Nutrition Support and Patient Safety: A Call to Action for Optimal Care

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ABSTRACT

Nutrition support is generally a low-risk and cost-effective treatment to improve outcomes for patients. Paramount for the safe delivery of nutrition support are adequate documentation of nutrient and fluid requirements, timely and correct placement of enteral feeding tubes or intravenous lines, and adequate monitoring of the feeding and patient's response. Malnutrition is linked to safe nutrition care and patient safety. It is clear that there is a connection between nutrition and patient safety as it has been demonstrated that nutrition care has the potential to cause harm to patients.

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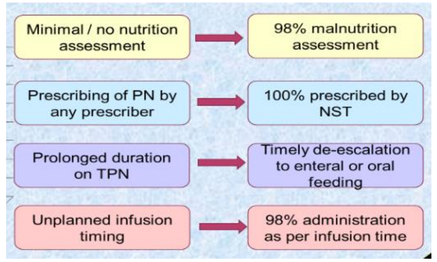
INTRODUCTION

Safe therapy is a first priority in patients requiring nutrition support therapy. Nutrition support is generally a low-risk and cost-effective treatment to improve outcomes for patients. The burden of practice errors on patients, their family members, and the healthcare system can be reduced through implementing patient-safety principles based on preventive and quality-improvement strategies. The main goal is to provide high-quality care (avoid prescribing and administration errors through safe nutritional support, which will reduce challenges) while ensuring the cost effectiveness of therapy with yearly reductions of expenditures and Hospitalization costs. Hence, Nutrition Therapy Support (NST) team was created to monitor and Deliver appropriate therapy for optimal outcome.

METHODS AND MATERIALS



RESULTS





TRAINING & COMPETENCY



NST
Nutrition **Webinar** and courses to **train** healthcare providers



Physicians
Nutrition support included in **MO masters curriculum**



Nursing
Line care training with catheter care workshops

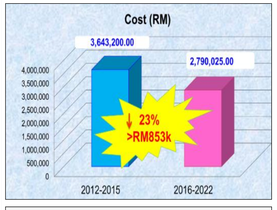


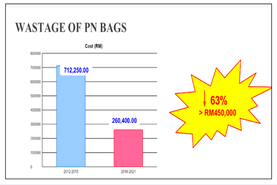
Dietitians
Standardized **enteral feeding protocol**



Pharmacy
PN **clinical** and **compounding training**

GRAPHS AND TABLES





INCIDENCE OF COMPLICATIONS

Complication	Pre NST	Post NST	
	Incidence		
Prescribing errors	80%	35%	↓45%
Administration errors	58%	10%	↓48%
Nutrients deficiency	61%	20%	
Line infection	69%	45%	
Organs function impairment	54%	40%	
Appropriateness of caloric supply	13%	57%	
Appropriateness of amino acid supply	45%	59%	
Length of ICU stay	15 days	8 days	

Chi Square test p<0.05 *(JK Gill, ND Jamil; 2020)*

DISCUSSION

The burden of practice errors on patients, their family members, and the healthcare system can be reduced through implementing patient-safety principles based on preventive and quality-improvement strategies. The fee-for-service health care paradigm is shifting toward value-based care and will require accountability around quality Assurance and cost reduction. Optimizing patient safety and outcomes are the prime directives for all quality assurance and performance improvement processes. Improving patient safety and quality of care is a collective responsibility that requires participation of all stakeholders, from patients and providers to organizations and policymakers.

CONCLUSIONS

The implementation of an NST led to a rise in PN referrals and a parallel decline in the proportion of unsuitable PN courses, especially in patients referred by primary teams from various subspecialty. Intravenous therapy related Complications been reduced and targeted education has shown good practices among Healthcare providers.

REFERENCES

1. National Institute for Health and Care Excellence. *Healthcare-Associated Infections: Prevention and Control in Primary and Community Care*; Clinical Guideline; NICE: London, UK, 2012.
2. *Prevent Central line Infection—Getting Started Kit*; Canadian Patient Safety Institute (CPSI). https://www.patientsafetyinstitute.ca/en/toolsResources/Documents/Interventions/Central%20Line-Associated%20Bloodstream%20Infection/CLI%20Getting%20Started%20Kit.pdf
3. Ling, M.L.; Apisarnthanarak, A.; LEE, C.M. APSIC guide for prevention of Central Line Associated Bloodstream Infections (CLABSI). *Anti Microb. Resist. Infect. Control* **2016**, *5*, 16.
4. Allingstrup, M.J.; Kondrup, J.; Wils, J. Early goal directed nutrition versus standard of care in adult intensive patients: The single center, randomized, outcome assessor blinded EAT-ICU trail. *Intensive Care Med.* **2017**, *43*, 1637–1647.