

CONSERVATIVE MANAGEMENT OF FECAL INCONTINENCE

An evidence-based approach to controlling this life-altering condition.

BY DONNA ZIMMARO BLISS, PhD, RN, FAAN, AND
CHRISTINE NORTON, PhD, MA, DMS, RN

Fecal incontinence is more common than many clinicians and laypeople realize. Characterized as the “unvoiced symptom” in 1982,¹ it remains a taboo subject 28 years later. Interviews with community-dwelling women who have fecal incontinence reveal that they are cautious about disclosing the problem, often not informing close friends or family members.^{2,3} In fact, recent reports show that many patients fail to inform even their health care providers about the condition.^{3,4} Perpetuating the stigmatization associated with fecal incontinence, health care providers seldom inquire about it.

Historically, urinary incontinence has received more clinical and research attention than fecal incontinence. It's only within the past 10 to 15 years that fecal incontinence has been widely studied and that its prevalence, characteristics, and risk factors have been identified. Because research into the effectiveness of management strategies has been limited, those who are incontinent often rely on trial and error in developing self-care practices.^{5,6} In fact, a survey of elderly patients at four primary care clinics in the midwestern United States found that a third of those with fecal incontinence had no self-management strategies whatsoever.⁵

It can be useful, therefore, to have information on up-to-date, evidence-based approaches to the conservative management of fecal incontinence. Many nurses may benefit from a review of the dynamics of normal defecation, as well as a discussion of the prevalence of fecal incontinence in various settings, its

OVERVIEW: Although fecal incontinence can be both emotionally and socially debilitating, the embarrassment associated with it is so great that it often prevents patients from seeking much needed help from their health care providers. Nursing care begins with case finding and continues through conservative management, which has greatly improved over the past 15 years. This article summarizes the strategies that have proven most effective in uncovering and combating this prevalent yet seldom acknowledged condition.

Keywords: defecation, diarrhea, fecal incontinence, feces, incontinence, incontinence of stool

enormous impact on quality of life, and the effective assessment of symptoms. Certain aspects of symptom management are crucial, including diet counseling, bowel training, and follow-up and referral.

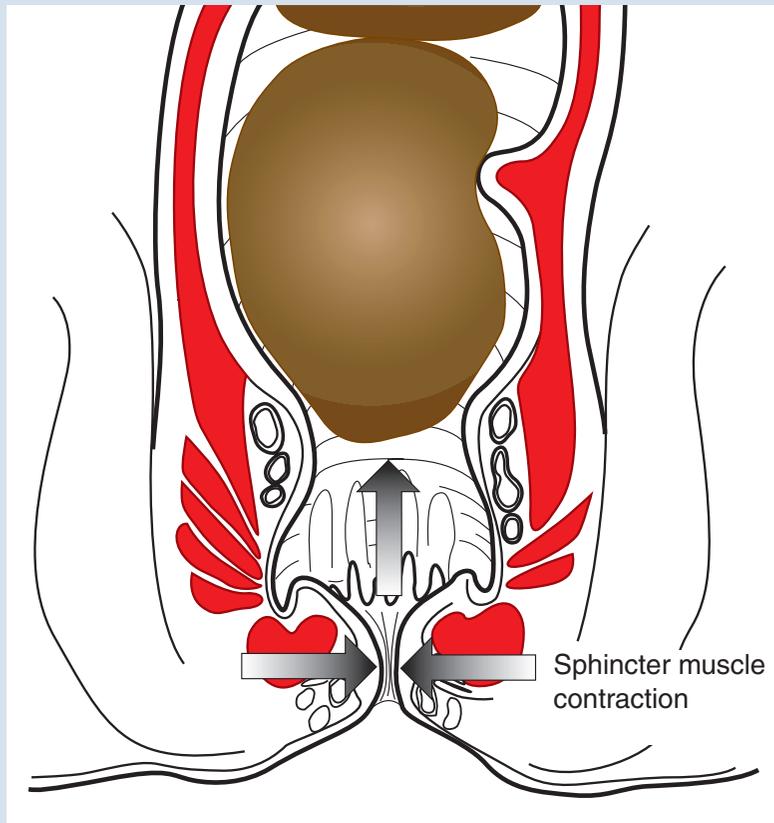
NORMAL DEFECTION AND FECAL INCONTINENCE

Normal defecation is a complex process that involves cognitive, neurologic, and muscular coordination. Each of the following factors plays a role in maintaining fecal continence:

- anatomical features, such as the acute anorectal angle formed by the puborectalis and levator ani muscles

FIGURE 1. SPHINCTER MUSCLE CONTRACTION

The reflexive contraction of the external anal sphincter, augmented by a voluntary squeeze when feces enter the rectum, helps maintain fecal continence. From Norton C, Chelvanayagam S, editors. *Bowel continence nursing*. Beaconsfield, Bucks, UK: Beaconsfield Publishers Ltd; 2004. Reprinted with permission of the publisher.



