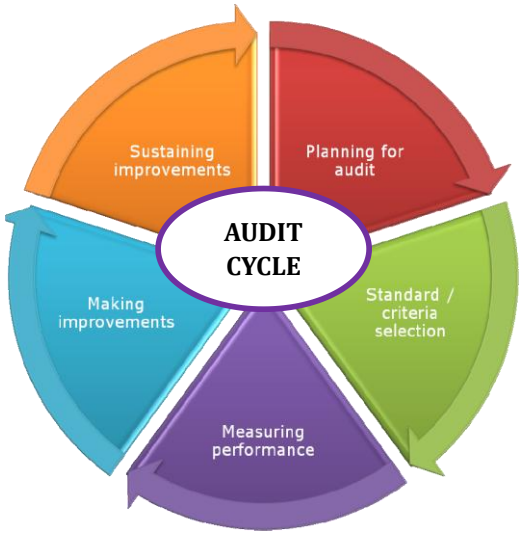
DEDER GENERAL HOSPITAL

NEONATAL INTENSIVE CARE UNIT (NICU)



CLINICAL AUDIT TO IMPROVE THE QUALITY OF CLINICAL CARE OF NEONATAL SEPSIS

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Advisors:

☞ ***HQU TEAM***

Deder, Oromia

December, 2017 E.C

NICU case team Clinical Audit/QI team members:

S/N	Name	Responsibility	Remarks
1.	Dr. Taju Abdi (MD, Senior)	**Team leader**	
2.	Ismael Abrahim	**Secretory**	
3.	Abdurhaman Bakri	Member	
4.	Mahader Gidlu	Member	
5.	Maserat Megarsa	Member	
6.	Ruziya Ahmed	Member	
7	Derartu Abdulaziz	Member	

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The implementation status of the previous audit action plan

Regarding the implementation status of the previous audit action plan, while most of the planned interventions have been successfully implemented, the persistent gaps in investigations and monitoring suggest partial implementation or challenges in sustaining improvements in these specific areas. Focused action is required to address these gaps effectively.

INTRODUCTION

The neonatal period is the most vulnerable time for children's survival. Globally every year about 4 million children die in the first 4 weeks of life, of which 99% of the deaths occur in low- and middle-income countries and of which 75% are considered avoidable [1]. Even though neonatal mortality shows a declining trend over the last 20 years from 50.6 per 1000 live births in 1998 to 28.9 per 1000 live births in 2017 [2], Ethiopia continuous to struggle with a prevalence of about 42% or 81,000 newborn deaths every year [1]. Thus all neonatal deaths in sub-Saharan Africa and southern Asia [7]. Even though there are some improvements to access essential preventive, primary child health care services and sector training [1], neonatal sepsis is still the major cause of newborn deaths resulting in more than one-third of all neonatal deaths [1, 8].

Statement of problem

Neonatal sepsis (NS) continues to pose significant morbidity and mortality despite the continued advancement in neonatal care (9, 10). Neonatal sepsis is classified into early- and late-onset depending on the timing of infection in days after birth (11). Another classification includes hospital-acquired vs. community-acquired (12, 13).

The global incidence of NS varies, with a population-level estimate of 2,202 per 100,000 live births, with mortality rates ranging from 11 to 19% in high- and middle-income countries (14) and 2.9 to 24 per 1,000 live births in low-income countries (15). Advancement in obstetrical care and universal screening for Group B Streptococcus (GBS) to stratify risk for NS has helped reduce the incidence of sepsis even further (16). Despite the reduction in NS in many countries, it still possesses a serious threat to neonates (17). Neonatal bacterial infection affecting neonates admitted to the neonatal intensive care unit (NICU) further complicates their course in the hospital and increases the risk of morbidity and mortality (18)

OBJECTIVE

General objective

To improve the quality of clinical care provided for neonates admitted with the diagnosis of sepsis (suspected and proven)

Specific objectives

- To ensure neonates with suspected or proven sepsis are appropriately evaluated
- To ensure neonates with suspected or proven sepsis are appropriately investigated
- To ensure neonates with suspected or proven sepsis are appropriately treated
- To ensure neonates with suspected or proven sepsis are appropriately monitored
- To ensure neonates with suspected or proven sepsis receive appropriate discharge care

METHODS

Study area & period

The clinical audit was conducted in NICU of Deder General Hospital from September 21, 2017E.C to December 20, 2017E.C

Study design

Retrospective cross-sectional study

Source population

All charts of Neonates admitted to NICU

Study population

All neonates admitted with a diagnosis of neonatal sepsis to NICU

Inclusion criteria

All neonates admitted with a diagnosis of neonatal sepsis to NICU from September 21, 2017E.C to December 20, 2017E.C

Exclusion criteria

Death on arrival, those who are observed and sent back to mother or discharged within 24 hours

Sampling technique

A total of 19 medical records (client chart) of the last two months of reporting periods were sampled for the audit. The individual client charts were withdrawn by systematic random sampling.

