DEDER GENERAL HOSPITAL

NEONATAL INTENSIVE CARE UNIT (NICU)

Reported By: Dr Frezer Girma (EOPD Director)

Neonatal Sepsis Management

STG Utilization Monitoring Report

Reported By: *Dr. Dawit Seifu-(IPD Director)*

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Purpose

Since EBC was launched in 2014 it was mentioned that monitoring Utilization to STG was necessitated as mentioned in EBC document to make sure that clients was treated as per the protocol and there is uniformity of the care provided for the all clients. Deder General Hospital has also followed this and conducting the Monitoring of STG adherence.

Introduction

Neonatal sepsis remains a leading cause of morbidity and mortality in newborns, particularly in resource-limited settings. Prompt diagnosis, evidence-based management, and consistent documentation are critical to improving outcomes. This report evaluates compliance with neonatal sepsis management protocols at the **Deder General hospital** to identify strengths and gaps in care delivery.

AIM

- To ensure that DGH NICU teams have working knowledge and Utilization to Neonatal Treatment Guideline.

Objective

- To assess the level of compliance with neonatalsepsis management protocols
- To identify areas requiring quality improvement
- To enhance patient outcomes and adherence to standards of care.

Methodology

- **Data Collection**: Retrospective review of 10 medical records (MRNs) of neonates diagnosed with sepsis during the period of **April 01-30, 2017E**.C
- **Criteria Assessed**: Compliance with 13 key indicators for neonatal sepsis management, including timely diagnosis, laboratory tests, initiation of antibiotics, and caregiver follow-up documentation.
- **Analysis**: Compliance rates were calculated for each indicator, and gaps were identified to inform actionable recommendations.

Table 1:CRITEREA AND STANDARDS

S.No	Standards
1.	Diagnosis documented within 24 hours of suspicion.
2.	Maternal/neonatal risk factors noted in records.
3.	Blood culture collected before antibiotics.
4.	CRP, CBC, or lumbar puncture performed if indicated.
5.	Empirical antibiotics started within 1 hour.
6.	Antibiotics aligned with standard guidelines.
7.	IV fluids documented as per protocol.
8.	Nutritional support provided when indicated.
9.	Oxygen or respiratory support when indicated.
10.	Vital signs recorded consistently.
11.	Family counseling documented.
12.	Neonate discharged only after stability.
13.	Follow-up plan documented for caregivers.

Result

The overall performance in Neonatal Sepsis management for April 2017 E.C. reflects a **95% compliance rate** (114/120), indicating robust adherence to most critical care standards. Ten out of the twelve assessed criteria achieved full compliance (100%), demonstrating excellence in urgent interventions such as timely diagnosis documentation, prompt antibiotic administration, and consistent monitoring of vital signs. Key protocols—including respiratory support, nutritional care, and family counseling—were uniformly followed, ensuring neonates received comprehensive and guideline-aligned care. This high overall compliance underscores institutional strengths in urgent care delivery, documentation practices, and systemic adherence to neonatal sepsis management guidelines **Table 3**).

Despite the strong performance, two areas require attention: **Standard 3** (CRP/CBC testing compliance at 60%) and **Standard 5** (antibiotic guideline alignment at 80%). These gaps suggest challenges in diagnostic follow-through and antibiotic stewardship, which are vital for minimizing complications and ensuring treatment efficacy. Addressing these through targeted training, resource allocation, or protocol reinforcement could bridge the remaining 5% gap, ensuring uniform adherence across all standards and further elevating care quality for vulnerable neonates (**Table 3**).

