

Enhancing MEWS Documentation, Completeness, Appropriateness of Response and Timely Escalation to Improve Patient Safety: A Quality Improvement Study

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Abstract

Background: Gaps in MEWS documentation and escalation were identified. Objective: To improve MEWS documentation compliance (>95%), appropriateness (>95%), and escalation practices. Methods: Quality improvement project conducted in Non-Critical Care Areas (5th to 7th Floor) using audit, root cause analysis (5-Why), staff training, competency assessment, and accountability measures. Results: MEWS compliance improved from 90% to 97%. Escalation for MEWS 1–4 patients improved from 5/302 (1.7%) to 44/224 (19.6%). Documentation and scoring accuracy improved across most parameters. Conclusion: Structured education, audits, and accountability improved MEWS compliance and patient safety.

Keywords

Modified Early Warning Score, MEWS, Patient Safety, Clinical Deterioration, Nursing Quality Improvement, Escalation Protocol

Introduction

Early recognition of clinical deterioration is essential for preventing adverse events. Modified Early Warning Score (MEWS) systems facilitate timely identification and escalation. Internal nursing audits revealed deficiencies in completeness of documentation, score calculation, and escalation practices.

Problem Statement

Pre-intervention audits demonstrated overall MEWS compliance of 90% with documentation and scoring inconsistencies. Escalation for patients with MEWS scores 1–4 was performed in only 5 of 302 identified cases.

Aim

To improve MEWS documentation compliance to >95%, increase scoring appropriateness to >95%, and improve escalation practices for patients with MEWS scores 1–4.

Methods

Design: Quality Improvement Study using Plan-Do-Study-Act principles.

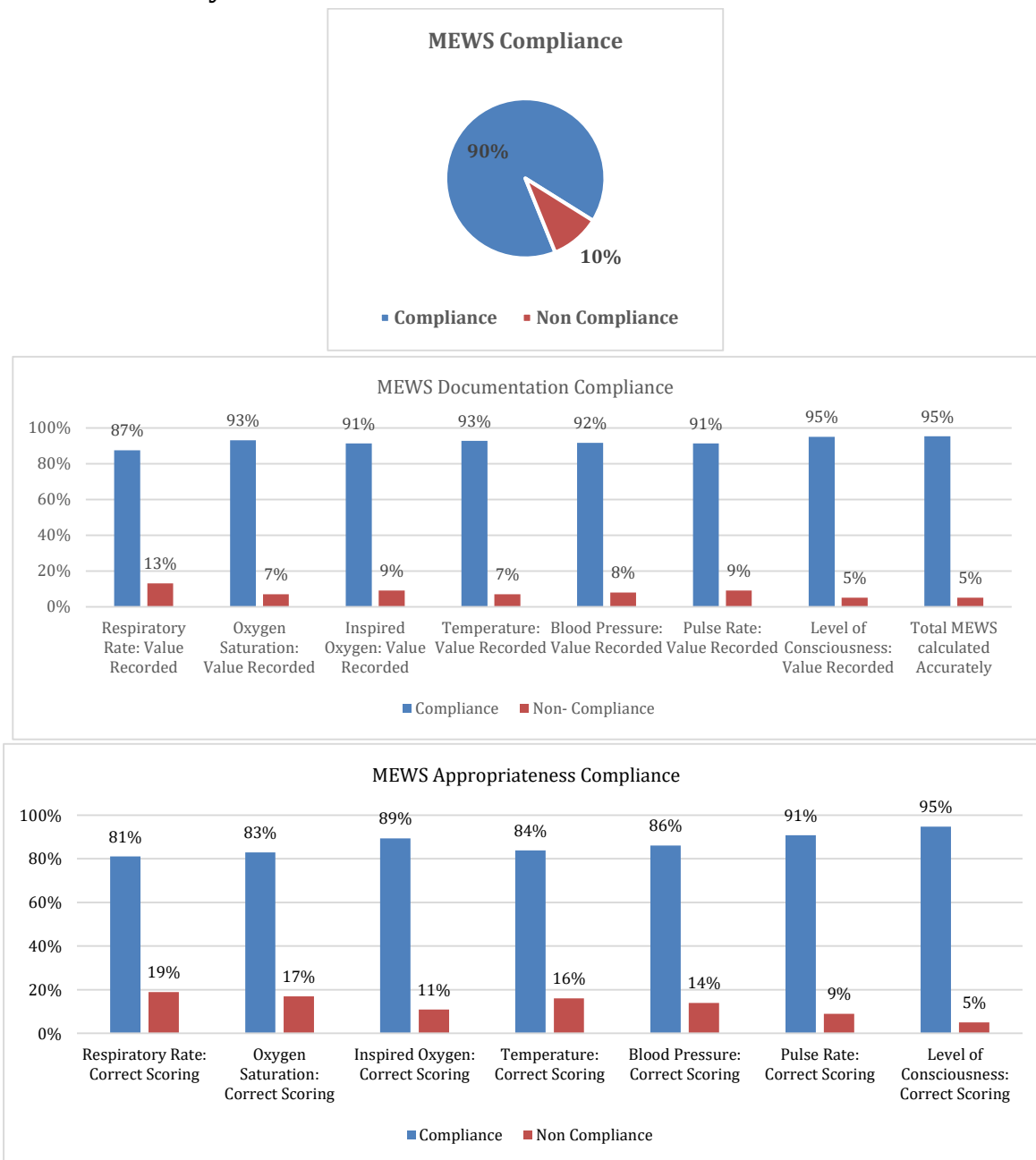
Setting: Non-Critical Care Areas (5th to 7th Floor).

