

# Do Post-Surgical Patients Have Increased Pain Satisfaction With A PCA Pump Compared to Intermittent Nurse Injections?

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## Introduction

The purpose of this project is to conduct a literature review to determine the best practice for pain management in postsurgical patients. Of the 70 million people who have surgery each year 80% experience post-operative pain, most of which is undertreated. This high prevalence of undertreated post-operative pain warrants closer examination to determine if patients are more satisfied with patient controlled analgesia (PCA) pumps compared to intermittent nurse administered injections.

## PICO Question

**Population:** Post-surgical adult patients

**Intervention:** Patient Controlled Analgesia (PCA)

**Comparison:** PCA pump compared to intermittent nurse administered injections

**Outcome:** Identify the most appropriate pain management technique for patient pain satisfaction

**Question:** Do post-surgical patients have increased pain satisfaction with a PCA pump compared to intermittent nurse injections?

## Methods

A critical analysis of the literature was conducted using CINAHL, Medline, and Cochrane Databases.

**Keywords:** *patient controlled analgesia, patient pain satisfaction, post-operative pain control*

**Inclusion Criteria:** Inpatient postoperative adult patients on PCA

Randomized controlled trials, systematic reviews, and meta-analyses were the primary sources sought to answer the PICO question posited.

## Literature Results:

Literature supports increased pain satisfaction with a PCA pump. Benefits include:

- Increased patient satisfaction
- Instant availability
- Reduction in nursing time
- Increased pulmonary function
- Early ambulation
- Decreased hospital length of stay
- Increased patient sense of control
- Decreased patient anxiety and stress



Deleterious complications of undertreated pain include:

- Agitation
- Increased stress and anxiety
- Decreased respiratory function and atelectasis
- Increased length of stay
- Tachycardia and Hypertension
- Decreased ambulation
- Chronic pain

## Discussion

Our appraisal of the evidence suggests that patients are more satisfied with PCA as compared to intermittent nurse administered injections. As the literature shows, PCA pumps are advantageous for a myriad of reasons. The benefits of implementing this pain management modality have salient implications for patient satisfaction and can augment the sequelae of undertreated pain. Moreover, the National Clearinghouse Guidelines gives the highest grade of recommendation that PCA provides superior post-operative analgesia, garners improved patient satisfaction, and decreases the risk of respiratory complications.

## Recommendations

- Educate patients and nurses on pain control options
- Development of adequate post-surgical pain protocols for PCA use
- Examine unit specific pain processes for improved patient pain satisfaction

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