Figure 1: Neonatal Sepsis management as STG Performance, April 2017E.C

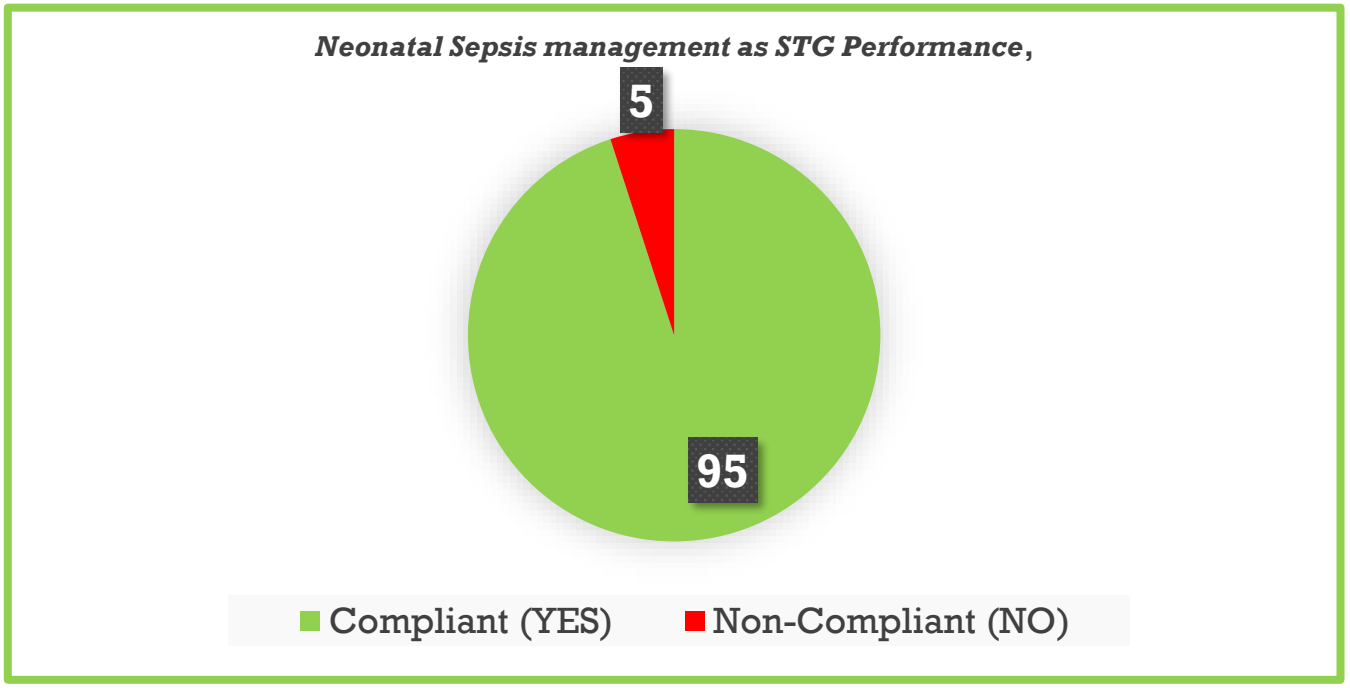

Table 2: Neonatal Sepsis management as STG Performance, April 2017E.C

S.No	Standards	Compliant (YES)	Non-Compliant (NO)	Compliance Rate (%)
1.	Diagnosis documented within 24 hours of suspicion.	10	0	100
2.	Maternal/neonatal risk factors noted in records.	10	0	100
3.	Test like CRP & CBC performed (if indicated)	6	4	60
4.	Empirical antibiotics started within 1 hour.	10	0	100
5.	Antibiotics aligned with standard guidelines.	8	2	80
6.	IV fluids documented as per protocol.	10	0	100
7.	Nutritional support provided when indicated.	10	0	100
8.	Oxygen or respiratory support when indicated.	10	0	100
9.	Vital signs recorded consistently.	10	0	100
10.	Family counselling documented.	10	0	100
11.	Neonate discharged only after stability.	10	0	100
12.	Follow-up plan documented for caregivers.	10	0	100
	OVERALL	114/120	6/120	**95%**

