

# NUTRITION SUPPORT TEAM



Why should we have one?



# NUTRITION CARE PROCESS: RATIONALE FOR A TEAM APPROACH



"To ensure that all patients' nutritional needs are met whenever possible".<sup>1</sup>

This requires coordinated activity by catering, dietetic departments, and multi-disciplinary Nutrition Support Teams (NSTs), working with all ward-based nurses and care assistants.<sup>1</sup>

# NUTRITION CARE PROCESS: RECOMMENDATIONS

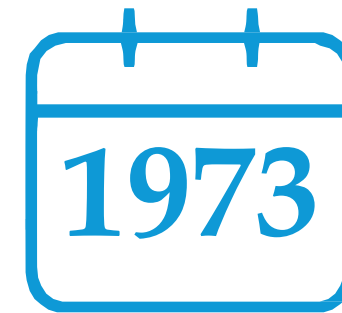


Royal College  
of Physicians  
Setting higher medical standards

"Coordination is best achieved by hospitals having a Nutrition Steering Committee with members which include senior representation from trust management, catering, pharmacy, dietetics, nursing, and the

**NUTRITION SUPPORT TEAM"<sup>1</sup>**

## WHAT DOES THE TERM NST MEAN?



The first Nutrition Support Team (NST)  
was established in the US  
in 1973, followed by teams across Europe.<sup>1</sup>

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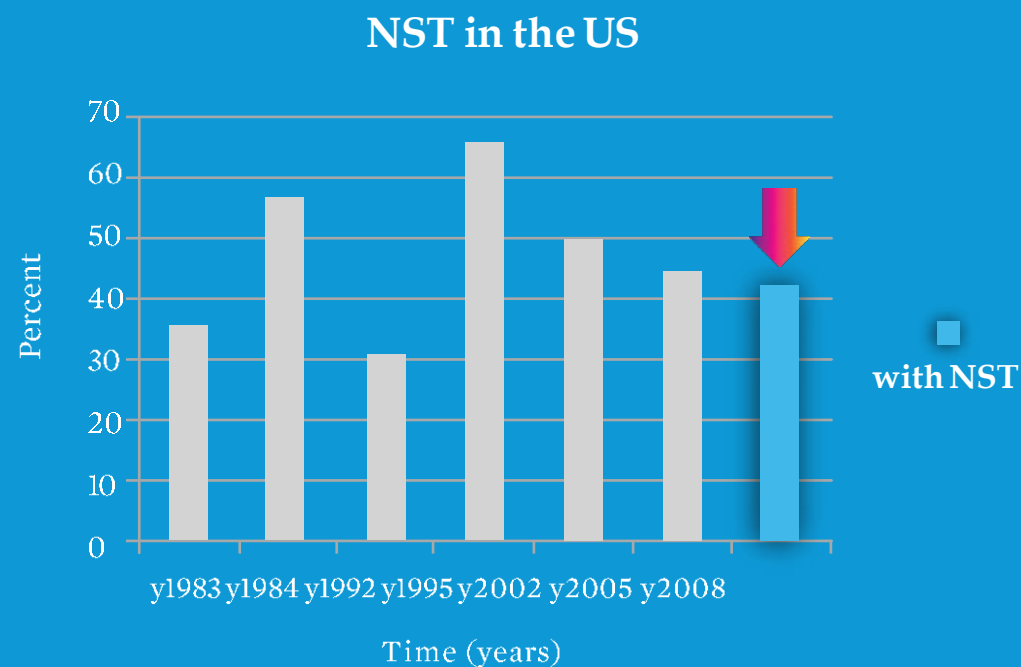


In 1992, Simon Allison defined a NST as a:  
**"TEAM OF DIFFERENT DISCIPLINES WITH  
GOOD COMMUNICATION, WHICH  
ENABLES NUTRITIONAL SUPPORT TO BE  
GIVEN IN THE BEST MANNER FOR EACH PATIENT!"**

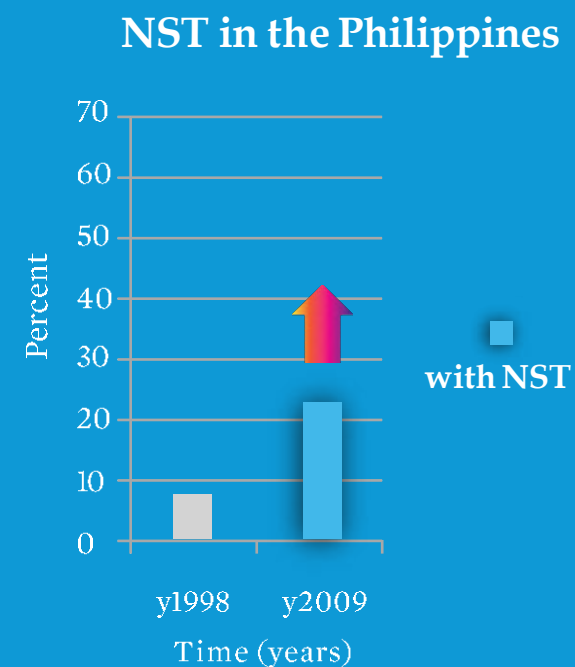
# HAS THERE BEEN AN INCREASE IN THE PRESENCE OF NST IN HOSPITALS?

"The answer is a mixed yes  &  no".<sup>1</sup>

**In the U.S.:**  
35% in 1983, 29% in 1991,  
65% - highest in 1995<sup>1</sup>

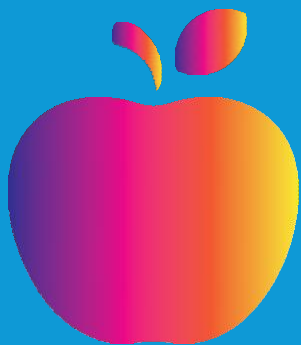
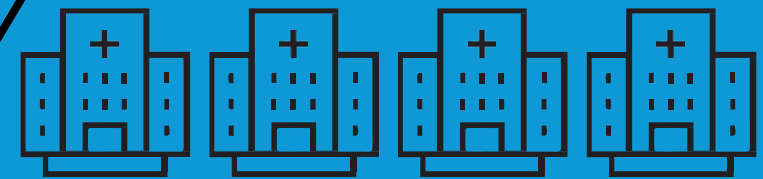


**In the Philippines:**  
Increasing trend of  
NSTs from 7% to 22%<sup>1</sup>



## INDIAN SCENARIO: STATUS OF NUTRITION SUPPORT SERVICES

In India, only about 6 out of 10 hospitals have a dietetics department.<sup>1</sup>



### NUTRITION SUPPORT SERVICES

are inadequate even in tertiary care hospitals and there is a need to strengthen the services for the holistic management of patients.<sup>1</sup>

# POTENTIAL ADVANTAGES OF NST



Reduction of unnecessary treatments<sup>1</sup>

Prevention of mechanical, infective, and metabolic complications<sup>1</sup>



Production or support of existing guidelines<sup>1</sup>

Education and training of other staff, patients, and caregivers<sup>1</sup>



Acting as advocates for patients & a point of contact for patients and caregivers<sup>1</sup>

