DEDER GENERAL HOSPITAL

EMERGENCY INJURY AND CRITICAL CARE DEPARTMENT

Clinical Audit to improve the quality of routine care in the Intensive Care Unit (ICU)

By: ICU QI Team

Audit phase: Re-Audit

Deder, Oromia

March 2017E.C

Emergency and critical care/ICU case team clinical Audit/QI members

S/N	Name	Responsibility	Remarks
1.	Dr. Samuel Shimelis (Emergency and critical care Director)	**Team leader**	
2.	Jabir Mohammed	Adult ICU Head	
3.	Lenco Jabir	Staff	
4.	Kadir Yusuf	Staff	
5.	Jabir m/d Abrahim	Staff	
6.	Mebratu Debru	Staff	
7.	Farahan Mohamed	Member	

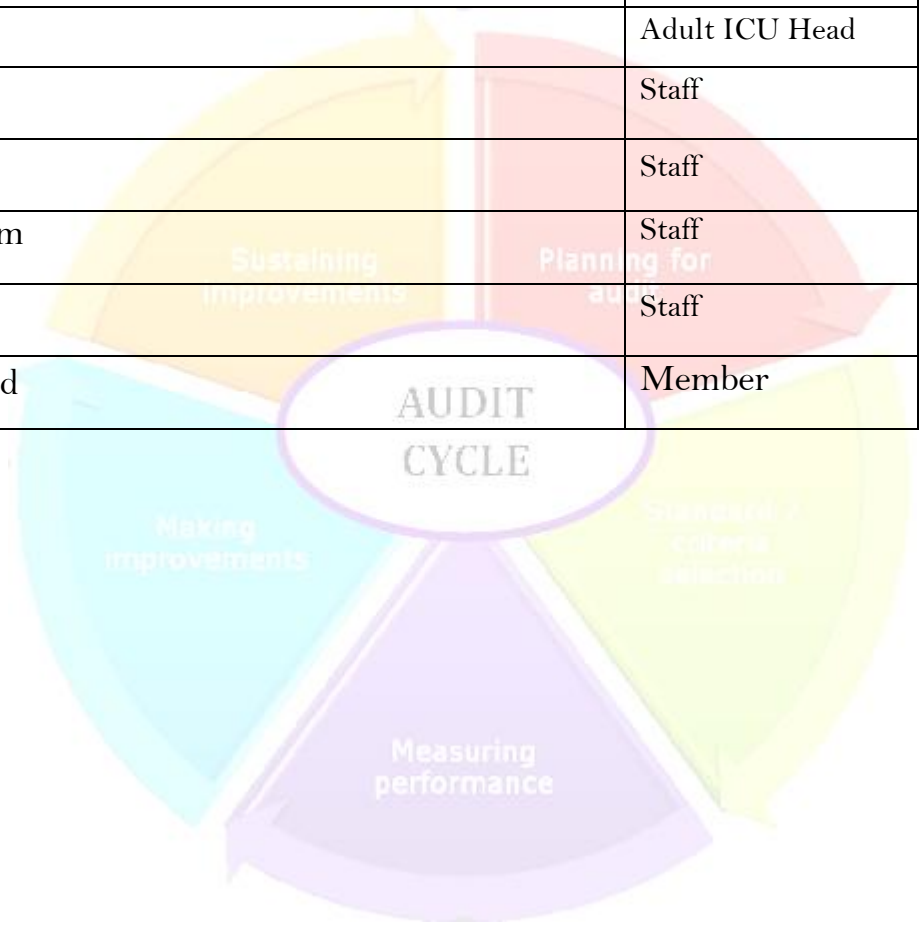


TABLE OF CONTENTS

Emergency and critical care/ICU case team clinical Audit/QI members ..... *i*

Lists of Figures and Tables ..... *ii*

NTRODUCTION *1*

OBJECTIVE 1

General objective *1*

Specific objectives *1*

METHODOLOGY *2*

RESULTS *3*

REFERENCES 14

Lists of Figures and Tables

Figure 1: Overall of Performance of ICU Care Clinical Audit, March 2017E.C 4
Figure 2: Optimal nutritional support provided for patient admitted to the ICU 6
Figure 3: Appropriate and timely patient mobilization, March 2017E.C 7
Figure 4: Provide appropriate pain and agitation evaluation and management, March 2017E.C 8
Figure 5: Provided optimal physician care, March 2017E.C 9
Figure 6: Provided optimal nursing monitoring, , March 2017E.C 10
Figure 7: DOCUMENTATION OF PROVIDER IDENTIFICATION 11

Table 1: Overall of Performance of ICU Care Clinical Audit, March 2017E.C 5
Table 2: Action Plan/Improvement plan for ICU Care, March 2017E.C. 12
Table 3: The Implementation Status of previous audit cycle improvement plan, March 2017E.C. 13

NTRODUCTION

Intensive Care Units (ICUs) are critical areas where optimal care delivery is vital to ensuring patient survival and recovery. This audit evaluates the quality of care provided to ICU patients at Deder General Hospital. It focuses on physician involvement, nursing monitoring, documentation practices, and patient outcomes, comparing them against established standards to identify areas for improvement.