- reflexes, such as that which causes the external anal sphincter to contract when the internal anal sphincter relaxes
- pressure in the anal canal at rest, generated primarily by the internal anal sphincter and augmented, in order to resist the urge to defecate, through the voluntary action of the external anal sphincter
- sensory response of the rectum to distension from filling with feces
- absorption of fluid from the intestine that aids in maintaining a nonliquid stool consistency
- complete evacuation of the rectum during defecation
- physical and cognitive abilities to access bathroom facilities as needed

When feces enter the rectum, the internal anal sphincter relaxes reflexively, enabling the anal canal to “sample” and categorize the contents as solid or liquid. This action is simultaneously accompanied by the reflexive contraction of the external sphincter, which may be augmented by a voluntary squeeze (see Figure 1). The rectum is capable of storing feces until their volume stimulates stretch receptors in the mucosa, which produce an urge to defecate. The person then chooses a socially appropriate place to do so; assumes a sitting or squatting position, which straightens the anorectal junction from its normally acute angle; and voluntarily relaxes the external anal sphincter (see Figure 2). Abdominal pressure is raised

as the person consciously bears down by tensing abdominal muscles. Pelvic floor muscles then relax, enabling feces to enter the lower rectum, where their presence stimulates an involuntary, propulsive rectosigmoid contraction until the rectum is emptied. Passage of the last bit of feces releases the stretch on the external anal sphincter, reflexively closing it.

Fecal incontinence has been defined as the “involuntary loss of liquid or solid stool that is a social or hygienic problem.”⁷ It can be caused by impaired sensory or motor function, poor coordination of defecation processes, cognitive or physical disability, or loose or liquid stool consistency, and may result from

- acute trauma to the organs, tissues, muscles, or nerves involved in defecation.
- chronic neurologic impairment.
- inflammation of the intestinal mucosa.
- functional disability.

In some cases, fecal incontinence is multifactorial or idiopathic (see Table 1^{8,9}).

Leaked stool most commonly has a loose or liquid consistency. Leakage is often episodic, with many people experiencing leaks at a frequency of several times per month or more. The amount of leakage may be small, soiling only the area between the buttocks, an absorbent pad, or underwear.^{10,11} Although soiling of outer clothing may not be a common occurrence,¹⁰ findings from a recent qualitative study,³ as well as reports of patients in our own clinical practices and

our research, indicate that the negative impact and embarrassment related to this type of bowel “accident” are lasting and cause ongoing anxiety about the possibility of a future occurrence.

PREVALENCE IN VARIOUS SETTINGS

More than 40% of nursing home residents have fecal incontinence,^{8, 12, 13} and a substantial number of residents have “double incontinence”—that is, both urinary and fecal incontinence. After reviewing the medical records of 59,558 residents of 555 nursing homes in 31 states, investigators reported that 7.7% of residents had urinary incontinence only, 12.4% had fecal incontinence only, and 39.7% had double incontinence.¹² Another nursing home study found that a large majority (78.6%) of the 1,918 residents had double incontinence.¹³

Among community-dwelling adults, it’s estimated that 10% to 15% have fecal incontinence.^{8, 14-16} Prevalence has been investigated in diverse community-dwelling populations (frail women, patients visiting the offices of generalist physicians or gastroenterologists, or elderly patients seeking care at health clinics)

through surveys conducted in several different ways or settings (by telephone, by mail, or in a health care clinic or physician’s office). Although the prevalence of fecal incontinence increases with age and disability, the condition is by no means confined to older or disabled people,¹⁷ nor is it limited to one sex. Most large community surveys and a systematic review have found a similar prevalence in women and men.^{8, 17, 18} As many as 50% of community-dwelling people who have fecal incontinence also have urinary incontinence.^{10, 19}

According to a study conducted by one of us (DZB), approximately one-third of hospitalized adult patients at one Veterans Affairs Medical Center had fecal incontinence.²⁰ In hospitalized patients, severe illness is one risk factor for fecal incontinence; others are having a loose or liquid stool, regardless of etiology, and advanced age.

