



Provision of high-quality end-of-life care in a cost-effective work environment is the aim of all hospice organizations. This opportunity can be negatively affected when there is a limited supply of parenteral narcotics or administration routes are either not functional or fail to control symptoms. To combat these challenges, including a shortage of available parenteral narcotics, staff at a hospice organization adopted the use of a rectal catheter to deliver oral medications that were readily available. The implementation of a rectal catheter resulted in better control of symptoms, fewer titrations, and improvement in pain control and/or symptom management needs during end-of-life care management.

#### AT A GLANCE

- The Macy Catheter is a transformational prescription device that offers a safe and effective option to provide rectal access for administration of medications during end-of-life care management.
- A rectal catheter can be used for a subset of patients who are unable to swallow or who require timely, meaningful pain relief.
- Cost savings and improved nursing attitudes were noted one year after integration of rectal medication administration.

#### KEYWORDS

hospice; end-of-life care; pain management; rectal catheter; program development

#### DIGITAL OBJECT

#### IDENTIFIER

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# Macy Catheter

Integration and evaluation in a hospice setting to provide symptom relief during end-of-life care

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Hospice organizations strive to provide high-quality care and, to accomplish this goal, care teams rely on the availability of comfort medications, such as parenteral narcotics, to control symptoms at the end of life (EOL) (Bailey et al., 2014; Latuga et al., 2018; Paez et al., 2016). A 2017 hurricane that devastated Puerto Rico caused a shortage of parenteral narcotics at Ohio's Hospice, a hospice organization in the southwest region of the state, leaving only a four-day supply for the organization. To combat this challenge, staff investigated the efficacy of a Macy Catheter as a delivery method for oral medications, which were readily available.

## Background

Ohio's Hospice is a statewide organization with nine affiliates serving 37 counties within the state. The Macy Catheter evaluation occurred at two of the nine affiliates. These two affiliates served 5,659 patients in 2019, with an average daily census of 1,100 patients in home care, long-term care, and one inpatient unit. Top terminal diagnoses include 36% cardiovascular, 31% cancer, and 11% nervous system diseases.

The Macy Catheter offers a safe, effective, convenient, and comfortable method for delivering crushed medications via the rectal route for symptom management (Lyons et al., 2015). Using the rectal route to administer medication in patients at the EOL is a beneficial option when the oral route fails, when parenteral narcotics

are not available, or when an alternate route is indicated. The walls of the rectum are highly vascularized, resulting in quick and effective absorption, likely related to avoiding the first-pass effect (Honasoge et al., 2016), and lead to improved symptom control and decrease the need for opioid titration and rotation (Lam et al., 2016; Latuga et al., 2018; Lyons et al., 2015; Paez et al., 2016).

## The Macy Catheter

The Macy Catheter, invented by hospice nurse Brad Macy, BSN, BA, RN, CHPN®, received U.S. Food and Drug Administration approval in 2014 (BioSpace, 2014). The device is a rectal catheter inserted into the distal one-third of the rectum (see Figure 1). After placement, a 15 ml balloon is inflated to secure the catheter in the rectum. The port to administer medications is taped to a patient's leg, fostering discreet medication delivery. The catheter and balloon are expelled during defecation. Oral medications are delivered by crushing them, creating a suspension in 10 ml of tap water, and injecting the solution into the administration port (Paez et al., 2016).

Use of the Macy Catheter improves care and comfort for patients and also benefits four major stakeholders: nurses, patients, caregivers, and hospice physicians. For example, Latuga et al. (2018) found that adoption of this device led to enhanced nursing efficiency with medication rounds, fostered a home-like setting, facilitated discharge options across multiple care settings, and decreased the need for continual opioid titration and rotation.