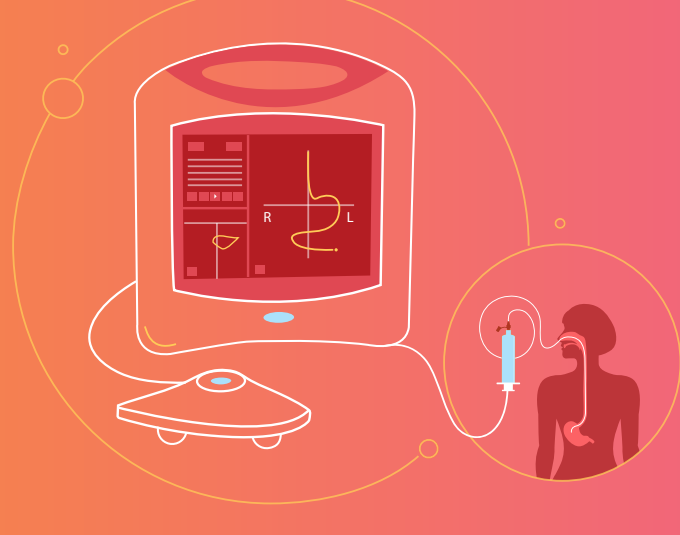


# CHALLENGES IN DELIVERING NUTRITION TO HOSPITALIZED PATIENTS



Malnutrition—a debilitating and highly prevalent condition in the hospital setting, with a prevalence ranging from 13%–88% depending on the patient population, disease severity, and the criteria used to identify its occurrence.<sup>1,2</sup>

- Associated with many adverse outcomes – immune system depression, impaired wound healing, muscle wasting, longer lengths of hospital stay, higher treatment costs and increased mortality<sup>1</sup>



## Factors contributing to malnutrition in acute care patients



ESPEN guidelines highlight that malnutrition seen in hospitalized patients is often a combination of cachexia and malnutrition as opposed to malnutrition alone (Table 1).<sup>1</sup>

Malnutrition in hospitalized patients can develop due to—<sup>1,3</sup>

- Deficiency in dietary intake<sup>1,3</sup>
- Increased requirements associated with a disease state<sup>1</sup>
- Complications of an underlying illness (poor absorption and excessive nutrient losses)<sup>1</sup>

Also procedures, testing, surgery, and hospital routines compromise on protocols required to adequately nourish hospitalized patients.<sup>3</sup>

Table 1: Factors contributing to malnutrition in hospitalized patients<sup>1</sup>

 Personal	 Organizational
Age	Failure to recognize malnutrition
Apathy/depression	Lack of nutritional screening or assessment
Disease (e.g., cancer, diabetes, cardiac, GI)	Lack of nutritional training
Inability to buy, cook or consume food	Confusion regarding nutritional responsibility
Inability to chew or swallow	Failure to record height and weight
Limited mobility	Failure to record patient intake
Sensory loss (taste, smell)	Lack of adequate intake
Treatment (ventilation, surgery, drain tubes)	Lack of staff to assist with feeding
Drug therapy	Importance of nutrition unrecognized



## Did you know ?

- ASPEN 2014 guidelines recommend that nutrition screening should be performed within 24 hours of hospital admission, with a full nutrition assessment completed if the screen identifies an at-risk patient.<sup>2</sup>
- SCCM and ASPEN 2016 recommend EN for patients admitted to an ICU once hemodynamics are stable.<sup>4</sup>
- ESPEN 2019 guidelines also recommend that if oral intake is not possible, early EN (within 48 h) in critically ill adult patients should be performed/ initiated rather than delaying it.<sup>4</sup>



## Improving nutritional support in hospitalized patients

EN is the mainstay of nutrition delivery in hospitalized patients owing to benefits for the GI tract and associated immune system.<sup>4,5,6</sup>

- Allows for the short- and long-term delivery of nutrients to the digestive tract of patients who cannot maintain their requirements with oral intake<sup>7</sup>

**Early EN nourishes the intestinal mucosa, maintains intestinal integrity, maintains intestinal microbial diversity, and improves immunity and metabolic function, thereby reducing infectious complications.<sup>4</sup>**

- Associated with lower infective risk compared to PN<sup>5</sup>

**Oroenteric and nasoenteric feeding tubes are generally used for short-term access (< 4 weeks' duration) until more definitive measures are implemented.** Oroenteric and nasoenteric feeding provides opportunities to assess EN tolerance prior to placement of permanent feeding tubes.<sup>7</sup>

## ACG 2016 recommendations for Nutritional therapy in hospitalized patients<sup>6</sup>

- ✓ Specialized nutrition therapy in the form of EN should be initiated promptly in the hospitalized patient who is at high nutritional risk and is unable to maintain voluntary oral intake, with EN to be used preferentially over PN in hospitalized patients who require non-voluntary specialized nutrition therapy and do not have a contraindication to delivery of luminal nutrients.<sup>6</sup>
- ✓ A nasogastric or orogastric feeding tube should be used as the initial access device for starting EN in a hospitalized patient.<sup>6</sup>



## Our Solution

AVANOS\* CORFLO\* Nasogastric/Nasointestinal (NG/NI) Feeding Tube is a medical grade polyurethane feeding tube specifically designed for patient comfort and safety during tube insertion and use.

- Intended for use in patients with intermittent or continuous tube feedings via the nasogastric or nasointestinal pathway<sup>8</sup>



CORFLO\* NG/NI pediatric feeding tube with stylet



CORFLO\* NG/NI feeding tube with ENFit\* connector and stylet



CORFLO\* NG/NI feeding tube with ENFit\* connector

- Medical grade polyurethane remains soft and flexible throughout use<sup>9,10</sup>
  - Offers larger lumen than silicone or PVC
  - Can remain in situ for as long as functional, hence excellent for long-term intubation
  - Maximum strength and kink resistance
  - Minimizes tissue irritation and reaction
  - Better deterioration and blockage resistance as compared to silicone tubes
- Clear cm markings to identify tube dislodgements, aid in placement and check migration<sup>9</sup>
- Simple, water-activated C-19™ external and internal lubricant eases insertion and improves patient compliance<sup>9</sup>
- Anti-clog exit port that is 3x larger than the inner diameter of the tube to prevent clogging<sup>9</sup>
- Dual port allows simultaneous feeding, flushing and/or medication delivery without unnecessary disconnection from feeding lines<sup>11</sup>
- Tungsten weighted (cylindrical shape for flexibility, following the natural course of nasopharynx into esophagus; maximizes patient comfort upon insertion) or non-weighted tubes<sup>10,11</sup>
- Braided (to reduce removal friction, with safety distal loop tip to eliminate blunt ends) stainless stylet or non-stylet options<sup>10,11</sup>
- Range in sizes from 5 Fr–12 Fr, available in a wide variety of neonatal, pediatric and adult sizes<sup>11</sup>
- Radiopaque tube and tip, with the entire tube visible under X-ray and fluoroscopy<sup>10,11</sup>
- No indicated dwell time. Tube should be monitored, regularly assessed and replaced when clinically indicated based on functionality and patient condition<sup>11</sup>

**Cachexia:** multifactorial syndrome characterized by severe body weight, fat and muscle loss and increased protein catabolism due to underlying disease(s); **malnutrition:** inadequate consumption of nutrients

ESPEN, European Society of Clinical Nutrition and Metabolism; GI, gastrointestinal; EN, enteral nutrition; ASPEN, American Society for Parenteral and Enteral Nutrition; SCCM, Society of Critical Care Medicine; PN, parenteral nutrition; ACG, American College of Gastroenterology

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