

## PEP uP Enhanced Protein-Energy Provision via the enteral route in critically ill Patients

### Why be Concerned about Nutrition Delivery in the ICU?

- The value of early enteral nutrition (EN) is supported by mechanistic data, large observational studies, randomized controlled trials and meta-analysis<sup>1</sup>
- Current data suggests that nutrition therapy provided early after admission to the ICU has a favorable effect on outcomes<sup>1,2</sup>
- Recent data suggest patients must receive at least 80% of prescribed amounts of protein and calories to obtain optimal outcomes<sup>3</sup>

### The PEP uP Concept

- A novel 24-hour volume-based feeding protocol
- A strategy to increase protein and calorie delivery and improve clinical outcomes in the ICU
- A “top down” therapy:
  - Providing multiple strategies to maximize therapy and promote tolerance at the start of enteral feeding, followed by the removal of some of these strategies over the next few days as appropriate<sup>1</sup>

### Background and Evidence

- Studies have demonstrated widespread iatrogenic underfeeding in ICU patients and that underfeeding may be associated with worse clinical outcomes<sup>4,5,6</sup>
- PEP uP has been shown to
  - Improve delivery of prescribed protein and calories in three published studies<sup>7,8,9</sup>

### PEP uP Protocol Elements

1. Three feeding options
  - **Volume-Based Feeds:** Stable patients start EN at goal rate
  - **Trophic Feeds:** Unstable patients start at 10 mL/hour, re-assess daily
  - **NPO:** Re-assess daily
2. Volume-based feeding: target a 24-hour volume vs. traditional hourly volume goal rate
3. Nurse driven: adjust hourly rate to make up the 24-hour volume
4. Semi-elemental/peptide-based 100% whey formula: start and progress to polymeric
5. Whey protein modular supplements (if required) and motility agents
6. Gastric residual volumes: tolerating higher thresholds

### PEP uP Benefits

- Improve nutrition delivery in your ICU with this Quality Improvement initiative
- The tools and resources you need are available – saving valuable time and energy

### To Find out More

- Visit the Critical Care Nutrition website at [www.criticalcarenutrition.com](http://www.criticalcarenutrition.com) to connect to the PEP uP collaborative and obtain access to all materials
- Nestlé Health Science can provide several resources to help facilitate the process
  - A list of tools and resources is found on the next page

## PEP uP Enhanced Protein-Energy Provision via the enteral route in critically ill Patients

### Tools & Resources Available

An extensive collection of tools and resources are available

Visit the Critical Care Nutrition website at [www.criticalcarenutrition.com](http://www.criticalcarenutrition.com) to browse through the PEP uP tools, learn about the initiative from PEP uP sites and read the PEP uP publications.

PEP uP tools available from the website include:

**Bedside Tools** to help with practical aspects of the protocol implementation

- Enteral Feeding Order templates
- Gastric Feeding Flowchart: Illustrating the procedure for managing gastric residual volumes
- Volume-Based Feeding Schedule: A quick reference table for determining goal rates
- Nurses' Guide for the Management of Diarrhea: Quick reference sheet
- EN Guidelines for Surgical Procedures: To assist with management of EN in patients going to the OR
- PEP uP Pocket Guide: A quick overview of the PEP uP protocol for bedside nurses
- Bedside Nutrition Monitoring Tool: A web-based application used to monitor EN progress in real-time

**Information Sheets** to help increase knowledge and awareness of PEP uP

- NUTRIC Score: A scoring system to help assess nutrition risk which may be used in conjunction with PEP uP and is incorporated into the electronic Monitoring Tool
- Information Sheet for Nurses: Provides general information about the protocol and rationale
- NIBBLES: Provide quick information about popular nutrition topics, including trophic feeding and the PEP uP protocol

**Implementation Tools** to support the protocol implementation and education process

- Power point presentations and a Self-Learning module

Nestlé Health Science can provide several resources to help facilitate the process, including:

- Volume-Based Feeding Posters
- PEP uP Nursing Education Video flash-drives
- PEP uP Pocket Guide laminated cards for bedside nurses

Critical Care  
Nutrition

Nestlé Health  
Science

A collaboration of:

