



# **DEDER GENERAL HOSPITAL**

## **NEONATAL INTENSIVE CARE UNIT**

### **Levelling Assessment Report**

**Reported By:** Dr. Dawit Seifu-IPD Dept' Director

**Report Period:** 4<sup>th</sup> Quarter of 2017E.C

***June 2017E.C,***

***Deder, Oromia***

## **FACILITY CHARACTERISTICS**

**-Assessment Period: April - June 2017**

**Assessment Date: 30/10/2017 EC**

**Facility Name:** Deder General Hospital

**Address of facility:** Deder town

**Level of the hospital:** General Hospital

**Catchment Population:** 1.5 million

## **Assessment Team:**

<b>S.No</b>	<b>Name</b>	<b>Responsibility</b>	<b>Role</b>
1	Dr Dawit Seifu	IPD director	Team Leader
	Redwan Sharafuddin	Quality officer	Member
2	Abdella Aliyi	Quality officer	Member
3	Abdi Baer	NICU head nurse	Member

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## INTRODUCTION

Neonatal Intensive Care Units (**NNICUs**) are critical components of maternal and child health services, providing specialized care to newborns requiring close monitoring and treatment. Deder General Hospital conducted a comprehensive NNICU levelling assessment to determine the current level of service delivery and identify areas requiring improvement. This report summarizes the findings and provides recommendations based on the national NNICU levelling standards.

## Objectives

- To evaluate the structural setup, staffing, equipment, laboratory, and service readiness of the NNICU.
- To determine the level of NNICU service provided as per national guidelines.
- To identify gaps and propose actionable recommendations to enhance neonatal care.

## METHODOLOGY

The assessment was conducted through:

- **Visual inspection** of the NNICU infrastructure and equipment.
- **Key informant interviews** with NNICU staff.
- **Checklist-based scoring** aligned with national NNICU levelling criteria.
- **Review of service readiness** across eight domains: configuration, human resources, equipment, laboratory services, imaging, clinical procedures, infection control, and documentation.

Each indicator was scored as:

- 1 = Available/Compliant
- 0 = Not Available/Non-Compliant

## Data analysis

### Analysis is conducted as follows:

1. Conversion factors are used to convert the Sub total of each category of the checklist
2. Total percentage is calculated relative percentage of each category

## Scoring Criteria:

If all are completed/Met give '1' if not/Unmet give '0'

**Table 1: NICU leveling criteria**

	Section	Met =1	UNMET=0
1.	NICU Configuration		
2.	Human Resources		
3.	Equipment (Essential + Desirable)		
4.	Laboratory Services		
5.	Imaging		
6.	Clinical Procedures		
7.	Support Services (TV, computer, etc.)		

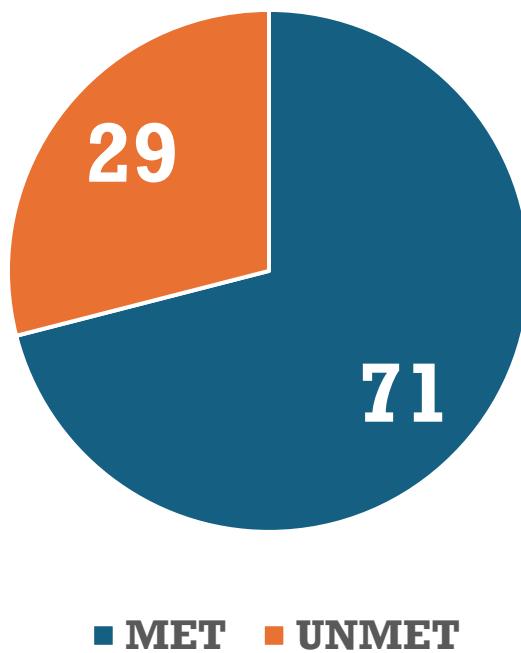
## RESULTS

The overall performance of the **NICU services leveling** in June 2017 (E.C.) was assessed at **71%** achievement. This result is based on the evaluation of 110 distinct items across **seven key** service sections. While achieving over 70% signifies a substantial level of service capability, the presence of 32 unmet standards ("0"s) out of the total items highlights significant areas requiring improvement to reach higher levels of service quality and comprehensiveness (**Table 2**).