OBJECTIVE

General objective

☞ To improve the quality of routine clinical care provided to patients admitted to critical care unit

Specific objectives

- To ensure optimal nutritional support is provided for patients admitted to the ICU
- To ensure timely and appropriate patient mobilization is provided for patients admitted to the ICU
- To ensure appropriate pain evaluation and management is done for patients admitted to the ICU
- To ensure VAP preventive methods are practiced for patients admitted to the ICU
- To ensure optimal physician care is provided for patients admitted to the ICU
- To ensure optimal nursing monitoring is provided for patients admitted to the ICU

METHODOLOGY

Study design

- Retrospective cross-sectional study

Study period

- The clinical audit was conducted in ICU of Deder General Hospital from **December 21, 2017EC to March 20, 2017E.C**

study population

- All patients routine ICU and cards are available during the study period.

Inclusion criteria

- Patients who received routine ICU care from **December 21, 2017EC to March 20, 2017E.C**

Exclusion criteria

- Patients who were admitted for ≤ 72 hours

Sampling technique

- A total of 19 medical records (client chart) of the last reporting quarter should be sampled for the audit. The individual client charts were withdrawn by systematic random sampling.

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.

RESULTS

The overall performance of ICU care during the clinical audit in March 2017 E.C. was 73%, indicating a significant gap between the target and actual outcomes **(figure 1).** While some variables, such as identification information recording, optimal nutritional support, optimal physician care, optimal nursing monitoring, and care provider documentation, achieved the 100% target, others fell short. Notably, patient mobilization was only 42%, and pain and agitation management reached 75%, highlighting areas requiring improvement. Additionally, the mortality rate exceeded the target, with 42% of patients dying compared to the desired 35% **(Table 1)**.

The audit reveals both strengths and weaknesses in ICU care delivery. The perfect scores in key areas like identification, nutrition, and physician and nursing care demonstrate effective protocols in these aspects. However, the low performance in patient mobilization and pain management suggests a need for targeted interventions to enhance these services. The higher-than-expected mortality rate further underscores the urgency of addressing these gaps to improve overall patient outcomes and align with the established standards **(Table 1)**.

