

**EVIDENCE-BASED GUIDELINES FOR  
DIARRHEA MANAGEMENT IN BMT PATIENTS**  
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**Purpose**

The purpose of this project is to investigate if educating nurses about evidence-based guidelines on diarrhea management in Blood and Marrow Transplant (BMT) patients will increase nurses' knowledge on the subject and improve diarrhea assessment, reporting, and treatment.

**Background and Evidence Review**

Diarrhea is a major cause of morbidity in BMT patients. Diarrhea in this setting is often persistent, profuse, and difficult to manage.<sup>2</sup> Poorly controlled diarrhea may result in fluid and electrolyte imbalance, poor nutrition, skin breakdown, falls, and emotional distress.<sup>1,2</sup> Diarrhea in cancer patients is often under-recognized and under-treated.<sup>2,3</sup> Evidence based interventions can reduce the amount of diarrhea and improve patient outcomes and satisfaction.<sup>1,2,3</sup>

**Methods**

Diarrhea management guidelines were created from the available evidence. Small test of change method was used to validate and revise the guidelines with interdisciplinary stakeholders. Subsequently, RNs and NAs were educated about the guidelines using the following strategies: (1) informational poster displayed in the staff room, (2) five PowerPoint presentations, (3) materials sent to all staff via email, (5) handouts and 1:1 meetings with NAs. 92% of staff received the education. To measure the staff's knowledge, a questionnaire was used. 64% of RNs participated. To evaluate the patient diarrhea management, a chart audit was completed. 100% of patients were reviewed.

**Results**

Following staff education, 36% more RNs report diarrhea details to physicians and 3 times as many RNs know ONS guidelines on diarrhea management. 73% of RNs believe that we are doing better at managing diarrhea. Chart audit showed a 25% decrease in the number of stools per patient day and 67% increase in the number of Loperamide capsules administered per stool.

**Conclusion**

This innovation should be sustained on E1 and even spread to other oncology units. After the intervention, staff knowledge as well as diarrhea reporting and treatment improved significantly. One major challenge was to have all disciplines agree to the proposed guidelines. To ensure the results are sustained, the staff will continue to get education, and periodic charts audits will be done.

**Key words**

BMT, Blood and Marrow Transplant, Oncology, Cancer, Diarrhea, GvHD, Loperamide, Octreotide.

**Selected References**

1. Benson, A., et al. (2004). "Recommended guidelines for the treatment of cancer treatment-induced diarrhea." *J Clin Oncol* 22: 2918-26.
2. Richardson, D., Dobish, R. (2007). "Chemotherapy induced diarrhea." *J Oncol Pharm Practice* 13: 181-198.
3. Rutledge, D. N., Engelking, C. (1998). "Cancer-related diarrhea: selected findings of a national survey of oncology nurse experiences." *Oncol Nurs Forum* 25(5): 861-73.

## **Attachment 1: E1 DIARRHEA MANAGEMENT GUIDELINES**

### **Assessment**

- All stools are charted in I&O flow sheet, including volume, consistency and color.
- NAs report loose stools to nurses within 15 minutes of emptying hats (to help with timely Loperamide administration).
- Stools and skin problems are discussed in Sign-out report.
- Nurses report duration, number of stools, stool volume, and number of anti-diarrhea medications to physicians.

### **Non-pharmacological Treatment**

- Diarrhea is identified as a problem in Nursing care plan.
- Patients are put on no-dairy diet.
- Stool cultures are obtained.
- Patients are provided with skin care products (baby wipes, squirt bottle, cleansing foam, barrier cream) and educated on how to use the products.

### **Pharmacological Treatment**

- Administer Loperamide to the full extent of the PRN order. Patients with moderate to severe diarrhea will be maxed out (8 capsules a day). Loperamide is effective in 84% of patients with grade 1-2, and 43-52% of patients with grade 3-4 diarrhea.
- If diarrhea is not resolved after 24-48 hours of Loperamide treatment, discuss with physicians stopping and initiating second line therapy, such as DTO or Lomotil. Recommended dose of DTO is 0.5ml-0.75ml (10-15 drops) every 3-4 hours. The use of DTO or Lomotil is not supported by the literature but is still a widely used and acceptable practice.
- If diarrhea is still not resolved after 24-48 hours, discuss with physicians treatment escalation to Octreotide. Initial recommended dose of Octreotide is 200 mcg IV TID, which can be increased to 500 mcg IV TID. The use of Octreotide is strongly supported by the literature. It has minimal toxicity and is effective in 61%-100% patients with CTID and 75%-85% patients with GvHD.