Study Variables

Dependent variables:

Perinatal Asphyxia

Independent Variables

ANC follow-up, Place of birth, mode of delivery,

Data collection method

Data extraction sheet was adapted from National clinical audit tool

Data Processing & analysis

Data from extraction sheets was manually verified and entered into the SPSS version 25 software for analysis. The software checked data types, sizes, classifications, and allowable values. Corrections were made, and the findings were presented in tables and figures.

RESULT

The clinical audit results for improving the quality of clinical care for neonatal sepsis reveal an overall performance of 96% against a target of 98%, indicating a 2% gap. Most criteria achieved 100% compliance, including proper identification, history-taking, physical examination, diagnosis, immediate treatment, discharge care, and provider documentation. However, two critical areas—relevant investigations on the day of admission and monitoring during the hospital stay—fell short, achieving 64% (16% gap) and 96% (4% gap), respectively. These gaps highlight areas requiring focused improvement to enhance the overall quality of neonatal sepsis care. **(Table1).**

Table 1: **ACTUAL PERFORMANCE ANDV PERFORMANCE AGAINST TARGET (%)**

S.no	Standards/criteria	Target	Actual performance	Performance against target
1.	Identification information is recorded for a neonate with sepsis	100	100	
2.	Appropriate history is taken for a neonate with sepsis	100	100	
3.	Appropriate physical examination is performed for a neonate with sepsis	100	100	
4.	Relevant investigations are done for a neonate with sepsis at day of admission	80	64	16
5.	Appropriate diagnosis is made for a neonate with sepsis	100	100	
6.	Appropriate treatment is provided for a neonate with sepsis on the immediate admission day	100	100	
7.	Appropriate monitoring is done for a neonate with sepsis during hospital stay	100	96	4
8.	Appropriate discharge care is provided for a neonate with sepsis	100	100	
9.	Identification of provider is documented for a neonate with sepsis	100	100	
10.	A neonate with sepsis died while being treated in the health facility	15	NA	0
	Total standards met per chart	880	**860/880**	
	Percentage	98%	**96%**	2%

