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Innovative Feeding Holder Improves Quality of Life in Home Enteral Patients and Caregivers: A Look at Confidence, Tolerance, and Mobility

Anita Vandergraaf, MBA, RDN, LDN[1]
Cynthia Reddick, RDN, CNSC[2]
Tracey Giambertone, MS, RDN, LDN, CNSC[3]

[1]Compass Group USA
[2]HEN Consultant
[3]Staley House LLC

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Background

Home enteral nutrition (HEN) patients and caregivers face challenges adhering to prescribed nutrition regimens related to dexterity issues, feeding outside the home, and other variables impacting quality of life (QOL). Gravity syringe feeding requires holding a syringe when feeding. Pump fed HEN patients utilize IV poles which can be difficult to move around inside and outside the home. Backpack users face programming and troubleshooting difficulties, such as kinked lines.

The purpose of this study is to evaluate the HEN consumer's confidence in feeding, before and after implementation of an Innovative Feeding Holder (IFH) in and out of the home. Additionally, we compared reported tolerance to syringe feeds, ability to perform other tasks while syringe feeding, and perception towards having a feeding tube before and after using an IFH.

Methods

A total of 839 HEN patients were surveyed before and after using the FreeArm®, an FDA Class 1 medical device which is a portable, flexible IV pole alternative. Survey data was collected 8/2020 - 9/2022. The before survey was sent via email prior to using the IFH device. A follow-up survey was sent via email 45 days after receiving the IFH. Eligibility criteria required a reply to both surveys. Six questions using a Likert scale related to confidence, tolerance, and experience with feeding were included in this study. Syringe feeding questions included statements regarding ability to perform therapies and activities while feeding. Lastly, feelings about having a feeding tube were collected by asking an open-ended question about the patient or caregiver's experience. Responses were characterized as favorable or unfavorable.

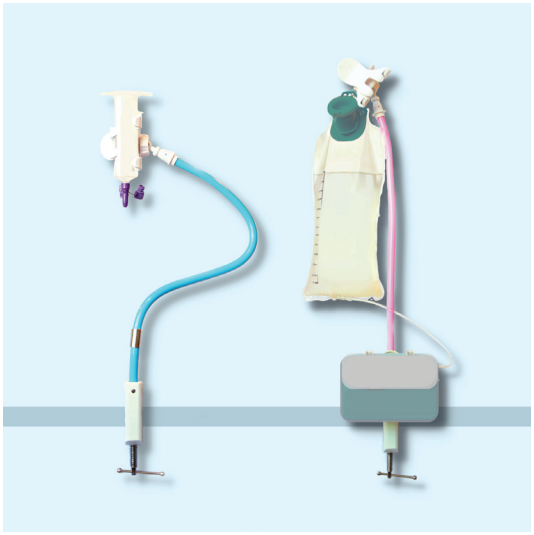
Survey Questions

	Not very confident	Not confident	Somewhat confident	Confident
1. How confident are you in feeding outside of the hospital or doctor's office?				
2. How confident are you feeding outside of your home?				
	Almost always vomiting or spitting up	Some vomiting or spitting up	No vomiting or spitting up	
3. If gravity syringe feeding, how well are feeds tolerated when holding the bolus syringe?				
	Never	Somewhat never	Somewhat often	Often
4. If gravity syringe feeding, how often are you able to perform therapies while holding the bolus syringe?				
5. If gravity syringe feeding, how often are you able to do other activities while holding the bolus syringe?				
6. If gravity syringe feeding, how often do you spill a feed or medicine bolus?				
7. What are your feelings about having a feeding tube?				

