting at night	Yes
Oxygen	
Oxygen wall outlets/ports in the neonatal unit	No
Number of oxygen wall outlets/ports in the neonatal unit	0
Walled/piped blended oxygen/medical air in neonatal unit	No
Water	
Routine water shortage in neonatal unit	Yes
Reliable backup water supply available	Yes
Fire Prevention and Emergency Drills	
Fire extinguisher available	No
Fire extinguisher ever formally inspected for functionality	Not applicable
Date of last inspection	Not applicable
Facility has a neonatal evacuation plan in case of a fire	No
Emergency care drill on the neonatal unit in the last 12 months	No

1.B.4 Neonatal Unit Electricity and Power

1.B.4.1 General Electricity and Power

Item	Results
Sufficient outlets: all equipment can be plugged in without unplugging something else. Adequate means staff are able to easily carry out work.	
Power outages are impacting care on the neonatal unit	Yes
Outlets and Power Strips	
Sufficient electrical outlets in unit	Yes
Number of electrical outlets in unit	13
Number of power strips/surge protectors available for use	0
Number of plugs among all power strips/surge protectors that are available for use	Not applicable
Number of power strips/surge protectors in use	Not applicable
Number of devices currently connected to any of the power strips/surge protectors	Not applicable
Devices connected to the surge protectors at time of visit	Not applicable
Inline voltage surge protector (e.g. AVS) available	No
Cables observed on floor that can be tripped over on day of visit	No
Power Quality Assessment	
Voltage stabilizer available in unit	No
Power audit and certification completed in the last year	No
Equipment broken in the last year due to electricity problems	No
Facility conducts internal power quality assessments	No
Facility experiences power surges or lags	Not applicable
Appropriate power supply amperage given equipment on neonatal unit	Yes
Comments regarding amperage of the power supply	NA

1.B.4.2 Neonatal Unit Backup Power

Item	Fuel Generator	Battery Inverter	Solar Power
Backup power available	Yes	No	No
Neonatal unit covered by backup power	Yes	Not applicable	Not applicable
Backup power exclusively covers the neonatal unit	Yes	Not applicable	Not applicable
Neonatal unit lighting covered by backup power	All lighting	Not applicable	Not applicable
Neonatal unit equipment covered by backup power	All equipment	Not applicable	Not applicable

1.B.5 Admission and Referral Criteria

Item	Results
Neonatal Unit Admissions Criteria	
Criteria for inborn admission to neonatal unit	Yes
Criteria for outborn admission to neonatal unit	Yes
Criteria for admission to neonatal unit by age	Not Mentioned
General or specific criteria for admission to neonatal unit	Yes General
Specific criteria for admission to neonatal unit mentioned by the respondent	See details below
Birth asphyxia	Not Mentioned
Neonatal sepsis	Not Mentioned
Congenital abnormalities	Not Mentioned

Item	Results
Born before arrival	Not Mentioned
Low birth weight <2.5kg	Not Mentioned
Macrosomia > 4.5kg	Not Mentioned
Respiratory distress syndrome	Not Mentioned
Low apgar score	Not Mentioned
Suspected meconium aspiration	Not Mentioned
Prematurity	Not Mentioned
Birth trauma	Not Mentioned
Vacuum extraction	Not Mentioned
Rashes and septic spots	Not Mentioned
Local infections	Not Mentioned
Neonatal jaundice	Not Mentioned
Hypothermia	Not Mentioned
Unable to breastfeed	Not Mentioned
Fever	Not Mentioned
Prolonged rupture of membranes/maternal sepsis	Not Mentioned
Maternal hypertension	Not Mentioned
Maternal psychiatric condition	Not Mentioned
Neonatal Unit Discharge Criteria	
Specific criteria for discharge from neonatal unit mentioned by the respondent	See details below
Stable/no danger signs	Yes
Time stable before discharge	Not Mentioned
Finished medications/treatment	Not Mentioned
Minimum discharge weight	Not Mentioned
Feeding established (eg able to breastfeed)	Not Mentioned
Specific bilirubin level	Not Mentioned
Neonatal Admission to Pediatric Unit Criteria	
Criteria for inborn neonatal admission to pediatric unit	Not applicable (neonates never admitted to pediatric ward)
Criteria for outborn neonatal admission to pediatric unit	Not applicable (neonates never admitted to pediatric ward)
General or specific criteria for neonatal admission to pediatric unit	Not applicable (neonates never admitted to pediatric ward)
Specific criteria for neonatal admission to pediatric unit mentioned by the respondent	See details below
Meningitis	Not applicable (neonates never admitted to pediatric ward)
Neonatal sepsis	Not applicable (neonates never admitted to pediatric ward)
KMC Unit Admissions Criteria	
Specific criteria for admission to KMC unit mentioned by the respondent	See details below
Stable/no danger signs	Not mentioned
Minimum admission weight	1000 grams
Maximum admission weight	Not mentioned
Low birth weight	Yes
Prematurity	Not mentioned
Mothers willing to practice KMC	Yes
Discharged from NICU	Not mentioned
Feeding established (eg able to breastfeed)	Not mentioned

Item	Results
KMC Unit Discharge Criteria	
Specific criteria for discharge from KMC unit mentioned by the respondent	See details below
Stable/no danger signs	Not applicable (no KMC unit)
Minimum discharge weight	Not applicable (no KMC unit)
Mother educated/able to practice KMC	Not applicable (no KMC unit)
Feeding established (eg able to breastfeed)	Not applicable (no KMC unit)
Criteria for referring newborn to higher level facility	
General or specific criteria for newborn referral to higher level facility	Yes General
Specific criteria for newborn referral to higher level facility mentioned by the respondent	See details below
Oesphageal atresia	Not mentioned
Congenital abnormalities/birth defects	Yes
Not improving with treatment	Not mentioned
Hydrocephalus	Not mentioned
Bowel obstruction	Not mentioned
Imperforated anus	Not mentioned
Congenital heart disease/heart defects	Not mentioned
IV fluids required	Not mentioned
Blood transfusion required	Not mentioned
Ventilation required	Not mentioned
ECG required	Not mentioned
Echo required	Not mentioned
X-ray required	Not mentioned
Surgery required	Yes
Criteria for referring newborn to lower level facility	
Specific criteria for newborn referral to lower level facility mentioned by the respondent	See details below
Orthopaedic	Not Mentioned
Stable post-surgery	Not Mentioned
Physiotherapy	Not Mentioned
Ambulatory KMC	Not Mentioned
Continued care at health facility	Yes

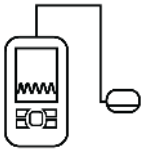
2. MEDICAL DEVICES AND SUPPLIES, PHARMACY, AND LABORATORY

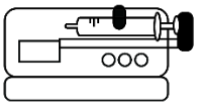
2.A Medical Devices and Supplies

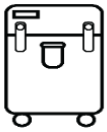
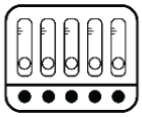
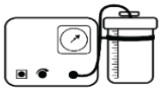
2.A.1 Neonatal Equipment & Supplies

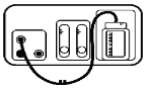
Item	Results	
Available = available at time of visit, Not available = not available at time of visit, No stockout = no stockout for last 4 weeks		
Diapers		
Baby nappies/diapers napkins (cloth)	Not available today	
Baby nappies/diapers (disposable)	Not available today	
Blood collection equipment & supplies		
Blood collection tubes (appropriate small size) e.g. vacuum tubes serum and EDTA (3ml and/or 6ml)	Not available today	
Blood collection tube holders	Available today and no stockout in last 4 weeks	
Blood collection vacuum tube needles 22G	Not available today	
Blood pressure accessories including neonatal sized blood pressure cuff	0 Available	0 Functional
Blood pressure apparatus (sphygmomanometer)	0 Available	0 Functional
Blood pressure transducer (for central arterial lines)	Not available today	
Capillary sample tubes (glass collection tubes)	Not available today	
Endotracheal tubes		
Endotracheal tubes size 2	Not available today	
Endotracheal tubes size 2.5	Not available today	
Endotracheal tubes size 3	Not available today	
Endotracheal tubes size 3.5	Not available today	
Endotracheal tubes (any size)	Not available today	
Electrocardiography		
Electrocardiogram (ECG) recorder	0 Available	0 Functional
ECG leads (reusable)	Not available today	
ECG leads (consumable)	Not available today	
ECG stickers	Not available today	
Imaging		
CT scanner (may be shared with other units)	0 Available	0 Functional
	Manufacturer: Not applicable	Model: Not applicable
Echocardiography	0 Available	0 Functional
MRI (may be shared with other units)	0 Available	0 Functional
Portable ultrasound scanner with appropriate probes (e.g. for cranial ultrasound) (may be shared with other units)	1 Available	0 Functional
X-ray viewer (negatoscope) (may be shared with other units)	0 Available	0 Functional

Item	Results	
Glucometer & supplies		
Glucometer	1 Available	1 Functional
	Manufacturer: SD Biosensor Inc	Model: Sd Check Gold
Glucometer test strips	Available today and no stockout in last 4 weeks	
Weighing scales		
Weighing scales for newborns (digital)	2 Available	2 Functional
	Manufacturer: Not applicable	Model: Ebsa-20,Ebsa-20
Weighing scales for newborns (manual)	0 Available	0 Functional
Other		
Clean blankets, towels, or linen (for drying baby)	Not available today	
Dressing trays/procedure trays (or equivalent) (sterile)	Not available today	
Dressing trolley (or equivalent)	Not available today	
Flashlight/torch	0 Available	0 Functional
Gauze (any)	Available today and no stockout in last 4 weeks	
Gauze (sterile)	Available today and no stockout in last 4 weeks	
Hemoglobinometer	1 Available	1 Functional
IV cannula (22G or 24G or 26G)	Available today and no stockout in last 4 weeks	
Identification bands	Not available today	
Infantometer (height board or mat)	0 Available	0 Functional
Intra-osseous needle (or 22G needles)	Not available today	
Kidney bowls (polypropylene or stainless steel)	Available today and no stockout in last 4 weeks	
Lumbar puncture needles (or 23G needles)	Not available today	
Magill's forceps	Available today and no stockout in last 4 weeks	
Measuring tape	Not available today	
Oxygen tubing	Available today and no stockout in last 4 weeks	
Padded boards and/or splints for neonates and preterm	Not available today	
pH monitors	0 Available	0 Functional
Recharger for batteries	1 Available	1 Functional
Sample collection tubes (pus, cerebrospinal fluid)	Available today and no stockout in last 4 weeks	
Sepsis diagnostics (bedside only)	0 Available	0 Functional
Scissors	Available today and no stockout in last 4 weeks	
Spacer	Not available today	
Sterile (low flow) lancet for heel pricks	Not available today	
Sterile surgical blades	Available today and no stockout in last 4 weeks	
Stethoscope (neonatal)	0 Available	0 Functional
Suture set	Available today and no stockout in last 4 weeks	
Swabs and/or cotton wool balls	Not available today	
Tourniquet (or rubber band for scalp vein)	Not available today	

Item	Results	
Wall clock/timer with second hand	1 Available	1 Functional
Nasogastric tubes		
Nasogastric (NG) tubes size 3.5 with caps	Not available today	
Nasogastric (NG) tubes size 4 with caps	Not available today	
Nasogastric (NG) tubes size 5 with caps	Not available today	
Nasogastric (NG) tubes size 6 with caps	Available today and no stockout in last 4 weeks	
Nasogastric (NG) tubes size 8 with caps	Not available today	
Nasogastric (NG) tubes size 10 with caps	Not available today	
Pulse oximetry		
Pulse oximeter 	2 Available	1 Functional
	Manufacturer: Guangdong Biolight Medtech Ltd, Devon Medical Systems	Model: M70,Pc-66
Neonatal sized pulse oximetry probes/sensors (reusable, match pulse oximeter)	0 Available	0 Functional
	Manufacturer: Not applicable	Model: Not applicable
Neonatal sized pulse oximetry probes/sensors (consumable, match pulse oximeter)	Not available today	
Suction catheters		
Suction catheters (size 5)	Not available today	
Suction catheters (size 6)	Available today and no stockout in last 4 weeks	
Suction catheters (size 8)	Not available today	
Suction catheters (size 10)	Not available today	
Thermometers		
Thermometers (digital for newborns that measure 32°C-43°C - must measure below 35.5°C degrees)	2 Available	1 Functional
	Manufacturer: Medline Industries, Inc.	Model: Mds9566,Ez-Life
Thermometers (analog for newborns that measure 32°C-43°C - must measure below 35.5°C degrees)	0 Available	0 Functional
Umbilical supplies		
Umbilical cord clamp (cord ties/sterile thread or sterile ligatures or clamp of Barr)	Available today and no stockout in last 4 weeks	
Umbilical vein catheters size 3.5	Not available today	
Umbilical vein catheters size 5	Not available today	
Urinary equipment		
Urinary catheter size 3. 4 or 5	Not available today	
Urine bags (pediatric)	Not available today	
Urine dipsticks (e.g. Multistix)	Not available today	
Patient monitors		
Patient monitors (at least 3 of: NIBP, HR, SpO2, ECG, RR, Temp) with accessories	0 Available	0 Functional
	Manufacturer: Not applicable	Model: Not applicable
Resuscitation equipment & supplies		
Bag, self-inflating (neonatal size)	10 Available	10 Functional

