Interdisciplinary Continuing Education as a High-Impact Strategy to Improve Safety and Quality in Hospital Nutritional Care

A quasi-experimental study evaluating the impact of structured bedside education on adverse events, in a private hospital in Brazil.

Physicians specialized in Clinical Nutrition (ETERNA – Equipe de Terapia Nutricional Avançada / Advanced Nutritional Therapy Team) - Juliano Antunes Machado and Maria Isabel Correia / Clinical Dietitian - Thales Antônio Silva / Nursing team – Rede Materei de Saúde –Janaína Oliveira Fernandes

Contact: Juliano Antunes Machado - Telephone: +55(31)987974016 / Email: jucaantunesmachado@gmail.com

Description of the initiative

- **Background / context:** Nutritional therapy is a critical determinant of clinical outcomes in hospitalized patients. Yet , it remains underutilized as a structured safety strategy. Adverse events related to enteral and parenteral nutrition are common, but significantly underreported, reflecting gaps in training, awareness, and safety culture among frontline nursing teams.
- **Rationale for the initiative:** This project is based on the premise that increasing adverse event reporting reflects improved detection and safety awareness rather than deterioration in care. Structured, bedside continuing education is expected to enhance clinical vigilance, strengthen interdisciplinary integration, and improve overall quality of care.
- **Objectives and scope:** To evaluate the impact of continuing education on patient safety; to measure the rate of adverse event notifications (AEN); to assess education as a cost-effective intervention; to develop a scalable and replicable implementation model

Planned activities & deliverables: - Baseline phase (3 months): adverse event recording; Intervention phase (3 months): structured weekly bedside education; Post-intervention phase (3 months): outcome reassessment; Data analysis and dissemination.

- **Outline the key steps of the project management plan:**
  - Bedside, real-time education
  - Short, high-frequency training sessions
  - Immediate feedback and correction
  - Strong interdisciplinary collaboration
  - Integration into clinical workflow

- **What are the concrete deliverables of the project?**
  -Quantitative analysis of adverse events
  - Standardized educational protocol
  - Implementation framework for replication
  - Scientific dissemination (reports and presentations)

- **What progress and achievements are possible in the next 12 and 24 months?**
  -12 months: Completion of data collection, analysis, and internal validation and dissemination
  -24 months: Expansion to additional units and replication in other institutions

Resources & enablers

Describe personnel, financial needs, and disclose any other fundings in relation to the project (confirmed, planned or potential):

- Personnel: - Physician specialists in clinical nutrition (Project Lead); Clinical Nutritionist (Co-investigator) and nursing teams (inpatient unit)

- Financial Needs: No specific dedicated funding is required, for the first phase of the study. However, to disseminate it to other units of the hospital group chain, it will be necessary to acquire tablets, on line software and nutritional assessment tools. No remuneration for investigators. Training conducted using existing hospital infrastructure

- Funding Disclosure: No external funding and no conflicts of interest

Specify how the grant will be spent: The MNI Grant is not required for the first phase of the project execution. If awarded, funds will be allocated to disseminate it to other units of the hospital group chain, it will be necessary to acquire tablets, online software and nutritional assessment tools. It will also be used to strengthen clinical nutrition capacity, including: Acquisition of handgrip dynamometers, acquisition of indirect calorimetry equipment and expansion of educational resources

What factors will make the project successful? Bedside, real-time education; Short, high-frequency training sessions; Immediate feedback and correction; Strong interdisciplinary collaboration; and integration into clinical workflow

Results, expected outcomes & impact: Increased adverse event reporting (enhanced safety culture); improved quality of nutritional care; reduction in preventable complications (long-term); demonstration of a high-impact, low-cost intervention strengthened multidisciplinary care

How will the findings be implemented? Findings will be incorporated into hospital continuing education programs and standardized protocols, enabling broader institutional adoption.

- **How will this project advance nutritional care in clinical practice in one or more of the following areas of clinical nutrition:**
  - Demonstrating effective nutritional care and implementation of clinical nutrition management pathways and therapies
  - Strategies to implement and advance nutritional care in clinical practice
  - Evidence of improved patient outcomes, including patient reported outcomes
  - Demonstration of health economic benefits
  - Patient and carer initiatives demonstrating improved access to, or compliance with clinical nutrition therapy
  - Education of medical students or healthcare professionals
- **Is the project transferable to other care settings / geographical regions?** Highly transferable model due to: Minimal financial requirements; use of existing infrastructure; transmission via online platforms.; adaptability across institutions and healthcare systems.

V **Please tick to confirm the PEN letter of endorsement is attached. Incomplete submissions will not be considered.**