



DEDER GENERAL HOSPITAL

EMERGENCY DEPARTMENT

Clinical Audit to Improve the Quality of Clinical Care
Provided to Trauma Patients

By: Emergency Department Clinical Audit/QI Team

Audit Cycle: Re-Audit 3

Deder, Oromia

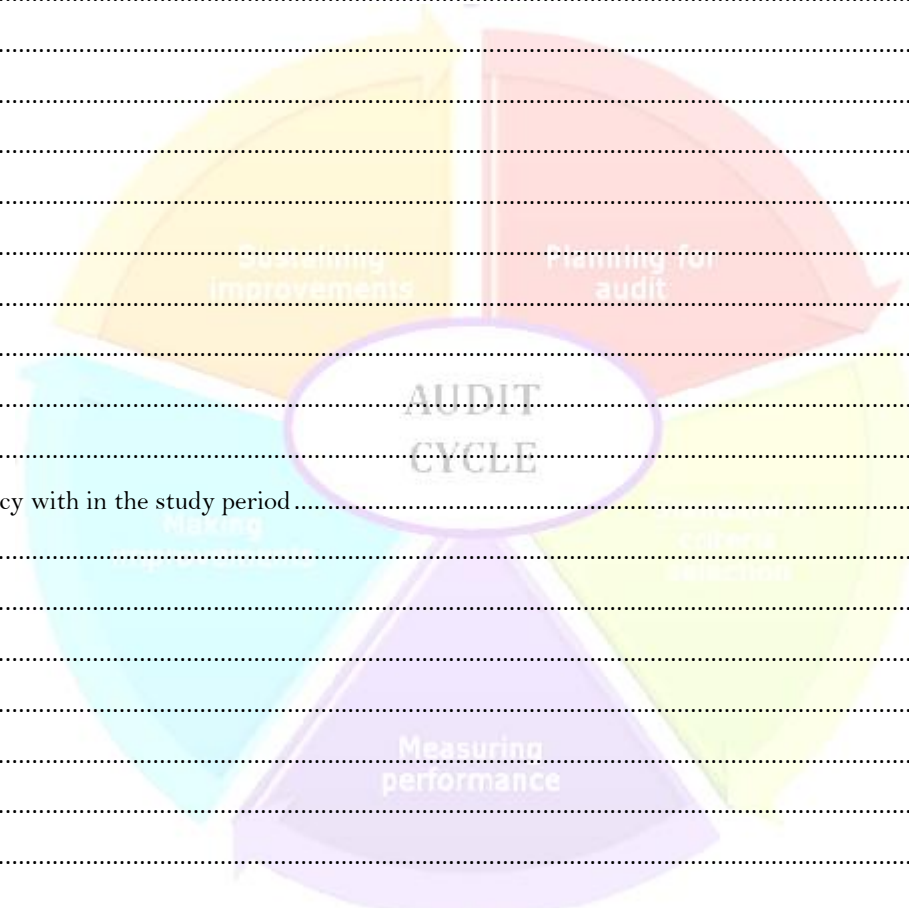
June 2017E.C

Emergency Department Clinical Audit/QI Team members

| S/N | Full Name | Status | Role |
|-----|--------------------|--------------------|------------------|
| 1. | Dr.Samuel Shimelis | Emergency Director | Chairperson |
| 2. | Jabir Mohammed | Emergency Head | Secretary |
| 3. | Wardi Usman | Staff | Deputy Secretary |