IMPACT ON QUALITY OF LIFE

Qualitative research reveals that fecal incontinence can have a significant impact on numerous dimensions of quality of life. One validated quality-of-life instrument has been used to quantify how the condition alters four aspects of quality of life: lifestyle, coping behavior, depression or self-perception, and embarrassment.²¹ Both men and women who had fecal incontinence and completed the 29-item scale scored significantly lower (indicating a poorer quality of life) in all four categories, compared with a control group of patients who had other gastrointestinal problems. Most research into the effects of fecal incontinence on quality of life, however, has focused on women with the condition.

Women with fecal incontinence experience anxiety about possible embarrassment from visible soiling or fecal odor and have a wide variety of related concerns, including types and colors of clothing to wear, proximity to a toilet while in public, and the need to wait in line for a toilet in a public restroom.^{3, 22, 23} Women with fecal incontinence feel the burden of harboring a secret and fear discovery. Fecal incontinence creates feelings of depression, tearfulness, and stress. It’s associated with a poor self-image, often manifested as feeling “dirty” from leakage or like a “baby” for needing to wear diapers.^{3, 22} It can also interfere with the frequency of and desire for sex as well as with intimacy.²² Women expressed lasting anger at physicians over complications of procedures or surgery that resulted in fecal incontinence.²³

When going out in public, women with fecal incontinence describe engaging in an array of preparatory or preventive routines, such as packing self-made kits of cleansing and absorbent products in their purses, determining the location of public restrooms upon arrival at an unfamiliar place, and arranging appointments around their bowel patterns.^{3, 23} The difficulties they’ve reported included changing discretely, dealing effectively with soiled garments in public restrooms,

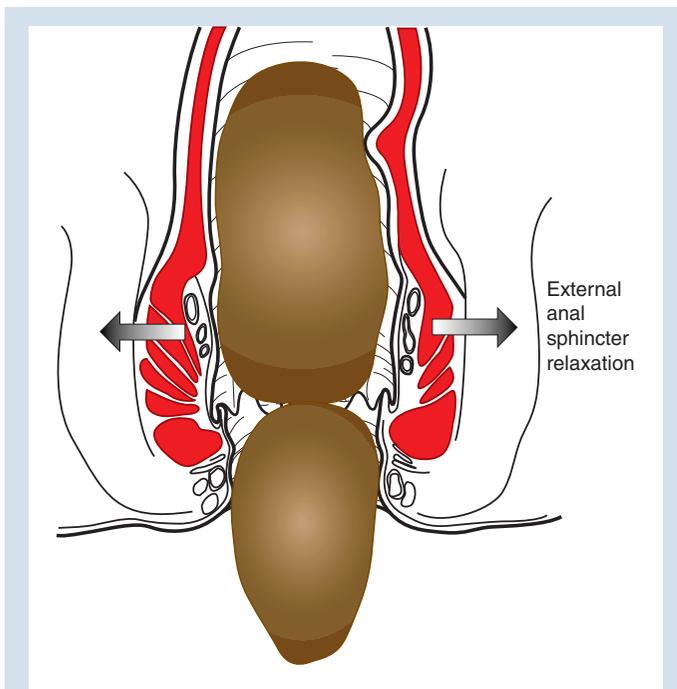


FIGURE 2. EXTERNAL ANAL SPHINCTER RELAXATION

Normally, as a safeguard against unwanted fecal leakage, the external anal sphincter must be relaxed voluntarily when a person chooses to defecate. From Norton C, Chelvanayagam S, editors. *Bowel continence nursing*. Beaconsfield, Bucks, UK: Beaconsfield Publishers Ltd; 2004. Reprinted with permission of the publisher.

and supervising small children in public places when needing to rush to a toilet.

Maintaining patient privacy and dignity in acute and chronic health care settings may be challenging for nurses caring for people with fecal incontinence. It's essential that nurses be sensitive to the individual patient's emotional and psychological response. Interactions with nurses should provide patients with a therapeutic climate that allows for a discussion of health and quality-of-life concerns that the patient may not feel safe discussing with anyone else. Patients adapt differently to fecal incontinence, and successful adaptation can substantially improve the quality of their lives.