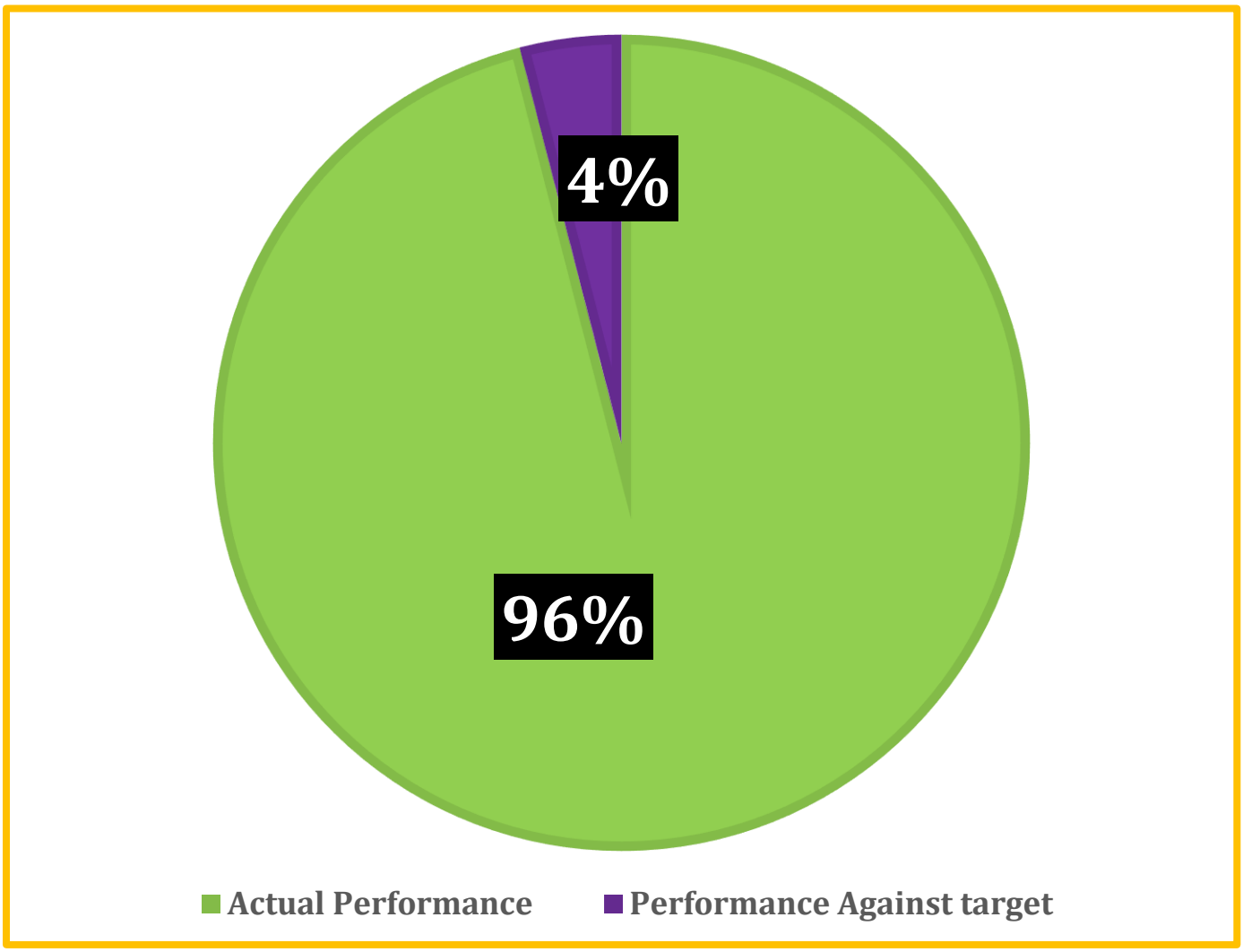

Figure 1: Overall performance of improving the quality of clinical care for neonatal sepsis, December 2017E.C

Graph showing score for each criterion/standard for management of neonatal sepsis, December 2017E.C

