



# Intermittent Subcutaneous Button At End-of-Life



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## PROBLEM STATEMENT

- 75% of the terminally ill will experience pain as they approach death.
- Oral opioids are preferred at end of life for pain management. However, the route is not always feasible due to dysphagia, symptoms, and disease.
- Other routes are available but have limitations.
- Unrelieved pain becomes an issue and must be addressed. Additional routes must be investigated

## PURPOSE

The purpose of this evidence-based project was to:

- Determine whether an intermittent indwelling subcutaneous catheter (ISB) decreased end-of-life pain.
- To determine if timely pain management decreased patients' and their loved ones emotional distress.
- To determine if caregivers could be taught to administer subcutaneous medications in a home-setting.

## EVIDENCE

- Although there is not a lot of evidence supporting the use of an ISB, this practice has proven effective in the hospice community. First used in England and Australia to palliate pain at end-of-life, it was not until the 1980's that hospices in the United States considered an indwelling catheter as an alternative to the oral route. In doing so, there is data to support the use of an ISB at end of life. Few complications are reported
- Letizia, M., Shenk, J., Jones, T. D., (1999). Intermittent subcutaneous injections of pain medication: effectiveness, manageability, and satisfaction. American Journal of Hospice and Palliative Care. 16, 585-592.34

## EVALUATION METHOD

**Target Population:** Patients with a prognosis of six months or less to live receiving end-of-life care by hospice.

### The accessible population:

Hospice Case Managers used these inclusion criteria to determine when an ISB was appropriate.

- Hospice patients in a home setting,
- With a caregiver overseeing their care.
- Contraindications to oral opioids.

**Sample Size:** 30 hospice patients received an ISB from August 2011 to March 2012.

### Materials;

- A caregiver profile form was created and completed by every caregiver involved in the patient's care.
- Hospice nurses used the form to determine if caregivers' could be taught to administer subcutaneous medication through an ISB.
- A caregiver training handbook was created and used by hospice nurses to educate caregivers on how to administer subcutaneous medications through an ISB.
- The hospice triage team used the same handbook to assist caregivers with ISB questions via phone to decrease nursing visits, thus decreasing nursing cost.
- A Formulary was created for pain management and, once orders were obtained, hospice nurses inserted ISBs per the hospice subcutaneous button standard
- A caregiver evaluation form was created and completed by hospice nurses for 5 days as a way to determine if caregivers administered medications as ordered and to address emotional issues.

### Design:

- Quasi-experimental time series design
- Pre-assessment of pain /MAR using the FLACC scale prior to insertion of an ISB.
- Implementation of ISB.
- Post-assessment of pain /MAR using the FLACC scale.
- Evaluation at day 1, 2, 3 and one month on the same patient.

### Subcutaneous Opioids Used:

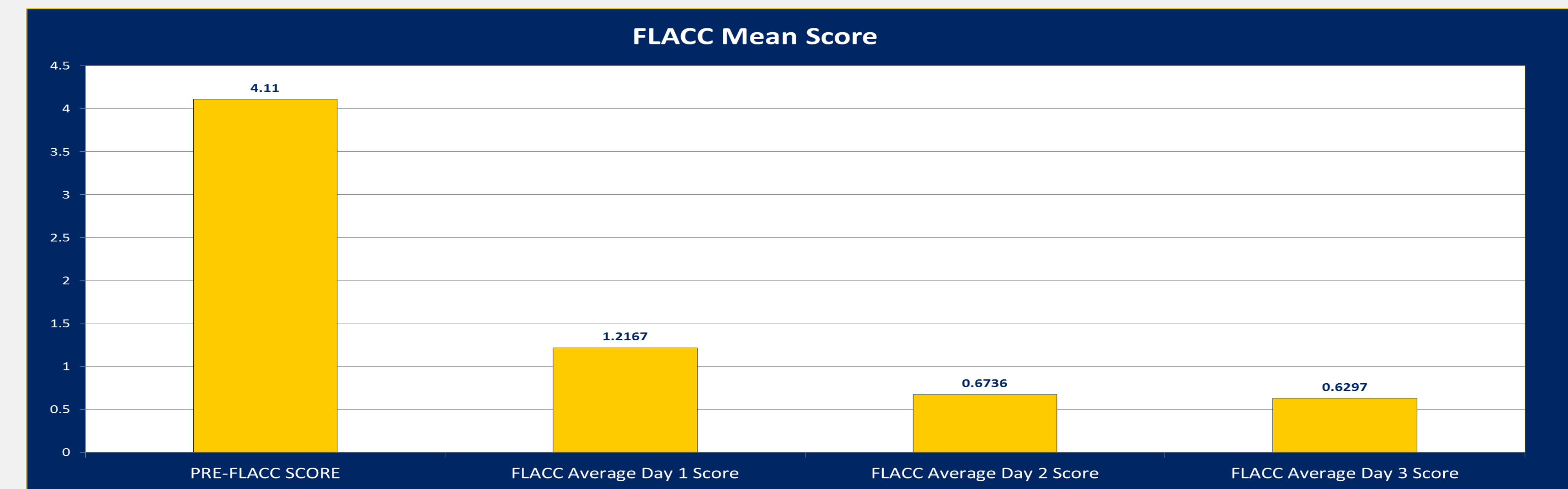
- Morphine, Methadone, Dilaudid, and Fentanyl



## RESULTS

The ISB proved to be an effective route to deliver subcutaneous opioids at end-of-life. Multiple opioids were used through the route to palliate pain. Pain was significantly decreased within the first 24 hours. The mean of pre and post FLACC scores were compared. The mean pre score was 4.11 on a scale of 0 to 10, and the mean post score was .16. The mean FLACC score decreased to 1.21 by day 1, .67 by day 2, and .62 by day 3. These findings are clinically significant in the hospice community where patients rely on hospice clinicians for timely effective pain management, which, in turn, decreased their loved ones distress by 50% in the first 24 hours.

5 out of the 30 caregivers that were trained were not able to administer medications as taught through an ISB.



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## CONCLUSIONS/IMPLICATIONS FOR CLINICAL PRACTICE

### This Evidence-based project determined :

- Patients experienced timely effective pain management with use of an ISB at end of life.
- Few to no complications occurred.
- Caregivers administered medications as taught. Some preferred this method over the oral route.
- Caregivers reported patients experienced a quality death.
- ISB prevented transfer of patients to inpatient facilities for severe symptom management. .

### Implications for Nursing Practice::

- Advance care planning for ISB is needed on admission to hospice, to decrease fear related to use, empower patients to make end-of-life disease-related decisions, and prepare caregivers for medication administration.