Item	Results	
Neonatal sized face masks (size 0)	5 Available	5 Functional
Neonatal sized face masks (size 1)	5 Available	5 Functional
Penguin sucker	Available today and no stockout in last 4 weeks	
T-piece resuscitator	0 Available	0 Functional
Resuscitation mannequin	Available today and no stockout in last 4 weeks	
Thermal protection equipment & supplies		
KMC wrappers	Not available today	
Continuous temperature monitor (not part of radiant warmer)	2 Available	1 Functional
	Manufacturer: Not applicable	Model: Not applicable
Incubator	0 Available	0 Functional
	Manufacturer: Not applicable	Model: Not applicable
Temperature probes (reusable)	Not available today	
Temperature probes (consumable)	Not available today	
Radiant warmer	2 Available	2 Functional
	Manufacturer: You Don Enterprise Ltd,Phoenix Medical Systems	Model: Nws-101
Radiant warmer probes	Not available today	
Embrace warmer	0 Available	0 Functional
Heated mattresses (e.g. for hot cots)	0 Available	0 Functional
Plastic bags/cling film	Not available today	
Newborn hats/caps (including preterm sizes)	Not available today	
Newborn mittens	Not available today	
Newborn socks	Not available today	
Hypoglycemia & IV fluids equipment & supplies		
Syringe pumps (single phase, delivers microdoses) 	0 Available	0 Functional
	Manufacturer: Not applicable	Model: Not applicable
Adhesive tape	Available today and no stockout in last 4 weeks	
Neonatal IV tubing/infusion set with burette 100-150ml, sterile, single use	Not available today	
IV infusion stands without castors	Available today and no stockout in last 4 weeks	
IV infusion stands on castors	Available today and no stockout in last 4 weeks	
Sterile needles (19-26 gauge) or butterfly set (23-25 gauge)	Available today and no stockout in last 4 weeks	
Sterile syringes (size 1)	Not available today	
Sterile syringes (size 2)	Available today and no stockout in last 4 weeks	
Sterile syringes (size 5)	Available today and no stockout in last 4 weeks	
Sterile syringes (size 10)	Available today and no stockout in last 4 weeks	
Stopcocks 2 or 3 way	Not available today	
Rapid blood sugar testing strips/paper reagent strips or equivalent	Not available today	
Infusion pumps (delivers larger doses than syringe pump)	0 Available	0 Functional
Safe oxygen delivery equipment and supplies		
	0 Available	0 Functional

Item	Results	
Apnea monitor	Manufacturer: Not applicable	Model: Not applicable
Respiratory rate monitor	0 Available	0 Functional
	Manufacturer: Not applicable	Model: Not applicable
Oxygen concentrator 	2 Available	2 Functional
	Manufacturer: Airsep Corporation,Airsep Corporation	Model: Newlife,Newlife
	Oxygen output (%): 97,85	
Oxygen, bottled/cylinder	0 Available	0 Functional
	Supplier: Not applicable	
Oxygen flow splitter for newborn 	2 Available	2 Functional
	Manufacturer: Caire Inc,Airsep Corporation	Model: Fm-069,Fm-069
Nasal prongs (1 mm)	Available today and no stockout in last 4 weeks	
Nasal prongs (2 mm)	Available today and no stockout in last 4 weeks	
Oxygen blenders	0 Available	0 Functional
Filters (spare, each type needed for concentrator)	Available today and no stockout in last 4 weeks	
Oxygen humidifiers	2 Available	2 Functional
Oxygen cannula	Available today and no stockout in last 4 weeks	
Suction pumps		
Suction pump (portable, electrical with accessories) 	1 Available	1 Functional
	Manufacturer: Not applicable	Model: Not applicable
Suction pump (manual, non-electric power dependent)	0 Available	0 Functional
	Manufacturer: Not applicable	Model: Not applicable
Assisted feeding equipment & supplies		
Feeding bottles	Not available today	
Breast pumps (battery powered)	0 Available	0 Functional
Breastmilk substitute	Not available today	
Breast model to demonstrate how to express milk	Available today and no stockout in last 4 weeks	
Collection containers (for expressed breastmilk)	Available today and no stockout in last 4 weeks	
Dolls for nurses to model position and attachment for breastfeeding	Available today and no stockout in last 4 weeks	
Feeding cups	Available today and no stockout in last 4 weeks	
Feeding syringes (any)	Available today and no stockout in last 4 weeks	
Feeding syringes (sterile)	Available today and no stockout in last 4 weeks	
Litmus paper/testing strips (or equivalent)	Not available today	

Item	Results	
Phototherapy equipment & supplies		
Phototherapy units – LED	0 Available	0 Functional
	Manufacturer: Not applicable	Model: Not applicable
	Bulb output: Not applicable	Bulb last changed: Not applicable
	Light distance from baby (in cm): Not applicable	Bulb output if light is 35cm from baby: Not applicable
Spare phototherapy LED bulbs	0 Available	0 Functional
	Manufacturer: Not applicable	Model: Not applicable
Phototherapy units – fluorescent	2 Available	2 Functional
	Manufacturer: Ningbo David Medical Device,Ningbo David Medical Device	Model: Xhz-90,Xhz-90
	Bulb output: 20,7.2	Bulb last changed: Not applicable
	Light distance from baby (in cm): 30,60	Bulb output if light is 35cm from baby: 14,11
Spare phototherapy fluorescent bulbs	0 Available	0 Functional
	Manufacturer: Not applicable	Model: Not applicable
Bilirubinometer	0 Available	0 Functional
	Manufacturer: Not applicable	Model: Not applicable
Test strips for bilirubinometer	Not available today	
Transcutaneous bilirubinometers	0 Available	0 Functional
	Manufacturer: Not applicable	Model: Not applicable
Photolight meter and/or phototherapy calibrator	0 Available	0 Functional
	Manufacturer: Not applicable	Model: Not applicable
Eye patches/eye shields	Not available today	
Exchange transfusion sets (may be any unit)	Not available today	
Icterometer	Not available today	
CPAP equipment & supplies		
CPAP driver system with accessories 	2 Available	2 Functional
	Manufacturer: Hadleigh Health Technologies,Hadleigh Health Technologies	Model: Pumani Bcpap,Pumani Bcpap
CPAP tubing	Available today and no stockout in last 4 weeks	
CPAP nasal canula	Not available today	
CPAP prongs	Available today and no stockout in last 4 weeks	
CPAP hats	Available today and no stockout in last 4 weeks	
Distilled water	Not available today	

Item	Results	
Mechanical ventilation equipment & supplies		
Respirator/ventilators plus accessories	0 Available	0 Functional
	Manufacturer: Not applicable	Model: Not applicable
Portable x-ray (may be shared with other units)	0 Available	0 Functional
iSTAT machine (hand-held blood gas analyzer)	0 Available	0 Functional
Cartridges for iSTAT	Not available today	
Infant laryngoscope	0 Available	0 Functional
Laryngoscope light bulb (spare)	Not available today	
Transilluminators	0 Available	0 Functional
Chest drain set	Not available today	
Drainage tubing and under water seal drainage bottle plus accessories	Not available today	
CO2 detector (capnometer)	0 Available	0 Functional
Retinopathy of prematurity equipment & supplies		
Indirect ophthalmoscope (with small pupil adjustments)	0 Available	0 Functional
Condensing lenses 20D for indirect ophthalmoscope	Not available today	
Condensing lenses 28D for indirect ophthalmoscope	Not available today	
Neonatal lid speculums (Alfonso)	Not available today	
Scleral depressors (Schoket/wire vectis)	Not available today	
Solution for corneal wetting (e.g. Ringers lactate)	Not available today	
Laser (may be shared with other units)	0 Available	0 Functional
Portable diode/green laser with indirect delivery system (may be shared with other units)	0 Available	0 Functional
Laser goggles	Not available today	
Therapeutic Hypothermia		
Cooling mattress or Mira cradle*	0 Available	0 Functional

2.A.2 Maintenance and Repair

2.A.2.1 Repair: Neonatal Unit

Item	Results
Dedicated technician available for repairing equipment at facility	Yes
Method for contacting technician when equipment breaks	Fill out form
Time for technician to arrive when equipment breaks	Within a week
Confidence that equipment will be returned after giving it to a technician	Very confident
Frequency of maintenance provided by the technician on equipment in the neonatal unit	At least once per week
Maintenance schedules labeled on the oxygen concentrators	Yes

2.A.2.2 Repair: Biomedical Workshop

Item	Results
Inventory list of all equipment available	No
Technician employed by	Ministry of Health
Repair of medical equipment free for the facility	Yes
Spare parts for broken equipment funded by	Hospital
Biggest barrier to repairing equipment	Lack of spare parts

2.A.2.3 Maintenance Services Provided and Training

Item	Service provided at this facility	Technician trained during pre-service training	Technician has taken a course	Technician has received on the job training
Repair of CPAP machines	Yes	No	Yes	No
Repair of oxygen concentrators	Yes	No	Yes	No
Routine maintenance of oxygen concentrators	Yes	No	Yes	Yes
Repair of phototherapy lights	Yes	No	No	No
Routine maintenance of phototherapy lights	Yes	No	Yes	No

2.A.2.4 Biomedical Technician Workshop Spare Parts

Item	Results
Dedicated workshop area available	Yes
Personal protective equipment (PPE) available in the workshop	Overalls/jumpsuit,Gloves (reusable),Face mask (surgical)
General spare parts available	
Power cables	Not available today
9V Batteries	Not available today
AA batteries	Not available today
AAA batteries	Not available today
Fuses (various)	Not available today
Spare parts available for glucometers	
Batteries	Not available today
Spare parts available for pulse oximeters	
Neonatal sized pulse oximetry probe (reusable, clip)	Not available today
Neonatal sized pulse oximetry probe (reusable, wrap)	Not available today
Recharger for batteries	Not available today
Spare parts available for radiant warmers	
Temperature probe	Not available today
Circuit board (control)	Not available today
Circuit board (heating element)	Not available today
Power supply unit	Not available today
LCD	Not available today
Heating element	Not available today
Spare parts available for for incubators	
Circuit board (control)	Not available today
Heating element	Not available today
Temperature probe	Not available today
Fan	Not available today
Control panel (membrane or LCD)	Not available today
Spare parts available for oxygen cylinders	
Pressure regulator	Not available today
Stop valve	Not available today

Item	Results
Cap	Not available today
Pressure gauge	Not available today
Flowmeter	Not available today
Pigtail with Safety Wire	Not available today
Spare parts available for oxygen concentrators	
Flowmeter	Not available today
Circuit board (control)	Not available today
Circuit board (oxygen monitoring)	Not available today
Circuit board (fan)	Not available today
Fan	Not available today
Solenoid valves (4-way)	Not available today
Solenoid valves (equalization)	Not available today
Molecular sieve beds	Not available today
Power supply unit	Not available today
Intake Filter (internal, fine particle)	Not available today
Intake Filter (external, gross particle)	Not available today
Resevoir tank	Not available today
Resonator	Not available today
Compressor	Not available today
Compressor rebuild component	Not available today
Starting capacitor	Not available today
Spare parts available for oxygen flow splitters	
Flowmeter	Not available today
Spare parts available for suction pumps (portable, electrical with accessories)	
Pump assembly	Not available today
Vaccuum gauge	Not available today
Filter (bacterial)	Not available today
Collection reservoir	Not available today
Collection reservoir lid	Not available today
Power supply unit	Not available today
Spare parts available for suction pumps (manual, non-electric power dependent)	
Piston assembly	Not available today
Vaccuum gauge	Not available today
Filter (bacterial)	Not available today
Collection reservoir and lid	Not available today
Spare parts available for LED phototherapy lights	
Circuit board (control)	Not available today
Power supply unit	Not available today
LED circuit or module	Not available today
Control panel (membrane or LCD)	Not available today
Spare parts available for fluorescent phototherapy lights	
Fluorescent bulb	Not available today
Power supply unit	Not available today
Spare parts available for CPAP driver system (standard or bubble CPAP) with accessories	
Pump assembly	Not available today
Filter (internal, pump)	Not available today
Flowmeter	Not available today