Baseline sample: 359 records.

Post-intervention sample: 361 records.

Root cause analysis was performed using the 5-Why technique. Interventions included bedside documentation reinforcement, focused training, competency assessments, refresher education, training calendar implementation, real-time audits, and shift-wise accountability.

Pre-Intervention Analysis



Root Cause Analysis

Why was MEWS documentation incomplete or inaccurate?

Because nursing staff did not consistently record all vital signs or calculate the MEWS score correctly.

Why did nursing staff not record or calculate MEWS correctly?

Because of inadequate knowledge, calculation errors, and lack of reinforcement of MEWS protocols.

Why was there inadequate knowledge or frequent calculation errors?

Because structured training, periodic competency assessments, and refresher sessions on MEWS were not conducted regularly.

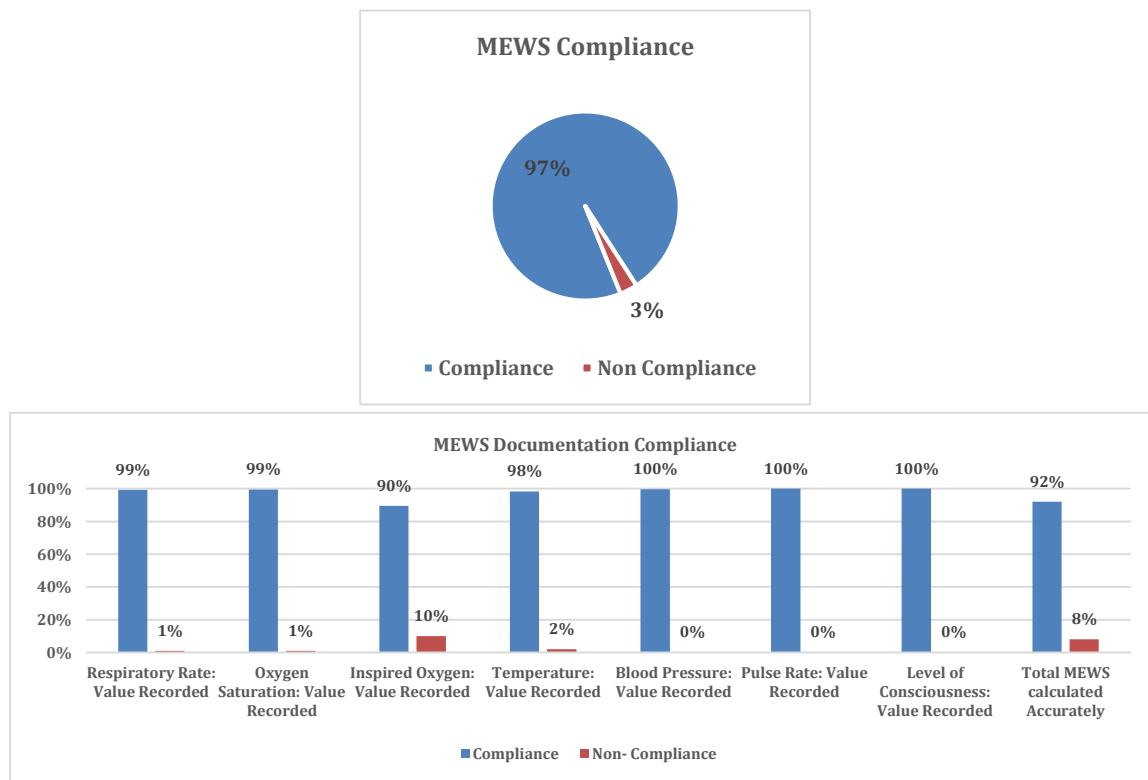
Why was there a lack of structured training, competency assessment, and reinforcement of MEWS protocols?

