

# Pain Management Documentation in the Age of the EMR: Analyzing One Hospital's Records

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## Introduction

- ▶ Pain management documentation (PMD) is a critical element of pain management care and required by the Joint Commission. PMD chronicles the pain assessment, treatment, and patient response.
- ▶ Quality PMD provides effective communication for health providers to facilitate continuity of care, and provides a platform to evaluate care provided to patient.
- ▶ PMD in the paper records consistently fell below the quality dictated by current guidelines, notoriously fraught with omissions, duplication, and illegibility.



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## Introduction



- Hospitals can earn up to \$11 million implementing the EMR.
- Monies can be forfeited after 5 years (Huslin, 2009; Washington Post).
- More than 70% of acute care hospitals will implement an electronic record in the near future (Malloch, 2007).



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## The Electronic Medical Record

Structured and unstructured fields

Typically hospital staff are provided with templates to individualize

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## Background

- ▶ The EMR promises to improve the quality of information available to deliver care.
  - Provide better information quality
  - Offer better sharing of information
  - Eliminate illegibility
  - Embed clinical practice guidelines
  - Reduce omissions and redundancy
  - Increase efficiency and effectiveness of care
  - Generate new knowledge through the ability to mine data from large samples of patients

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## Background

- ▶ Some evidence exists that shows a partial improvement in documentation with the EMR (Eden et al., 2008; Mahler et al., 2007; Tang, Larosa, Gordon, 1999).
- ▶ Physicians have difficulty finding information in the nursing EMR (Tornvall & Wilhelmsson, 2008) and some prefer narrative notes to guide care (Green & Thomas, 2005)

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## Background

- ▶ Emerging studies evaluating EMR documentation contain small sample sizes, evidence shows partial improvement in nursing documentation after EMR implementation.

- Mahler and colleagues (2007) compared the quantity and quality of documentation. Improvements were identified in the quantity of documentation in two of the units, and near 100% compliance with documentation of all phases of the nursing process. One unit reached 100% compliance in the documentation of evaluation while two were at 0% compliance.
- Pain assessment documentation was more complete after the implementation of an EMR for clinical charting. Evaluation and notification documentation quality declined (Smith, Smith, Krugman, Oman, 2005).



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## Background

- ▶ However, after reviewing PMD in 233 charts, Gilbertson–White and Shapiro (2007) concluded “organizations...should not count on the shift from paper to computer to solve issues of nursing practice or documentation.



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## Purpose

- ▶ Since the adoption of the EMR alters the presentation of PMD, it is important to understand how to clinically interpret data and collect information to manage care and for standards compliance
- ▶ Therefore, the purpose of this study was to comprehensively describe the PMD in the medical record in a hospital using the EMR



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## Method

- ▶ **Setting** – 200 bed community hospital in New England where the EMR is used by the nursing staff for documentation
  - MEDITECH 5.6® implemented initially in May 2005 with 1 major upgrade
- ▶ **Convenience Sample** – 51 records of discharged adult surgical patients with a length of stay 24 hours or longer after PACU discharge

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## Method

- ▶ After IRB approval, and computer training, PMD data were collected from EMR data sources
  - Nursing electronic spreadsheet fields
    - Pain and comfort management assessment
    - Patient controlled analgesia
    - Patient controlled epidural analgesia
  - eMar
  - Nursing progress notes
- ▶ Collection time spanned from PACU discharge to hospital discharge




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## Time Variant Data Collection

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## Data Analysis

- ▶ Data were organized into PMD episodes
  - **Assessment** – the entry of a NRS rating or a verbal pain description where no documentation occurred in the previous 90 minutes
  - **Intervention** – actions taken on behalf of the patient
  - **Reassessment** is considered any assessment occurring within an hour of an intervention or a previous assessment.
  - **Further intervention and reassessment** were defined in the same manner



- ▶ Potential for a four hour episode

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## Results

				Percent (n)	
Gender	Male			37.3 (19)	
	Female			62.7 (32)	
Surgical Types	Orthopedic			48.1 (25)	
	General			39.2 (20)	
	GYN			13.7 (7)	
	Mean	SD	Min	Max	
Age	64.77	16.5	23.0	95.0	
Length of Stay (hrs after PACU)	84.69	44.0	23.8	209.5	
Number of PMD episodes per day	6.67	1.6	3.5	10.6	
Hours between episodes	2.84	4.7	2.0	15.0	
Average NRS	2.64	1.28	.6	6.4	

Pearson *r* (PMD episodes/day and average NRS) = .24 (ns)




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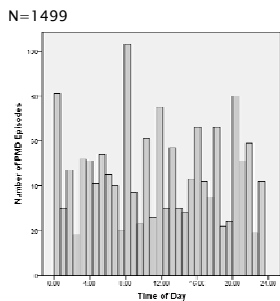
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## PMD Episodes by Time of Day




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### Discussion

- ▶ High volume of documentation, still with omissions and duplication.
- ▶ Number of entries/day are not associated with pain severity, however, PMD episode categories are associated with pain severity
- ▶ EMR data fields impeded interpretations of clinically relevant associations.



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### Conclusion and implications

- ▶ Improvements to streamline and consolidate PMD entries are required to allow for clinically interpretable output.
- ▶ Implications for EMR report construction
- ▶ Care to allow the practice to drive the systems and not the system to drive the care ensuring that the information has the potential to impact outcomes



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