Item	Results
O-ring	Not available today
Power supply unit	Not available today

2.A.2.5 Biomedical Technician Workshop Tools

Item	Results
Digital Multi meter, digital, LED, with accessories; comparable or similar to Fluke brand piece	Available today and no stockout in last 4 weeks
Penlight torch piece	Not available today
Pocket magnifier piece	Not available today
160 mm combination pliers (heavy duty) piece	Not available today
Junior hack saw and blade piece	Not available today
Hammer, soft-faced; 1 lb. piece	Not available today
Hammer, ballpein; 1 lb. piece	Not available today
Soldering station with iron; 240 Vac, 300-500 watts	Not available today
Soldering wire	Not available today
Soldering tip cleaner (solution or wire sponge)	Not available today
Desoldering pump or sucker	Not available today
Solder braid wick	Not available today
Imperial hex (Allen) key set	Not available today
Tape measure; 3 meters; metal, metric piece	Not available today
Metric hex (Allen) key set	Not available today
Parallel tip screw driver; 6 x 3/16 in. piece	Not available today
Flared screw driver; 4 x ¼ in piece	Not available today
Diagonal cutter; 130 mm heavy duty piece	Not available today
Straight tweezers piece	Not available today
Polycarbonate brass trimmer set (7 items)	Not available today
Insulated inspection screw driver (165 mm) piece	Not available today
Offset blade screw driver (2x6mm) pieces	Not available today
Adjustable wire stripper/crimping tool combination; 0.25 to 0.8 mm piece	Not available today
Terminal screw driver piece	Not available today
1.5 mm slot screw driver piece	Not available today
2.5 mm slot screw driver piece	Not available today
Reversible screw driver (No.1 and ¾ in. Blades) each	Not available today
Engineer's files; wooden handle; hand, square, warding, half round, round and three square in plastic wallet set	Not available today
Tx 8, Tx 10, Tx 15 and Tx 20 Torx	Not available today
1.5 mm and 2.5 mm ball end drivers	Not available today
1.5mm and 2.5 mm nut driver	Not available today
Bevelled cutter; 4 in. piece	Not available today
Small snipe nose pliers piece	Not available today
Interchangeable Jeweller's screw drivers with 3 flats and 2 crosshead bits set	Not available today
4 in. and 6 in. Adjustable spanner each	Not available today
150 mm utility pliers (heavy duty) piece	Not available today
Snap-off blade knife piece	Not available today

2.A.2.6 Biomedical Technician Workshop Storage

Item	Results
Storage location for new equipment	
Storage location for new equipment available	Yes
Storage location for new equipment free and protected from insects, birds and rodents	No
Storage location for new equipment visibly clean at time of visit	No
Storage location for new equipment secured	Yes
Ventilation in the storage location for new equipment	Yes
Minimum documentation available for each equipment order	Date of receipt,Name and description,Quantity received
Date of receipt	Yes
Name and description	Yes
Quantity recieved	Yes
Name and address of supplier	No
Expiry date (if applicable)	No
None	No
Location for decommissioned equipment available	Yes
Available in the storage location for new equipment at time of visit	
Pallet storage/appropriate racking	Available today
Temperature and relative humidity monitoring and recording systems	Not available today
Fire protection and fighting equipment	Not available today
Warning and information signs	Not available today
Quality assurance system and record keeping	Not available today
Controlled access (e.g. sign in sheet)	Not available today
Lighting sufficient to view all racking areas	Available today
6x6 m or more free space for orderly packing, loading & unloading of equipment	Available today
Outside space for loading/unloading equipment	Available today
Transport structures (picking trolley, etc.)	Available today
First aid kit	Not available today
Adequate PPE (dust mask, safety goggles, etc.)	Not available today
Workshop Space and Organization	
Maintenance workshop has an independent space	Yes
Devices sorting system used	No sorting system used

2.A.2.7 Biomedical Technician Workshop Systems

Item	Results
Documentation	
Documentation available in the workshop	See details below
Corrective maintenance Job cards	No
Planned preventive maintenance job cards	No
Stock cards	No
Tool requisition register	No
Spare parts requisition register	No
Equipment/asset tags	No
Decommissioning records	No
Procurement records	No
None	Yes
Planned Preventive Maintenance	
Planned Preventive Maintenance System in use	Yes
Wards covered by the Planned Preventive Maintenance System	Neonatal unit,Postnatal unit,Labour & delivery ward
Specific staff allocated to each ward (can be assigned to one ward or multiple wards)	No
Frequency of scheduled preventive maintenance	Monthly
Corrective Maintenance	
Corrective Maintenance System in use	Yes
Wards covered by the Corrective Maintenance System	Neonatal unit,Postnatal unit,Labour & delivery ward
Staff allocated for corrective maintenance	By availability
Existing referral system in use to send devices offsite for maintenance	Yes
Corrective repairs documented	No
Decommissioning	
Decommissioning system in use	No
Clear, written procedure for decommissioning	Not applicable
Included in clear written procedure	See details below
Decommission	Not applicable
Decontaminate	Not applicable
Eliminate	Not applicable
None	Not applicable
Included in decommissioning procedure	See details below
Request to decommission (user/biotech)	Not applicable
Decommission confirmation (manager/biotech)	Not applicable
Decommission approver (manager/MOH)	Not applicable
Clear points of contact at each decommissioning stage	Not applicable
None	Not applicable
Included in decontaminating procedure	See details below
Disassemble	Not applicable
Manual cleaning	Not applicable
Mechanical cleaning	Not applicable
Disinfect	Not applicable
None	Not applicable
Included in eliminating procedure	See details below

Item	Results
Disposal	Not applicable
Reuse	Not applicable
Refurbish	Not applicable
Reprocess	Not applicable
Upgrade	Not applicable
Donate	Not applicable
Sell	Not applicable
Trade-in	Not applicable
Reassign internally	Not applicable
None	Not applicable
Inventory of decommissioned equipment	No
Challenges to decommissioning equipment	Long process,Too many approvers,Lack of familiarity (at any level, e.g. approver, bio,No plan for device replacement
Equipment Leasing and Servicing Contracts	
Equipment leasing and servicing contracts in use	No
Service provider assessment procedure includes	See details below
Responsiveness to fault (e.g. within 48 hours)	Not applicable
Prior programme of attendance for servicing equipment	Not applicable
Timely reports produced	Not applicable
Timely job cards produced	Not applicable
Responsiveness to requested interventions/issues	Not applicable
Responsibility in assessing when necessary	Not applicable
Responsibility in intervening when necessary	Not applicable
Appropriate skills transfer provided across devices	Not applicable
None of the above	Not applicable
Electronic Maintenance System	
Electronic maintenance system in use	No
Name of the system	Not applicable
Electronic maintenance system covers	See details below
Equipment Inventory	Not applicable
Spare Parts Inventory	Not applicable
Planned Preventive Maintenance	Not applicable
Corrective Maintenance Record	Not applicable
Spare Parts Tracking	Not applicable
Reporting	Not applicable
Repair Library	Not applicable
Decommissioning	Not applicable
Other	Not applicable
Reports	
Monthly reports developed to report to	See details below
Hospital admin	No
Regional/District health officers	No
Ministry of Health (national)	No
None	Yes
Unknown	No
Other	Not applicable

Item	Results
Infrastructural issues (e.g. power or water interruptions) included in reports	No
Equipment maintenance issues included in reports	No
Reports organized and available for review	No
Date of the most recent report	Not applicable
Equipment Procurement	
Procurement plan in place for medical devices	No
Guidelines or a system for receiving equipment donations	No
Meetings that include biomedical or maintenance staff	Budget planning

2.B Pharmacy

2.B.1 Pharmacy Systems

Item	Results
*Up-to-date indicates that five randomly selected cards are up-to-date at the time of the visit.	
Pharmacy/drugstore available	Yes
Pharmacy accessible 24/7	No
Major source of medicines	Government supplier
Minor source of medicines	Non-governmental organization/bilateral/multilateral
Drug inventory register/system available	Yes
Frequency of drug stock inventory	At least once per month
Up-to-date* drug inventory register/system available	Yes
When drugs are ordered	Same time each week/month/quarter
Primary source of gloves, syringes, and other medical supplies	Government supplier
Secondary source for gloves, syringes, and other medical supplies	Non-governmental organization/bilateral/multilateral
Most common cause of delay in delivery of supplies	Stockout at the central store
Second most common cause of delay in delivery of supplies	No other causes of delays
"First-expired-First-out" system for supply management used	Yes
Regularly used mechanisms to ensure expired drugs are not distributed	Yes
Drugs stored away from the ground	Yes
Functioning thermometer indicating room temperature in the pharmacy	Yes
Facility has at least one functioning electric/gas (liquid or compressed) refrigerator	Yes
Facility has at least one functioning solar refrigerator	No
Drugs available free of charge to neonates	See details below
Gentamicin	Yes
Benzylpenicillin	Yes
Phenobarbitone	Yes
Amoxicillin	Yes
Ampicillin	Yes
Caffeine or Aminophylline	Yes
Vitamin K	Yes
Prices of drugs publicly displayed anywhere in the hospital	No
Stockout of following medicines in last 3 months	See details below
Gentamicin (injection)	No
Benzylpenicillin	No
Phenobarbitone	No

Item	Results
Caffeine or aminophylline	No
Vitamin K	No
Amoxicillin	No
Ampicillin	Yes
Action if drug is out of stock	Borrow from a different facility

2.B.2 Essential Drug Availability at Central Pharmacy

Drug	Availability
Available = available at time of visit, Not available = not available at time of visit, No stockout = no stockout for last 4 weeks	
Antiretrovirals	
Azidothymidine/Zidovudine (AZT) (oral)	Available today and no stockout in last 4 weeks
Nevirapine (NVP) (oral)	Available today and no stockout in last 4 weeks
IV fluids	
Dextrose 10% with normal saline	Not available today
Dextrose 5% with normal saline	Available today and no stockout in last 4 weeks
Dextrose/glucose 10%	Not available today
Potassium chloride (KCL) 7.5%, 10%, 15%	Not available today
Sodium chloride 0.9%	Available today and no stockout in last 4 weeks
Ringer's lactate	Available today and no stockout in last 4 weeks
Water for injection	Available today and no stockout in last 4 weeks
Antibiotics	
Amoxicillin (oral suspension)	Available today and no stockout in last 4 weeks
Amoxicillin (injection)	Not available today
Amikacin	Not available today
Ampicillin (IV or IM)	Not available today
Ampicillin (oral)	Not available today
Benzathine benzylpenicillin (IM)	Available today and no stockout in last 4 weeks
Benzylpenicillin (Penicillin G) (IV or IM)	Not available today
Cefotaxime (IV or IM)	Not available today
Ceftriaxone (IV or IM)	Available today and no stockout in last 4 weeks
Flucloxacillin/cloxacillin (IV/IM)	Not available today
Flucloxacillin (oral)	Not available today
Gentamicin (IV or IM)	Available today and no stockout in last 4 weeks
Isoniazid (oral)	Available today and no stockout in last 4 weeks
Meropenem	Not available today
Metronidazole (IV)	Available today and no stockout in last 4 weeks
Metronidazole (oral)	Available today and no stockout in last 4 weeks
Piperazine	Not available today
Penicillin G Procaine (IM)	Not available today
Procaine benzylpenicillin (IM)	Not available today
Tetracycline 1% eye ointment	Not available today
Vancomycin	Not available today
Antibiotic drops (moxifloxacin/betadine)	Not available today
Anticonvulsants	
Paraldehyde (rectal)	Not available today
Phenobarbital (IV or IM)	Available today and no stockout in last 4 weeks
Phenobarbital (oral)	Available today and no stockout in last 4 weeks