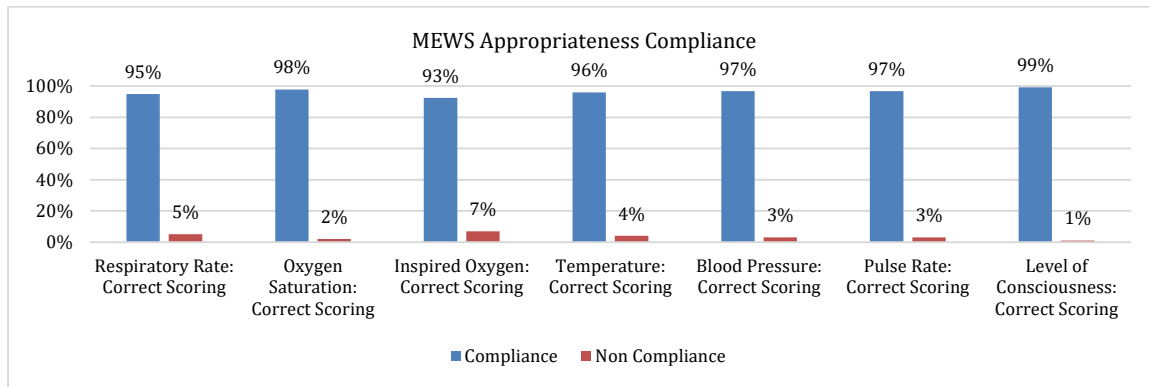
Because there was no standardized system for regular MEWS training, competency validation, and monitoring compliance across shifts.

Why was there no standardized system for training, monitoring, and accountability?

Because there was inadequate oversight by the TLs & Incharges, lack of defined ownership, and absence of structured audit and enforcement mechanisms for MEWS compliance.