# EFFECTIVENESS OF NST



62% of patients achieved  
≥75% of the energy and  
protein intake<sup>1</sup>



Complications  
reduced from 47% to  
3%<sup>1</sup>



Reduced ICU  
stay by 9 days<sup>2</sup>



Less weight loss<sup>1</sup>



Improved  
muscle function<sup>1</sup>



Improvement  
in quality of  
life<sup>1</sup>



## ROLES OF THE NST

1  
Nutritional  
assessments<sup>1</sup>

2  
Check for adequacy  
of the nutritional  
support provided<sup>1</sup>

3  
Recommend the best  
nutritional therapy  
for each patient<sup>1</sup>

4  
Respond to  
consultations on  
nutritional support<sup>1</sup>

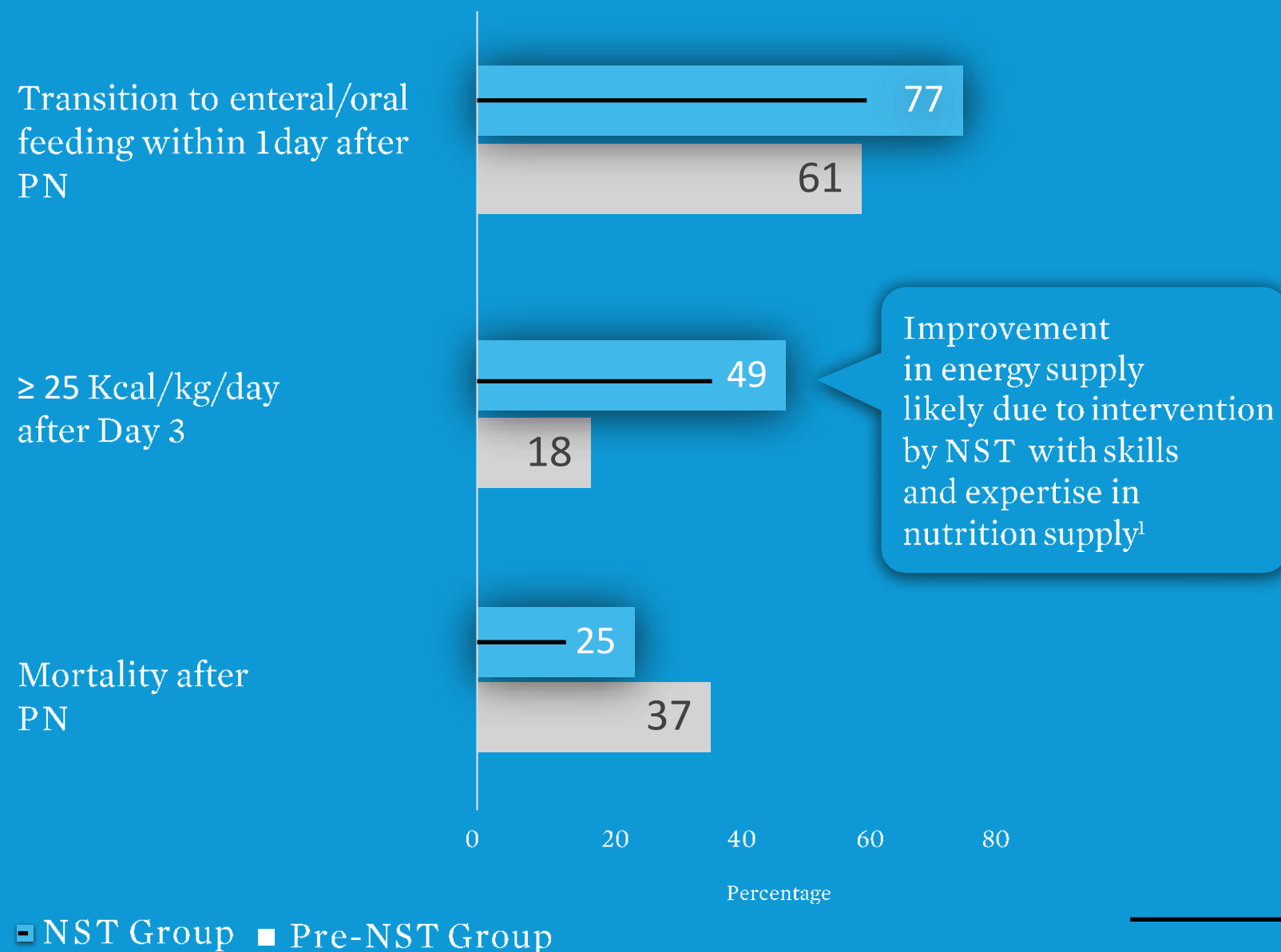
5  
Prevent complications  
during nutritional  
therapy<sup>1</sup>