Drug	Availability
Phenytoin (IV)	Not available today
Vaccinations	
BCG	Available today and no stockout in last 4 weeks
Hepatitis B	Available today and no stockout in last 4 weeks
Oral poliomyelitis	Available today and no stockout in last 4 weeks
Tetanus immunoglobulin (HTIG) (IM)	Available today and no stockout in last 4 weeks
Analgesics	
Morphine (IV)	Available today and no stockout in last 4 weeks
Morphine (oral)	Available today and no stockout in last 4 weeks
Paracetamol (oral)	Available today and no stockout in last 4 weeks
Paracetamol (suppository)	Not available today
Paracetamol (injection)	Not available today
Corticosteroids	
Dexamethasone (IM)	Available today and no stockout in last 4 weeks
Emergency drugs	
Adrenaline/epinephrine (IV)	Available today and no stockout in last 4 weeks
Calcium gluconate 10% (injection)	Not available today
Hydrocortisone (injection)	Not available today
Naloxone (IV)	Not available today
Other drugs	
Acyclovir (IV)	Not available today
Acyclovir 3% topical eye ointment	Not available today
Aminophylline	Available today and no stockout in last 4 weeks
Anti-rho (D) immune globulin (injection)	Not available today
Artificial teardrops	Not available today
Caffeine citrate (oral)	Not available today
Caffeine citrate (IV)	Not available today
Chlorhexidine digluconate 7.1% gel (delivering 4% chlorhexidine)	Available today and no stockout in last 4 weeks
Dilating eye drops (tropicamide 0.5% + phenylepherine 2.5%)	Not available today
Ethambutol	Available today and no stockout in last 4 weeks
Ferrous fumarate (oral syrup)	Not available today
Folic acid	Available today and no stockout in last 4 weeks
Fluconazole (IV)	Available today and no stockout in last 4 weeks
Fluconazole (oral)	Available today and no stockout in last 4 weeks
Furosemide (IV)	Available today and no stockout in last 4 weeks
Furosemide (oral)	Not available today
Glycerin chip	Not available today
Hepatitis B immune globulin (HBIG)	Not available today
Human milk fortifier	Not available today
Lidocaine solution	Available today and no stockout in last 4 weeks
Local aneasthetic eye drops (proparacaine 0.5%)	Not available today
Miconazole cream (or equivalent e.g. gentian violet)	Available today and no stockout in last 4 weeks
Multivitamin	Not available today
Nystatin (oral solution)	Available today and no stockout in last 4 weeks
Nystatin cream	Not available today
Oral rehydration solution	Available today and no stockout in last 4 weeks

Drug	Availability
Phosphate solution	Not available today
Sucrose 30% (oral)	Not available today
Surfactant	Not available today
Vitamin K1 (Phytomenadione) (IM or IV)	Available today and no stockout in last 4 weeks
Water based lubricant	Not available today
Zinc oxide cream	Not available today

2.B.3 Essential Drug Availability on Neonatal Unit

Item	Results
Available = available at time of visit, Not available = not available at time of visit, No stockout = no stockout for last 4 weeks	
Antiretrovirals	
Azidothymidine/Zidovudine (AZT) (oral)	Not available today
Nevirapine (NVP) (oral)	Available today and no stockout in last 4 weeks
IV fluids	
Dextrose/glucose 10%	Not available today
Sodium chloride 0.9%	Available today and no stockout in last 4 weeks
Ringer's lactate	Available today and no stockout in last 4 weeks
Water for injection	Available today and no stockout in last 4 weeks
Antibiotics	
Amoxicillin (oral suspension)	Available today and no stockout in last 4 weeks
Amoxicillin (injection)	Not available today
Amikacin (injection)	Not available today
Ampicillin (IV or IM)	Not available today
Benzathine benzylpenicillin (IM)	Not available today
Benzylpenicillin (Penicillin G) (IV or IM)	Available today and no stockout in last 4 weeks
Cefotaxime (IV or IM)	Not available today
Ceftriaxone (IV or IM)	Available today and no stockout in last 4 weeks
Flucloxacillin/cloxacillin (IV/IM)	Not available today
Gentamicin (IV or IM)	Available today and no stockout in last 4 weeks
Meropenem	Not available today
Tetracycline 1% eye ointment	Available today and no stockout in last 4 weeks
Anticonvulsants	
Paraldehyde (rectal)	Not available today
Phenobarbital (IV or IM)	Available today, but stockout in last 4 weeks
Analgesics	
Paracetamol (oral)	Available today and no stockout in last 4 weeks
Paracetamol (injection)	Not available today
Emergency drugs	
Adrenaline/epinephrine (IV)	Not applicable
Calcium gluconate 10% (injection)	Not applicable
Hydrocortisone (injection)	Not applicable
Naloxone (IV)	Not applicable
Others	
Acyclovir (IV)	Not available today
Aminophylline	Available today and no stockout in last 4 weeks
Caffeine citrate (oral)	Not available today
Chlorhexidine digluconate 7.1% gel (delivering 4% chlorhexidine)	Not available today

Item	Results
Furosemide (IV)	Not available today
Miconazole cream (or equivalent e.g. gentian violet)	Available today and no stockout in last 4 weeks
Multivitamin	Not available today
Nystatin (oral solution)	Available today and no stockout in last 4 weeks
Vitamin K1 (Phytomenadione) (IM or IV)	Available today, but stockout in last 4 weeks
Water based lubricant	Not available today

2.C Laboratory

2.C.1 Laboratory Systems

Item	Results
Facility has laboratory	Yes
Laboratory operational 24 hours per day/7 days per week	Yes
Laboratory has backup power	Yes
Type of backup power	Solar Power
Laboratory lighting covered by the backup power	All lighting
Laboratory equipment covered by the backup power	All equipment
Biosafety guidelines available	Yes
Internal quality control guidelines available	No
Standard operating procedures (SOPs) available	Yes

2.C.2 Laboratory Equipment and Supplies

2.C.2.1 Equipment and Supplies For Provision of Donor Blood for Transfusion

Item	Results	
Available = available at time of visit, Not available = not available at time of visit, No stockout = no stockout for last 4 weeks		
Supplies and Equipment for Provision of Donor Blood		
Refrigerator for blood bank	1 Available	1 Functional
Test tubes	Available today and no stockout in last 4 weeks	
Microscope slides	Available today and no stockout in last 4 weeks	
Blood lancets	Available today and no stockout in last 4 weeks	
Cotton wool	Available today and no stockout in last 4 weeks	
Test tube rack	Available today and no stockout in last 4 weeks	
0.9% Sodium chloride solution	Available today and no stockout in last 4 weeks	
20% Bovine albumin	Not available today	
Electric centrifuge	1 Available	1 Functional
37°C water bath or incubator	1 Available	1 Functional
Volumetric pipettes	Available today and no stockout in last 4 weeks	
Blood typing reagents	Available today and no stockout in last 4 weeks	
Crossmatching reagents	Not available today	
Laboratory Supplies		
Compound Microscope	1 Available	1 Functional
Immersion oil	Available today and no stockout in last 4 weeks	
Glass rods	Not available today	
Sink or staining tank	2 Available	1 Functional
Measuring cylinder, polypropylene, various sizes	Available today and no stockout in last 4 weeks	
Wash bottle	Available today and no stockout in last 4 weeks	
Bottle with buffered water	Available today and no stockout in last 4 weeks	

Item	Results	
Blood culture bottles (adult)	Not available today	
Blood culture bottle (pediatric)	Not available today	
Timer clock with alarm	4 Available	1 Functional
Rack for drying slides	Available today and no stockout in last 4 weeks	
Giemsa stain	Available today and no stockout in last 4 weeks	
Wright stain/Eosin	Not available today	
Funnel and filter paper	Available today and no stockout in last 4 weeks	
Methanol	Not available today	
Refrigerator for laboratory supplies	1 Available	0 Functional
Refrigerator types available	Clean and Dirty combined	
Freezer	2 Available	2 Functional
Temperature (°C) of freezer	-31,-40	
Glass containers with lids	Available today and no stockout in last 4 weeks	
Counting chamber (differential counter)	2 Available	2 Functional
Pipette, 5ml	Available today and no stockout in last 4 weeks	
Pipette, graduated 1.0ml	Available today and no stockout in last 4 weeks	
Dropping pipette	Available today and no stockout in last 4 weeks	
Cover slips	Available today and no stockout in last 4 weeks	
Petri dishes	Available today and no stockout in last 4 weeks	
Culture media	Available today and no stockout in last 4 weeks	
Kidney dishes	Available today and no stockout in last 4 weeks	
Tally counter	2 Available	2 Functional
Hemoglobinometer	6 Available	6 Functional
Brand of Hemoglobinometer	Hemocue Hb Analyzer 301	
Hydrochloric acid solution	Available today and no stockout in last 4 weeks	
Spectrophotometer (symex, screenplus)	2 Available	2 Functional
Microhematocrit centrifuge (manual or electric)	0 Available	0 Functional
Balance for weighing reagents	1 Available	1 Functional
Heparinized capillary tubes, 75mm x 1.5mm	Not available today	
Ethanol	Available today and no stockout in last 4 weeks	
Beakers	Available today and no stockout in last 4 weeks	
Lugol's iodine solution	Available today and no stockout in last 4 weeks	
CD4 machine	1 Available	1 Functional
Sterile picks/loops	Available today and no stockout in last 4 weeks	

2.C.2.2 Laboratory Tests

Item	Results*
*Available = available at time of visit; Usually available = usually available but not available at time of visit; Not available - but can be outsourced; Not available	
Biochemistry tests	
Blood glucose (e.g. glucometer and test strips)	Available today
C-reactive protein (CRP)	Not available
Electrolytes	Not available
Urea	Usually available, but not today
Calcium	Usually available, but not today
Magnesium	Not available
Creatinine	Usually available, but not today
Serum bilirubin (conjugated)	Usually available, but not today

Item	Results*
Serum bilirubin (unconjugated)	Usually available, but not today
Cerebrospinal fluid analysis (glucose and protein)	Usually available, but not today
Liver function testing	Usually available, but not today
Blood gas analysis	Not available
Urine dipstick for urinalysis that measures: pH, proteins, glucose, ketones, blood nitrates, leucocytes	Available today
Glucose 6-phosphate deyrogenase deficiency (G6PD) screening	Not available
Albumin	Usually available, but not today
Hematology	
Coagulation profile	Not available
Full blood count (FBC)/Full blood examination (FBE)	Available today
Haemaglobin (haemacue) and or haematocrit testing (erythrocyte volume fraction)	Available today
Method used for the full blood count (FBC)/full blood examination (FBE)	Hemolyzer
TB & Malaria testing	
TB testing (Tuberculin skin testing)	Not available
TB testing (Ziehl-Neilsen staining)	Available today
TB testing (GeneXpert)	Available today
Malaria testing (blood film microscopy or rapid diagnostic tests for neonatal malaria)	Available today

2.C.3 Blood Bank Testing and Supplies

Item	Results	
Blood typing and cross matching	Available today	
Coombs test	Not available	
Storage of whole fresh blood, including type O	Available today	
Storage of Rh-negative blood	Available today	
Storage of packed cells	Available today	
Storage of fresh frozen plasma	Available today	
Storage of fresh frozen platelets	Not available	
Blood screening for HIV	Available today	
Blood screening for hepatitis B	Available today	
Blood screening for hepatitis C	Not available	
Blood screening for syphilis	Available today	
Blood screening for malaria	Available today	
Blood screening for sickle cell	Available today	
Blood typing and cross matching protocol	Yes	
Blood screening for HIV protocol	Yes	
Bags for blood and airway needle for giving blood	Available today and no stockout in last 4 weeks	
Artery forceps	Available today and no stockout in last 4 weeks	
Anticoagulant bottles (small)	Not available today	
Anticoagulant bottles (large)	Available today and no stockout in last 4 weeks	
Scale for blood collection	0 Available	0 Functional
Blood Availability		
Units of Type A+ blood ready for transfusion	5	
Units of Type A- blood ready for transfusion	0	
Units of Type B+ blood ready for transfusion	2	

Item	Results
Units of Type B- blood ready for transfusion	0
Units of Type AB+ blood ready for transfusion	9
Units of Type AB- blood ready for transfusion	0
Units of Type O+ blood ready for transfusion	3
Units of Type O- blood ready for transfusion	0

3.HUMAN RESOURCES

3.A Facility Staffing

3.A.1 Medical Unit Staffing

Item	General Nurse	Specialist Nurse	Medical Dr./(GP)	Neonatologist	Paediatrician	Clinical Officer
Formal training can include HBB, COIN, ETAT+, ENC, EmONC etc.						
Established positions	X	X	X	X	X	X
Currently employed	X	X	X	X	X	X
Provide newborn care	X	X	X	X	X	X
Exclusively provide newborn care	X	X	X	X	X	X
Currently assigned to neonatal unit	X	X	X	X	X	X
Assigned exclusively to neonatal unit	X	X	X	X	X	X
Posted to neonatal unit in last 12 mos.	X	X	X	X	X	X
Also work on KMC ward	X	X	X	X	X	X
Currently on extended leave (more than 4 weeks)	X	X	X	X	X	X
*Formal training in newborn care	X	X				
Positions for locum staff	X	X	X	X	X	X

3.A.2 Laboratory Staff General Information

Item	Results
Laboratory manager onsite or offsite	Onsite
Number of laboratory technicians currently employed by this facility	X

3.A.3 Laboratory Staffing

Shift	Physically present	Staff On-Call
Monday – Friday (Day)	Yes	
Monday – Friday (Night)	No	Yes
Saturday (Day)	Yes	

