



Implementation of an Evidence-Based Screening and Treatment Algorithm for Chronic Constipation in a Skilled Nursing Facility

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Background

Patients with chronic constipation at a 129-bed capacity nursing home that included a post-acute care subspecialty hospital often required frequent diagnostic testing and rescue laxative Medications. This led to increased costs, patient discomfort, and dissatisfaction.

An improved method for managing chronic constipation was needed.

PIGOT question "Will the Implementation of an Evidence-Based Screening and Treatment Algorithm for Chronic Constipation in a Skilled Nursing Facility decrease the occurrence of chronic constipation"?

The project will provide the skilled nursing facility with a practical and straightforward management algorithm for patients with chronic constipation as described by Rome IV criteria.

Findings	Level of Evidence	Appraisal of Quality	Authors
The study focused on various meta-analyses and trials on chronic constipation and various management of constipation such as fibers, and laxatives including diagnostic testing and surgical intervention.	Level I	Clinically significant, Applicable	Bharucha, A. E. & Liny, B. E. (2020).
The study is to identify and review all relevant data to determine whether Lactulose or Polyethylene Glycol is more effective at treating chronic constipation and fecal impaction.	Level I	Clinically Significant, Applicable	Lee- Robichaud, H., Thomas, K., Phogen, & Nelson, R. L. (2011).
This article is to study the efficacy and safety treatments for constipation in older people.	Level I	Clinically Significant, Applicable	Gandhi, D., Sprau, S. E., Bandookwall, M., Tsui, V., & Alkhat, T. (2013).
The study is to review the latest evidence on the effect and safety of laxatives in the elderly.	Level I	Clinically Significant, Applicable	Saengj, K. Y., Yang, S. C., Tan, H. L., Jung, K., Han, S. R., Jung, Wook, K., Seon-yeung, P., Yang, J., Jung, E. S., & Constipation Research Group Of The Korean Society Of Neurogastroenterology And Motility (2021).
Diagnosis of constipation is based on predefined symptoms and Rome criteria. Clinicians must specifically concentrate on medical interview due to different pathology and complaints.	Level I	Clinically Significant, Applicable	Włodarczyk, J., Wronowska, A., Fajana, J., Czek, A., Czek, L., & Włodarczyk, M. (2021).
The study used Delphi consensus process was used to produce statements and practical algorithms for the management of chronic constipation.	Level I	Clinically Significant, Applicable	Serra, J., Pohl, D., Approu, F., Charrier, G., Dourson, F., Gourcuff, G., Hupin, A. P., Laper, P., Mandin, J. M., Pfeiler, J., Rieger, G., Soric, S. M., Serres, M., Whorwell, P. (2020).
This is a review to provide regulatory and clinical updates on the management of chronic constipation in post-acute care facilities.	Level II	Clinically Significant, Applicable	Fraser, M., Vance, J., & Miquelad, C. (2019).
Constipation is a self-reported digestive symptoms and has a significant impact on health expenses and quality of life. Authors recommend additional RCTs addressing the management of constipation in the elderly to tailor treatment in the complex population and to improve the quality of life of patients in LTC.	Level II	Clinically Significant, Applicable	De Giorgio, R., Saeghelli, V., Esaki, L., Baroni, F., & Chiarugi, C. (2015).
This study supports the concern that there is often a gap between documentation of symptoms and constipation treatment decisions. Treatment decisions should be based on thorough examination and individualized patient needs.	Level III	Clinically Significant, Applicable	Phillips, C., Pabakoff, D., Mian, S., & Pines, R. (2001).
This is an article review of different treatment options for chronic constipation.	Level III	Clinically Significant, Applicable	Roman, M. V., & Booras, E. P. (2015).
The study aimed to examine the epidemiology of Functional Constipation in large-scale survey of individuals undergoing a medical check-up in Japan.	Level III	Clinically Significant, Applicable	Otsu, K., Watanabe, T., Takahashi, K., Nakatani, Y., Fukunaga, S., Inoue, S., Tanaka, F., Kamada, R., Taira, K., Nagami, T., Emura, T., Takamitsu, S., Kawada, N., & Fujiwara, Y. (2020).
In this study, the authors focused on various meta-analyses and trials on chronic constipation. The authors focused on discussion of various management of constipation such as fibers, laxatives including diagnostic testing and surgical intervention. The authors endorsed an algorithm for managing chronic constipation.	Level III	Clinically Significant, Applicable	Bharucha, A. E. & Liny, B. E. (2020).
This is a guideline that serves as an update of the previous edition of The American Society of Colon and Rectal Surgeons practice parameters for treatment of constipation published in 2007.	Level IV	Clinically Significant, Applicable	Papantoni, I. M., Varma, M., Tennyson, C., Nelson-Rosen, G., Rafferty, J., Fargnoli, D., & Stahl, S. R. (2016).
This medical position statement is published in conjunction with a technical review on same subject for an in-depth consideration of topics discussed in the clinical practice guidelines.	Level IV	Clinically Significant, Applicable	American Gastroenterological Association. (2013).
The aim of this article is to provide clinicians an understanding of the different pathophysiological mechanisms associated with constipation, understand the different testing modalities including their appropriateness and limitations, and tailor the management of individual patients.	Level V	Clinically Significant, Applicable	Shah, H., & Cash, B. D. (2015).
In this review, the authors endorsed the use of an algorithm for chronic constipation. The authors believe that lab tests results are debatable in chronic constipation as part of routine testing with chronic constipation.	Level VII	Clinically Significant, Applicable	Bharucha, A. E., Pemberton, J. H., & Locke, G. R. (2013).

Methodology

· **Design:** Plan-Do-Study-Act. The project manager performed a comprehensive literature review to identify the most appropriate guideline for chronic constipation applicable to the skilled nursing home population.



· **TRISMA** flowchart used to track the number of studies or records selected for inclusion and deemed eligible for this QI project (n = 56).

· **SWOT** Analysis



Rome IV Criteria for Functional Constipation

At least two of the following:

Two or more of the following must occur at least 12 months prior to diagnosis:

	Yes	No
Straining during most defecations		
Lumpy or hard stools		
Feeling of incomplete evacuation		
Handing of stool		
Less than one defecation per week		
At least one of the following must occur at least 12 months prior to diagnosis:		
Defecation without straining		
Soft stools		
Feeling of complete evacuation		
Handing of stool		
More than one defecation per week		

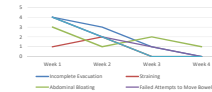
Rome IV Criteria for Screening

Modified Algorithm for Chronic Constipation



Outcomes Measure

Chart for 4 Weeks QI Project for Constipation in a Skilled Nursing Facility



Conclusion

· Identification and implementation of the modified algorithm for constipation decreased episodes of symptoms of constipation.

Unanticipated Results

Nursing Staff:

Improved daily assessment and documentation of patients' bowel movements

Increased sense of professional satisfaction and ownership of practice