| 4. | Dachas Shamsadin | Staff | Member |
| 5. | Zabib Abraham | Staff | Member |
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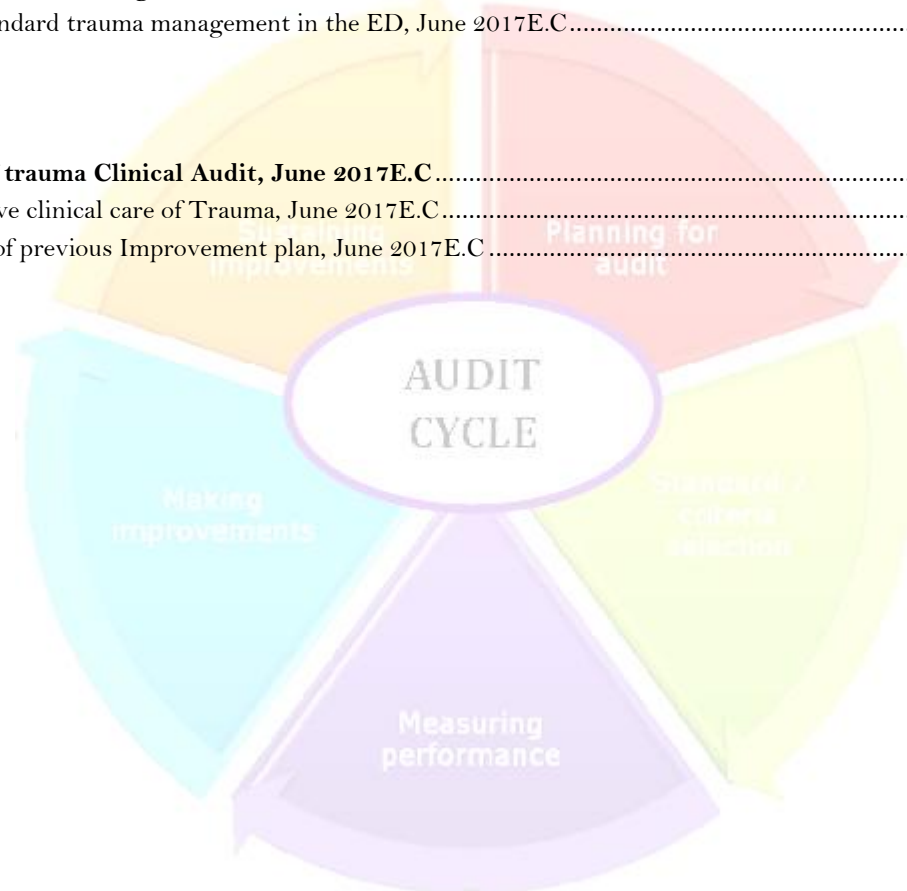
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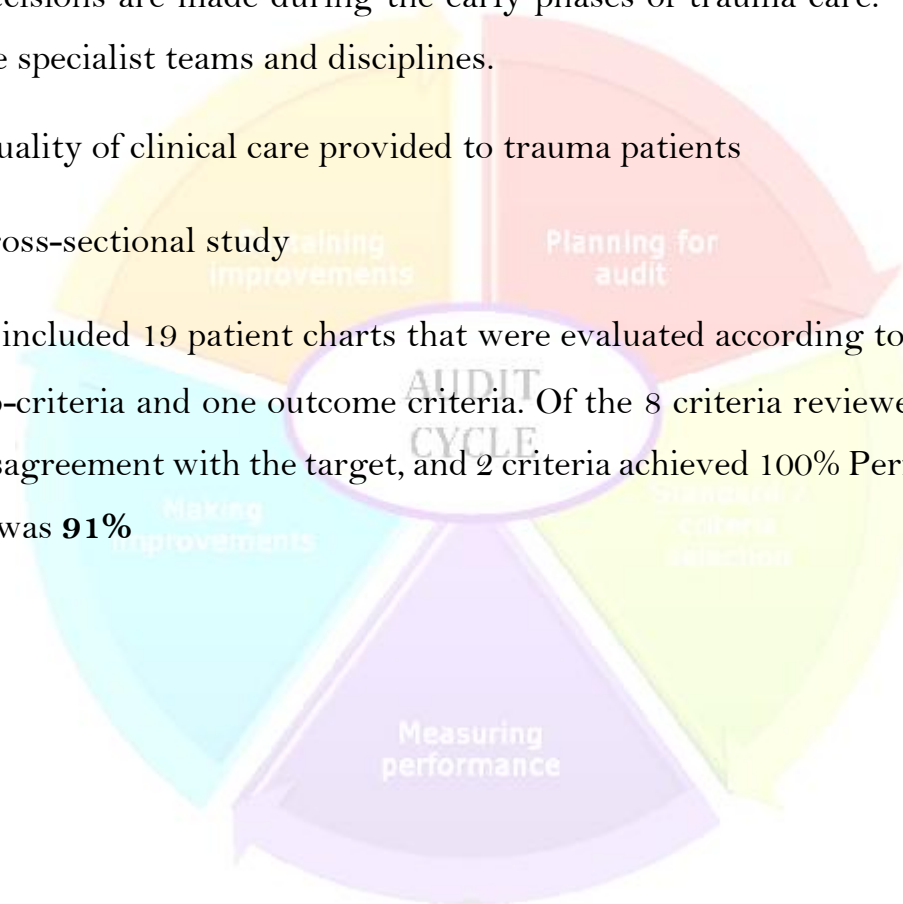
ABSTRACT

Introduction: Trauma care is complex and challenging. People sustain multiple injuries requiring urgent medical attention. Many critical decisions are made during the early phases of trauma care. Initial resuscitation and on-going care involve multiple specialist teams and disciplines.

