

Adoption Trends of (ISO) 80369-3 Enteral Feeding Tubes in Homecare: A National Perspective

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Introduction

The International Standard Organization (ISO) 80369-3 design standard defining the enteral feeding connector was published in 2016. The design is engineered to remove opportunities for human error and small-bore tubing misconnection by making each family of connectors incompatible with each other. The US adoption of the safety standard is estimated to be approximately 30%, which lags behind most other regions of the world and has been difficult to measure due to limits in reporting and data sharing by enteral device manufacturers, hospitals, and home enteral providers.¹ The purpose of this study is to validate that estimation by measuring national adoption rates and characteristics of ISO compliant enteral feeding tube users on service with one national home infusion company.

Methods

In this study, ISO compliant enteral feeding tubes are identified as ENFit™, which is the registered trademark term commonly used in the enteral community. Demographic and enteral device dispensing data from Q1 2018 to Q2 2021 was utilized to identify this population.

Results

Figure 1. ENFit™ Census Trend Q1 2018 – Q2 2021

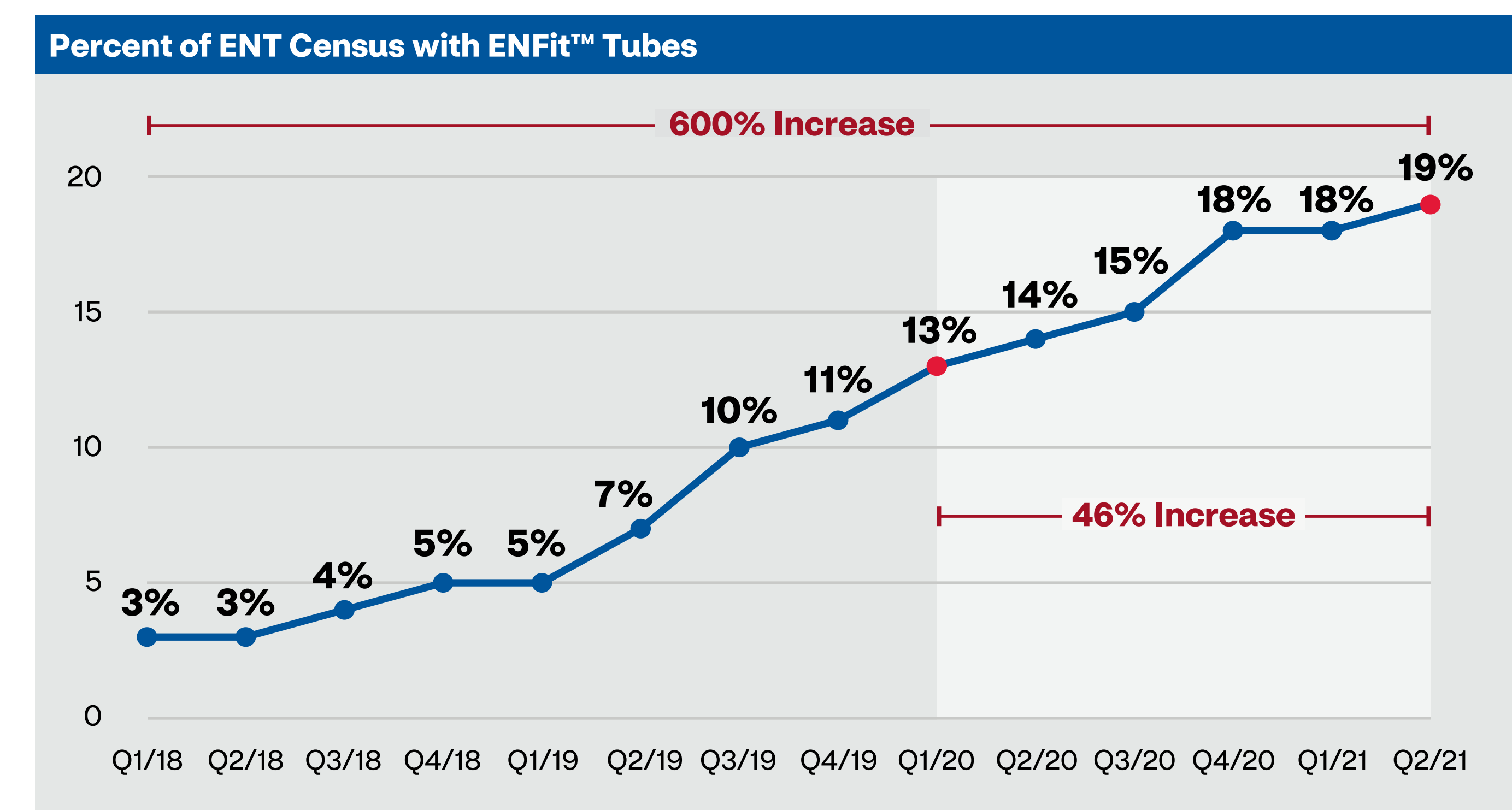


Figure 2. ENFit Adoption by Age Group