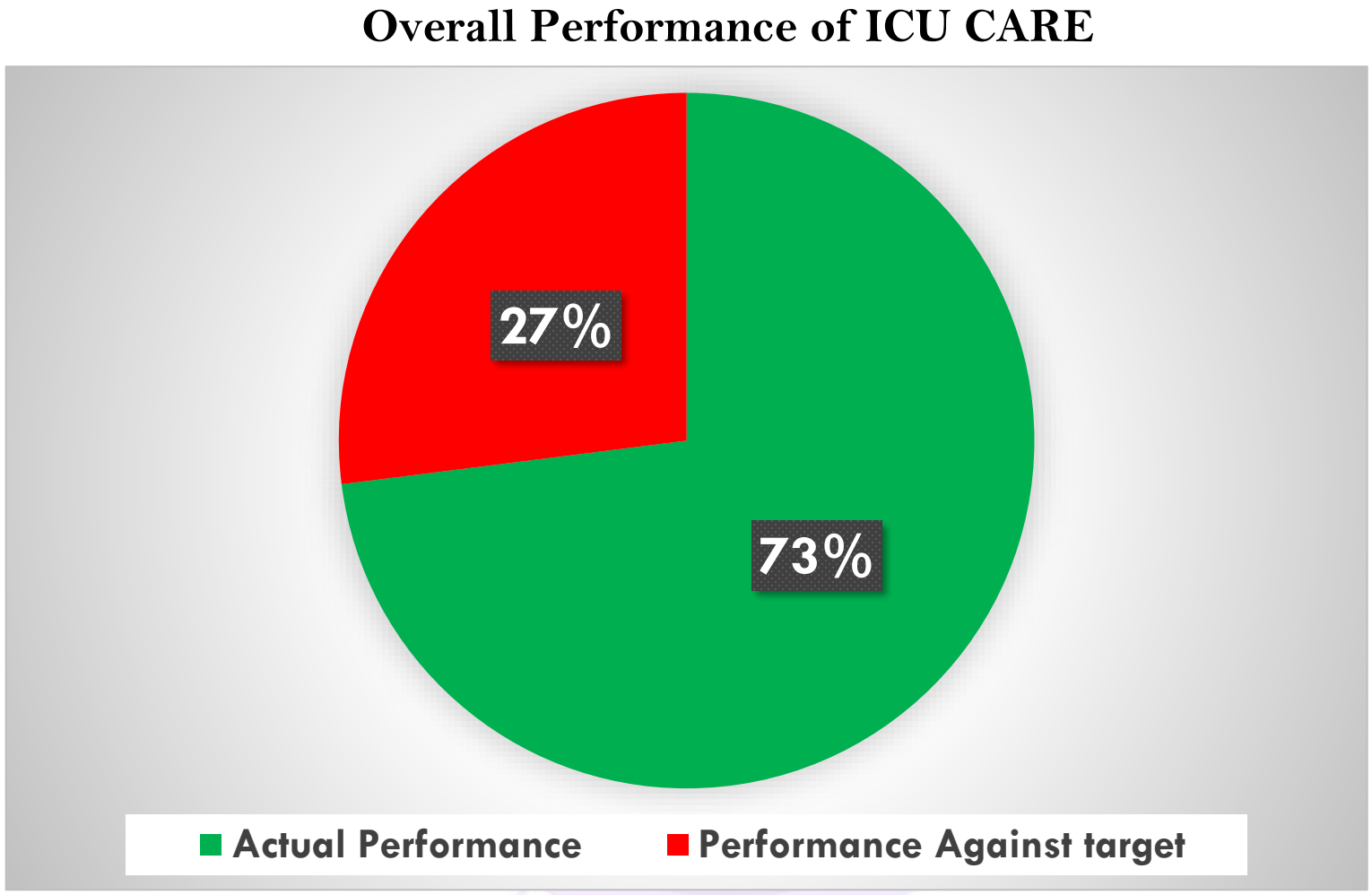


Figure 1: *Overall of Performance of ICU Care Clinical Audit, March 2017E.C*

Table 1: Overall of Performance of ICU Care Clinical Audit, March 2017E.C

S/N	Variables	Target (%)	Actual Performance (%)
1	Identification information is recorded for a patient admitted to the ICU	100	100
2	Optimal nutritional support is provided for a patient admitted to the ICU	100	100
3	Appropriate and timely patient mobilization is done for a patient admitted to the ICU	100	42
4	Appropriate pain and agitation evaluation and management is provided for a patient admitted to the ICU	100	75
6	Optimal physician care is provided for a patient admitted to the ICU	100	100
7	Optimal nursing monitoring is provided for a patient admitted to the ICU	100	97
8	Identification of care provider is documented for a patient admitted to the ICU	100	100
9	Patient died while being managed in the ICU	35	42
	Total Percentage (%)	**100**	**73%**

Graph showing score for Optimal nutritional support is provided for a patient admitted to the ICU

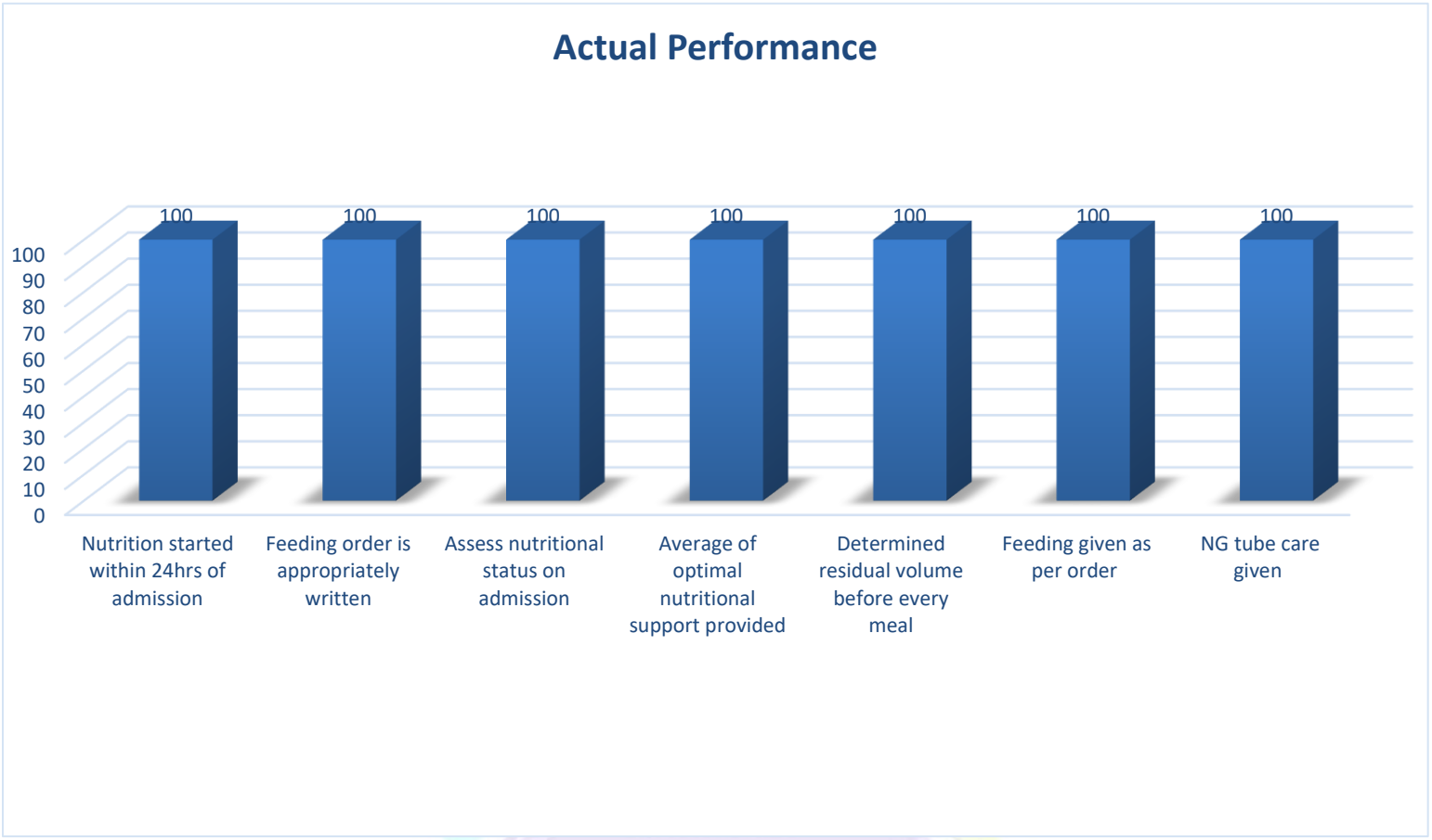


Figure 2: Optimal nutritional support provided for patient admitted to the ICU

GRAPH SHOWING TIMELY PATIENT MOBILIZATION

The rate of patient mobilization was only **42%,** highlighting a critical gap in ICU care. Specific sub-element performances include:

- change position Q2hrs: 100%
- Use of physiotherapy support: 0% , &
- Use DVT prevention method 21% The absence of physiotherapists and structured mobilization protocols contributed to this low performance. Implementing a physiotherapy program and providing clear guidelines for mobilization could help bridge this gap (**figure** 3)

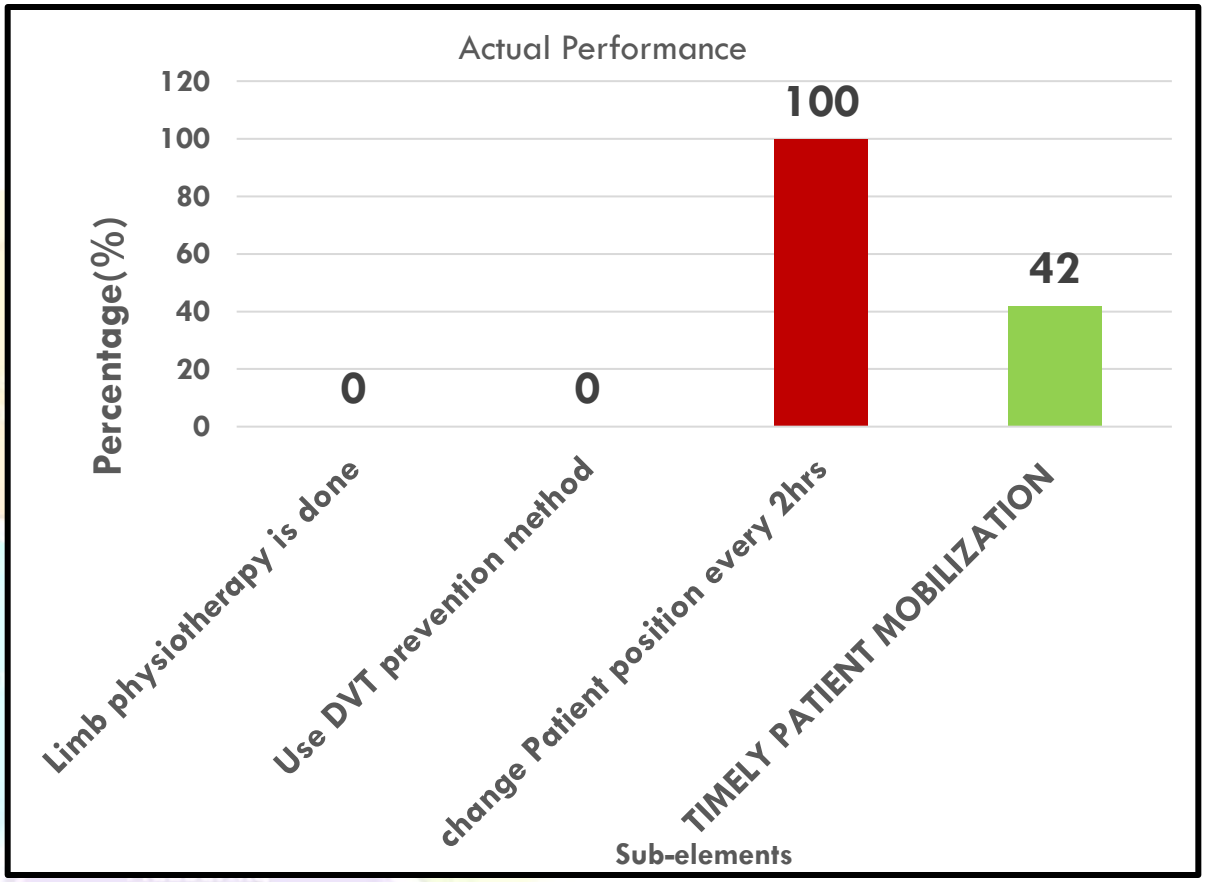


***Figure 3**: Appropriate and timely patient mobilization, March 2017E.C*

Graph showing score for PROVIDE APPROPRIATE PAIN AND AGITATION EVALUATION AND MANAGEMENT

The performance for appropriate pain and agitation evaluation and management was **75%.** This indicates suboptimal compliance with recommended practices. Specific sub-elements include:

- calculate sedation score Q4hr and Provide sedation management for patient with RAAS >1 was 16% respectively (**figure 4**)