Objective: To improve quality of clinical care provided to trauma patients

Method: Retrospective cross-sectional study

Result: The clinical audit included 19 patient charts that were evaluated according to nine main criteria. The main criteria consisted of 65 sub-criteria and one outcome criteria. Of the 8 criteria reviewed for trauma management, 6 criteria had a significant disagreement with the target, and 2 criteria achieved 100% Performance. The overall trauma management performance was **91%**



INTRODUCTION

Trauma care is complex and challenging. People sustain multiple injuries requiring urgent medical attention. Many critical decisions are made during the early phases of trauma care. Initial resuscitation and on-going care involve multiple specialist teams and disciplines. Each and every part of this journey impacts on whether the patient lives or dies and what injuries they will live with for the rest of their lives. Since the beginning of the year 2022, DGH has encountered and still continues to encounter some challenges with case management of TRAUMA. Thus, DGH plan this clinical audit aim to improve the quality of clinical care provided for patient with the trauma ED.

OBJECTIVE

General objective

- To improve quality of clinical care provided to trauma patients

Specific objectives

- To ensure trauma patients presenting to the emergency are appropriately evaluated
- To ensure trauma patients presenting to the emergency are appropriately investigated
- To ensure trauma patients presenting to the emergency are appropriately treated
- To ensure trauma patients presenting to the emergency are appropriately disposed

Methods

Study area & period

The clinical audit was conducted in EOPD of Deder General Hospital from **March 21-june 20, 2017**EC

Study design

Retrospective cross-sectional study

Source population

All patients treated in the emergency within the study period

Study population

All trauma patients treated in the emergency within the study period

Inclusion criteria

All trauma patients aged 14 and above, treated in the emergency from June 21-december 20, 2017EC

Exclusion criteria

Patients who arrived 24 hours after sustaining trauma

Sampling technique

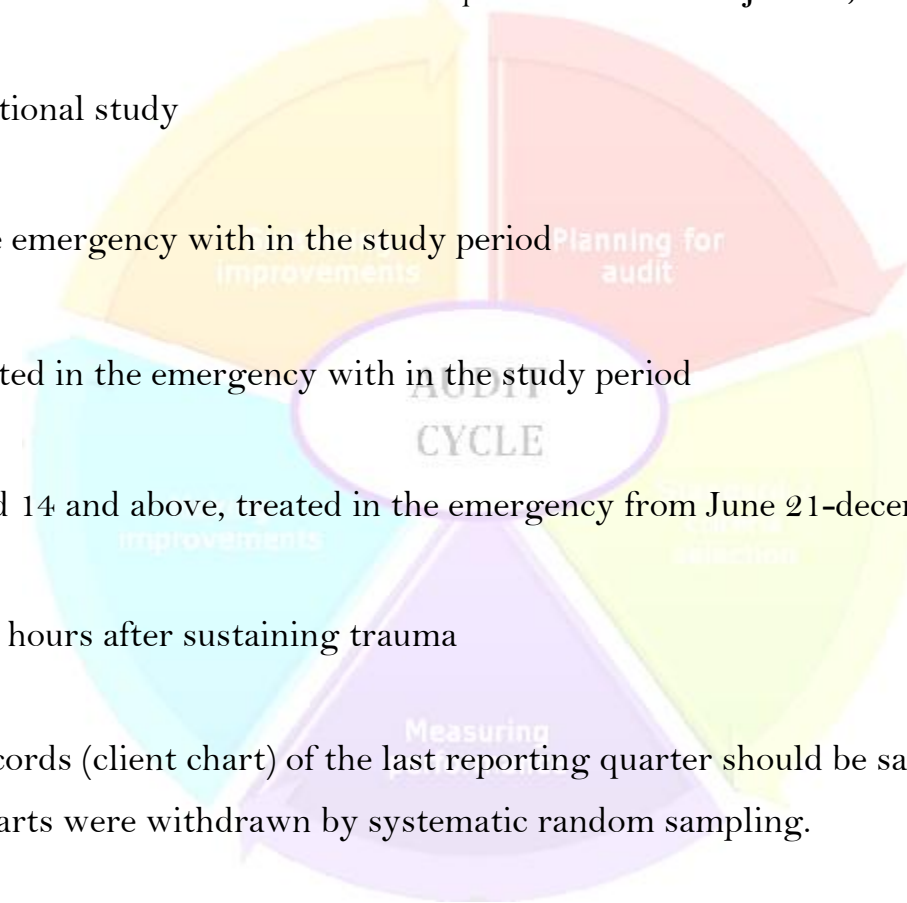
A total of 19 medical records (client chart) of the last reporting quarter should be sampled for the audit.

