

# Nonpharmacologic Pain Management for Patients in Ambulatory Extended Recovery After Minimally Invasive Gynecologic and Urologic Surgery

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**PURPOSE:** To determine the effectiveness of an evidence-based postoperation nonpharmacologic pain management bundle for patients recovering from minimally invasive gynecologic and urologic surgeries.

**PARTICIPANTS & SETTING:** This study focused on patients recovering from minimally invasive gynecologic and urologic surgery at a comprehensive cancer center. The first cohort consisted of patients three months preimplementation (n = 96) and the second consisted of those three months postimplementation (n = 86).

**METHODOLOGIC APPROACH:** The project used a pre- and postintervention design and deployed the bundle as a nursing order. Nurses and patients were educated about the bundle and comprehensive postoperation pain management strategies.

**FINDINGS:** Postimplementation, the documented use of nonpharmacologic pain management interventions significantly increased and postoperation opioid use significantly decreased without negatively affecting pain scores or lengths of stay.

**IMPLICATIONS FOR NURSING:** Nonpharmacologic pain interventions can decrease the need for postoperation opioids, and ordering a bundle of interventions alongside analgesia is an effective way patients can manage pain.

**KEYWORDS** pain management; alternative therapies; laparoscopy; robotic surgical procedures

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The use of minimally invasive surgical techniques is increasing worldwide (Blencowe et al., 2018). Robotic surgery increased from 1.8% of all surgeries in 2012 to 15.1% of all surgeries in 2018 and has become commonplace in many surgeries for which the laparoscopic technique has been considered safe and effective, including surgeries for urologic and gynecologic malignancies (Sheetz et al., 2020). Although there is reportedly less postoperation pain after laparoscopic surgery compared to open surgery, early postoperation pain after laparoscopy is still thought to be similar or even more severe (Sjövall et al., 2015). The etiology of laparoscopic surgical pain is multifactorial. As with open surgery, laparoscopic surgery includes superficial and deep somatic pain related to tissue trauma near the incision sites or drains, and pain can be worsened by sociocultural and individual factors (Blencowe et al., 2018; Sjövall et al., 2015). Because of the insufflation of the abdomen with carbon dioxide, postlaparoscopic surgery pain can also include visceral pain, which is attributed to peritoneal irritation caused by the dissolved gas, as well as neuropathic pain related to distension-induced neuropraxia of the phrenic nerves (Blencowe et al., 2018; Koraş & Karabulut, 2019; Sjövall et al., 2015). Visceral and neuropathic pain present as cramps, bloating, and shoulder tip pain, generally in the first 24 hours postoperation (Blencowe et al., 2018). Previous studies report the presence of postlaparoscopic surgery visceral pain and shoulder pain in 31%–83% of patients (Çankaya & Saritaş, 2018). Given that postoperation pain in these patients arises from different mechanisms, an appropriate pain management protocol should also be mechanism