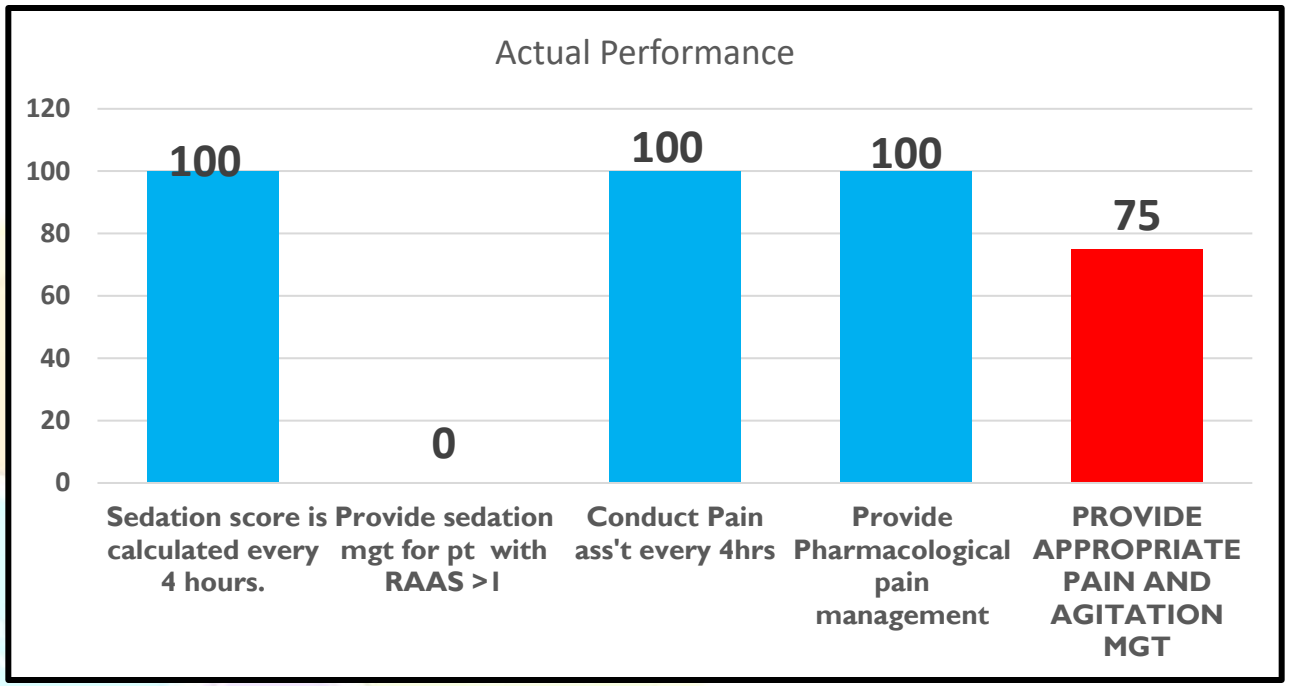


Figure 4: *Provide appropriate pain and agitation evaluation and management, March 2017E.C*

OPTIMAL PHYSICIAN CARE

The performance of physician care was relatively high at **100%,** close to the target of 100%. Sub-element performances include:

- Timely evaluation upon admission: 100%
- performing baseline investigation: 100%
- Appropriate medication orders: 100%
- Regular rounds and updates: 100%

This indicates effective engagement of physicians in patient care, although minor improvements are still needed to achieve full compliance (**Figure 5**).