# NST: AN EVIDENCE-BASED PRACTICE

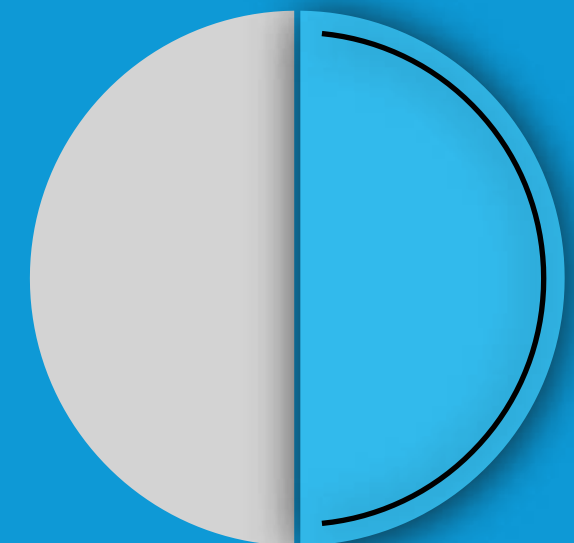


# PATIENT AND NUTRITIONAL OUTCOMES

## Outcomes in the pre-NST and NST groups



## Mean LOS

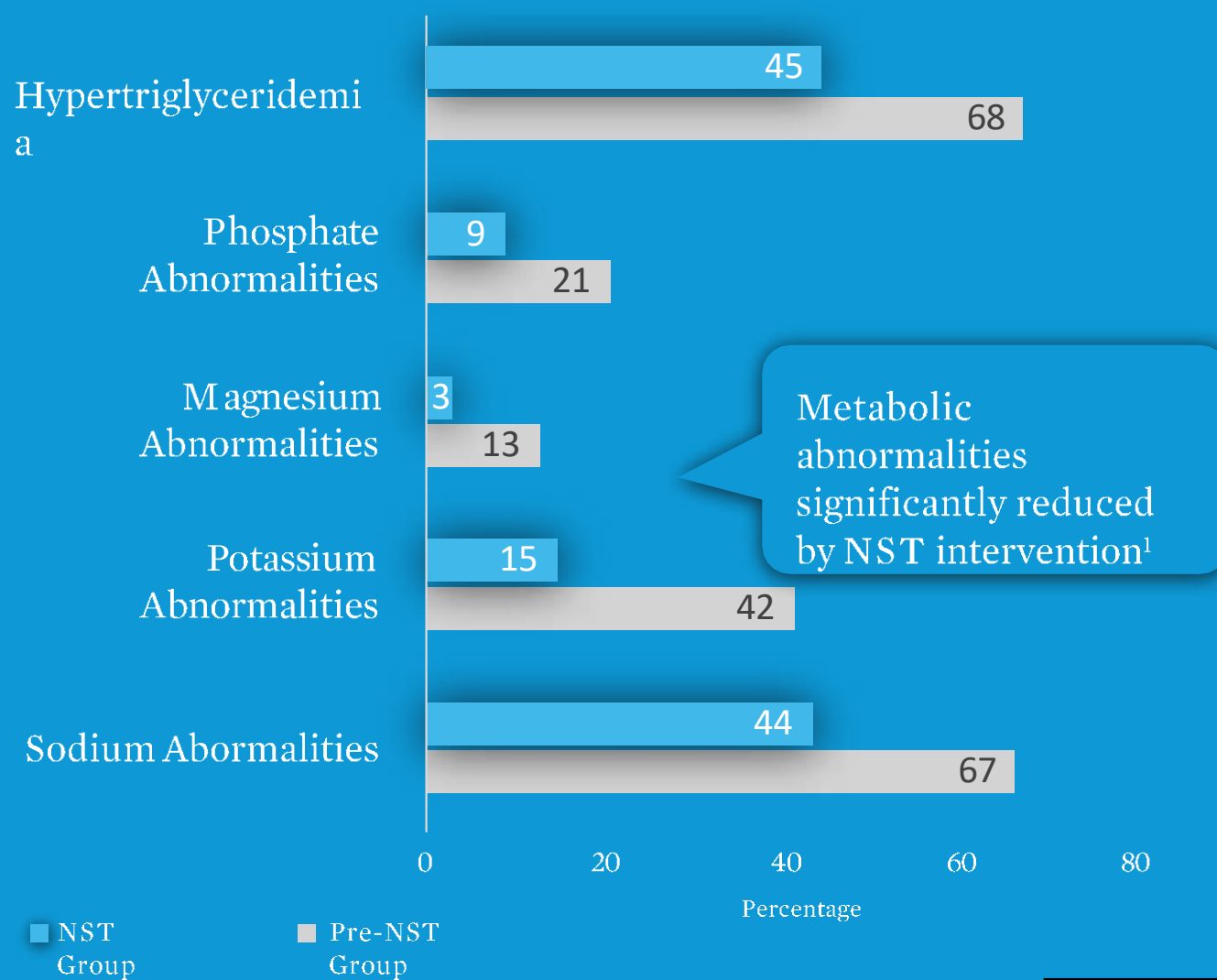


Mean LOS reduced by 1 day for NST group<sup>1</sup>

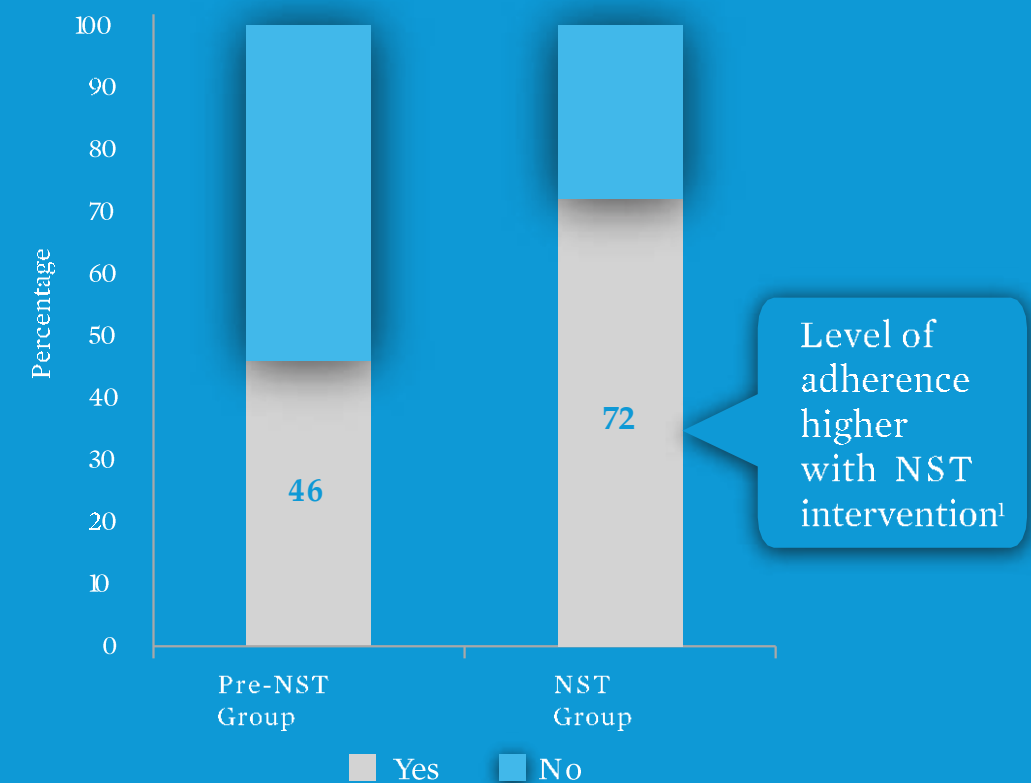
Legend: ■ NST Group ■ Pre-NST Group

# INCIDENCES OF METABOLIC ABNORMALITIES & LEVEL OF ADHERENCE TO MONITORING

Incidences of metabolic abnormalities in the pre-NST and NST groups



Level of adherence to monitoring guidelines



# NST: HOW TO START?



## Create an Institutional Culture<sup>1</sup>

- Know the facts - Nutrition improves patient outcomes
- Support adequate and appropriate nutritional intervention
- Identify motivated champions among hospital stakeholders



## Redefine Clinicians' Roles to Include Nutrition<sup>1</sup>

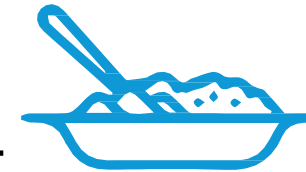
- Empower dietitians
- Secure nurse and physician leadership
- Engineer teamwork (e.g., daily team huddles) to include nutrition

# NST: HOW DOES IT WORK?



## Recognize and Diagnose ALL Patients at Risk<sup>1</sup>

- Assure accountability for malnutrition identification
- Use valid screening tools and criteria to assess/diagnose malnutrition
- Include fields for malnutrition characteristics in an EHR



## Rapidly Implement Interventions and Continued Monitoring<sup>1</sup>

- Establish policy to feed patients within 24 hours of 'at-risk' screen
- Create an EHR prompt for diet order when 'at-risk' screening data entered
- Monitor patients' food and oral nutritional supplement consumption

# NST: HOW DOES IT MAINTAIN?



## Communicate Nutrition Care Plans<sup>1</sup>

- Leverage an EHR to standardize nutrition documentation
- When present, ensure coding of mild, moderate or severe malnutrition as a complicating condition to primary diagnosis
- Ensure that care discussions include nutrition



## Develop Discharge Nutrition Care and Education Plan<sup>1</sup>

- Ensure that the nutrition care plan is incorporated into the discharge plan
- Educate patients and their families
- Communicate with the patient's health care providers

# ROLE OF EACH MEMBER OF THENST

Traditionally, NSTs have included:<sup>1</sup>



Physician



Dietitian



Nurse



Pharmacist

The structure and function of NSTs vary from one institution to another depending on needs, organizational culture, and available personnel.<sup>1</sup>