Shift	Physically present	Staff On-Call
Saturday (Night)	No	Yes
Sunday (Day)	No	
Sunday (Night)	No	Yes
Day of visit	Yes	
Night before the visit	No	Yes

3.A.4 Other Established Positions

Item	Neonatal Clerk	Biomed Tech	Lab Tech
Established positions	X	X	X

3.A.5 Students rotating in the neonatal unit

Item	Medical Students	Nursing Students	Clinical Officer Students
Number of students rotating in the neonatal unit on the day of visit	X	X	X

3.A.6 Biomedical Workshop Staffing

Item	Biomed engineer	Med Tech / Biomed	Spare Parts Req. Manager	Tools Req. Manager	Electrician	Plumber	Carpenter	Brick Layer	Painter
Allocated to Maintenance Dpt.	No	Yes	No	No	Yes	Yes	Yes	Yes	No
Currently employed by Maintenance Dpt.	Not applicable	1	Not applicable	Not applicable	1	1	1	1	Not applicable
Exclusively assigned to Facility	Not applicable	Yes							

3.A.7 Biomedical Staff Scheduling

Shift	Physically Present	Staff On-Call
Monday – Friday (Day)	1	
Monday – Friday (Night)	0	1
Saturday (Day)	0	
Saturday (Night)	0	1
Sunday (Day)	0	
Sunday (Night)	0	1
Day of visit	1	
Night before visit	0	0

3.B Policies and Working Conditions

3.B.1.1 Facility Policies and Working Conditions

Item	Results
Contract and Job Description	
Length of time respondent has been working at facility	More than 2 years
Respondent on a short term (<1 year) or long term (>1 year) contract	Long term (> 1 year)
Last on-the-job training in newborn health	More than a year ago
Facility has a written job description for respondent's position	Yes
Reporting structure for administrative purposes is clear	Yes
Respondent has a copy of the job description	Yes
Staff Rotations	
Facility conducts staff rotations in and out of the neonatal unit	Yes
Facility has a policy on staff rotation to different units in the facility	Yes
There was a staff rotation of nurses on the neonatal unit in the last 12 months	Yes
Nurses rotated out of the neonatal unit during the last staff rotation	1
Up-to-date daily staff rota detailing the shifts of all clinical staff in the neonatal unit available	Staff rota for the next 4 weeks is available
Designated person who develops the staff rota for nurses in the neonatal unit	Yes
Shifts on the neonatal unit	Morning shift,Night shift
Hours per day covered by the morning shift	8
Hours per day covered by the afternoon shift	0
Hours per day covered by the evening shift	0
Hours per day covered by the night shift	15
Hours worked by respondent in the last 7 days	40
Nights in a row worked when last on night duty	2
Nights off received after being on night duty	4
Staff Cell Phone Policy	
Personal cell phone used to talk with patients or other providers	Yes
Estimated out of pocket costs paid to talk with patients or other providers in the last 7 days	X Currency
Staff reimbursed for out of pocket costs	No

3.C Staff Providing Care on the Neonatal Unit

Shift	Physically present in facility	Provide exclusive care on neonatal unit	On-Call
No pediatricians, neonatologists or general nurses were scheduled.			
Monday – Friday (Day)	X General Nurse X Clinical Officer	X General Nurse X Clinical Officer	X Clinical Officer
Monday – Friday (Night)	X General Nurse	X General Nurse	None scheduled
Saturday (Day)	X General Nurse	X General Nurse	None scheduled
Saturday (Night)	X General Nurse	X General Nurse	None scheduled
Sunday (Day)	X General Nurse	X General Nurse	None scheduled
Sunday (Night)	X General Nurse	X General Nurse	None scheduled
Day of visit	X General Nurse X Clinical Officer	X General Nurse X Clinical Officer	X Clinical Officer
Night before visit	X General Nurse	X General Nurse	None scheduled

3.D Clinical Care Policies and Guidelines

Item	Results
*Easily accessible refers the nurse being able to retrieve the item quickly	
BEmOC and CEmOC guidelines	Not available
Wall charts/action sequences for neonatal resuscitation (e.g. HBB flowchart, ETAT+ flowchart)	Available and easily accessible
Neonatal resuscitation guidelines	Available and easily accessible
Thermal protection guidelines	Not available
PMTCT guidelines	Available, but not easily accessible
Standards on immediate initiation and exclusive breastfeeding	Available and easily accessible
Maternal, Infant, and Young Child Nutrition guidelines	Not available
"Ten steps to successful breastfeeding" or implementation of International Code of Marketing of Breast-milk Substitutes written policy	Available and easily accessible
Fluid, volume, and medication guidelines	Available and easily accessible
Prevention and management of hypoglycaemia in those at risk of impaired metabolic adaptation guidelines	Available and easily accessible
KMC guidelines	Available and easily accessible
Classification of breathing difficulty and SpO2 thresholds and protocols for oxygen therapy and monitoring	Not available
Assessment, management and prevention of apnoea guidelines	Available and easily accessible
Infant feeding for the neonatal unit, including enteral feeding volumes by weight and age, IV fluid volumes	Available and easily accessible
IV fluid volume guidelines	Available and easily accessible
Fluid balance and feeding chart (fluid input and output)	Available and easily accessible
Providing vitamin D, calcium, phosphorus and iron supplements for very-low-birth-weight newborns protocol	Not available
Treatment thresholds for phototherapy	Available and easily accessible
Treatment thresholds for exchange transfusion	Not available
Use of phototherapy units (e.g. positioning of phototherapy lamps, etc.)	Available and easily accessible
Guidelines on management of newborn convulsions and spasms	Available and easily accessible
CPAP initiation and weaning protocols	Available and easily accessible
CPAP wall chart	Available and easily accessible
Mechanical ventilation guidelines	Not available
Blood transfusion procedural guidelines	Available, but not easily accessible
Exchange transfusion procedural guidelines	Not available
Blood transfusion monitoring chart	Not available
Assessment and management of newborns with congenital abnormalities, including for specialist consultation and referral pathways guidelines	Not available
Assessment and management of neonatal encephalopathy in newborns guidelines	Not available
Prevention, screening, documentation and treatment of retinopathy of prematurity guidelines	Not available
Management of congenital syphilis guidelines	Not available
Assessment and management of anaemia in small and sick newborns guidelines	Available, but not easily accessible

Item	Results
Prevention, monitoring, detection and management of complications related to health care equipment, devices and practices, including skin erythema, skin breakdown, pressure sores, nasal trauma and tissue injury guidelines	Not available
Prevention and management of ophthalmia neonatorum in newborns guidelines	Not available
Pre-referral management of all small and sick newborns who require referral protocol	Available, but not easily accessible
Structured, standard form for written handover of newborns among care teams at shift changes or during transfer among facilities protocol	Not available

3.E Newborn Care Signal Functions

3.E.1 Signal Function Performance

Signal functions performed in the last 4 weeks	Results	Reasons for not performing signal function spontaneously mentioned
Wash hands with soap or use hand sanitizer before and after handling each baby	Yes	Lack of running water
Resuscitate newborn with bag and mask	Yes	Lack of supplies
Provide treatment for hypoglycemia	Yes	Lack of supplies
Provide support for kangaroo mother care	Yes	Lack of space designated
Provide thermal protection	Yes	Not applicable
Administer oxygen to a newborn	Yes	Lack of supply accessories
Provide alternative feeding (breast milk substitute) to the newborn	Yes	Not applicable
Provide phototherapy treatment to the newborn	Yes	Not applicable
Administer antibiotics guided by culture report	No	Lack of lab capcity/supplies
Administer anticonvulsants	Yes	Not applicable
Administer IV fluids to a newborn	Yes	Lack of neonatal IV fluid giving sets
Provide CPAP treatment to a newborn	Yes	Training needed
Provide mechanical ventilation to a newborn	No	Training needed,Lack of supplies
Perform blood transfusion for the newborn	Yes	Lack of supplies
Provide follow-up for retinopathy of prematurity	No	Providing follow-up for retinopathy,Training needed

3.E.2 Staff Who Routinely Provide Each Signal Function

Essential services	Medical Doctor (GP)	General Nurse	Clinical Officer	Other
Note: Staff are only able to provide these signal functions while on-call for or providing care on the neonatal unit				
Provide essential newborn care	Yes	Yes	Yes	Not applicable
Provide PMTCT services	Yes	Yes	Yes	Not applicable
Resuscitate newborn with bag and mask	Yes	Yes	Yes	Not applicable
Provide mothers with support for breastfeeding	No	Yes	No	Not applicable
Provide treatment for hypoglycemia to a newborn	No	Yes	Yes	Not applicable
Provide support for kangaroo mother care	No	Yes	No	Not applicable

Essential services	Medical Doctor (GP)	General Nurse	Clinical Officer	Other
Provide oxygen to a newborn	No	Yes	Yes	Not applicable
Provide total parenteral feeding to a newborn	No	Yes	No	Not applicable
Provide phototherapy light treatment to a newborn	No	Yes	No	Not applicable
Provide antibiotics for neonatal infections	No	Yes	No	Not applicable
Provide parenteral anticonvulsants to a newborn	No	Yes	No	Not applicable
Provide IV fluids using a syringe pump to a newborn	No	Yes	No	Not applicable
Provide treatment for neonatal encephalopathy	No	No	No	Not Applicable
Provide treatment for congenital syphilis	No	Yes	Yes	Not Applicable
Provide treatment for anaemia to a newborn	No	Yes	Yes	Not Applicable
Provide CPAP treatment to a newborn	No	Yes	No	Not applicable
Provide mechanical ventilation to a newborn	No	No	No	Not applicable
Perform blood transfusion for a newborn	No	Yes	No	Not applicable
Provide follow-up for retinopathy of prematurity	No	No	No	Not applicable
Provide pre- and post-neonatal surgical care	No	No	No	Not applicable
Provide thermal protection to a newborn	No	Yes	No	Not Applicable
Provide palliative care to a newborn	No	Yes	Yes	Not Applicable
Provide treatment for congenital abnormalities	No	Yes	Yes	Not Applicable
Provide treatment for ophthalmia neonatorum	No	Yes	Yes	Not Applicable
Provide treatment for necrotizing enterocolitis to a newborn	No	No	No	Not Applicable
Provide treatment for intraventricular hemorrhage to a newborn	No	No	No	Not Applicable

3.F Clinical Experience and Training

Essential services	Trained during pre-service training on how to:	Received a formal in-service course in past 5 years on how to:	Received on the job training in past 5 years on how to:	Provided service at facility in last 4 weeks:
Provide essential newborn care	Not recorded	Not recorded	Not recorded	Not recorded
Infection prevention control	Not recorded	Not recorded	Not recorded	Not recorded
Provide breastfeeding support	Not recorded	Not recorded	Not recorded	Not recorded

Essential services	Trained during pre-service training on how to:	Received a formal in-service course in past 5 years on how to:	Received on the job training in past 5 years on how to:	Provided service at facility in last 4 weeks:
Resuscitate a newborn with bag and mask	Not recorded	Not recorded	Not recorded	Not recorded
Provide HIV antiretrovirals in order to prevent mother to child transmission	Not recorded	Not recorded	Not recorded	Not recorded
Treat a newborn for hypoglycemia	Not recorded	Not recorded	Not recorded	Not recorded
Provide kangaroo mother care	Not recorded	Not recorded	Not recorded	Not recorded
Provide safe oxygen to newborns	Not recorded	Not recorded	Not recorded	Not recorded
Provide alternative feeding to newborns	Not recorded	Not recorded	Not recorded	Not recorded
Provide phototherapy to newborns	Not recorded	Not recorded	Not recorded	Not recorded
Provide antibiotics for neonatal infections	Not recorded	Not recorded	Not recorded	Not recorded
Manage newborn seizures	Not recorded	Not recorded	Not recorded	Not recorded
Provide fluids intravenously to newborns	Not recorded	Not recorded	Not recorded	Not recorded
Provide treatment for anaemia to newborns	Not recorded	Not recorded	Not recorded	Not recorded
Provide thermal protection to newborns	Not recorded	Not recorded	Not recorded	Not recorded
Place newborn on CPAP therapy	Not recorded	Not recorded	Not recorded	Not recorded
Place newborn on mechanical ventilation	Not recorded	Not recorded	Not recorded	Not recorded
Provide blood transfusion to newborns	Not recorded	Not recorded	Not recorded	Not recorded
Provide follow-up for retinopathy of prematurity	Not recorded	Not recorded	Not recorded	Not recorded
Provide treatment for neonatal encephalopathy	Not recorded	Not recorded	Not recorded	Not recorded
Provide treatment for congenital syphilis	Not recorded	Not recorded	Not recorded	Not recorded
Provide palliative care to newborns	Not recorded	Not recorded	Not recorded	Not recorded
Provide family centered care	Not recorded	Not recorded	Not recorded	Not recorded
Classify conditions and diseases in accordance with the ICD	Not recorded	Not recorded	Not recorded	Not recorded
Legal and medical ethical principles of autonomy, informed consent, confidentiality and privacy	Not recorded	Not recorded	Not recorded	Not recorded
Complete registers currently used at facility	Not recorded	Not recorded	Not recorded	Not recorded