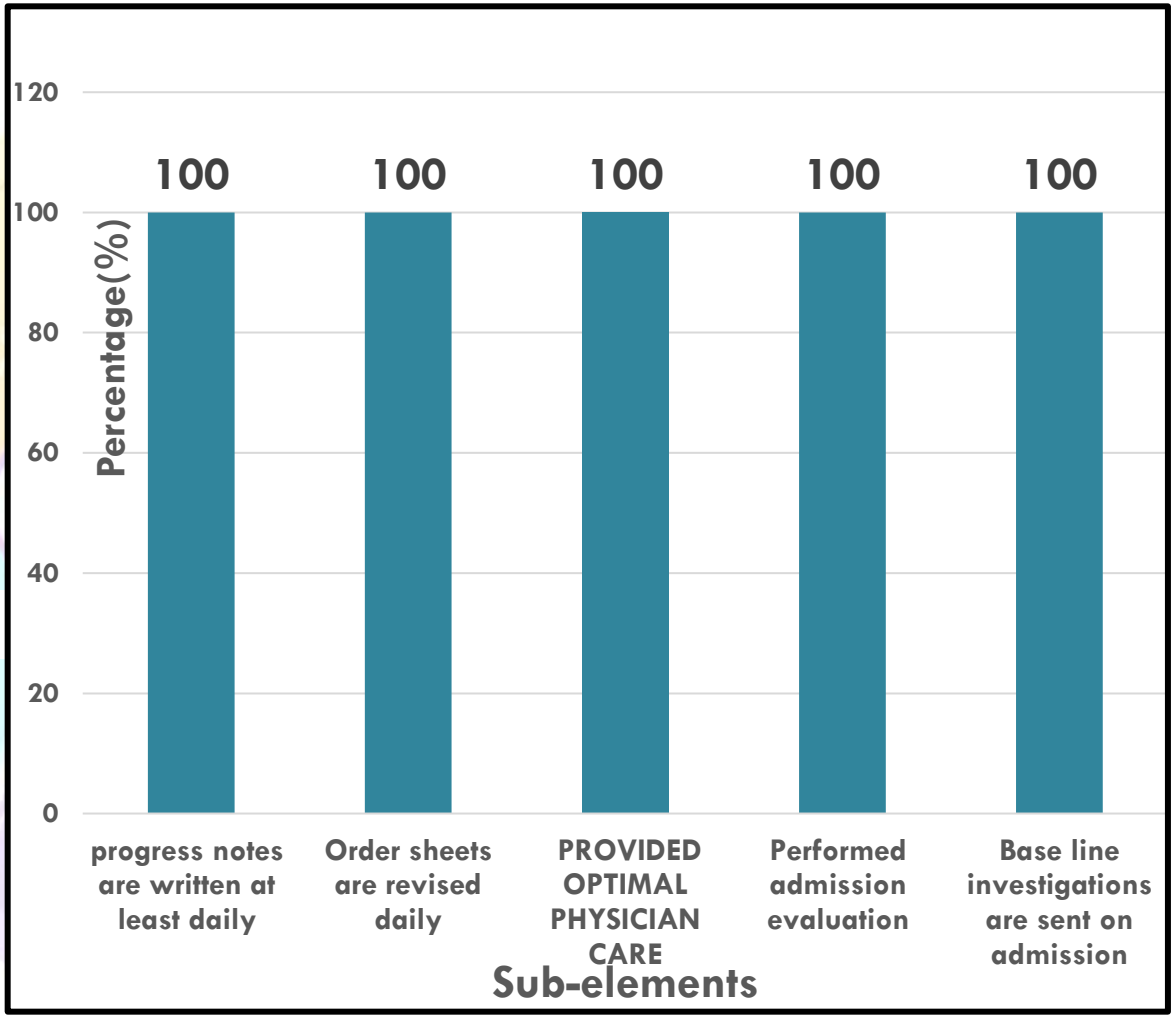


Figure 5: Provided optimal physician care, March 2017E.C

Nursing monitoring achieved 97% compliance, showing high performance. Specific sub elements include:

- Vital sign monitoring: 100%
- Fluid intake calculation per shift:100%
- Fluid output calculation per shift: 100%
- Measuring RBS Q6hrs: 0%

Key issues included negligence in measuring RBS Q6hrsb **(Figure 6).**

OPTIMAL NURSING MONITORING

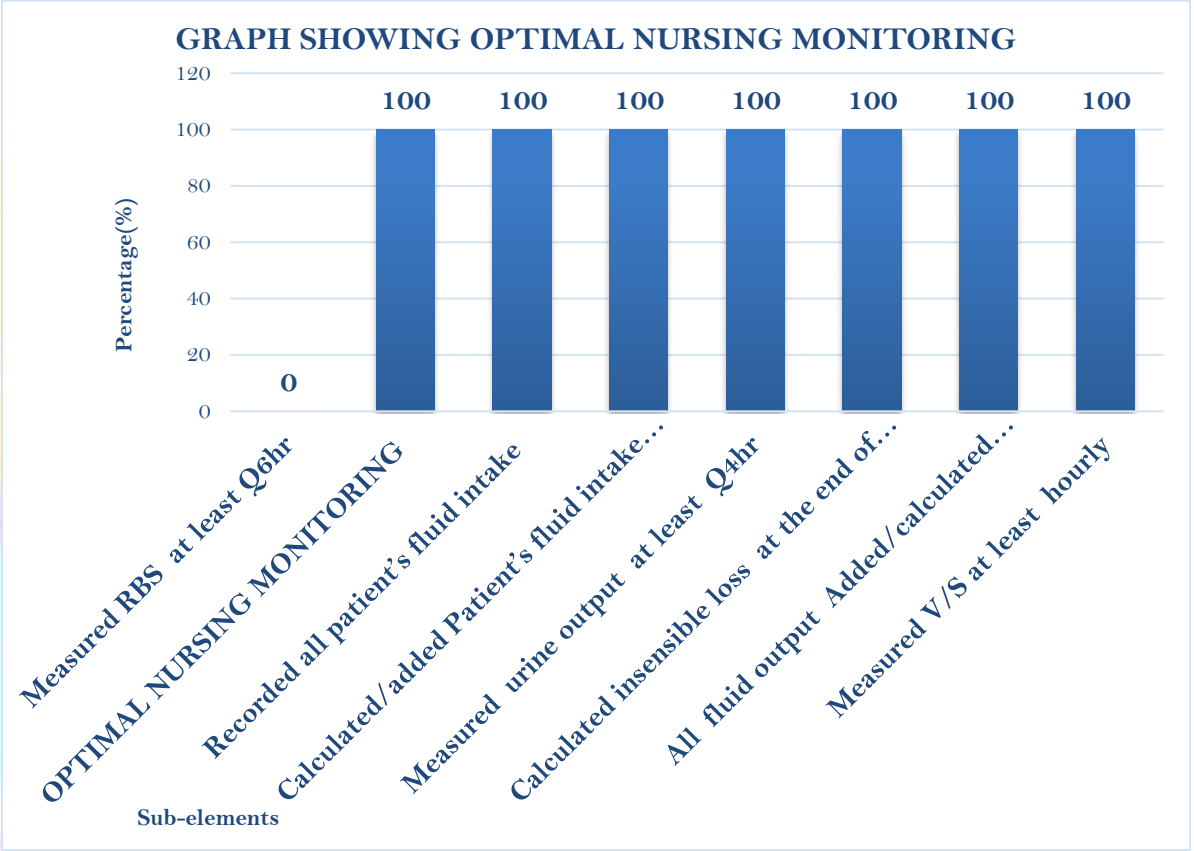


Figure 6: *Provided optimal nursing monitoring,, March 2017E.C*

Graph showing score for DOCUMENTATION OF PROVIDER IDENTIFICATION

The documentation of provider identification achieved 100% compliance, reflecting strong adherence to standards. Sub-elements include:

- Recording provider name: 100%
- Recording provider signature: 100%

This practice ensures accountability and supports the continuity of care (**figure 7**).