ASSESSING FECAL INCONTINENCE

Given the numerous possible causes of fecal incontinence and the complexity of contributing factors, a detailed, often multidisciplinary, assessment is essential for all patients presenting with this condition. The aims are to determine symptoms, identify reversible causes or any "alarm signals" that indicate a need for fast-track referral, and construct the most logical care plan for the specific individual. Nurses need to be cognizant of the embarrassing nature of the condition and the reticence of many patients to discuss it. Patients may delay many years before seeking help.¹⁷ For this reason, it's necessary to pursue active case finding through empathetic inquiry when patients belong to high-risk groups, such as the frail elderly, patients with neurologic disorders, people with diarrhea from any cause, those who've had a recent change in bowel habits (such as looser or more frequent stools), and postpartum women. Finding a vocabulary that's acceptable to patients trying to communicate about an embarrassing condition and that's understood by both nurses and patients can be challenging.^{2,24} Because urinary and fecal incontinence often coexist, it's important to ask patients about urinary symptoms as well.

Symptom pattern and history provide important clues to causation. Urgency accompanied by fecal incontinence ("urge fecal incontinence") often indicates a loose stool or weakness of the external (voluntary) anal sphincter. Patients with this problem typically experience a strong urge to defecate and the inability to defer for more than a few minutes. By contrast, passive soiling without sensation often results from dysfunction of the smooth muscle internal anal sphincter, rectal impaction with "overflow" leakage, or neurologic impairment with blunted sensation. If the patient has difficulty remembering the pattern or severity of the incontinence, a daily chart or diary can help clarify matters.²⁵

Rectal bleeding can be a sign of colorectal cancer and always warrants further investigation, especially in a patient over age 50 with a history of altered bowel habits or unexplained weight loss. Although colorectal

cancer is not specifically related to fecal incontinence, the two may coexist. Colorectal cancer is the second most common cause of cancer-related death.²⁶ Caught early, it can often be cured. Diagnosed in its late stages, it's associated with a high mortality rate. It's crucial, therefore, to refer patients with rectal bleeding and bowel changes for a diagnostic evaluation by a gastroenterologist or colorectal surgeon. Other conditions that warrant immediate medical referral are profuse diarrhea, rectal prolapse, third-degree (constantly prolapsing, for example) hemorrhoids, and acute anal sphincter injury (as can occur immediately after childbirth).

Diet and fluid intake may influence stool consistency and bowel patterns. Mobility, dexterity, and cognitive function will determine the patient's ability to access the toilet when needed. If the patient is dependent, caregivers who are available and supportive are crucial to maintaining the patient's well-being. Comorbidities, such as neurologic dysfunction or diabetes, may contribute to fecal incontinence. A huge range of drugs may cause loose stools or constipation, so be sure to review patients' drug regimens. Weight loss drugs and fat substitutes, for example, have been found to increase fecal incontinence.²⁷

Cognitive function, emotional disorders, and physical limitations may be contributing factors. If the patient appears to have specific cognitive or emotional problems, a more formal mental health assessment may be indicated. Physical examination should include general health, mobility, dexterity, skin condition (including any evidence of perianal dermatitis), rectal loading (see the first paragraph under *Rectal Emptying*, below), and any perianal conditions such as hemorrhoids or rectal prolapse. Assess anal tone at rest and with squeeze by digital examination. At present there are no validated descriptors by which to grade anal tone.

MANAGEMENT STRATEGIES

Conservative management of fecal incontinence is recommended when

- severity is determined upon assessment to be mild to moderate (which is common).
- there's no cure for the predisposing cause (multiple sclerosis, for example).
- no cause can be identified.

Because causes are often complex, great care should be taken to avoid "diagnostic overshadowing," the tendency to attribute all symptoms to a primary diagnosis. A woman with multiple sclerosis, for example, may also have sustained damage to her anal sphincter during childbirth, a fact that could be overlooked if her symptoms are assumed to be entirely neurologic in origin. Symptom management may also be required after some surgical procedures (such as hemorrhoidectomy) that may reduce, without eliminating, fecal incontinence.