The individual client charts were withdrawn by systematic random sampling.

Study Variables

Dependent variables:

Trauma management



Independent Variables

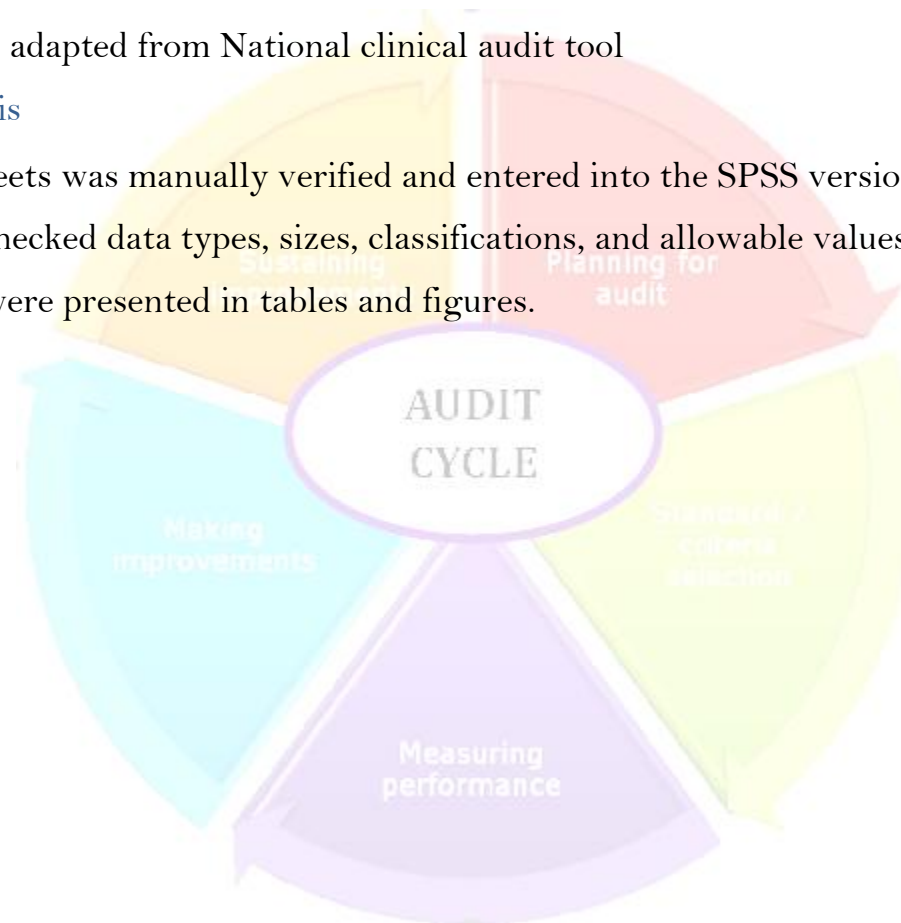
Demographic data, trauma, ABC of live, Mode of arrival, time of arrival Emergency OPD,

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 audit achieved an **overall compliance rate of 91%**, reflecting strong adherence to trauma care protocols across most evaluated criteria. Out of eight variables, five met or nearly met their targets, including **Appropriate Diagnosis (100%)**, **Treatment (100%)**, **Patient Disposition (100%)**, **Provider Identification (100%)**, and **Detailed History & Physical Exam (99%)**. These results demonstrate the hospital's robust capacity to deliver accurate diagnoses, effective treatments, and systematic documentation, ensuring accountability and continuity of care(**figure1**).

Exemplary performance was observed in critical areas: **Appropriate Diagnosis** and **Treatment** both achieved 100% compliance, highlighting the team's ability to align with evidence-based guidelines. Administrative standards like **Patient Identification (99%)** and **Provider Documentation (100%)** also neared perfection, ensuring traceability and medico-legal integrity. Additionally, **Patient Disposition** met full compliance, indicating effective discharge planning and referrals.