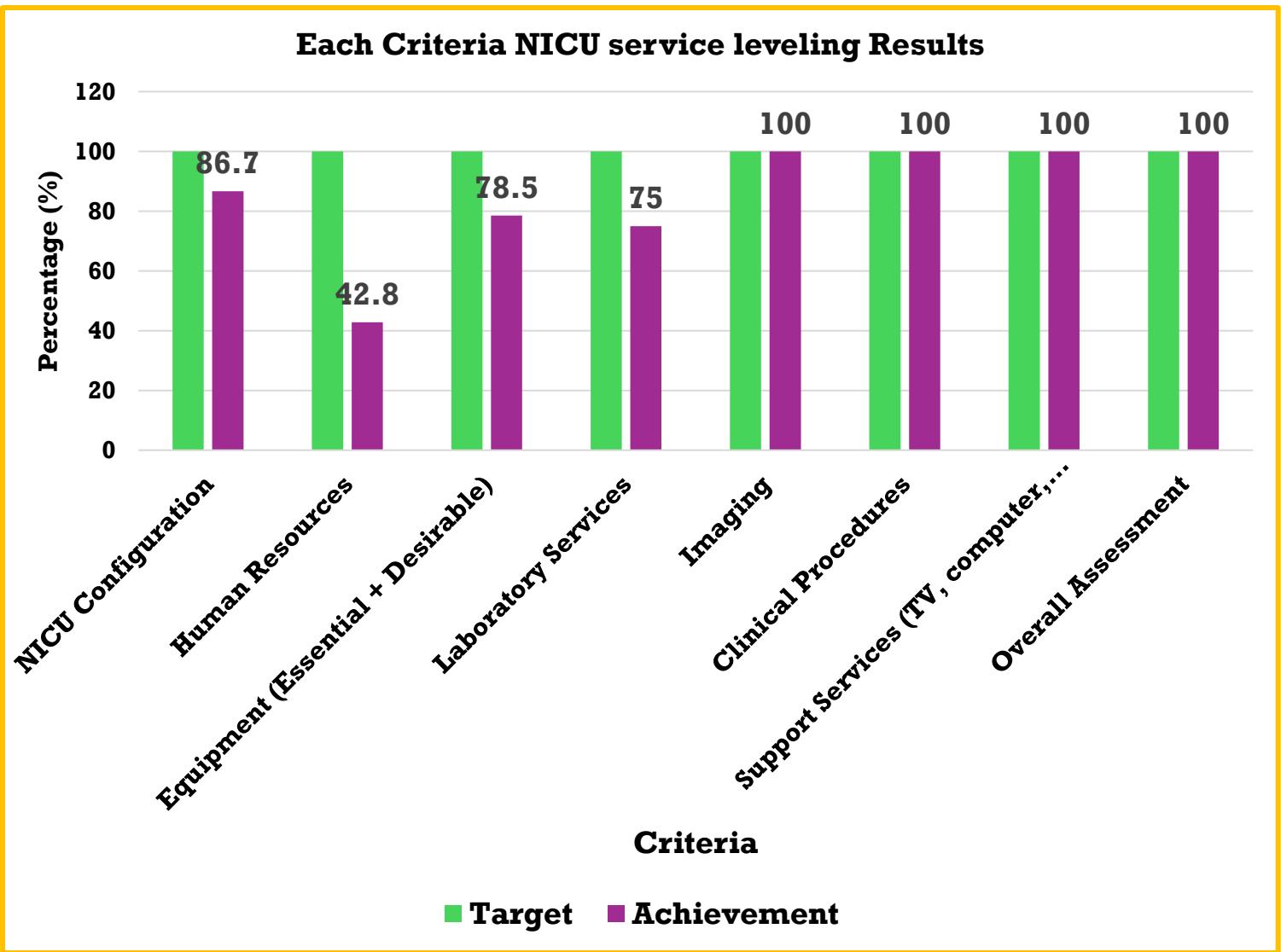
Performance varied considerably across the different service sections. Imaging Services and Support Services (including TV, computer, etc.) demonstrated excellent performance, achieving 100% compliance with the standards assessed (2 out of 2 items met in each). Human Resources was the next strongest area at 77.8% (7 out of 9 items met), followed closely by NICU Configuration at 75% (15 out of 20 items met). Equipment, encompassing both Essential and Desirable items, achieved a 72.3% compliance rate (34 out of 47 items met) (**Table 2**).

Areas needing the most significant attention were Laboratory Services and Clinical Procedures, both achieving only 60% compliance. Laboratory Services met 12 out of 20 standards, leaving 8 unmet, while Clinical Procedures met 6 out of 10 standards, leaving 4 unmet. These sections represent critical domains for neonatal intensive care, and their lower scores compared to the overall average indicate priority areas for targeted improvement efforts to enhance the overall quality and scope of NICU services (**Table 2**).