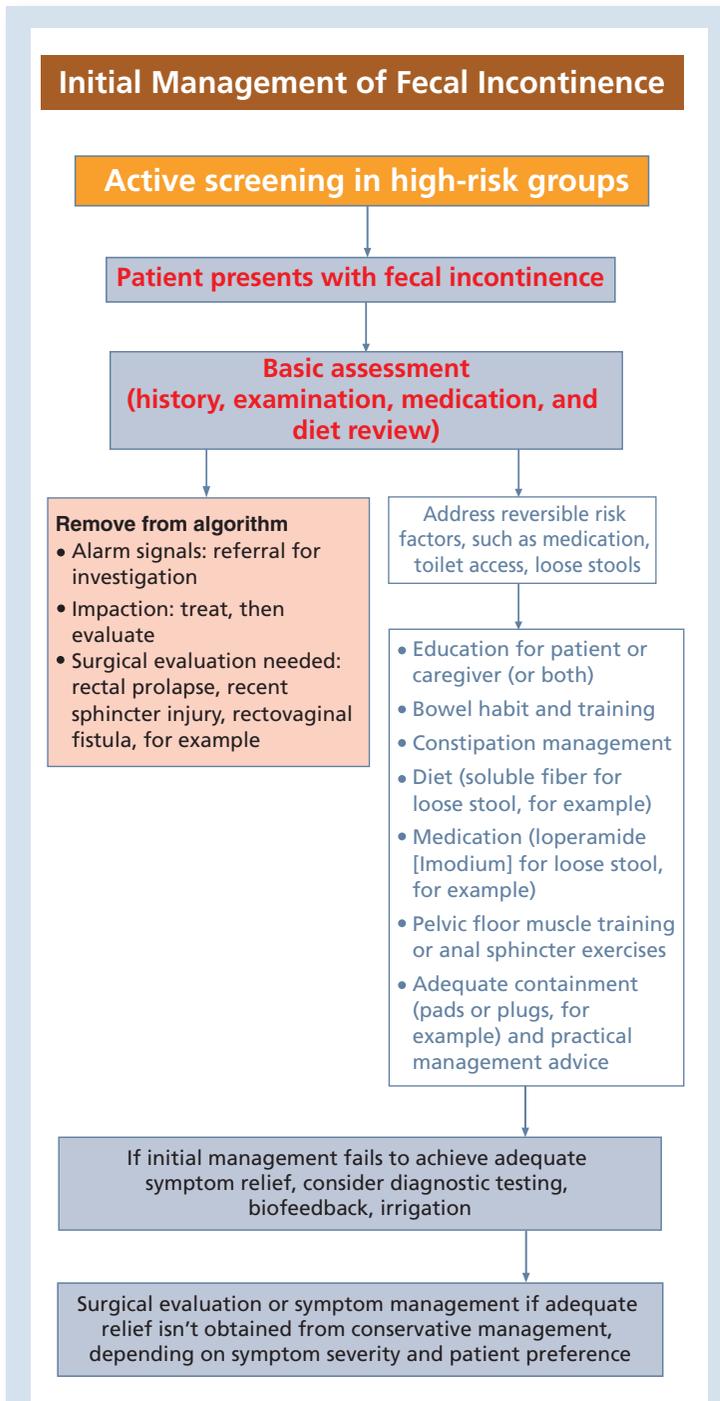


FIGURE 3. ALGORITHM FOR CONSERVATIVE MANAGEMENT OF FECAL INCONTINENCE^a

^aThis algorithm was developed by the International Consultation on Incontinence and was published as part of Norton C, et al. Conservative and pharmacological management of faecal incontinence in adults. In: Abrams P, et al., editors. *Incontinence*. 4th ed. London: Health Publications, Ltd.; 2009. Used with permission of the publisher.

The International Consultation on Incontinence (ICI), an international assembly of clinical practitioners and researchers working in the area of fecal incontinence, has developed and refined an evidence-based algorithm for management of the condition (see Figure 3).²⁸ In addition to revealing risk factors for fecal incontinence, a thorough assessment can guide symptom management, which includes educational, behavioral, pharmacologic, and containment strategies.²⁹ If such conservative strategies fail to restore continence, diagnostic testing (through anal ultrasound or magnetic resonance imaging) and other therapies, including surgery, may be indicated.^{7,30}

EDUCATION

Patient education is a fundamental component of therapy. Most patients understand little about how the bowel functions. Clear information on normal bowel function and what may have gone wrong both instructs and promotes self-management by increasing patients' understanding of therapeutic advice and addressing issues that may arise in the workplace, such as accessing a toilet in a timely and convenient manner, limited privacy, or insufficient time to allow for complete elimination of rectal contents.

