

# Evaluating Unique Factors That May Contribute to Clogging of Enteral Feeding Tubes in the Home Care Setting

June Greaves, RD, CNSC, CDN, LD, LDN<sup>1</sup>

<sup>2</sup> Coram CVS Specialty Infusion Services, Denver, Colorado, 80202, USA

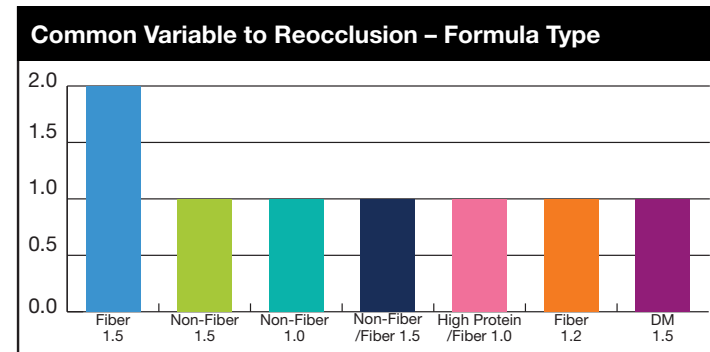
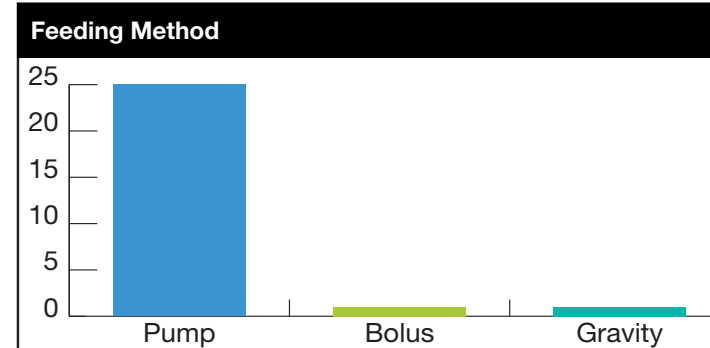
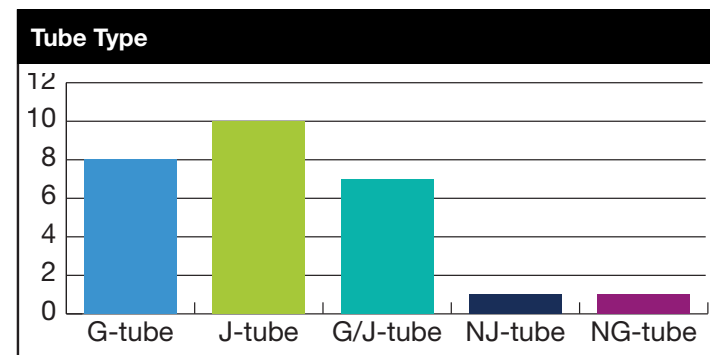


## Purposes

The purposes of this study were to examine the common variables that frequently occur in the homecare setting that may contribute to occlusion of enteral feeding tubes, to determine the incidence of occlusion in this study population, and to outline the effective techniques needed to treat or prevent feeding tube occlusions.

## Introduction

Upon transition from acute/chronic care to home care, healthcare professionals are seldom available to provide in-home care for enteral feeding patients. The home care dietitian (HCD) can monitor these patients to ensure understanding and compliance with therapy. However, it is typically expected that ongoing patient monitoring and therapy complication management is the responsibility of the prescriber. The prescriber may not have particular expertise in home enteral management and may see the patient infrequently depending upon the patient's health status. It is essential that home tube feeding patients are well-educated, competent and confident regarding therapy self-administration. It is well documented in the literature that feeding tube occlusion causes interruption in nutrition support and hydration. Also as importantly, tube occlusion causes emotional distress to the patient and/or caregivers. To avoid this complication, it is imperative that the HCD understand the common risk factors associated with tube occlusion.



## Methods

Retrospective data was collected from chart reviews of home tube feeding patients serviced in a four-state region from June 2015 to June 2016 from a large national home care provider. Data collected included: formula composition, tube type, flushing regimen, medication administration, gastric residual volume and other factors. Additionally, when complications arose, the treatment regimen (including hospitalization) was tracked as well as patient outcome. A literature review was conducted to compare results of this study to other published studies on tube occlusion.

## Results

- 209 adult patients were evaluated. Of these, 27 reported clogged feeding tubes.
  - 78% of patients had been on service less than 90 days (with an average length of service at 32 days).
  - 22% had been on service >100 days.
- Formula Type:
  - 55% received fiber-containing formulas.
  - 45% were on non-fiber, semi-elemental/elemental formula.
- Tube Outcomes: After feeding tube occlusion occurred, the HCD instructed:
  - 19 (70.3%) patients on proper flushing.
  - 2 patients (7.4%) received flushing instructions from the visiting nurse association.
  - 6 patients did not have education specified/noted in home care medical record. This would not exclude if education was completed prior to discharge.
  - 18 patients (66%) did not experience re-occlusion.
  - 9 patients (34%) experienced re-occlusion, however, had received flush education by a trained clinician after their initial occlusion.
    - 2 patients (7%) required tube replacement in the outpatient setting; 1 feeding tube was converted from J-tube to G-tube.
  - None of the patients experienced a hospitalization related to an occluded tube.
    - With re-occlusion, 47% reported it as a result of medications, tube type, or poor flushing despite education.
    - The remaining 53% had no documentation regarding potential reasons for occlusion.

## Conclusions

Multiple factors contribute to feeding tube occlusion. These factors include, but are not limited to, improper flushing techniques due to lack of education or non-compliance. Risk factors identified for tube clogging in this population included: patients new to tube feeding, those with J-tubes, and the use of fiber-containing formulas. The study population experienced an overall 12.9% complication rate. The literature varies widely between 12.5% to 45% occlusion rates. The HCD can assist the home care patient with interventions, such as training on proper flushing techniques, to clear occlusions to preserve tube patency and prevent replacement.