4. INFORMATION SYSTEMS

4.A Data Sources

4.A.1 Medical Forms

Type of document	Document Used	Creator	Paper or Electronic
Birth Forms			
Birth certificate	Yes	Government/Ministry of Health	Paper
Birth notification	Yes	Government/Ministry of Health	Paper
Inpatient Forms			
Inpatient diagnostic index card	No	Not applicable	Not applicable
Mother and child booklet	Yes	Government/Ministry of Health	Paper
Inpatient/clinical medical notes	Yes	Facility	Paper
Nursing notes (Cardex)	No	Not applicable	Not applicable
Inpatient unit perinatal chart	No	Not applicable	Not applicable
Treatment sheet/chart	Yes	Government/Ministry of Health	Paper
Labor, delivery, postnatal case notes	Yes	Government/Ministry of Health	Paper
Reporting form for adverse events	Yes	Government/Ministry of Health	Paper
Admission form	Yes	Government/Ministry of Health	Paper
Prescription form (CC pathway)	Yes	Government/Ministry of Health	Paper
KMC chart	Yes	Government/Ministry of Health	Paper
Vaccination record (BCG Polio 0)	Yes	Government/Ministry of Health	Paper
Facility/ward transfer form (referral)	Yes	Government/Ministry of Health	Paper
Daily bed return form (occupancy)	No	Not applicable	Not applicable
Death and Discharge Forms			
Discharge form	Yes	Government/Ministry of Health	Paper
Neonatal death audit form	Yes	Government/Ministry of Health	Paper
Perinatal death audit form	No	Not applicable	Not applicable
Death certification form	Yes	Government/Ministry of Health	Paper
Neonatal Death Notification	Yes	Government/Ministry of Health	Paper
Perinatal Death Notification	No	Not applicable	Not applicable
Other Forms			
Neonatal unit admission and discharge form	Yes	Government/Ministry of Health	Paper
Paediatric admission and discharge form	Yes	Government/Ministry of Health	Paper
Mortality and cause of death book	No	Not applicable	Not applicable
Follow-up card	Yes	Government/Ministry of Health	Paper
Burial permits	No	Not applicable	Not applicable
Other: Feeding chart	Yes	Government/Ministry of Health	Paper

Other: Pink form	Yes	Government/Ministry of Health	Paper
Other: CPAP	Yes	Government/Ministry of Health	Paper
Other: Not applicable	Not applicable	Not applicable	Not applicable
Other: Not applicable	Not applicable	Not applicable	Not applicable

4.A.2 Hospital Registers

Type of document	Used	Creator	Paper or Electronic	All data entry fields complete for last 4 weeks	Register filled up to night before visit
Labor and Delivery					
Labor and delivery ward register	Yes	Government/Ministry of Health	Paper		
PMTCT labor and delivery register	Yes	Government/Ministry of Health	Paper		
Helping Babies Breathe (HBB) register	Yes	Government/Ministry of Health	Paper		
Neonatal admissions register	Yes	Government/Ministry of Health	Paper	No	No
Neonatal discharge register	Yes	Government/Ministry of Health	Paper	No	No
Postnatal Register	Yes	Government/Ministry of Health	Paper		
Outpatient register under 5 years	Yes	Government/Ministry of Health	Paper		
Inpatient register under 5 years	No	Not applicable	Not applicable		
Death/mortuary register	Yes	Government/Ministry of Health	Paper		
Referral/counter referral register	No	Not applicable	Not applicable		
KMC register	Yes	Government/Ministry of Health	Paper	No	No
PNC register	Not asked	Not recorded	Not recorded		
Immunization permanent register (EPI)	Yes	Government/Ministry of Health	Paper		
Child welfare clinic register		Not applicable	Not applicable		
HIV care and treatment register	Yes	Government/Ministry of Health	Paper		
Other: CPAP register	Yes	Facility	Paper		
Other: Not applicable	Not applicable	Not applicable	Not applicable		

Type of document	Used	Creator	Paper or Electronic	All data entry fields complete for last 4 weeks	Register filled up to night before visit
Other: Not applicable	Not applicable	Not applicable	Not applicable		
Other: Not applicable	Not applicable	Not applicable	Not applicable		
Other: Not applicable	Not applicable	Not applicable	Not applicable		

4.A.3 Hospital Tally Sheets

Type of document	Document Used	Creator	Paper or Electronic
Child health and nutrition information systems (CHANIS) tally sheet for child health welfare clinics	No	Not applicable	Not applicable
Under 5-year daily outpatient morbidity tally sheet	Yes	Government/ Ministry of Health	Paper
Immunization tally sheet	Yes	Government/ Ministry of Health	Paper
Other: Not applicable	Not applicable	Not applicable	Not applicable
Other: Not applicable	Not applicable	Not applicable	Not applicable
Other: Not applicable	Not applicable	Not applicable	Not applicable
Other: Not applicable	Not applicable	Not applicable	Not applicable
Other: Not applicable	Not applicable	Not applicable	Not applicable

4.A.4 Health Summary Reports

Type of document	Document Used	Creator	Paper or Electronic	Frequency of report compilation
Integrated disease surveillance and response (IDSR) monthly report	Yes	Government/Ministry of Health	Paper	Monthly
Integrated disease surveillance and response (IDSR) weekly report	Yes	Government/Ministry of Health	Paper	Weekly
Immunization services uptake summary report	Yes	Government/Ministry of Health	Paper	Monthly
Integrated reproductive and child health summary report	No	Not applicable	Not applicable	Not applicable

4.A.5 Forms and Registers Supply

Item	Results
Sufficient is defined as allowing for the documentation of all neonates in the register with extra space to enter additional patients or a new register to use if the current one is filled.	
Neonatal unit had sufficient supply of paper registers in stock at the time of the visit	Yes
Neonatal unit had a stockout of paper registers in the last 4 weeks prior to the time of the visit	No
Neonatal unit had sufficient supply of paper inpatient neonatal forms in stock at the time of the visit	No

Item	Results
Neonatal unit had a stockout of paper inpatient neonatal forms in the last 4 weeks prior to the time of the visit	Yes

4.A.6 Register Completion on Weekends and After Hours

Item	Results
Routinely is defined as having a system in place to ensure it is always done, except in the case of an occasional extenuating circumstance.	
Neonatal unit routinely filled on the weekends	Yes
Neonatal unit routinely filled after working hours	Yes
Cadre primarily responsible for filling out neonatal unit register	Nurse

4.A.7 Filing systems

Item	Results
Filing on the Neonatal Unit	
Filing systems used	Chronological
Location where medical records for babies are stored during admission	Neonatal unit
Cadres with access to medical records for babies on the neonatal unit	Nurses,Doctors,Clinical officers
Cadres with access to the active neonatal admissions register	Nurses,Clinical officers

4.A.8 Storage of medical records

Item	Results
Storage of medical records for babies discharged alive	
Years old records are stored for babies discharged alive	>3 years
Location where medical records for babies discharged alive are stored after discharge	Onsite
Location onsite where medical records for babies discharged alive are stored after discharge	Neonatal unit
Cadres with access to medical records for babies discharged alive after they go to central storage	Not applicable
Cadre responsible for bringing medical records for babies discharged alive to the central storage	Not applicable
Cadre responsible for managing/overseeing medical records for babies discharged alive in central storage	Not applicable
Summarize how medical records for babies are transferred from the neonatal unit to long-term storage	The nurses and hospital maids take files through wheelchair or trolley to the central storage currently it full.
Storage of medical records for babies discharged deceased	
Years old records are stored for babies discharged deceased	>3 years
Location where medical records for deceased babies are stored after discharge	Neonatal unit
Cadres with access to medical records for deceased babies after they go to central storage	Not applicable
Cadre responsible for bringing medical records for deceased babies to the central storage	Not applicable
Cadre responsible for managing/overseeing medical records for deceased babies in central storage	Not applicable
Summarize how medical records for babies discharged deceased are transferred from the neonatal unit to long-term storage	Same as files of babies discharged alive
Storage of neonatal admissions register	
Location where old/inactive neonatal admissions registers are stored	Not applicable
Cadres with access to neonatal registers after they go to central storage	Not applicable

Item	Results
Cadre responsible for bringing neonatal registers to the central storage	Not applicable
Cadre responsible for managing/overseeing old/inactive neonatal registers in central storage	Not applicable
Summarize how old/inactive neonatal admissions registers are transferred from the neonatal unit to long-term storage	Taken by nurses and hospital maids using a wheelchair or trolley
Other	
Logistical challenges with medical records experienced in 4 weeks before the visit	Missing patient notes/records,Infestations (e.g mice, rats
Baby given a unique record ID at the facility	No
When baby is given the unique record ID	Not applicable
Cadre responsible for generating the unique record ID for a baby during office hours	Not applicable
How baby's and mother's medical records are linked	Baby and mother not linked
How multiple babies medical records are linked to each other	Multiple babies not linked
Documents on the neonatal unit are filed away neatly and the surface spaces (e.g. tables, examination areas) are tidy	No

4.B Neonatal Data Clerks

Item	Results
Number of neonatal ward clerks currently employed by the facility	1
Days of the week neonatal ward clerk usually works	Monday,Tuesday,Wednesday,Thursday,Friday
Facility has a ward clerk exclusively responsible for the neonatal unit	No
Facility has a ward clerk exclusively responsible for the neonatal and maternity unit combined	Yes
It is the nurses' responsibility to perform these duties	Not applicable
Neonatal ward clerk has received a copy of their job description	Yes

4.C Summary Data for Reporting

Item	Results
Indicators routinely calculated at this facility:	See details below
Institutional delivery rate	Yes
Neonatal mortality rate	Yes
Neonatal mortality rate stratified by weight	Yes
Institutional low birth rate	Yes
Stillbirth rate	Yes
Neonatal bed occupancy rate	Yes
Referral rate	No
Left-against-medical-advice rate	No
When indicators are calculated	Annually
This facility submits summary data electronically (e.g. DHIS2)	Yes
Facility has a DHIS2 office	No
Number of staff currently work in the DHIS2 office	Not applicable
Staff responsible for DHIS2 data entry	HMIO/HRIO
When neonatal data are reported to DHIS2	Monthly
Data checked by the nurse in charge before submission	Yes

4.E Mortality Audit and Maternal Perinatal Death Surveillance and Response

Item	Results
Facility has WHO MPDSR or relevant national guidelines	Not available
National tools or WHO "tools for implementation" that the facility is using:	See details below
"Terms of reference for review committee" for MPDSR	Not applicable
"Sample meeting code of practice"	Not applicable
Individual death care review/clinical summary forms	Not applicable
Items from the minimal perinatal dataset that are reported to the national level	See details below
Mother's obstetric history (gravida, parity)	Not applicable
Mother's medical history	Not applicable
Mother's age	Not applicable
Single or multiple pregnancy	Not applicable
Antenatal care history (number of visits)	Not applicable
HIV status	Not applicable
Gestational age (and method of determination)	Not applicable
Place of delivery	Not applicable
Date and time of birth	Not applicable
Attendant at delivery	Not applicable
Mode of delivery	Not applicable
Sex of baby	Not applicable
Birthweight	Not applicable
Date and time of death (if applicable)	Not applicable
Type of death (antepartum stillbirth, intrapartum stillbirth, neonatal death)	Not applicable
Cause of death using ICD-10/11 or ICD-PM	Not applicable
Standardised cause of death classification used at the facility for neonatal deaths (e.g. ICD-PM)	ICD-10
Neonatal deaths/stillbirths that occur outside the hospital (e.g. brought dead) or in the community are included in the MPDSR process	No
Facility has an MPDSR "champion" or lead	Yes
How MPDSR information is communicated to the sub-national level (e.g. district, county)	Regular reports
Facility receives feedback from the sub-national level (e.g. district, county) on MPDSR information	Yes

4.F Civil Registration and Vital Statistics (CRVS)

Item	Results
Facility has an onsite Civil Registration and Vital Statistics (CRVS) office/registrar	No
Staff responsible for submitting data to the CRVS system	Other (specify below)
Facility has written, up-to-date guidelines for registering neonatal death and stillbirths	Not available
Births and deaths notified to the civil authority	Yes
Births and deaths captured in the health management information system (HMIS)	Yes