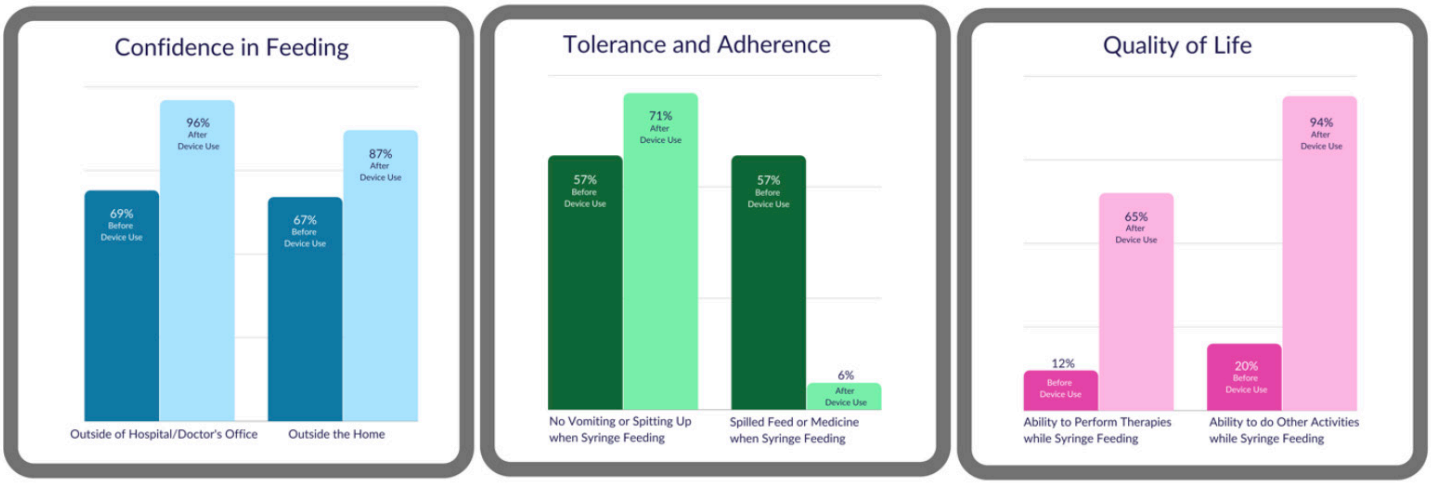
Results

A total of 71 HEN patients were eligible for the study. Sixty-four percent of patients were < 18 years old, of which the majority were < 2 years old. The adult population between 18 to 65 years old constituted 25% of patients, with 10% > 65 years old. Feeding methods included 30% syringe, 45% pump, and 25% on a combination of syringe and pump. Respondents who were 'somewhat confident' or 'confident' in feeding outside of the hospital/doctor's office increased from 69% to 96% after using the device. When away from home, confidence in feeding increased from 67% to 87%. The experience of syringe feeding without episodes of vomiting or spitting up improved from 57% to 71%. The ability for syringe fed patients to perform therapies often when feeding increased from 12% to 65%. Ability to conduct other activities often while syringe feeding increased from 20% to 94%. Occurrences of spilled syringe feeds or medications decreased from 57% to 6%. A 92% increase in favorable attitude towards having a feeding tube was seen after using the Innovative Feeding Holder.

Innovative Feeding Holder (IFH)



Reported Experience Before and After Device Use



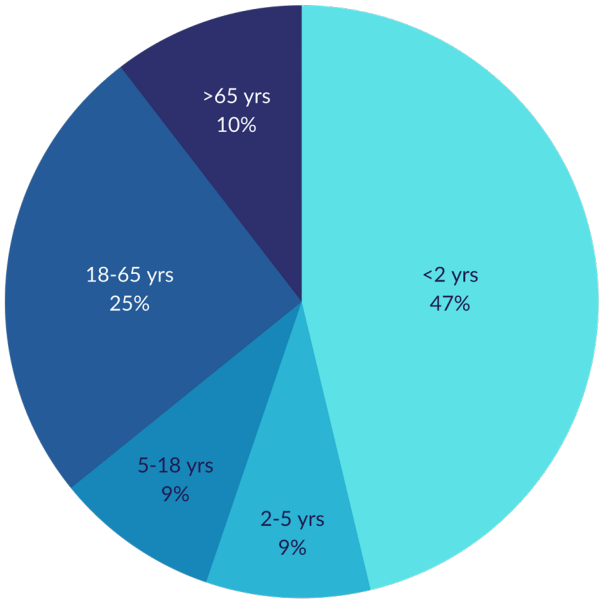
Conclusion

The Innovative Feeding Holder improved confidence in feeding at home and on-the-go for both syringe and pump fed HEN patients. The flexibility of the device to consistently set the appropriate height led to an improvement in tolerance for syringe fed patients. The device which holds a syringe during feeding and medication administration reduced spills. Overall outlook towards having a feeding tube improved with use of the IFH.

Due to the majority of study participants being < 5 years, caregivers were reporting their own experiences with home tube feeding. The ability to travel, prevention of formula and medication spills, capacity to multitask while syringe feeding, and overall caregiver QOL are factors that should be considered when home feeding regimens are developed.

Future research could focus on caregiver QOL and the clinical benefits of using the IFH. Quantifying the number of missed feedings due to the lack of mobility and independence may offer insights to nonadherence of HEN prescriptions and regimens.

Age Ranges of HEN Patients
65% pediatric, 35% adult



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