

## Surgical Interventions in Pain Management: Addressing Gaps in Medical Education and Patient Care

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Pain is defined by the International Association for the Study of Pain (IASP) as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage" (International Association for the Study of Pain (IASP)). The global prevalence of chronic pain is estimated at 20.0%, with women more affected than men, and prevalence increases with age. Proper classification and early detection are critical, as delayed treatment can worsen outcomes. This article examines surgery's role in pain management, addresses conditions requiring surgical intervention, assesses medical students' and graduates' understanding, and evaluates how the timing of surgery affects outcomes.

Insufficient pain management can raise morbidity, mortality, and healthcare expenses, with pain-related unplanned admissions or readmissions causing a substantial financial burden. Acute pain is common in the emergency department (ED), with 70% of patients seeking care for pain. <sup>1</sup> Frequent causes of ED admission include appendicitis (8.9%), large bowel obstruction (7.8%), and small bowel obstruction (5.9%). Acute conditions like cholecystitis, intestinal obstruction, appendicitis, diverticulitis, toxic megacolon, incarcerated hernia, acute abdomen, ovarian torsion, ectopic pregnancy, intussusception, imperforate anus, ureteral obstruction, urinary retention, testicular torsion,

aortic emergencies, limb ischemia, wet gangrene, and mesenteric ischemia often require emergency surgery. Complicated peptic ulcer disease was the leading cause of death (3.5 deaths/100,000 annually), followed by aortic aneurysm (2.7), bowel obstruction (2.1), biliary disease (1.3), mesenteric ischemia (1.0), peripheral vascular disease (0.7), abscess and soft tissue infections (0.6), and appendicitis (0.5). <sup>2</sup> Though patients may view surgery as a last resort, it can offer significant relief by addressing the underlying cause of the pain. Most cases are treated surgically, but there are a few exceptions. Some conditions, such as myocardial infarction (MI) and rheumatoid arthritis, are primarily managed with medication, and surgery is considered only when necessary.

Insufficient surgical training in medical curricula hinders early diagnosis and intervention. To address this, integrated surgical education is essential. Stakeholders should prioritize the provision of accessible and timely surgical care through the following steps:

1. Assessing surgical and pain management needs in the community.
2. Improving access to essential services.
3. Ensuring universal access to effective pain treatments.

In conclusion, educational resources should enhance surgical decision-making and promote

evidence-based approaches to improve patient outcomes through timely interventions.

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**References**

1. Zanza C, Romenskaya T, Zuliani M, Piccolella F, Bottinelli M, Caputo G, et al. Acute traumatic pain in the emergency department. *Diseases*. 2023;11(1):45. doi: 10.3390/diseases11010045.
2. Gallaway MS, Idaikkadar N, Tai E, Momin B, Rohan EA, Townsend J, et al. Emergency department visits among people with cancer: frequency, symptoms, and characteristics. *J Am Coll Emerg Physicians Open*. 2021;2(3):e12438. doi: 10.1002/emp2.12438.