

Diarrhea and Tube Fed Patients: Clinical and Financial Impact



Banatrol® TF supports nutritional needs during diarrhea management through one simple connection.

NutriConnect™

DIARRHEA CAN INCREASE:

- **FACILITY RESOURCE STRAIN**
WHICH CAN RESULT IN:
 - INCREASED LENGTH OF STAY
 - INCREASED LABOR & NURSING TIME
 - UNNECESSARY PATIENT COMPLICATIONS
- **FECAL DEVICE USE**
- **C-DIFF RATES**

Banatrol¹
LOW RISK, **TF**
HIGH REWARD

Departments Impacted:



Nursing



Infection Control



Wound Care



Pharmacy

Fiber has Evolved

Banatrol® TF provides:

- Liquid, 4-fiber blend formula
- More soluble fiber per packet
- ENFit® compatible pouch
- No mixing
- Reduced cross contamination risk
- Can also be administered orally (open & serve)



VS



NutriConnect™ Method:

Remove cap to open,
(5g of soluble fiber
per 60mL pouch)
connect to ENFit tube,
roll pouch to dispense.

Traditional Method:

Mix a packet of powder
(3g of soluble fiber)
with 120mL of water,
mix until dissolved and
administer via syringe.

One system that simplifies patient nutrition to improve operational efficiency and drive clinical excellence.

Saves time 26% reduction in administration time compared to traditional powdered products.*

*Based on independent evaluation comparing administration of Banatrol TF vs traditional powdered soluble fiber.



Microbiome Management

- Banatrol TF is 4 sources of fermentable soluble fiber.
- Fermentable fibers produce short chain fatty acids including butyrate.¹
- Butyrate fuels Bifidobacterium for bacterial balance.¹
- Bifidobacterium helps improve inflammation, immune response, and strengthens the gut barrier.¹
- These improvements will have a positive effect on tube feeding tolerance and a reduction in diarrhea.²

TRUE COST OF DIARRRHEA

Snowball Effects Across Your Unit

INCREASED LENGTH OF STAY (LOS)

Patients with *Clostridioides difficile* (C. diff) stay in the hospital 55% longer, are 77% more likely to be readmitted, and increase hospital costs by over 40%. *Clostridioides difficile* infection (CDI) and diarrhea put a strain on the healthcare system unnecessarily.³

WORSE PATIENT OUTCOMES

A systematic review and meta analysis involving over 13,000 patients showed a correlation between patients with diarrhea and mortality suggesting that diarrhea in the ICU may be correlated with high mortality risk.⁴

LABOR & RESOURCE DRAIN

Management Time

The mean time measurement for managing one liquid stool in 50 diarrhea episodes was 17 minutes and 33 seconds.⁵

Nursing time

The average nursing time per day for managing fecal incontinence was 240–760 minutes per day.⁶

Nursing time spent with Fecal Management Systems (FMS) averages 120–240 minutes per day.⁶

COST BURDEN

Total annual CDI-attributable cost in the US is estimated \$6.3 billion (Range: \$1.9-\$7.0) .⁷

LABOR COST CALCULATOR

National Average

1. Average hourly nurse wage _____ /hour	\$45
2. Time spent per clean up _____ 17 minutes	17
3. Diarrhea episodes _____ /day	3+
4. Average number of ICU beds _____ beds/unit	12

Your facility labor costs per day

$$\frac{\text{1. wage}}{\text{60}} \times \text{2. clean-up} \times \text{3. episodes} \times \text{4. beds} = \text{cost per day}^*$$

National average labor costs per day

$$\frac{\$45}{\text{1. wage}} \div 60 \times \frac{17}{\text{2. clean-up}} \times \frac{3}{\text{3. episodes}} \times \frac{12}{\text{4. beds}} = \$459^* \text{ cost per day}^*$$

Your facility labor costs per year

$$\frac{\$}{\text{per day}} \times 365 \text{ days} = \$ \text{ per year}^*$$

National average labor costs per year

$$\frac{\$459}{\text{per day}} \times 365 \text{ days} = \$167,535^* \text{ per year}^*$$

*These numbers do not reflect the additional costs of resources such as linens, and cleaning supplies or the emotional toll that can occur with patients.

Bureau of Labor Statistics. Occupational Outlook Handbook. May 2024. Bureau of Labor Statistics; 2024. Heidegger CP, et al. Int J Nurs Stud. 2016;59:163-168. American Hospital Association. AHA Hospital Statistics. 2024 edition. American Hospital Association; 2024.