## Physician

## ROLE OF EACH MEMBER OF THE NST

- Prescribes and manages enteral/parenteral therapy<sup>1</sup>
- Promotes the established nutrition therapy within the host specialty<sup>1</sup>
- Provides professional input for highly complex nutritional therapy<sup>1</sup>
- Supports ongoing research and projects on complex nutritional therapy<sup>1</sup>
- Informs colleagues, physicians in training, and members on the board of directors of the importance of good nutrition therapy on the ward<sup>1</sup>



## Dietitian

## ROLE OF EACH MEMBER OF THE NST

- Gives advice on enteral/parenteral nutrition (indications, choice of feeding solution, nutritional goals)<sup>1</sup>
- Advises about options for enteral/parenteral nutrition and other nutrients (e.g., immuno-nutrition, vitamins, trace elements)<sup>1</sup>
- Edits, implements, and adapts protocols on enteral/parenteral nutrition and complex nutritional therapy<sup>1</sup>
- Develops and interprets screening tools; initiates and performs nutritional assessment<sup>1</sup>
- Contributes to education and conducts research on complex nutritional solutions<sup>1</sup>



Nurse

## ROLE OF EACH MEMBER OF THE NST

- Gives advice on routes, methods, and systems for delivery of enteral/parenteral nutrition<sup>1</sup>
- Assesses adequacy of access to nutrition therapy<sup>1</sup>
- Advises on the use of tubes, feeding pumps, and enteral/parenteral equipment<sup>1</sup>
- Implements and adapts protocols on methods of delivering enteral/parenteral nutrition to establish uniformity, save costs, and prevent mechanical complications<sup>1</sup>
- Educates on enteral/parenteral nutrition and highly complex nutritional therapy<sup>1</sup>
- Conducts research on complex nutritional therapy<sup>1</sup>



Pharmacist

## ROLE OF EACH MEMBER OF THE NST

- Provides logistical support for parenteral nutrition<sup>1</sup>
- Oversees and provides information about possible chemical/pharmaceutical interactions between parenteral nutrition components<sup>1</sup>
- Provides professional input on the composition of parenteral nutrition, on stability and compatibility of parenteral admixtures, and on drug/medication interactions with enteral/parenteral nutrition<sup>1</sup>
- Supports ongoing research projects on complex nutritional therapy, develops and implements parenteral nutrition protocols<sup>1</sup>

# MEETINGS AND AUDIT



The NST may meet weekly to discuss its operation, selected patients, data collection/audits, and journals.<sup>1</sup>

The meetings may include other specialists (surgeon(s), occupational therapist, speech and language therapist, physiotherapist, etc).<sup>1</sup>

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The continuation of the NST depends on it keeping good audit data.<sup>1</sup>

As a minimum, it must record details of:<sup>1</sup>

- All patients seen and data about every episode of
- CRS Every other complication of PN
- Infection data per 100 catheter days (at home, it is presented per 1000 days)



# TEAM MEASUREMENT TOOLS FOR EVALUATION OF NST



Plotting performance using a “run” chart (measurement of performance over time) helps NSTs to determine how closely they are achieving their aim.<sup>1</sup>

It also enables the measurement of the impact of procedural changes on the quality of care.<sup>1</sup>

# MEASURE AND TRACK



Percentage of patients for whom nutrition support is indicated according to predefined standards<sup>1</sup>



Percentage of patients for whom the proper route of administration is used to administer nutrition support<sup>1</sup>



Percentage of nutrition support patients with improved nitrogen balance<sup>1</sup>

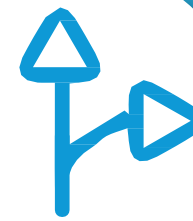


Incidence of hyper or hypoglycemia, fluid and electrolyte imbalance, and acid base alterations in nutrition support patients<sup>1</sup>

# MEASURE AND TRACK



Number of nutrition support patients who sign consent forms acknowledging the risks and benefits of nutrition therapy<sup>1</sup>



Number of patients who are given nutrition support that deviates from the prescribed treatment<sup>1</sup>



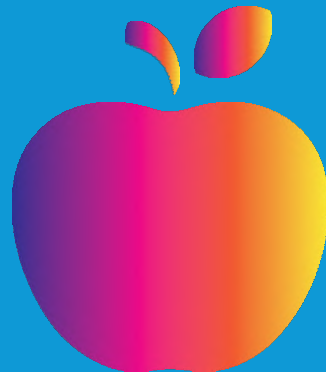
Number of patients who experience a detrimental drug-nutrient interaction<sup>1</sup>