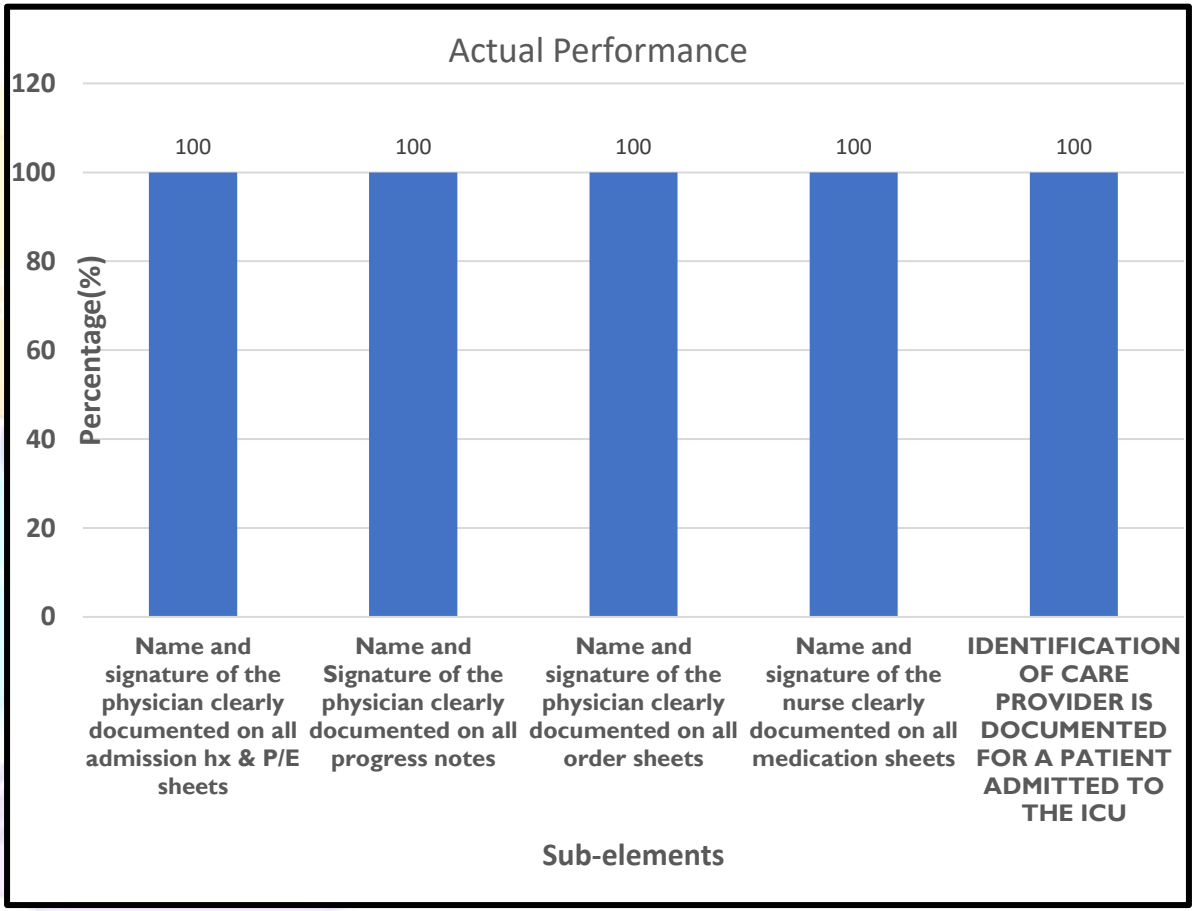


Figure 7: DOCUMENTATION OF PROVIDER IDENTIFICATION

Table 2: Action Plan/Improvement plan for ICU Care, March 2017E.C.