A single nurse-conducted education session was found to improve bowel function after stroke.³¹ In one randomized controlled trial, four to five nurse-led education and advice sessions, conducted at a specialty colorectal clinic over a period of three to six months, reduced fecal incontinence in more than half of the patients who completed treatment.³² The sessions focused on topics such as bowel patterns, diet and fluid intake, titration of antidiarrheal medications, and bowel training techniques. The 29 patients who completed the education and advice sessions achieved a reduction in the frequency of fecal incontinence comparable to rate reductions among the patients who completed a similar education and advice program with the addition of either anal sphincter exercises or one of two types of biofeedback training methods.

Educating family caregivers of people with dementia can also be beneficial. Nursing advice can range from practical tips for everyday functioning, such as carrying a travel-sized cleansing kit, to referral for additional counseling when the patient's distress persists. Tailored advice depends on findings from a thorough nursing assessment and addresses the need for functional or mobility aides if limitations are present.

Optimal content and delivery methods for patient education haven't been determined. This provides an opportunity for nurses to be innovative in developing and evaluating Web-based education programs and providing advice through clinic visits, telephone calls, or online instant messaging. Another strategy to explore is the use of online or faxed "frequently asked questions" (FAQ) sheets about fecal incontinence and its management. Whether a shorter program with a

later “booster” session is as effective as a longer program is another question to be studied.

DIET COUNSELING

Because people with fecal incontinence often restrict their diet and social activities to avoid public disclosure and humiliation, there may be a need for diet counseling. Approximately three times as many women as men employ such practices as a means of managing fecal incontinence.⁵ Women restrict the type, as well as the amount, of food they eat, sometimes skipping meals before going out or while in public, even if others are eating.^{6, 22} Favorite foods that are considered troublesome are often consumed only at home as a reward for prolonged restriction.⁶

nurses may need to explain the practice to others, who are familiar only with the use of such supplements in managing constipation. Patients and caregivers should receive instruction in the appropriate dilution and preparation of a fiber supplement and the need to drink adequate fluid to prevent choking and intestinal blockage.

Distress from amending eating patterns or restricting social activities needs further examination. One study found few differences in the nutritional composition of diets consumed by people with fecal incontinence and those of age- and sex-matched controls.³⁶ If, however, patients who are at risk for malnutrition, such as the frail elderly, are altering their intake to manage fecal incontinence, they should be monitored

NOT ALL PATIENTS WITH FECAL INCONTINENCE TAKE ANTIDIARRHEAL MEDICATION REGULARLY, ALTHOUGH IT'S RECOMMENDED.

Diet modifications are usually determined by trial and error and may be borrowed from those used for other gastrointestinal conditions, such as irritable bowel syndrome and lactose intolerance. Foods thought to worsen incontinence include nuts, caffeinated drinks, chocolate, greasy or spicy foods, dairy products, and various raw fruits and vegetables. By contrast, foods such as yogurt and high-fiber bread are believed to be therapeutic. Patients acknowledge varying success in adjusting their diets to limit foods that exacerbate fecal incontinence and consuming more foods that attenuate the condition.⁶

A supplement of soluble dietary fiber has been shown to reduce the leakage of loose or liquid stools.³³⁻³⁵ Soluble fiber is believed to be beneficial in this regard because it reduces free stool water, firming stool consistency. Whether certain types of soluble fiber are more effective in managing fecal incontinence than others is currently under investigation.¹⁶ Other issues still to be determined include the ideal amount of dietary fiber to be used in a supplement and the comparative benefit of eating high-fiber foods, which usually contain a mixture of fiber types, versus taking a fiber supplement, which would normally provide a single type of fiber. Clinical experience suggests that patients' response to fiber varies widely, without any clear predictors of response.

For this reason, the nursing assessment should include a thorough diet review that determines current diet modification practices and their effectiveness. Some patients may already be using a dietary fiber supplement to manage their fecal incontinence, but

for nutritional deficiencies through a daily diet record and nutritional assessment.