Diarrhea Complications, Costs & the Impact on Patient Care

Fecal management devices are a reactive intervention that can result in serious complications. Banatrol® TF provides a proactive solution to mitigate the challenges of diarrhea before they begin.

62% 
of rectal tubes are
placed due to diarrhea⁸

Cost of FMS Materials
per day can range from



**\$93.74 –
\$153.50⁶**



Nurses spend
120–240
minutes per day
with FMS⁶

- CDI are a **leading cause of facility related infections** in the United States and globally.⁹
- **Patients with C. diff** stay in hospital **55%** longer and are **77%** more likely to be readmitted.¹⁰
- CDI imposes a significant financial burden on facilities due to:
 - **increased length of stay,**
 - **excessive resource utilization,** and
 - **adverse patient outcomes.**¹¹
- **The incremental cost** to healthcare systems for a primary CDI case is estimated at **\$24,000** more than patients without CDI.¹²

A 2020 study at a community hospital found that 29 patients with recurrent CDI accounted for 108 admissions and 1,006 inpatient days over four years, resulting in a net financial loss of over \$2.2 million to the hospital (about \$77,000 per patient).¹³

**net financial loss
> \$2.2 million**
 that amounts to 
**\$77,000
per patient¹³**

ONE CONNECTION THAT MAKES NUTRITION INTERVENTION SIMPLE, FAST, AND EFFECTIVE.



Clinical Benefits in the ICU Setting:

- Helps manage and reduce diarrhea associated with enteral feeding, antibiotics, dysbiosis, and illness-related GI dysregulation.
- Supports continuation of tube feeding, reducing calorie-protein deficits.
- May reduce reliance on fecal management devices and decrease nursing burden.
- Promotes improved patient comfort and quality of life.

Dosing & Administration

Provide 2–4 packets per day in divided doses over 24 hours to help manage diarrhea while supporting overall microbiome health.

Product Number	Quantity	Volume	Category	Billing Code	Gluten Free	Dye Free
18801	60	2 fl oz (60 mL)	Soluble Fiber	94688-0188-01	✓	✓

Citations:

1. Riviere, A, et al. Front. Microbiol. 2016; 7:979. 2. McClave SA, et al. J Parenter Enteral Nutr. 2016;40:159-211. 3. Magee G. Am J Infect Control. 2015; 43(11): 1148–1153. 4. Taito S, et al. J Crit Care. 2019;53:142-148. 5. Heidegger CP, et al. Int J Nurs Stud. 2016;59:163-168. 6. Langill M, et al. OWM. 2012 Dec;58(12):25-33. 7. Zhang S, et al. BMC Infect Dis. 2016;16(1):447. 8. Butts E, et al. JIM. 2019 Jan-Dec; 7:2324709619869368. 9. Akorful RA, et al. Infect Dis Rep. 2025; 17(2):31. 10. Vora P. Am J Manag Care. 2025. 11. Khan A, et al. JCHIMP. 2014; 4(3). 12. Malone DC et al. Antimicrob Steward Healthc Epidemiol. 2023; 3:e17. 13. Reilly J, et al. Infect. Control Hosp. Epidemiol. 2025;46(11): 1–3.

About Medtrition

Medtrition®, Inc. was founded in 1986 as the first marketer in the healthcare industry of both instant food thickeners and pre-formed three-dimensional pureed foods. These products revolutionized the dysphagia market by converting ‘mystery bowls’ of pureed foods into dimensionally shaped foods with puree texture that were both safer to swallow and eye-appealing, promoting better food consumption.

Since then, we have continued our leadership with many first-of-their-kind products: Expedite to support wound healing; Banatrol® Plus, the number #1 natural anti-diarrheal for management of diarrhea; ProSource® liquid proteins for malnutrition; Gelatein® high protein and calorie supplements, and ProSource® TF20 and Banatrol® TF, the first ENFit®-equipped liquid protein and fiber for tube fed patients.

Today, our products are used by dietitians, clinicians, nursing staff, infection control specialists, wound care nurses, food service departments, in hospitals, nursing homes, oncology centers, and dialysis centers across the United States and in over 50 countries.

Samples



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Product of Medtrition

Banatrol
TF

 *More than nutrition,*
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