STANDARDIZING EPISTAXIS MANAGEMENT: A QUALITY IMPROVEMENT PROJECT UTILIZING A STEPWISE CLINICAL FLOWCHART IN EMERGENCY AND ENT SETTINGS

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Abstract - Epistaxis is one of the most common acute presentations in Ear, Nose, and Throat (ENT) and Emergency Departments (A&E), carrying a 60% lifelong population incidence. Management variations, inconsistent nasal packing, and delayed specialist escalation frequently occur without a unified pathway. This study evaluated the clinical impact of introducing a structured, evidence-based management flowchart based on ENT UK guidelines.

Keywords - Area-efficient, Low power, CSLA, Binary to excess one converter, Multiplexer.

OBJECTIVES

To provide healthcare professionals with a clear, organized, and staged approach to epistaxis management, and to evaluate the effectiveness of an educational flowchart intervention in improving clinical adherence and knowledge.

METHODS

A closed-loop audit and retrospective review were conducted from August 2025 to February 2026. Data were collected via structured questionnaires distributed to multidisciplinary healthcare providers managing anterior and posterior epistaxis across all age groups and genders. Non-healthcare providers were excluded. Following the baseline audit (Cycle 1), a targeted clinical flowchart and staff education program were introduced, followed by a re-audit (Cycle 2).

RESULTS

In the baseline cycle, only 29% of healthcare providers reported adequate confidence and standardization in managing epistaxis, with 71% identifying significant protocol variations and inconsistent packing techniques. Following the educational intervention (Cycle 2), compliance with the unified pathway rose sharply to 90%, demonstrating significantly improved technical knowledge of nasal packing and sequential, staged care delivery.

CONCLUSIONS

Implementing a standardized epistaxis flowchart bridges clinical knowledge gaps for frontline healthcare providers. It secures rapid, seamless transitions from first-aid and localized interventions (cauterization, anterior packing) to advanced specialist care (posterior packing, surgery, or arterial embolization) for definitive hemorrhagic control.

RECOMMENDATIONS:

- Clinical Integration: Mandate flowchart placement digitally on the hospital intranet and via physical laminated posters in ENT bays, resuscitation areas, and triage.
- Induction Training: Embed the flowchart into mandatory induction curricula for rotating junior doctors and multidisciplinary staff.
- Governance: Establish a continuous monitoring process and initiate a third-cycle audit to ensure long-term sustainability.