## Graph of NICU service leveling (%)



**Figure 1:** NICU service leveling results, June 2017E.C



**Figure 2:** Each Criteria NICU service leveling results, June 2017E.C

**Table 2: NICU service leveling results, June 2017E.C**

	<b>Section</b>	<b>Total Items</b>	<b>Total "1"</b>	<b>Total "0"</b>	<b>% Achieved</b>
8.	NICU Configuration	20	15	5	75
9.	Human Resources	9	7	2	77.8
10.	Equipment (Essential + Desirable)	47	34	13	72.3
11.	Laboratory Services	20	12	8	60
12.	Imaging	2	2	0	100
13.	Clinical Procedures	10	6	4	60
14.	Support Services (TV, computer, etc.)	2	2	0	100
	<b>Overall Assessment</b>	<b>110</b>	<b>78</b>	<b>32</b>	<b>71</b>

## DISCUSSION

The overall achievement rate of 71% indicates a reasonably functional NICU service level, meeting nearly three-quarters of the assessed standards. However, this score falls short of optimal performance and reveals significant gaps affecting comprehensive neonatal care. The presence of 32 unmet items ("0's) across 110 criteria represents tangible deficiencies requiring urgent attention. While a 71% compliance rate suggests foundational capabilities are largely in place, it underscores that nearly 30% of essential or desirable infrastructure, resources, or processes are suboptimal or absent. This level of performance may compromise the unit's ability to manage complex cases efficiently or meet evolving clinical demands, particularly in critical domains like laboratory diagnostics and clinical procedures where scores are weakest.

Notable strengths include **Imaging Services** and **Support Services** (e.g., TV, computers), both achieving perfect compliance (100%). This indicates robust ancillary support systems, likely facilitating diagnostics and administrative functions. **Human Resources** (77.8%) and **NICU Configuration** (75%) also performed well, suggesting adequate staffing structures and appropriate physical unit design. **Equipment availability** (72.3%), though below the overall average, remains a relative strength given its large share (47 items) of the total assessment. These higher-scoring sections collectively form a critical operational backbone, enabling baseline service delivery and reflecting effective prioritization in resource allocation or process implementation.

The most concerning deficiencies lie in **Laboratory Services** (60%) and **Clinical Procedures** (60%). Laboratory gaps (8 unmet items) directly impact diagnostic speed and accuracy, potentially delaying life-saving interventions. Similarly, gaps in clinical procedures (4 unmet items) suggest limitations in technical capabilities or protocol adherence, directly affecting patient care quality. The **Equipment** section, despite its moderate score, has the highest absolute number of deficiencies (13 unmet items), which could range from missing essential devices to inadequate maintenance. These weaknesses, particularly in laboratory and clinical domains, represent high-risk areas where investment could yield significant improvements in outcomes. Addressing these gaps—through targeted procurement, staff training, protocol standardization, or process optimization—should be prioritized to elevate overall service quality, patient safety, and the unit's readiness for complex neonatal emergencies.

## RECOMMENDATIONS

1. **Upgrade Equipment:** Procure critical missing items—e.g., laryngoscope, infusion pumps, bilirubin meter, exchange transfusion kits.
2. **Strengthen Staffing:** Train and recruit neonatal nurses and assign dedicated porters.
3. **Enhance Laboratory Capacity:** Include blood gas analysis, CSF, gram staining, and cultures.
4. **Improve KMC Infrastructure:** Build a dedicated area with toilet/shower facilities.
5. **Advance Procedure Readiness:** Ensure tools and training for LP, umbilical catheterization, and exchange transfusion.

**Table 3: NICU IMPROVEMENT PLAN, June 2017E.C**

S/N	Gap Identified	Action Plan	Due Date	Responsible Body
1	Missing advanced equipment (e.g., bilirubin meter, exchange transfusion set)	Prepare request for government and donor support	Q1 2018	Hospital Admin
2	No dedicated porter for NICU	Include porter in HR planning	Q1 2018	HR Department
3	Laboratory gaps (e.g., CSF, cultures)	Procure essential lab equipment	Q2 2018	Laboratory Unit
4	No step-down/KMC toilet/shower	Plan inclusion in facility renovation project	Q2 2018	Infrastructure Dept
5	Lack of neonatal-trained nurses	Enroll existing staff in neonatal training programs	Q3 2018	Nursing Director



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- ❖ Garee tajaajila NICU irraa
- ❖ Garee Qulquullina Tajaajila Fayyaatiif

**Dhimmi: waa'ee Gabaasa “ICU services leveling” erguu ilaala**

Akkuma mata Dureerrattii ibsamuuf yaalameetti “**Neonatal intensive care unit (NICU) services leveling report**” kan kurmaana 4ffaa bara 2017 xalayaa **Fuula 11** qabuu gaggeessituu kana waliin walqabsiifnee isiiniif eerguu keenya kabajaan isiniif beeksiifnaa.

**Nagaya waggiin!!**