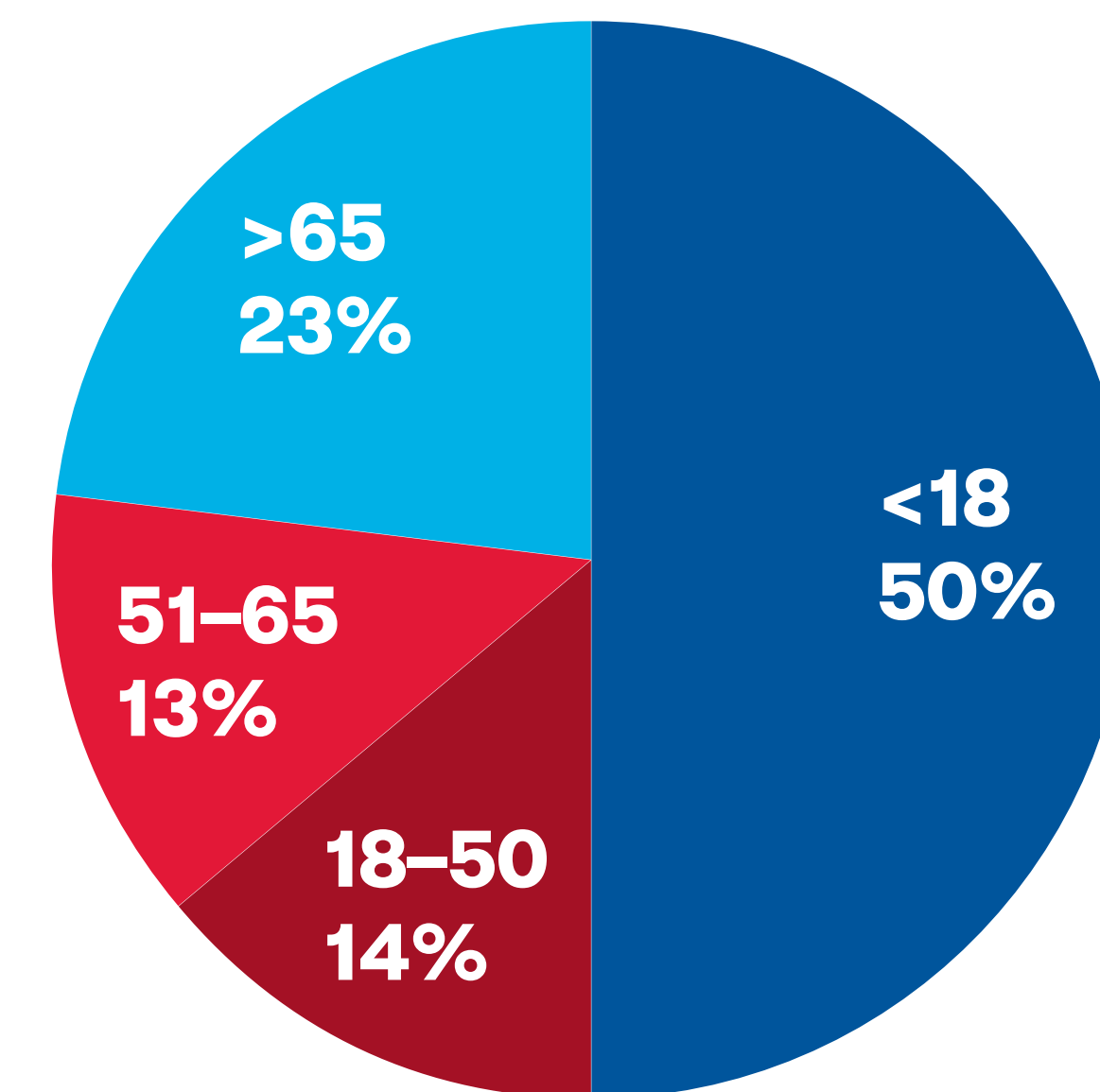


Table 2. Top 20 Hospital ENFit Referrals

| Hospital Name | PEDS | CA |
|---|------|----|
| Mayo Clinic Rochester | | |
| Childrens Hospital Los Angeles | X | X |
| UC San Francisco Medical Center | | X |
| Mayo Clinic Jacksonville | | |
| Hospital of The University of Pennsylvania | | |
| Sunrise Hospital & Medical Center (Las Vegas) | | |
| Lucile Salter Packard Children's Hospital | X | X |
| Primary Childrens Medical (Salt Lake City) | X | |
| Phoenix Childrens Hospital | X | |
| Prisma Health Greenville Memorial Hospital (South Carolina) | | |
| University Of Kansas Medical Center | | |
| Children's Mercy Hospital (Kansas City, MO) | X | |
| University Of Chicago Medical Center | | |
| Childrens Hospital Colorado | X | |
| UC Davis Medical Center (Sacramento, CA) | | X |
| Moffitt Cancer Center (Tampa, FL) | | |
| Cincinnati Children's Hospital | X | |
| Spectrum Health Butterworth Hospital (Grand Rapids, MI) | | |
| Stanford Hospital (Palo Alto, CA) | | X |
| Children's Hospital of Orange County | X | X |

Table 1. Percent of ENFit Census by State

| State | Top 10 |
|----------------|--------|
| California | 30% |
| Florida | 6% |
| Illinois | 6% |
| Arizona | 5% |
| South Carolina | 4% |
| Minnesota | 4% |
| Idaho | 4% |
| New York | 3% |
| Michigan | 3% |
| Nevada | 3% |

Table 3. Tube Type of ENFit Population

| Tube Type | n = 1703 (14%) | |
|-------------------|----------------|------------------------|
| Gastric | 55% | Long Term Tube 68% |
| GastroJejunostomy | 4% | |
| Jejunal | 9% | Short Term Tube 32% |
| NasoGastric | 25% | |
| NasoJejunal | 7% | |

Conclusion

- As of Q2 2021, our population reflects a 19% ENFit adoption rate without an active conversion protocol.
- Adoption in our population grew by 46% during the pandemic
- Adoption is led by our pediatric population
- 51% of our ISO compliant users reside in 5 states and 71% live in 10 states

Adoption trends of ISO 80369-3 compliant enteral feeding tubes across the nation have been led by children's hospitals with additional momentum in California related to local legislation, resulting in early adoption of the safety standard. Our California population of users is double the national average with more adults than the national results, which suggests legislation supports improved adoption in the adult population. Further research regarding outcomes, quality of life, and ease of use compared to legacy tubes would provide valuable insights into the homecare experience in this population.

References

1. GEDSA <https://stayconnected.org/gedsa-webinars-summits/> "Reducing the Risk of Device Misconnections: Education & Awareness on ENFit"
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