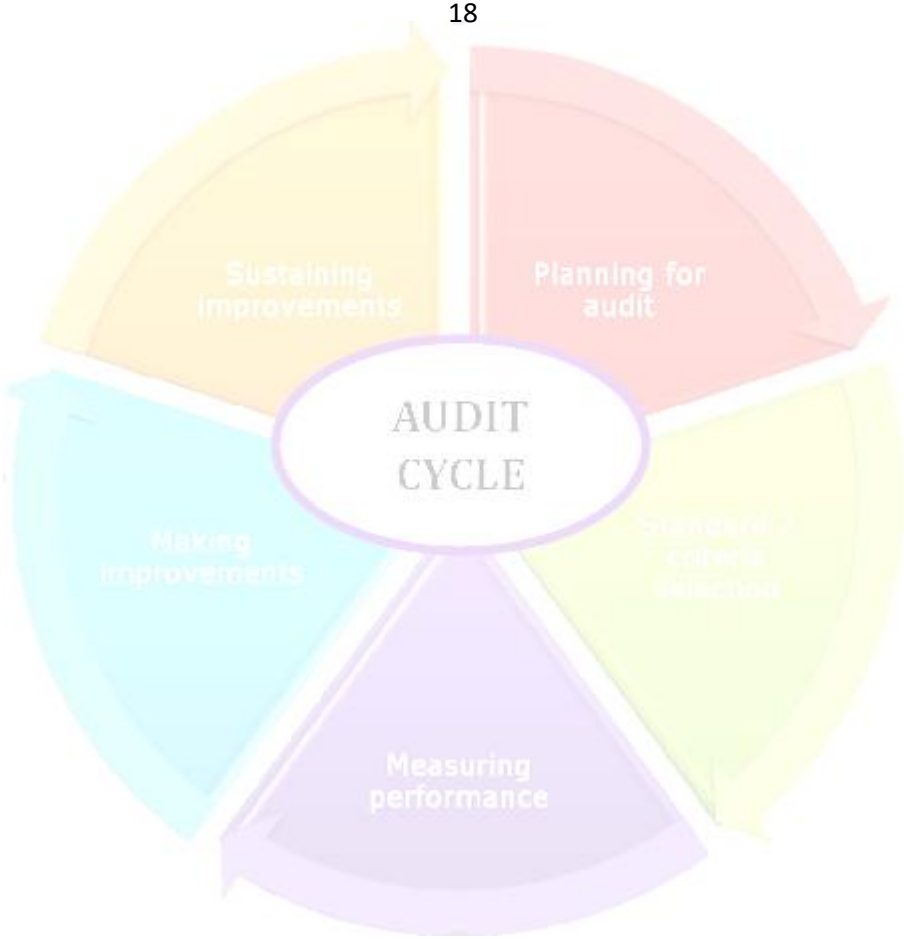
Area Needing Improvement	Root Cause Identified	Proposed Intervention	Responsible Party	Timeline
Low patient mobilization	Lack of physiotherapists, no structured protocols	Hire/assign dedicated ICU physiotherapist. Develop and implement mobilization protocols (e.g., Q2hr repositioning, DVT prevention). Train staff on safe mobilization techniques.	ICU Head, Hospital Admin	3 months
Pain/agitation management	Infrequent sedation scoring, lack of guidelines	Introduce mandatory sedation scoring every 4 hours. Provide training on pain/agitation assessment tools (e.g., RAAS). Audit compliance monthly.	ICU Physicians, Nurses	2 months
RBS monitoring	Negligence, lack of accountability	Enforce RBS monitoring policy with checklists. Assign nurse champions for compliance. Conduct spot audits.	Nursing Supervisor	1 month
DVT prevention	Lack of awareness, inconsistent practices	Train staff on DVT prevention methods (e.g., compression stockings, early mobilization). Integrate DVT risk assessment into admission protocols.	ICU Nurses, Physicians	2 months

***Table 3**: The Implementation Status of previous audit cycle improvement plan, March 2017E.C.*

S/N	Recommendation	Implementation Status
1	Enhance Fluid Balance Calculation Compliance	- Implemented end-of-shift accountability checks. - Compliance improved but sporadic due to workload.
2	Optimize Physician Care	- Refresher training completed. - Medication order accuracy maintained at 100%.
3	Strengthen Nutritional Support	- Training conducted; nutritional assessments now documented. - Compliance at 100%.
4	Improve Nursing Monitoring	- Professional development sessions held. - RBS monitoring remains inconsistent (0%).
5	Enhance Pain and Agitation Management	- RAAS tools introduced; sedation scoring compliance increased to 50% (from 16%).
6	Increase Timely Patient Mobilization	- Physiotherapist assigned; mobilization protocols drafted. - Compliance rose to 60%.

REFERENCES

1. Core standards for intensive care units. 1st ed. http:// www.ficm.ac.uk/sites/default/files/Core%20Standards %20for%20ICUs%20Ed.1%20%282013%29.pdf (2013, accessed 18 August 2014).
2. Rhodes A, Moreno R, Azoulay E, et al. Prospectively defined indicators to improve the safety and quality of care for critically ill patients: a report from the task force on safety and Quality of the European Society of Intensive Care Medicine (ESICM). Intensive Care Med 2012; 38: 598–605.
3. National Institute of Health and Care Excellence, https://www.nice.org.uk/ (accessed 25 September 2014).
4. Healthcare Quality Improvement Partnership, http://www.hqip.org.uk/ (accessed 25 September 2014).
5. Royal College of Anaesthetists. Raising the standard: a compendium of audit recipes for continuous quality improvement projects in anaesthesia. 3rd ed, http:// www.rcoa.ac.uk/system/files/CSQ-ARB-2012_1.pdf(accessed 25 September 2014).
6. Wong A. Audit recipe book survey. Crit Eye 2014; 5: 16.
7. A 'how-to' guide to setting up a trainee-led research network, http://www.niaa.org.uk/article.php?newsid¼ 925 (accessed 1 August 2014).
8. Pronovost P, Needham D, Berenholtz S, et al. An intervention to decrease catheter- related bloodstream infections in the ICU. NEJM 2006; 355: 2725–2732.
9. Matching Michigan. Reducing CVC bloodstream infections, http://www.patientsafetyfirst.nhs.uk/Content aspx?path¼/interventions/matchingmichigan/ (accessed 25 September 2014).
10. South coast perioperative audit and research collaboration, http://wessex-sparc.com/ (accessed 20 July 14).


Planning for audit
Measuring performance
Making improvements
Sustaining improvements
AUDIT CYCLE