4.G Electronic Information Systems and Infrastucture

4.G.1 Electronic Information Systems

Patient status	Results	Vendor	Vendor support contract	System backup	Encrypted storage
Patient Administration System (PAS)	No	Not applicable	Not applicable	Not applicable	Not applicable
Financial Management System and/or Billing System (FMS)	Yes	IFMIS	Yes	Offsite (cloud based)	Yes
Laboratory Information System (LIS)	Yes	LIMS	Yes	Onsite	No
Picture Archiving and Communications System (PACS)	No	Not applicable	Not applicable	Not applicable	Not applicable
Outpatient Electronic Medical Records (EMR-outpatient)	Yes	EMR	Yes	Offsite (cloud based)	Yes
Inpatient electronic medical records (EMR-inpatient)	No	Not applicable	Not applicable	Not applicable	Not applicable
Comprehensive Care Clinics (CCC) EMR	No	Not applicable	Not applicable	Not applicable	Not applicable
Pharmacy Information System (PIS)	Yes	Open LIMS	Yes	Offsite (cloud based)	Yes
National Health Information System (NHIS-DHIS2)	Yes	DHIS2	Yes	Offsite (cloud based)	Yes

4.G.2 Electronic Information Infrastructure

Patient status	Results
Backup power for Information Systems	No
Wired network	No
IT support staff	No

5.GOVERNANCE AND LEADERSHIP

5.A Target Setting

Item	Results
Facility sets targets to achieve	Yes
Facility sets targets for the neonatal unit to achieve	Yes
Facility targets concerning neonatal health or the neonatal unit	Health or mortality targets,Clinical practice targets,Input targets
Facility targets displayed in the hospital	Yes
Where facility targets are displayed in the hospital	Hospital manager office or meeting room (specify below)

5.B Financing Reports

Item	Results
Facility produces a report of revenue and expenditure	Yes
How often report is produced	Monthly
When last report was produced	dd/mm/yyyy
Facility has an annual budget of the likely costs the facility will face over the next year	Yes
The most common insurance providers that are seen at the facility	X insurance

5.C Staff Absenteeism and Performance

Item	Results
Facility has a system of documenting when clinical staff are absent from work	Absenteeism is formally recorded and senior managers are notified
Facility has a formal system for recognising or rewarding well performing clinical staff	Non-material status awards are given
Actions taken for poorly performing clinical staff	Staff reassigned in past 6 months,Staff dismissed in past 6 months,Staff have faced other disciplinary action in past month
Facility has a training plan in place to improve the skills of staff on the neonatal unit going forward	Yes
Individual staff have detailed training plans	Yes
Years individual staff training plans cover	1

5.D Inventory and Forecasting of Consumables

Item	Results
Inventory register/system for neonatal unit consumables available	No
Frequency of inventory of neonatal unit consumables	Not applicable
Neonatal unit consumables ordered	Not applicable

5.E Hospital Quality Improvement Team

Item	Results
The health facility has a quality improvement team.	Yes
The health facility conducts quality improvement meetings at least every 3 months.	Yes
Most recent team meeting date	dd/mm/yyyy
Meeting conducted in 3 months before date of visit	More than 3 months ago
Meeting minutes available for the most recent meeting	No

5.F Infection Prevention and Control (IPC) Team

Item	Results
The health facility has an infection prevention and control (IPC) team.	Yes
The health facility conducts IPC meetings at least every 3 months.	Yes
Most recent team meeting date	dd/mm/yyyy
Meeting conducted in 3 months before date of visit	Within last 3 months
Meeting minutes available for the most recent meeting	No

5.G Maternal and Perinatal Death Surveillance and Response (MPDSR) Team

Item	Results
The health facility has a mortality audit/MPDSR team.	Yes
The health facility conducts mortality audit/MPDSR meetings at least every 3 months.	Yes
Are review meetings integrated for maternal, stillbirth and neonatal death audit?	Never
When did the team last meet?	dd/mm/yyyy
Meeting conducted in 3 months before date of visit	Within last 3 months
Are meeting minutes available for the most recent meeting?	Yes

5.H Lab Management and Inventory

Item	Results
Lab Management Team	
The health facility has a lab management team.	Yes
The health facility conducts lab management meetings at least every 3 months	Yes
Date of last meeting	Not Recorded
Meeting conducted in 3 months before date of visit	Not Recorded
Meeting minutes available for the most recent meeting	No
Inventory and Forecasting	
Inventory of laboratory supplies kept	Yes
Frequency of inventory of laboratory supplies	At least once per month
Lab supplies are ordered	Order at regular interrvals throughout the year (e.g. same

5.I Newborn Services and Price Details

Item	Results
Newborn services provided free at the point of care	Yes
Newborn services are provided free at the point of care	See details below
Provide essential newborn care	Yes
Provide PMTCT services	Yes
Resuscitate newborn with bag and mask	Yes
Provide mothers with support for breastfeeding	Yes
Provide treatment for hypoglycemia to a newborn	Yes
Provide support for kangaroo mother care	Yes
Provide oxygen to a newborn	Yes
Provide total parenteral feeding to a newborn	Yes
Provide phototherapy light treatment to a newborn	Yes
Provide antibiotics for neonatal infections	Yes
Provide parenteral anticonvulsants to a newborn	Yes

Item	Results
Provide IV fluids using a syringe pump to a newborn	Yes
Provide treatment for neonatal encephalopathy	No
Provide treatment for congenital syphilis	Yes
Provide treatment for anaemia to a newborn	Yes
Provide CPAP treatment to a newborn	Yes
Provide mechanical ventilation to a newborn	No
Perform blood transfusion for a newborn	Yes
Provide follow-up for retinopathy of prematurity	No
Provide pre- and post-neonatal surgical care	No
Provide thermal protection to a newborn	Yes
Provide palliative care to a newborn	Yes
Provide treatment for congenital abnormalities	Yes
Provide treatment for ophthalmia neonatorum	Yes
Provide treatment for necrotizing enterocolitis to a newborn	No
Provide treatment for intraventricular hemorrhage to a newborn	No
Other:	Not applicable
Prices of treatments and services are displayed publicly anywhere in the hospital	No

6. RESPECTFUL AND FAMILY-CENTERED CARE

6.A Respectful and/or Family-centered Care Policies and Training

Item	Results
Unnecessary interventions guidelines	Not available
Guidelines for management of newborns suspected of being maltreated	Not available
Pain assessment and management guidelines	Not available
Minimising separation of newborns from mothers/caretakers guidelines	Not available
Discharge protocol	Not available
Developmental follow-up protocol	Not available
Formal policies (e.g. special grieving area etc.) around supporting families of a child who dies	None
Guidelines for staff supporting bereaved families	No
Protected grieving area	No
Counselling services	No
Chaplaincy services	No
Parent support groups	No
Community support groups	No
Written support information (e.g. phone number) for bereaved families	No
None	Yes
Other:	Not applicable
Specific respectful and/or family-centered care trainings for staff	See details below
Training in family-centred care	Yes
Training in Kangaroo Mother Care	Yes
Training in legal and medical ethical principles of autonomy, informed consent, confidentiality and privacy	No
Training and refresher sessions in end-of-life and bereavement care	No
Training and refresher sessions on screening, protecting and managing newborns with evidence of maltreatment, including neglect and violence	No
None	No
Other:	Not applicable

6.B Patient Satisfaction

Item	Results
Mechanisms that exist to voice grievances or provide feedback to the facility	See details below
Anonymous survey	No
Suggestion box	Yes
Hotline	No
Ombudsman	Yes
Exit survey	No
None	No
Other:	Not applicable
Facility routinely performs patient satisfaction surveys on the services offered at the facility	No

6.C Family Involvement

Item	Results
Information shared with parents about their child's condition	Verbally
Parents receive formal counselling about their child's condition before discharge or a training programme on discharge to help them become confident carers	Yes
Activities family members are allowed to do on their sick neonate whilst in hospital	See details below
Bathing	No
Feeding	Yes
Turning	Yes
None	No
Other:	Not applicable

6.D Infrastructure

Item	Results
*Adequate space means there is enough space for all equipment and for staff/mothers to move around the equipment when the unit is full.	
Sitting and sleeping arrangements	
Rooming-in facility within the neonatal unit with a place (e.g. chair, bench, not on the floor) for mothers to sit available	No
Rooming-in facility within the neonatal unit with sleeping arrangements available for mothers	No
Rooming-in sleeping arrangements available	Not applicable
Location where mothers with babies in the neonatal unit are housed	Not applicable
KMC	
Facility has a KMC unit	Yes
Number of beds in KMC unit	X
Of the beds in the KMC unit, how many beds can sit up?	X
Number of reclining KMC chairs	X
Number of mothers in the KMC unit at the time of visit	X
Percent occupancy of KMC beds filled at the time of visit	X
Space in KMC unit adequate* for volume	No
All KMC unit beds have insecticide treated bed nets	No
All KMC unit beds have curtains for privacy	No
Location where visitors meet the KMC mothers	Elsewhere at the facility, not on the KMC unit
Changes to KMC visitor policy due to COVID-19	Yes
Description of changes to KMC visitor policy due to COVID-19	One guardian per patient
Milk	
Dedicated area for preparing milk/feeds	No
Separate space in neonatal unit for private milk expression	No
Refrigerated storage space for expressed milk	No
Refrigerated expressed milk is labeled	Not applicable
Human milk bank available at facility	No
Visitors and waiting areas	
Dedicated waiting area for visitors that is near or in front of the neonatal unit	No
Location of the dedicated waiting area for visitors	Not applicable
Type of waiting area for visitors	Not applicable
Seating arrangement available in the waiting area	Not applicable
Seating is adequate* given the number of visitors in the waiting area at time of visit	Not applicable

Item	Results
Number of people in the waiting area at the time of visit	Not applicable
Mothers/caretakers allowed into the unit at all times or only specific times	Every 2 hours
Mothers/caretakers allowed into the unit for specific activities	No activities specified
Changes to mother/caretaker visiting hours due to COVID-19	No
Breastfeeding mothers provided with high-quality and nutritious meals	No
Other areas for families	
Specific private space for counseling within the ward	None
Space and equipment for mothers to cook available	No
Separate/designated 'eating area' for mothers/caretakers	No
Breastfeeding mothers provided with high-quality and nutritious meals	No
Bathing facilities for caretakers/guardians to use	Yes
Family members permitted to use the bathing facilities	See details below
Mother	Yes
Father	No
Grandmother	Yes
Other	No
Availibility of rota of times the bathing facilities are cleaned	Yes
Access to laundry/washing facilities for caretakers/guardians	No

7. INFECTION PREVENTION AND CONTROL

7.A Infrastructure

7.A.1 Facility Autoclave and Sterilisation

Item	Results
Available = available at time of visit, Not available = not available at time of visit	
Separate autoclave room	Available and functional
Autoclave with temperature and pressure gauges	Available but not functional
Hot air sterilizer (dry oven)	Not available
Steriliser/pressure cooker, electric	Not available
Steriliser/pressure cooker, kerosene heated	Not available
Sterilisation drum	Available and functional
Sterilisation drum stand	Available and functional
Autoclave Tapes	Available and functional

7.A.2 Infection Prevention, Detection and Control Protocols

Item	Results
Facility has the following infection prevention guidelines and protocols:	
Prevention of neonatal infections protocol	Not available
Handwashing wall chart	Not applicable
Cleaning the neonatal unit guidelines	Not available
Cleaning medical equipment guidelines	Not available
Maintaining medical equipment guidelines	Not asked
Facility has the following infection control guidelines and protocols:	

Item	Results
Infection control guidelines	Available and easily accessible
Early diagnosis and management of neonatal infections protocol	Not available
Drug doses, dilutions and preparations for the neonatal unit guidelines	Available and easily accessible
Safe and rational use of antibiotics and other medications based on weight and age guidelines	Available and easily accessible
Prescription chart	Available and easily accessible
Care of small and sick newborns in outbreak guidelines	Available and easily accessible
Accidental needle prick protocol	Available, but not easily accessible
Surveillance	
Surveillance conducted for device-associated infections (for example, catheter-associated urinary tract infections, central line-associated bloodstream infections)	No
Surveillance conducted for hospital-acquired infection outbreaks for neonates	No

7.A.3 Neonatal Unit Hand Hygience Policies and Functionality

Item	Results
All sinks	
All sinks functioning (running water, not clogged up, not leaking)	Some sinks functioning
Liquid soaps been diluted with water	Not recorded
Hand hygiene policies	
Facility has policy for staff to wash their hands with soap before or immediately upon entry to the neonatal unit	No
Facility has policy for staff to use hand sanitizer before or immediately upon entry to the neonatal unit	No