Post Intervention Analysis





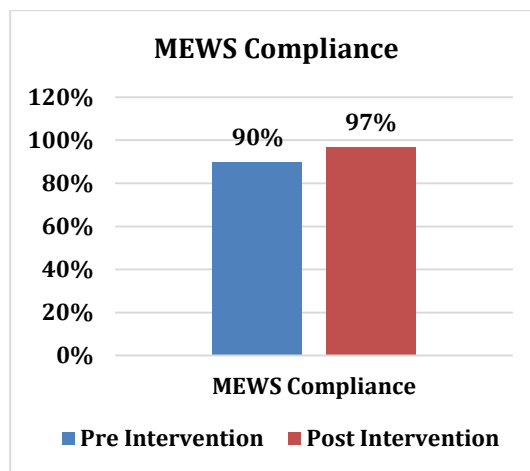
Interventions

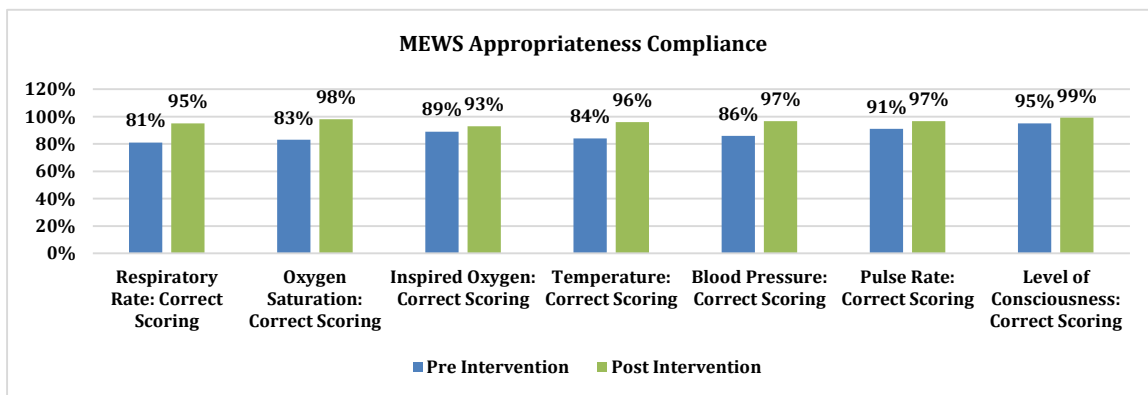
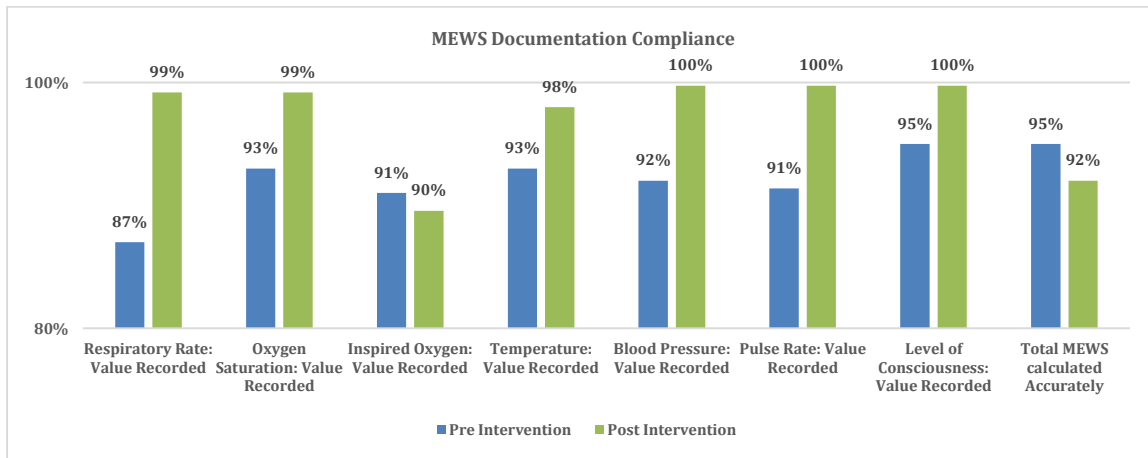
1. Bedside documentation reinforcement. 2. Focused MEWS training and calculation drills. 3. Quarterly competency assessment. 4. Standardized training calendar. 5. Real-time audits and accountability system.

Results

Overall MEWS compliance improved from 90% to 97%. Documentation accuracy improved across vital-sign parameters. Correct scoring improved substantially for respiratory rate (81% to 95%), oxygen saturation (83% to 98%), temperature (84% to 96%), blood pressure (86% to 97%), pulse rate (91% to 97%), and level of consciousness (95% to 99%). Escalation for MEWS 1–4 patients improved from 5/302 to 44/224. MET call activation for MEWS >4 increased from 3 to 4.

Pre-& Post Intervention Analysis





Discussion

The study demonstrates that multimodal interventions focusing on education, competency, audit, and accountability can significantly improve MEWS compliance and escalation practices. Findings support the role of nursing leadership and continuous monitoring in sustaining improvements.

Conclusion

The QI project achieved its target by improving MEWS compliance from 90% to 97% and strengthening escalation practices. Sustained monitoring and competency-based education are recommended.

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