



Comparing a Simple Numeric Pain Rating Scale (NPRS) to a Descriptive NPRS for the Management of Pain in an Inpatient Community Hospital Setting

John Talili, Pharm.D.; Blake Urhahn, Pharm.D.; Colleen Arendt, Pharm.D.

Background

Pain management remains a challenging aspect of health care for both patients and providers. On January 2018, the Joint Commission revised their pain standards which include identifying pain assessment and management with safe opioid prescribing as an organizational priority (LD.04.03.13) and collecting data to monitor its performance (PI.01.01.01). This community hospital uses an 11-point numeric pain rating scale (NPRS) of 0 to 10 with 0 representing no pain, 1-3: mild pain, 4-6: moderate pain, and 7-10: severe pain. Because pain is related to a patient's function, a change to a descriptive pain scale will allow for better assessment and management.

Objective

- To determine how patients rate their pain with a descriptive NPRS compared to a simple NPRS, how well pain is controlled, and how medication use and administration differs

Methods

- A retrospective pre-implementation and post-implementation study with a one month post-implementation pilot analysis
- One month of data for pain medications given for as-needed pain was collected before implementation of the new scale, excluding procedural and critical care areas
- Data from the pilot study involved one inpatient floor that included patients at least 18 years of age and able to self-assess pain from nursing documentation.
- Data collected: Patient age, gender, pain scale ratings, whether or not symptoms improved, class of pain medication, route of administration, and number of administrations
- Exclusion criteria: pediatric populations and patients unable to self-assess pain (ie. procedural and critical care areas)

Pilot Study Results (Single Floor)

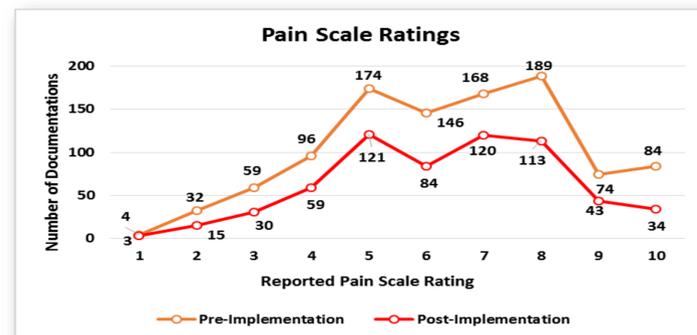
Patient Demographics Pre-implementation (N = 94)

Patients	Individuals
Male	42
Female	52
Ethnicity	Individuals
Caucasian	87
Black	7

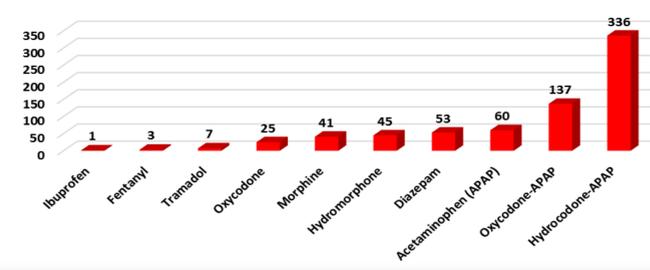
Patient Demographics Post-implementation (N = 82)

Patients	Individuals
Male	34
Female	48
Ethnicity	Individuals
Caucasian	74
Black	7
Hispanic	1

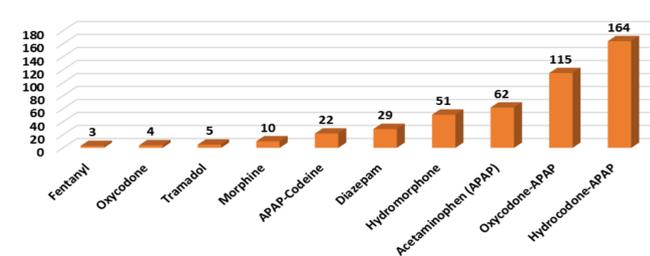
Number of Pain Scale Ratings (Pre-Implementation)	Average Pain Scale Rating
1026	6.40
Number of Pain Scale Ratings (Post-Implementation)	Average Pain Scale Rating
622	6.33



Pain Medications Administered Pre-Implementation (N = 708)



Pain Medications Administered Post-Implementation (N = 465)



Drug Class	Pre-	Post-
Benzodiazepine	53	29
NSAID	1	0
Non-opioid Analgesic: Acetaminophen (APAP)	60	62
Opioid	121	73
Opioid-APAP Combination	473	301

Pain Medication Effectiveness Pre-implementation (N = 705)		Pain Medication Effectiveness Post-implementation (N = 465)	
Yes	680 (96%)	Yes	453 (97%)
No	25 (4%)	No	12 (3%)

Outcome	P-value
Average Pain Scale Score	0.46
Number of Narcotic Medication Administrations	0.01
Response to Pain Medications Post-Administration	0.36

Conclusions

- The switch to a descriptive pain scale may yield lower pain scores
- Potentially, non-opioid medications may be utilized more than opioid medications due to lower pain scores with the descriptive pain scale
- Potential decrease in inappropriate opioid use
- There might be a decrease in opioid use with similar medication effectiveness.

Limitations

- Retrospective data collection
- Single center hospital setting
- Subjective reporting & population size differences
- Variable nursing documentation

Next Steps

- Post-implementation analysis applied to appropriate floors hospital-wide
- Education of nurses and physicians on new scale

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Disclosure

The authors have nothing to disclose concerning possible financial or personal relationships with commercial entities.