RECTAL EMPTYING

Rectal loading with overflow incontinence is most common in residents of long-term care institutions who suffer from impaction or constipation. The accumulation of feces and gas in the rectum distends the intestinal lumen, thereby relaxing the internal anal sphincter and allowing for passive, intermittent leakage. Liquid stool from higher in the intestine can seep past the fecal bolus, increasing soiling. Preventing impaction or constipation by emptying the rectum regularly with enemas, suppositories, or laxatives (bulk forming, stimulant, or osmotic) has been found to reduce fecal incontinence in patients with this problem.^{31, 37-39} The use of such agents after stroke, however, hasn't been adequately studied.³¹

In addition to monitoring the effectiveness of rectal evacuation, nurses need to evaluate patients undergoing treatment for fluid and electrolyte imbalances, thirst, and abdominal discomfort, instituting appropriate treatment as warranted. Rectal emptying can be combined with a toileting program that promotes regular defecation after awakening and after meals (to capitalize on the gastrocolic response). At such times, a full rectum and sitting in the correct position are most likely to stimulate the conditioned response of emptying the bowel.⁴⁰

Other methods of emptying the rectum include abdominal massage (applying firm pressure in the direction of stool movement around the colon to promote

TABLE 1. ETIOLOGIES OF FECAL INCONTINENCE^{8, 9}

Perianorectal trauma
Anal sphincter injury
Obstetric procedures or childbirth
Anorectal surgery complications
Pelvic fracture
Abnormal anal sphincter or pelvic floor function
Rectal prolapse
Chronic straining
Neurologic disorders
Spinal cord or brain injuries
Myelomeningocele
Multiple sclerosis
Neuropathy (as may occur in diabetes, for example)
Loose stool consistency or bowel irritation or inflammation
Diarrhea
Gastrointestinal infections
Inflammatory bowel disease or irritable bowel syndrome
Short bowel syndrome resulting from bowel resection
Radiation enteritis
Laxative overuse
Adverse effects of medications
Antibiotics
Weight reduction medications
Oral diabetic agents (for example, metformin)
Obstruction and overflow
Impaction
Neoplasms
Medications with antimotility adverse effects
Cognitive or functional disability
Dementia or delirium
Decreased mobility (resulting from stroke, arthritis, lower back problems, or weakness)
Restraints
Inability to access the toilet independently for any reason
Congenital anorectal malformations
Imperforate anus
Hirschsprung's disease
Idiopathic incontinence

movement of bowel contents)⁴¹ and digital stimulation (inserting a gloved, lubricated finger through the anus into the rectum to trigger anal relaxation and a rectal contraction), but the effectiveness of these techniques has yet to be established in controlled studies. Abdominal massage and rectal irrigation (using up to one liter of tap water instilled by rectal catheter) are used in bowel management programs for patients with

incontinence secondary to neurologic disease or injury.⁴²⁻⁴⁴ Digital stimulation is appropriate only with certain types of motor neurologic function (in other words, when spinal reflexes are intact). Patients with a flaccid bowel (indicating lower motor neuron dysfunction) may need to resort to manual evacuation.⁴⁵

BOWEL TRAINING

Bowel training is conceptually similar to bladder training in that it modifies behavior to achieve a controlled response to urgency. Cognitive and relaxation techniques help patients delay the release of bowel contents over progressively longer periods and contract the anal sphincter to prevent the release of feces. At the same time, such training may reduce anxiety and build the patient's confidence in these new behaviors. Although nurses involved in continence care may routinely employ bowel training, studies of the effectiveness of the various techniques are sorely needed.

CONTAINMENT OF LEAKED FECES

Complications of fecal incontinence are unpredictable and therefore difficult to manage. Perineal dermatitis is a common adverse consequence. Its manifestations include skin redness, skin loss, and in the more severe cases, secondary fungal infection. For acutely ill patients with fecal incontinence, bowel catheters or an anal pouch can be used to reduce perineal skin damage by diverting liquid stool into a collection bag. Technologic advances in the design of bowel catheters and the balloons used to keep them in place have made their use much safer than in years past.^{7,46} Skin care regimens that include a pH balanced cleanser and moisture barrier reduce the risk of incontinence-associated dermatitis.^{13,47} It's important to take steps to prevent perineal skin damage even when a bowel catheter is used because fecal seepage may occur around the catheter.