7.A.4 Neonatal Unit Hand Hygiene Infrastructure

Hand hygiene options	Before or immediately upon at the entrance to the neonatal unit	Before entry to each room in the neonatal unit	In each room in the neonatal unit
Hand hygiene options available	No	Some rooms	Some rooms
Type of soap available	Not applicable	Bar soap	Bar soap
How water taps are operated	Not asked	Not asked	Hand
Hand drying options available	None	Not applicable	Not applicable

7.A.5 Neonatal Unit Hand Hygiene Behaviour

Item	Results
Hand hygiene opportunities observed	33
Indications for hand hygiene (proportion)	
Before touching a patient	17/33
Before clean/aseptic procedure	2/33
After body fluid exposure risk	1/33
After touching a patient	15/33
After touching patient surroundings	8/33
Hand hygiene action taken (proportion)	5/33

7.A.6 Facility and Neonatal Unit Toilets and Latrines

Toilets/latrine options	Separate Staff Toilet	Separate Caretaker / Guardian Toilet	Shared Staff and Caretaker / Guardian Toilet
Toilet/latrine available	Yes	No	No
Can be accessed at time of visit	Yes	Not applicable	Not applicable
Can be accessed 24 hours per day, 7 days per week	Yes	Not applicable	Not applicable
Visibly clean and functional	Yes	Not applicable	Not applicable
Hand hygiene options available	None	Not applicable	Not applicable
How water taps are operated	Not applicable	Not recorded	Not recorded
Hand drying options available	None	Not applicable	Not applicable
Location of nearest toilet to neonatal unit	Postnatal unit	Not applicable	Not applicable
Type of toilet/latrine	Flush or pour flush toilet	Not applicable	Not applicable
How often toilets are cleaned	Daily	Not applicable	Not applicable
Rota of times toilets are cleaned	Yes	Not applicable	Not applicable
Dedicated person whose job it is to clean the toilet	Yes	Not applicable	Not applicable
Family members permitted to use the toilet		Not applicable	Not applicable

7.A.7 Neonatal Unit Sterilisation, Ventilation and Waste Management

Item	Results
Sterilisation	
Area for cleaning and disinfecting supplies and equipment	Disinfection bucket
Space for sterilization	No
Clean storage space on neonatal unit for supplies	No
Is the storage space tidy and organized?	Not applicable
Disinfection buckets available on the day of the visit	Yes
Ventilation	
Functioning air filtration system to prevent risk of airborne infection available	No
Waste Management	
Functioning incinerator (e.g. burn in incinerator, non-burning incinerator, off-site incineration)	Yes
Types of separate covered waste bins are available on the neonatal unit	See details below
Puncture-proofs sharps container,	Yes
Contaminated waste (red)	Yes
Discarded medicines (black)	No
Anatomical/human waste (yellow)	No
Glass (blue)	No
General trash bin	No
None	No
Other	Not applicable
Waste bins used appropriately on the day of visit	All
Trash collected at least once per day from the neonatal unit	Yes
Designated staff for waste handling	Yes
Storage space for soiled utility anywhere in facility	No
Liquid spills or trash on the floor observed on day of visit	No

Item	Results
Vermin (mice, cockroaches) or animal feces ever seen in neonatal unit	Yes
Staff rest area (e.g. tea room, etc.) available	No
Food allowed in patient areas	No

7.A.8 Staff Personal Items

Item	Results
Number of neonatal unit uniforms owned by respondent	2
Clothes respondent comes to work in on most days	Uniform
Clothes respondent goes home in after shift on most days	Uniform
Frequency that neonatal unit uniform is washed	Daily
Place for staff to leave their personal items (e.g. lockers, cubbies, etc.)	No
Staff mobile phones allowed in the neonatal unit	Yes, any phones
Caretaker/guardian mobile phones allowed in the neonatal unit	Yes, any phones

7.B Medical Supplies and Laboratory

7.B.1 Infection Prevention Supplies

Item	Results
Available = available at time of visit, Not available = not available at time of visit, No stockout = no stockout for last 4 weeks	
Soap	Available today and no stockout in last 4 weeks
Antiseptics	Not available today
Disposable latex examination gloves	Available today and no stockout in last 4 weeks
Heavy-duty gloves	Not available today
Non-sterile protective clothing	Available today and no stockout in last 4 weeks
Bleach or bleaching powder (chlorine)	Available today and no stockout in last 4 weeks
Prepared disinfection solution	Available today and no stockout in last 4 weeks
Mayo stand (or equivalent to establish sterile field)	Not available today
Surgeon's hand brush with nylon bristles	Available today and no stockout in last 4 weeks
Mop	Available today and no stockout in last 4 weeks
Disinfectants and Antiseptics	
Chlorhexidine (7%) gel	Not available today
Ethanol	Not available today
Povidone iodine	Not available today
Alcohol-based rub	Available today and no stockout in last 4 weeks
Hypochlorite	Not available today

7.B.2 Laboratory Testing and Capacity for Microbiology

Item	Results
Available = available at time of visit; Usually available = usually available but not available at time of visit; Not available - but can be outsourced; Not available	
Microbiology	
Culture on blood samples	Not available
Sensitivity on blood samples	Not available
Culture on pus samples	Available today
Sensitivity on pus samples	Not available
Culture on cerebrospinal fluid samples	Available today
Sensitivity on cerebrospinal fluid samples	Not available

Item	Results	
Culture on urine samples	Available today	
Sensitivity on urine samples	Not available	
Cerebrospinal cell count	Available today	
Gram staining	Available today	
Stool analysis	Available today	
GBS screening	Not available	
Protocol for reporting antibiogram/antibiotic susceptibility testing	Not applicable	
GBS protocol	Not applicable	
Blood culture		
Laboratory method used to conduct blood culture	Not applicable	
Plastic or glass blood culture bottles used	Not applicable	
Make of the blood culture bottles	Not applicable	
Culture media used to make blood culture bottles	Not applicable	
Culture additives used to make blood culture bottles	Not applicable	
Quality controls for the reagents are used in the production of the blood culture bottles	Not applicable	
Make of the Pre-prepared/Procured International Blood Culture Bottles	Not applicable	
Quality controls are used for the pre-prepared/procured blood culture bottles	Not applicable	
Automated Continuous Systems/Machines make	Not applicable	
Automated Continuous Systems/Machines model details	Model name: Not applicable	Model number: Not applicable
BD Bactec Bottles used for blood culture	Not applicable	
BioMerieux BacT/Alert Bottles used for blood culture	Not applicable	
ThermoFisher VersaTREK Bottles used for blood culture	Not applicable	
Molecular/genomic machine used	Make: Not applicable	Model: Not applicable
Blood culture protocol available	No	
CSF culture		
Method used to concentrate the sample before the CSF culture	Centrifugation	
Laboratory method used to conduct CSF culture	Manual Methods - Direct Agar Culture or In-Laboratory/In-House Produced Culture Bottles	
Cultures inoculated directly to an agar plate or into a culture bottle	Agar Plate	
Culture media used to conduct CSF primary culture	5% Sheep Blood Agar,Enriched Chocolate Agar,MacConkey Agar	
Culture additives used to produce the primary agar plates/culture bottles	Yeast Extract,Hemin (X-Factor),NAD (V-Factor),Cysteine	
Quality controls for the reagents used in the production of the CSF cultures	Yes	
Plastic or glass CSF culture bottles used	Not applicable	
Make of the culture bottles	Not applicable	
Culture media used to make CSF culture bottles	Not applicable	
Culture additives used to make CSF culture bottles	Not applicable	
Quality controls conducted for the locally produced CSF culture bottles	Not applicable	

Item	Results	
Pre-prepared/procured international CSF culture system used	Not applicable	
Quality controls conducted for the pre-prepared/procured CSF culture bottles	Not applicable	
Automated continuous systems/machines used	Make: Not applicable	Model number: Not applicable
BD Bactec bottles used for CSF culture	Not applicable	
BioMerieux BacT/Alert Bottles used for CSF culture	Not applicable	
ThermoFisher VersaTREK Bottles used for CSF culture	Not applicable	
Molecular/genomic machine used	Not applicable	Not applicable
CSF culture protocol available	Yes	
Identification of Blood Isolates		
Specific microorganism detected from the blood culture bottle is identified	Not applicable	
Methods used for identification of the microorganism cultured from blood culture bottles	Not applicable	
Media used to subculture blood isolates	Not applicable	
Stains conducted on blood isolates	Not applicable	
Tests used for manual biochemical identification of isolates from blood culture	Not applicable	
Stockouts occured for the reagents used in any of these methods in the 4 weeks before the day of visit	Not applicable	
Comments about the reagent stockouts	Not applicable	
Commercially available assays/minisystems (e.g. API BioMerieux Test Strip etc.) is used for blood culture	Make: Not applicable	Model: Not applicable
Stockouts occured for the reagents used in any of these methods in the 4 weeks before the day of visit	Not applicable	
Comments about the reagent stockouts	Not applicable	
Identification of CSF Isolates		
Specific microorganism detected from the CSF culture bottle is identified	Yes	
Methods used for identification of the microorganism cultured from CSF culture bottles	Subculture (including agar plates),Microscopy (including staining),Manual Biochemical Tests	
Media used to subculture CSF isolates	MacConkey Agar,Kligler Iron Agar	
Stains conducted on CSF isolates	Gram Stain	
Tests used for manual biochemical identification of isolates from CSF culture	Motility Test,Catalase Test,Oxidase Test	
Stockouts occured for the reagents used in any of these methods in the 4 weeks before the day of visit	Yes	
Comments about the reagent stockouts	Expiration of Indole, Citrate, other biochemical discs	
Commercially available assays/minisystems (e.g. API BioMerieux Test Strip etc.) is used for blood culture	Make: Not applicable	Model: Not applicable
Stockouts occured for the reagents used in any of these methods in the 4 weeks before the day of visit	Not applicable	
Comments about the reagent stockouts	Not applicable	
Antibiotic Sensitivity Testing		
Method for antibiotic sensitivity/resistance used	Not applicable	

Item	Results	
Etest (Antibiotic Gradient Method)	Make: Not applicable	Model: Not applicable
Equipment used in MALDI-TOF MS	Make: Not applicable	Model: Not applicable
Equipment used in qPCR	Make: Not applicable	Model: Not applicable
Equipment used in DNA Microarray/Chips	Make: Not applicable	Model: Not applicable
Equipment used in Loop-mediated Isothermal Amplification (LAMP)	Make: Not applicable	Model: Not applicable
Stockouts occured for the reagents used in any of these methods in the 4 weeks before the day of visit	Not applicable	
Comments about the reagent stockouts	Not applicable	
Antibiotic sensitivity testing machines used	Not applicable	
Stockouts occured for the reagents used in any of these methods in the 4 weeks before the day of visit	Not applicable	
Comments about the reagent stockouts	Not applicable	
Protocol for blood culture isolate antibiotic sensitivity testing available	No	
Protocol for CSF culture isolate antibiotic sensitivity testing available	Not recorded	
Current research studies involving laboratory culture, antimicrobial resistance (AMR) or neonatal infections	None	

7.B.3 Laboratory Linkage to Neonatal Unit

Item	Number requested in 7 days before visit (Lab)	Number requested in 7 days before visit (Neonatal unit)	Number completed in 7 days before visit (Lab)	Number received in 7 days before visit (Neonatal unit)	Challenges to performing the tests
Blood cultures	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
CSF cultures	0	0	0	0	Not applicable
Bilirubin tests	0	0	0	0	Not applicable

7.B.4 Other Protocols for Laboratory Cultures

Item	Results
Protocols for cultures (Lab)	
Record keeping system used for the lab	Electronic
How blood cultures are labeled	Not applicable
Lab has a protocol for reporting culture results back to the neonatal unit	No
Describe the protocol for reporting culture results to the neonatal unit	Not applicable
Time it usually takes to receive results for a suspected sepsis test	Not applicable
Protocols for cultures (Neonatal unit)	
Neonatal unit has a protocol for receiving results from the laboratory and adding them to patient files	No
Describe the protocol	Not applicable
Time it usually takes to receive results for a suspected sepsis test from the lab	Not applicable

7.B.5 Personal Protective Equipment (PPE)

Item	Results
Gloves (disposable)	Available today and no stockout in last 4 weeks
Gloves (reusable)	Not available today
Face mask (dust/debris)	Available today and no stockout in last 4 weeks
Face mask (surgical)	Available today and no stockout in last 4 weeks
Face mask (N95)	Not available today
Face shield	Not available today

IV. APPENDICES

Neonatal Unit Layout

Insert link

Biomedical Technician Workshop Layout

Insert link

Laboratory Protocols

Insert link

V. ACKNOWLEDGEMENTS

We would like to thank the facility staff who participated, the HFA assessors who collected the data, and the London School of Hygiene and Tropical Medicine and Rice University teams who designed the reports.

For questions, please contact info@nest360.org