The audit identified significant gaps in **Relevant Investigations**, which scored **39%** against an 80% target. This stark shortfall suggests systemic challenges, such as limited access to diagnostic tools or inconsistent adherence to investigation protocols. **Evaluation & Management of Acute Injuries (91%)** also fell slightly below the 100% target, pointing to opportunities for refining urgent intervention workflows. Addressing these gaps through resource allocation, staff training, and protocol reinforcement is critical to achieving comprehensive compliance (**Table 1**).

Table 1: Overall of Performance of trauma Clinical Audit, June 2017E.C

| Sno | Variables | Target | Actual Performance |
|-----|--|--------|--------------------|
| 1 | Identification Information Is Recorded for A Patient Presenting with Trauma | 100 | 99 |
| 2 | Appropriate Evaluation and Management for Acute Life-Threatening Injuries Is Done for A Patient Presenting with Trauma Using Standard Trauma Care Principles | 100 | 91 |
| 3 | Detailed History Taken and Physical Examination Performed for A Patient Presenting with Trauma | 100 | 99 |
| 4 | Relevant Investigation Are Done for A Patient Presenting with Trauma | 80 | 39 |
| 5 | Appropriate Diagnosis Is Made for A Patient Presenting with Trauma | 100 | 100 |
| 6 | Appropriate Treatment Is Provided for A Patient Presenting with Trauma | 100 | 100 |
| 7 | Appropriate Patient Disposition Is Done for A Patient Presenting with Trauma | 100 | 100 |
| 8 | Identification Of Care Provider Is Documented for A Patient Presenting with Trauma | 100 | 100 |
| | Total Percentage (%) | | 728/8=91`% |