Although absorbent pads and briefs may provide a feeling of security for incontinent community dwellers, these products do little to protect the skin from irritation. Few elderly men will wear standard absorbent products,⁴ and most such products have been designed for absorbing urine, not feces. A small surgical dressing, however, designed specifically to absorb small amounts of leaked stool when placed between the buttocks, has been found to be more acceptable by men with fecal incontinence.⁴⁸

The anal plug is an alternative to absorbent briefs that has been evaluated in research studies but isn't currently available for use in the United States. This device is inserted into the rectum to prevent fecal leakage. Various designs and materials have been tested in both children and adults.⁴⁹ Although the anal plug has been found to prevent fecal leakage, its use over extended periods has been limited by practical considerations such as discomfort, pain, and

involuntary expulsion. Improved designs and materials have increased tolerance in some people, but response varies widely and is difficult to predict.⁵⁰⁻⁵² Nurses are encouraged to participate in the development and evaluation of a comfortable and effective anal plug.

MEDICATION

Antimotility, or antidiarrheal, medications are commonly used to manage diarrhea-related fecal incontinence. Based on current evidence, loperamide (Imodium) is the drug of first choice.^{53,54} It reduces the frequency of bowel movements, firms stools, and increases pressure in the anal canal. The drug can be initiated in doses as small as 1 mg per day and titrated upward as needed to a maximum dosage of 16 mg per day. In our experience, not all patients with fecal incontinence take antidiarrheal medication regularly, although such a regimen is recommended. Reasons for nonadherence include forgetfulness, inconvenience, a fear of constipation, or an inability to afford the drug. Patients who use varying amounts of antidiarrheal medication on an as-needed basis may also derive some benefit. Nurses should assess patterns of medication use and evaluate the feasibility of instituting a more regular dosing regimen, as well as its likely effectiveness.

DIAGNOSTIC TESTING AND FOLLOW-UP

If conservative measures fail to resolve mild-to-moderate fecal incontinence, consider referring the patient for further tests, such as anal ultrasound or magnetic resonance imaging to identify any structural abnormalities in the anal sphincters or anorectal physiology tests to detect motor or sensory dysfunction.

Pelvic floor muscle training, as used for urinary incontinence, hasn't been widely studied as a treatment for fecal incontinence. Biofeedback, which involves a pressure-sensitive probe inserted into the anus to show the patient aspects of anorectal function in order to guide these exercises and modify anal sphincter function and anorectal sensation, is often used in specialty centers. Evidence of an additional benefit over conservative measures, however, is lacking.^{28,55} Intra-anal electrical stimulation may be used to enhance anal sphincter strength and sensation, but here too, there's little evidence of its effectiveness.^{7,56,57}

SURGERY

When assessment and physical examination reveal defects for which surgery is indicated, patients should be referred to a surgeon. Such conditions would include a complete rectal prolapse, in which the intestine protrudes through the anus, preventing complete closure of the anal sphincter(s); surgical repair would be required not only to cure the incontinence but also to prevent intestinal necrosis. Patients with a disrupted anal sphincter also may benefit from surgical repair,

although perfect continence is seldom maintained over the long term.^{58,59} Surgical implantation of a sacral nerve stimulator is a promising recent option, but long-term results aren't yet available. When all else has failed and fecal incontinence severely limits the quality of a patient's life, some patients find a stoma an acceptable and life-enhancing option.⁶⁰ The nurse should undertake postoperative follow-up on the extent of incontinence resolution and the need for continued symptom management. ▼

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Donna Zimmaro Bliss is a professor at the University of Minnesota School of Nursing, Minneapolis. Christine Norton is professor of clinical nursing innovation, Bucks New University, Uxbridge, and Imperial College Healthcare NHS Trust, London. Both are members of the International Consultation on Incontinence (ICI). Contact author: Donna Zimmaro Bliss, bliss@umn.edu. The fecal incontinence management algorithm discussed in this article was developed by the ICI committees and was based on an extensive literature review. The authors appreciate the contributions of the following fellow ICI members: Danielle Harari, Julie Lang, Pirkko Metsola, Janette Tries, and William E. Whitehead. The ICI covered travel expenses for one meeting of members but provided no honoraria for research or algorithm development. Donna Zimmaro Bliss has received speaking honoraria from Hollister Incorporated, a maker of products used in the treatment of fecal incontinence. Christine Norton has received speaking honoraria and research funding from Coloplast, a maker of products used in the treatment of fecal incontinence, and consultancy fees from Hollister Incorporated. This article has been reviewed and all potential or actual conflicts have been resolved.

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