Number of patients who receive nutrition support more than 2 hours after a treatment decision is made<sup>1</sup>



# WHY SHOULD A HOSPITAL INITIATE A NST IN INDIA?

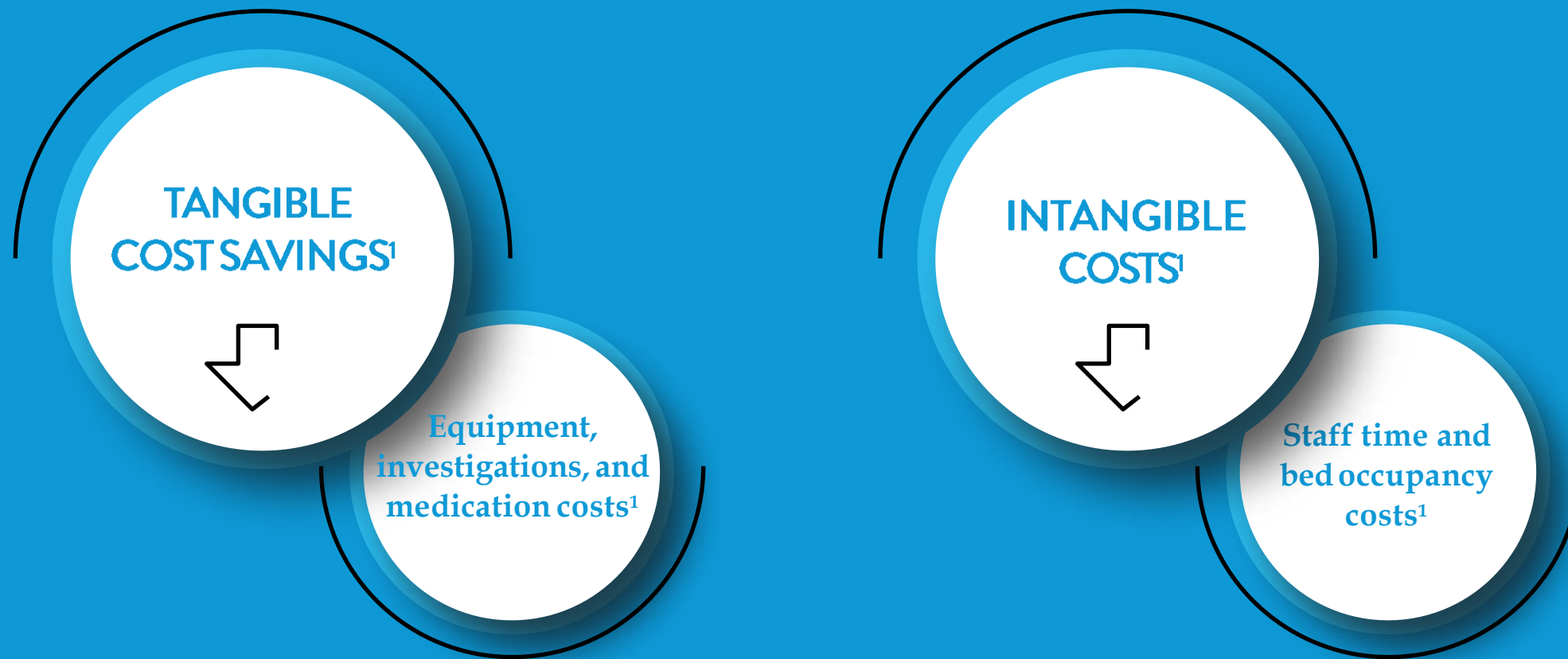


If a Trust does not have a NST, it may still be necessary to justify the benefits of having one, both in terms of:

## QUALITY IMPROVEMENT & COST SAVINGS<sup>1</sup>...



# TYPES OF FINANCIAL COST SAVINGS WITH NST



**In the U.S.:**  
NST reduced  
intangible costs<sup>1</sup>



**In the UK:**  
NST saved tangible  
costs of 50715£ by  
avoiding PN episodes &  
lowering incidence of  
CRS<sup>2</sup>



**Additional cost  
savings by NST:**  
Reduced the number  
of PEG tube  
insertions<sup>1</sup>

THANK YOU