Overall Performance of trauma management in the ED

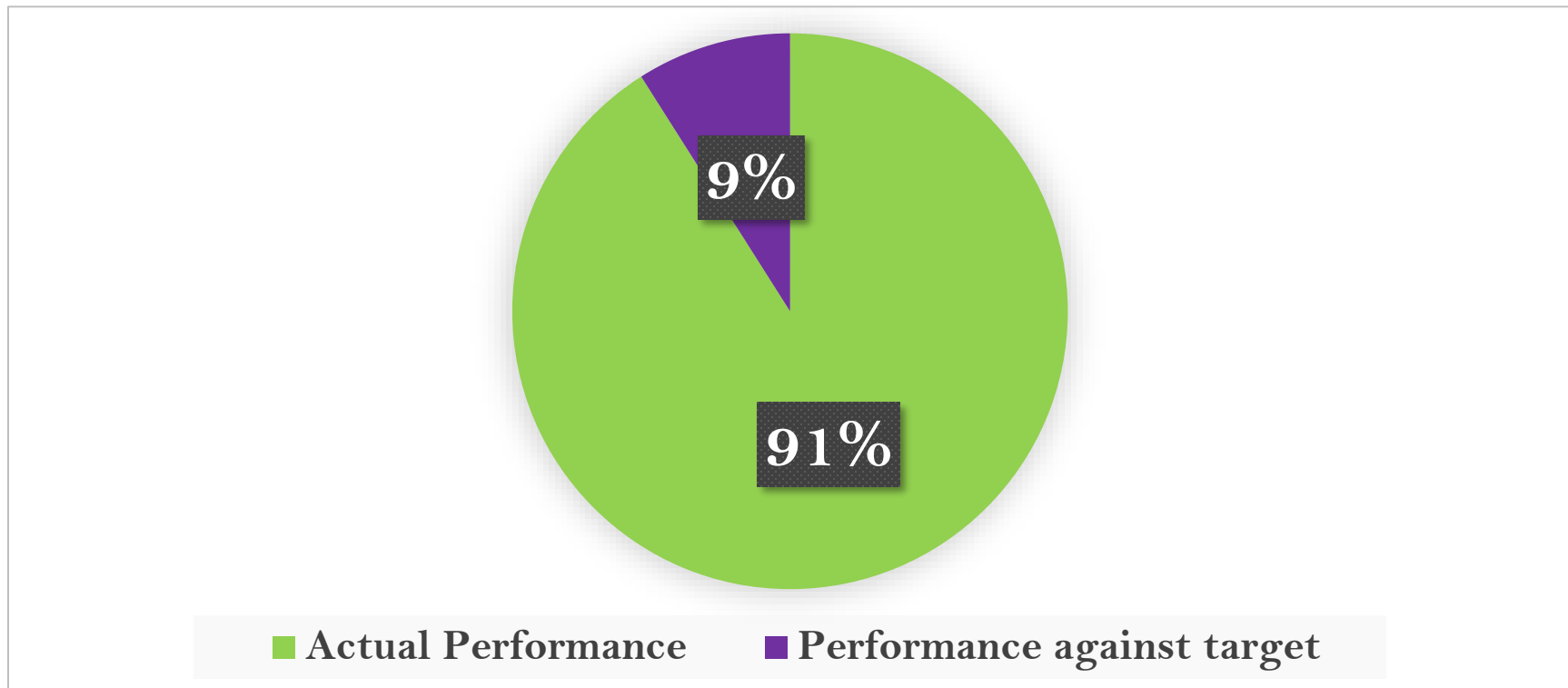


Figure 1: Overall Performance of trauma management in the ED, June 2017E.C

Graph showing score for each criterion/standard for trauma management in the ED

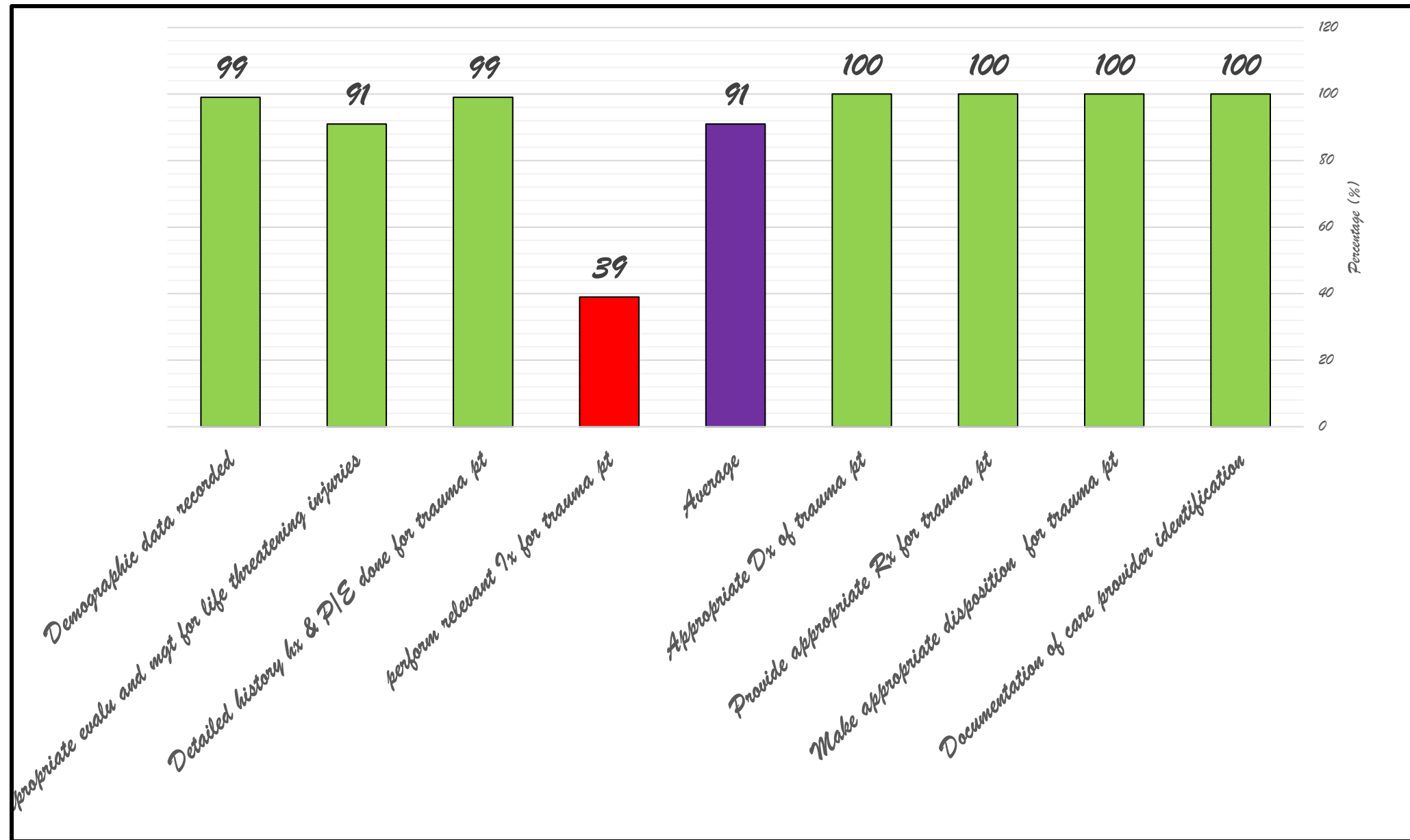


Figure 2: score for each criterion/standard trauma management in the ED, June 2017E.C

