

Supply Chain Benefits of ISO Standardization to the ENFit® Enteral Feeding Connector

ENFit enteral feeding connectors were developed through the International Organization for Standardization (ISO) process as part of a global patient safety initiative to reduce medical tubing misconnections, and they were introduced with the publication of the ISO 80369-3 standard. Before ENFit, there were no internationally standardized and dedicated enteral feeding connectors, which resulted in numerous proprietary systems with varying degrees of compatibility and potential risks of misconnections. The standardization of connectors prioritizes patient safety by helping ensure that connectors for alternative delivery systems are incongruous, thus minimizing the potential for medical tubing misconnections, which can result in patient injury or death. In addition to promoting patient safety, many other benefits come along with this standardization of enteral connectors.

Some of the greatest benefits resulting from the standardization of enteral connectors are evident in the supply chain. The global supply chain has been especially strained since the start of the COVID-19 pandemic. Unfortunately, the global supply chain has not yet fully recovered and may be even worse now. As noted by Forbes magazine, America's healthcare system is currently "facing supply shortages that dwarf the problems experienced in the early days of the Covid-19 pandemic . . . today's problems include a much wider array of equipment. They can be traced to component scarcities, backlogged ports, transportation glitches, and lockdowns in China to combat the spread of Covid-19."¹ The Forbes article goes on to mention that the multi-billion-dollar healthcare logistics firm, Owens & Minor, believes that "45% of the items it handles are in some way supply-constrained . . . For the often-used stocked items required to treat patients, the industry as a whole used to have fill rates of 96% to 98%, meaning that just a very small percentage of orders remained unfilled. Today, Jochims [Owens & Minor, COO of products and healthcare services] says, the industry's fill rate for these items is in the high 80s. 'It used to be that hospitals would deal with 50 to 100 back-ordered items per day. Many institutions now are dealing with 800 to 1,000 back orders per day.'"¹

The pandemic has also resulted in a major uptick in travel nursing. There are now more than three times the amount of travel nurses as there were pre-pandemic². This can present unique challenges to the continuum of care, especially when processes, systems, and products

are not standardized from one institution to the next. This lack of standardization can result in additional training requirements, and it can increase the risks to patients.

Product standardization offers solutions to these pressing and seemingly endless supply chain and patient safety concerns, so much so that The US government’s “Nation Strategy for a Resilient Public Health Supply Chain” advocates for immediate standardization. They specifically state that to correct these supply chain shortages, we must “engage with manufacturers and consumers to increase product standardization and interchangeability.”³ Their push is in the spirit of alleviating external logistical inefficiencies. However, there are also internal logistical benefits to product standardization. This is noted in statements from 3M, “Standardization within an individual facility and across a system can help the organization select best-in-class products, drive optimal clinical practices, reduce waste, and increase its buying power. Healthcare managers are finding that properly implemented, standardization measures can help them improve the quality and consistency of care, reduce patient risk, increase efficiency, and reduce costs.”⁴ Product standardization provides notable and significant benefits to both the external and internal logistics of the supply chain, and it benefits clinical practice.

There are many problems recognized in today’s supply chain. Fortunately, many of these problems can be alleviated, and patient safety can be increased, through the benefits that are experienced with standardization to the ENFit enteral feeding connectors. Some of ENFit’s key benefits are improved patient safety (especially in an environment with high clinical staff turnover), reduced supply disruptions/backorders, patient portability, new product innovations, reduced training, more product options, and the elimination of the need for adaptors. Take advantage of these solutions and benefits by visiting <https://stayconnected.org/enteral-enfit/> or contacting your enteral device supplier to learn more.

¹Feldman A. Supply-chain snags create shortages of lifesaving medical supplies in U.S. Forbes. <https://www.forbes.com/sites/amyfeldman/2022/05/03/supply-chain-snags-create-shortages-of-life-saving-medical-supplies-in-us/?sh=7f867c9641b0>. Published May 4, 2022. Accessed July 13, 2022.

²Advisory Board. Why travel nursing will likely outlast the pandemic. <https://www.advisory.com/daily-briefing/2022/03/18/travel-nursing>. Published March 18, 2022. Accessed August 10, 2022

³United States Government. National Strategy for a Resilient Public Health Supply Chain. <https://www.phe.gov/Preparedness/legal/Documents/National-Strategy-for-Resilient-Public-Health-Supply-Chain.pdf>. Published July 2021. Accessed July 13, 2022.

⁴3M Health Care. Supply Standardization: The Clinical and Economic Benefits of Reducing Waste in the Supply Chain. <https://multimedia.3m.com/mws/media/10906680/benefits-of-supply-chain-waste-reduction.pdf>. Published 2014. Accessed July 13, 2022.

The Global Enteral Device Supplier Association (GEDSA) is a 501(c)6 nonprofit trade association formed to help introduce international standards for healthcare tubing connectors. Comprised of manufacturers, distributors, and suppliers of enteral nutrition devices worldwide, GEDSA facilitates information flow to increase patient safety by reducing the risk of medical tubing misconnections.

Benefits of ISO Standardization to the ENFit® Enteral Feeding Connector



Improved patient safety

While there are many supply chain, clinical, and user benefits associated with the standardized ENFit connector, improved patient safety is the key benefit and top priority.



Less supply disruptions / backorders

- Split production lines (legacy product & ENFit product) can now both run ENFit, doubling output.
- Warehousing capacities and safety stock levels can increase, since stock isn't split between legacy & ENFit.
- Raw materials are no longer being competed over by split product lines.
- Alternative suppliers are available because the standardized ENFit products all work together.
- Unlike ENFit, proprietary systems, often have no alternative supplier when a supply disruption occurs.



Patient Portability

With patients and facilities standardized to one system, there are no product incompatibilities when a patient is transferred, no matter whether that transfer is across the street or halfway across the globe.



Product Innovations

- With standardized connectors, new technologies emerge because the tech doesn't have to accommodate numerous connection types.
- Several new innovations, that improve patient outcomes and experiences, have already emerged around ENFit.
- Manufacturers are also able to allocate more resources into R&D, instead of having those resources managing split product lines.



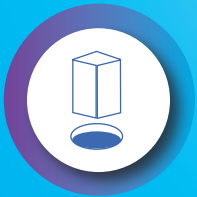
Reduced Training

Clinicians are not having to constantly learn new product systems and connections because of ENFit's robust supply chain and multitude of backup suppliers.



More product options

With nearly all manufacturers standardizing to one connector, an enormous array of compatible products becomes available. Clinicians then have a greater ability to select the different features and benefits of products they want from different manufacturers, with the confidence that they will all be compatible with one another.



No more need for adaptors

Dissimilar systems require additional components to adapt/couple one system to the other. This creates extra SKUs and adaptors can have many negative benefits, as pointed out by ISMP¹, and they are also discouraged by the FDA².

¹ ISMP. Transition adapters for ENFit syringes can defeat the purpose of ENFit itself. Institute For Safe Medication Practices. <https://www.ismp.org/resources/transition-adapters-enfit-syringes-can-defeat-purpose-enfit-itself>. Published September 21, 2017. Accessed July 15, 2022.

² Maisel WH. September 7, 2018 to: Manufacturers of Enteral Feeding tubes. FDA. <https://www.fda.gov/media/115846/download>. Published September 7, 2018. Accessed July 15, 2022.