Discussion

The findings from the Neonatal Sepsis management performance assessment reveal a **95% overall compliance rate** (114/120), reflecting a strong institutional commitment to evidence-based care. Ten out of twelve standards achieved full compliance, highlighting excellence in critical areas such as timely documentation of diagnoses, prompt initiation of empirical antibiotics, consistent vital sign monitoring, and adherence to protocols for respiratory support, nutritional care, and discharge criteria. These results underscore the facility's capacity to deliver urgent, standardized interventions, which are pivotal for neonatal survival and recovery. The uniform adherence to family counseling and follow-up planning further demonstrates a holistic approach to care, addressing both clinical and psychosocial needs of patients and caregivers. Such high compliance aligns with global best practices, where rapid response and systematic documentation are cornerstones of effective sepsis management.

However, the gaps in **Standard 3** (60% compliance with CRP/CBC testing) and **Standard 5** (80% antibiotic guideline alignment) warrant attention. The underperformance in diagnostic testing raises concerns about potential delays in confirming sepsis or tailoring treatments, which could compromise patient outcomes. Similarly, deviations from antibiotic guidelines may reflect gaps in prescriber awareness, resource constraints, or outdated protocols, risking suboptimal therapy and antimicrobial resistance. These issues, though limited to two standards, are clinically significant, as diagnostic accuracy and appropriate antibiotic use are central to sepsis management. Addressing these gaps could involve targeted interventions, such as ensuring consistent availability of diagnostic tools, regular training on updated antibiotic protocols, and implementing audit mechanisms to reinforce compliance. By prioritizing these areas, the facility can bridge the remaining 5% performance gap, further strengthening its neonatal care framework and aligning fully with international standards for sepsis management.

RECOMMENDATIONS

1. Avail & Ensure CRP/CBC tests are performed promptly
2. Avail STG protocols for staff
3. Conduct regular audits with feedback loops to address gaps.

Table 3: Performance improvement plan, April 2017E.C

Area of Improvement	**Action Steps**	**Responsible bdy**	**Timeline**
Standard 3: CRP/CBC Testing Compliance	Ensure lab availability for urgent tests.	Lab head,	1 month
Standard 5: Antibiotic Guideline Adherence	Avail STG protocols.	NICU head,	1 Week
Cross-Cutting Improvements	Monthly interdisciplinary review meetings.	NICU head	Ongoing

Table 4: *Implementation Status of previous performance improvement plan, April 2017E.C*

No.	Area of Improvement	Action Taken	Responsible Party	Status
1.	CRP/CBC/ availability	- Procured reagents for CBC	Laboratory Head, NICU Unit Head	Pending
2.	Oxygen/respiratory support	- Initiated respiratory support training for nurses	Equipment Manager, NICU Head	In progress
3.	Monitoring & feedback	- Established bimonthly review meetings	Quality Team, NICU Head	Completed

References

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3. Seale AC, Blencowe H, Manu AA, et al. *Estimates of possible severe bacterial infection in neonates in sub-Saharan Africa, South Asia, and Latin America for 2012: a systematic review and meta-analysis*. The Lancet Infectious Diseases. 2014;14(8):731-741.
4. American Academy of Pediatrics (AAP). *Guidelines for Management of Neonatal Sepsis*. Pediatrics. 2018;142(6):e20182896.
5. Ethiopian Public Health Institute (EPHI). *Ethiopian Emergency and Essential Clinical Guidelines for Newborns*. Addis Ababa: EPHI; 2021.
6. UNICEF. *Strengthening Quality of Newborn Care: Strategies and Tools*. New York: UNICEF; 2019.

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

Dhimmi: **waa'ee Gabaasa STG protocol mon erguu ilaala**

Akkuma mata Dureerrattii ibsamuuf yaalameettii **STG protocol mon "NEONATAL SEPSIS"** Jedhamu kan **ji'a 8ffaa** bara **2017** xalayaa **Fuula 11** qabuu gaggeessituu kana waliin walqabsiifnee isiiniif eerguu keenya kabajaan isiniif beeksiifnaa.

Nagaya wajjiin!!