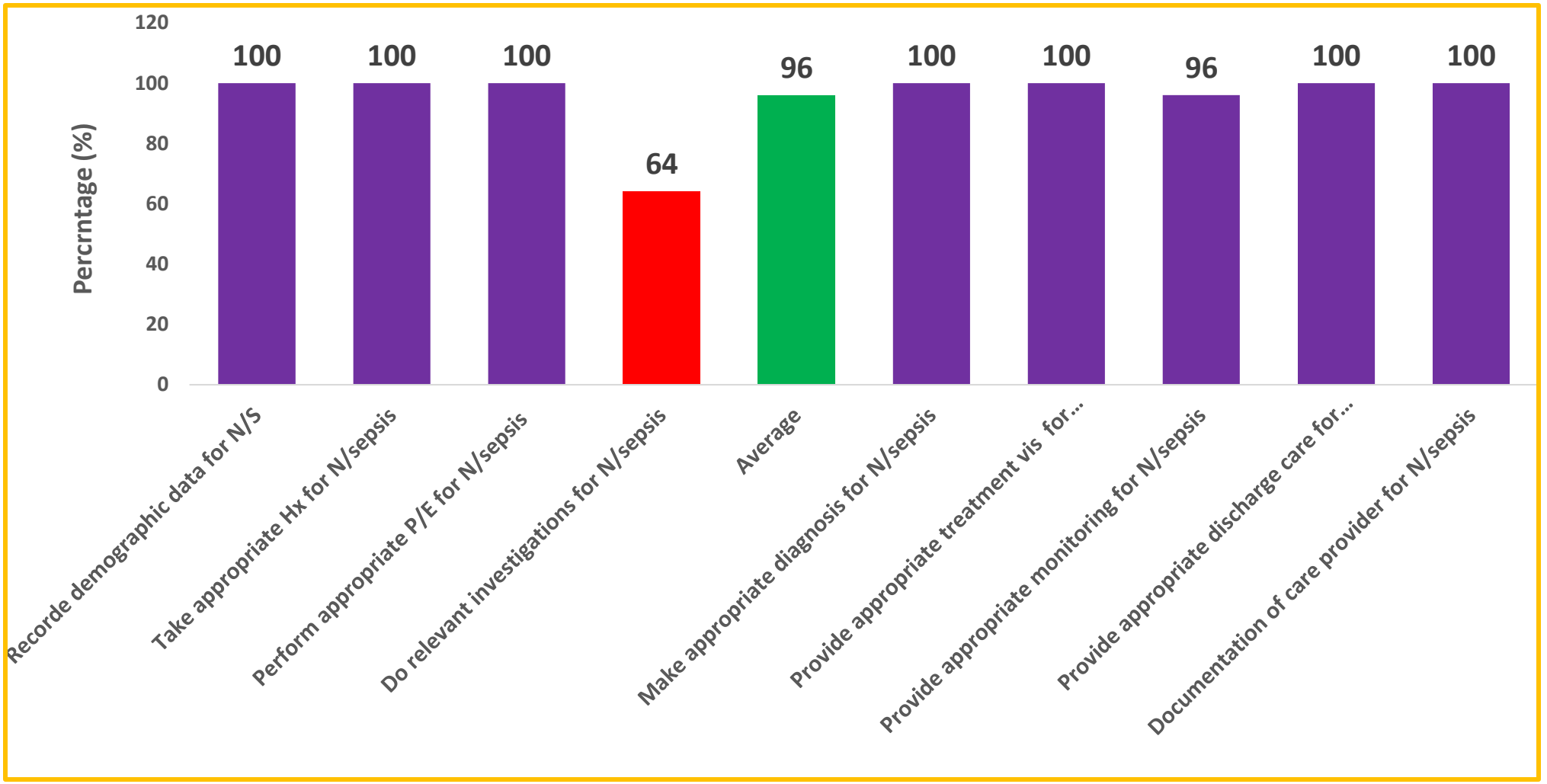

Figure 2: Score for each criterion/standard for neonatal sepsis management, December 2017E.C E.C

RECOMMENDATIONS

1. Improve Relevant Investigations:
2. Enhance Monitoring During Hospital Stay

DEDER GENERAL HOSPITAL

CLINICAL AUDIT QUALITY IMPROVEMENT PLAN/PDSA FORM

Clinical Audit Title: CLINICAL AUDIT TO IMPROVE THE QUALITY OF CLINICAL CARE OF NEONATAL SEPSIS

Clinical Audit Lead: Dr.Taju Abdi Department /Team NICU

Audit Cycle: 2

		Plan					DO	STUDY	ACT
S/N	**Recommendation**	**Actions to address the recommendation/Change idea**	**Person Responsible**	**Target Date**	**Data collection plan**		Carry out the plan. Record data, observations and modifications to the plan. Use visual descriptions such as run charts to describe what actually happened	Complete analysis and synthesis. Do the results align with the explicit criteria? Write the progress made in the implementation, the difficulties faced and actions taken to address them.	**Decision**: What action are we going to take as a result of this cycle (**Adopt, Adapt, or Abandon**)? Are we ready to implement? What other processes or systems might be affected by this change?
	Recommendation based on findings fromclinical audit report form	What change will we test? What do we need to try the change?	Who will perform the test? (Name or Role)	When will this be complete?	How will we collect data? (Checklist, Chart audit,)	Who will collect the data? (Name or Role)			
	Improve Relevant Investigations:	• Ensure necessary diagnostic equipment and reagents are available • Develop a checklist for required investigations to be completed within 24 hours of admission	Finance head (Obsa) and NICU head (Usmail)	Until next audit (Mar 2017)	Checklist	Abdi & Abdella			
	Enhance Monitoring During Hospital Stay:	- Reinforce accountability among nurses for accurate neonatal monitoring in hospital stay	NICU Head (Usmail)	From jan 10, 2017	Checklist	Abdi & Abdella			

☐ **Adapt** *(Modify this change and plan next PDSA cycle; loop back to "Plan")* ☐ **Abandon** *(Change didn't work/won't lead to improvement. Identify new change; plan new PDSA cycle; loop back to "Plan")*

☐ **Adopt** *(Data revealed this change was effective and worked well; Next step, develop implementation plan) >>>>*

Completed by:	**Sign off:**	**Date of review of PDSA:**

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