

Retrospective analysis of adherence and compliance, with registered dietitian oversight in enterally fed, home infusion patients receiving pea-protein plant-based formula versus milk-based formulas



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Background: There are several factors that impact adherence to home enteral nutrition (HEN), including formula tolerance. Registered Dietitian (RD) guidance has helped identify and address feeding intolerances and offer interventions to improve patient adherence and delivery of nutrition. Barriers include clinician-to-patient communication via telephone and other limitations, such as voluntary, subjective reporting.

Purpose: The purpose of this project is to compare and assess adherence with the focus of home infusion RD oversight in the enterally-fed, home infusion patient receiving milk based conventional formula versus pea-protein-plant based formula.

Methods Medical records of enterally fed, adult patients of a home infusion company, fed with pea-protein-plant-based formula (PBF) or milk-based formula (MBF), for at least 3-months between Jan 1, 2021- Dec 31, 2021, were reviewed. Exclusion criteria included patients younger than 18, orally fed (not receiving enteral nutrition), those prescribed PBF or MBF any time before or after the 12-month period, and those who received PBF or MBF for less than 3 months. Adherence was measured by a) determining percentage of formula delivered to the patient, compared to formula prescription and b) determining patient compliance to ordering formula within 30 days, +/-10 days of their last order over a 3-month time frame, with ability to only order with less than 10-day count of formula on hand. Adherence rates of PBF and MBF were compared. RD oversight is defined by completion of a nutrition assessment by RD with a patient via telephone.

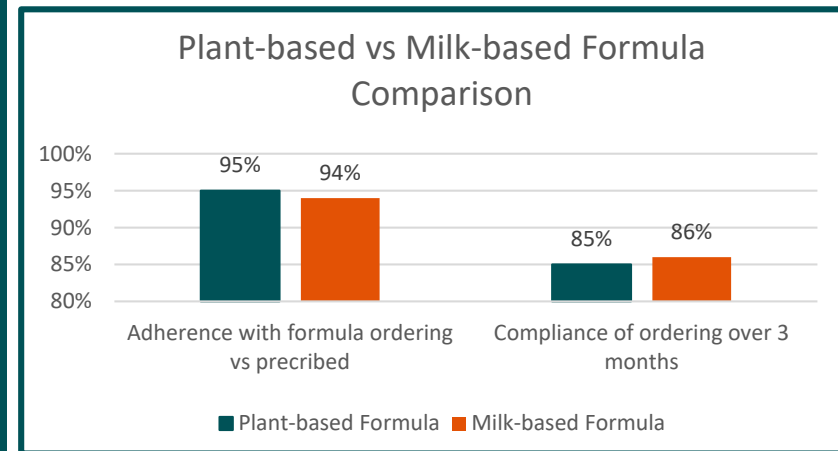
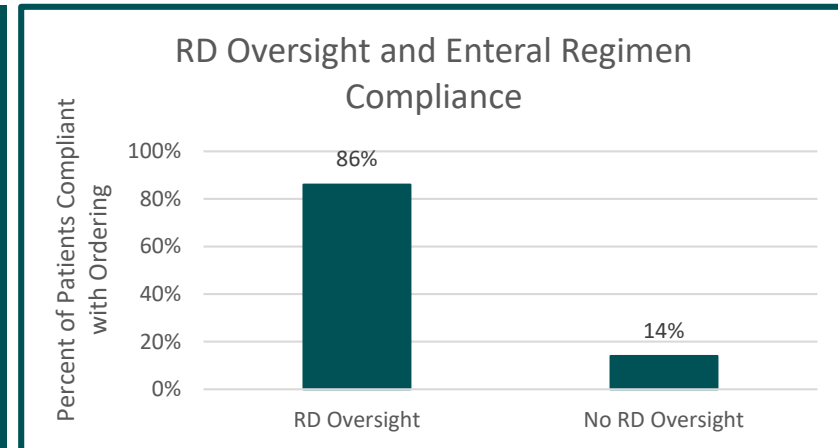
Results This retrospective analysis reviewed 188 adult patients receiving HEN, 51% male and 49% female. Half of the patients received PBF; 45% male, 54% female and half of patients received MBF; 56% male, 44% female, with mean age being 55+21.87 years. 86% of total patients receiving PBF and MBF were adherent to ordering for 3 consecutive months within 30 days+10 days of their last order over a 3-month period. Patients receiving PBF were 85% adherent, patients receiving MBF were 86% adherent. The average percentage of formula ordered by patient vs formula prescribed over 3-months was 94.89%+0.11. PBF adherence was 95.4%+0.11 formula ordered vs prescribed and MBF adherence was 94.32%+0.12 formula ordered vs prescribed. Of the patients that received PBF, 45.7% had switched from a MBF to the PBF. A home infusion RD oversaw 85% of the sample. Patients followed by a home infusion RD who received PBF, ordered 96% of the formula prescribed over a 3-month time frame and 85% were compliant with ordering within the timeframe. Patients followed by a home infusion RD who received MBF, ordered 95% of the formula prescribed over a 3-month time frame, and 88% were compliant with ordering within the timeframe. Data also showed that of the patients that had RD oversight 87% were compliant with ordering for 3 consecutive months vs only 79% of patients that did not have RD oversight.

Conclusions:

Patients with RD oversight by a home infusion dietitian were more compliant with ordering over 3-month consecutive time frame.

This study is a useful indicator that continued research is warranted to investigate the impacts that a home infusion RD can have on home, enteral nutrition patients.

Patients receiving plant-based formula or milk-based formula had similar outcomes with compliance to ordering and adherence to formula prescribed.



Discussion: Adherence to HEN therapy was similar between PBF and MBF groups. Completion of a clinical nutrition assessment by RD can help determine appropriate formula type based on the patient's needs to optimize adherence and compliance. RD involvement with home infusion patients has the potential to improve patient compliance and demonstrates the importance of having a registered dietitian as part of a multi-disciplinary home infusion team.

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