Trends of Trauma clinical audit performance

Based on the data presented in Figure 3: Trends of Trauma clinical audit performance for 2017 E.C., the results indicate a generally positive trajectory in performance over the first three quarters, albeit with some fluctuation. The 1st Quarter started with performance ranging between 78% and 82%. The 2nd Quarter saw a notable improvement, with performance rising to span from 82% to 91%. This upward trend was largely sustained in the 3rd Quarter, where performance remained within a similar high range of 81% to 91%. **Overall, the data suggests a significant improvement from the start of the year to the end of the reported period (Figure 3).**

The key observations are the clear step-up in performance from Q1 to Q2, reaching and maintaining a higher performance bracket (above 80%, peaking at 91%) in both Q2 and Q3. While the absolute lower end in Q3 (81%) was slightly lower than Q2's lower end (82%), the upper end remained consistently high at 91% for both quarters. **The data demonstrates sustained high performance in Q2 and Q3 compared to Q1, with the highest recorded points reaching 91%.** Notably, data for the 4th Quarter is not provided in this graph (Figure 3).

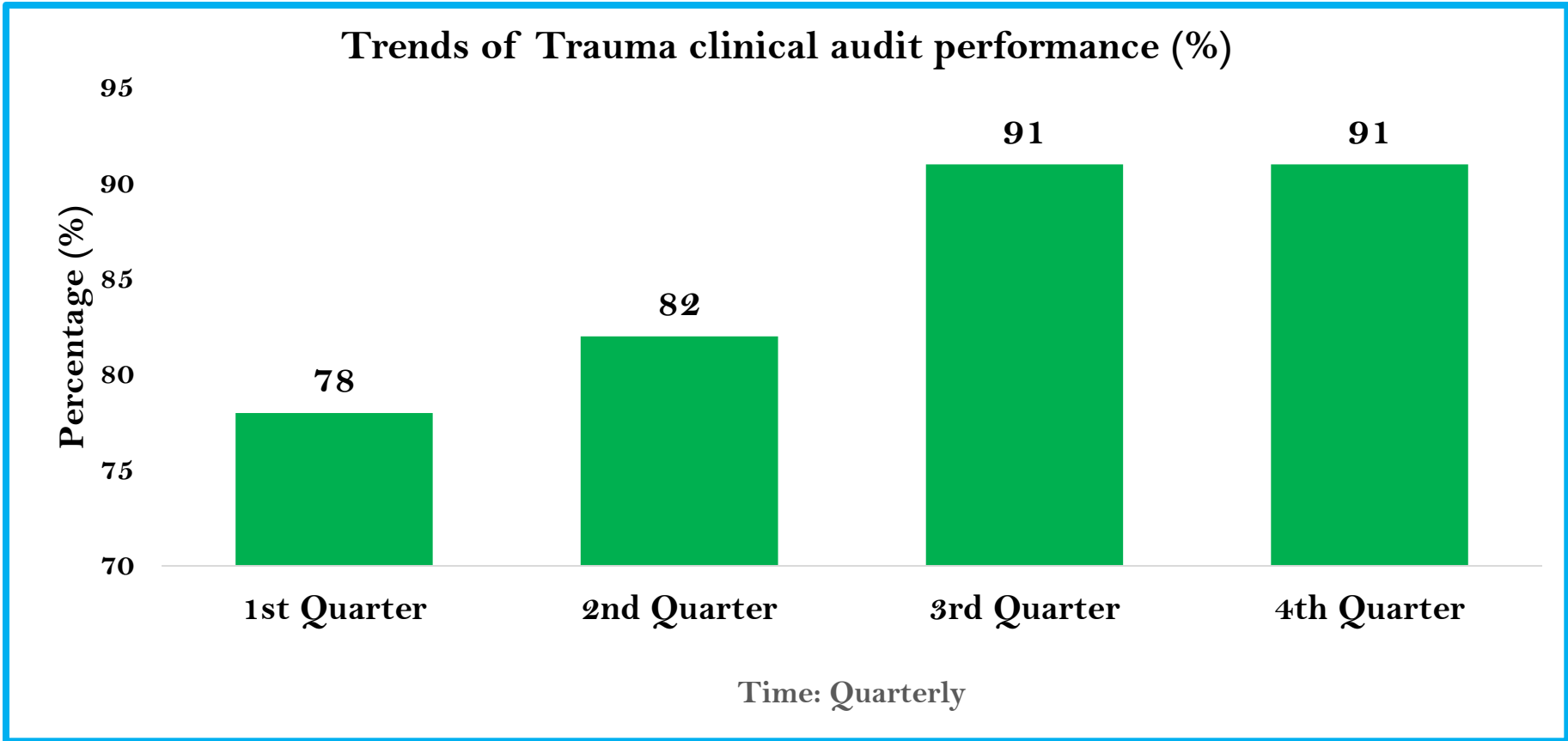


Figure 3: Trends of Trauma clinical audit performance 2017E.C

DISCUSSION

The Trauma Clinical Audit reveals a **91% overall compliance rate**, underscoring the hospital's proficiency in key areas of trauma care, including **diagnosis, treatment, and documentation**. Strengths such as **100% compliance in Appropriate Diagnosis, Treatment, and Provider Identification** reflect rigorous adherence to evidence-based protocols and effective multidisciplinary coordination. These outcomes align with global standards, where accurate diagnosis and timely interventions are critical to reducing morbidity and mortality in trauma cases. The near-perfect scores in **Patient Identification (99%)** and **Detailed History & Physical Exam (99%)** further demonstrate institutional commitment to thorough documentation, which is vital for continuity of care and medico-legal accountability.

However, significant gaps persist in **Relevant Investigations (39%)**, falling far short of the 80% target. This stark disparity suggests systemic challenges, such as limited access to diagnostic tools (e.g., imaging equipment, lab services) or inconsistent adherence to investigation protocols. In low-resource settings, these barriers are common and often exacerbate delays in identifying complications like internal bleeding or fractures. Similarly, the **91% compliance in Evaluation & Management of Acute Injuries** indicates occasional lapses in urgent interventions, potentially due

to resource constraints or variability in staff training. Such gaps could compromise patient outcomes, particularly in time-sensitive trauma scenarios requiring immediate stabilization.

These findings resonate with studies highlighting challenges in trauma care within resource-limited environments, where infrastructural deficits and workforce shortages impede optimal care. For instance, the Ethiopian FMOH's *Emergency Surgical Care Guidelines* emphasize the necessity of rapid diagnostics, yet operationalizing these standards remains challenging. To address these issues, prioritizing **resource allocation** (e.g., procuring portable ultrasound machines), **staff training** on investigation protocols, and **regular audits** to monitor compliance is essential. While the audit's small sample size (10 records) limits generalizability, it provides actionable insights. Strengthening these areas will not only bridge compliance gaps but also enhance patient survival and recovery, reinforcing the hospital's role as a trauma care benchmark in similar settings.

RECOMMENDATIONS

Sustain Compliance Through Monitoring

Table 2: Improvement plan to improve clinical care of Trauma, June 2017E.C

| Action Item | Responsibility | Timeline |
|---|--|------------|
| Procure portable ultrasound machines and rapid lab equipment. | Hospital Administration & Procurement Team | 3–6 months |
| Procurement of ECG Machines | Hospital Administration | 3–6 months |

Table 3: The implementation status of previous Improvement plan, June 2017E.C

| Action Item | Responsibility | Status |
|--|-------------------------|-----------|
| Staff Training on Airway Management & Oxygen Therapy | ED Leads | Completed |
| Procurement of ECG Machines | Hospital Administration | Ongoing |
| Standardized Treatment Checklists | Nursing Supervisor | Completed |
| Referral Pathway Development | Case Managers | Completed |
| Decontamination Protocol Rollout | ED & Nursing Teams | Completed |

Measuring
performance

Guyyaa/ቀን/Date: ____/____/____

-  **Garee tajaajila EOPD ward irraa**
-  **Garee Qulquullina Tajaajila Fayyaatiif**

Dhimmi: waa'ee Gabaasa CLINICAL AUDIT galchuu ilaallata

Akkuma mata Dureerrattii ibsamuuf yaalameettii clinical audit” **Trauma mgt**” jedhamu kan **kurmaana 4ffaa** bara **2017** xalayaa Fuula **19** qabuu gaggeessituu kana waliin walqabsiifnee isiiniif eerguu keenya kabajaan isiniif beeksiifnaa.

Nagaya wajjiin!!