

NACNS 2017 Annual Conference  
 Friday, March 10, 2017  
 Session: F5  
 Session Time: 3:45-5:00pm



## Taking the **B I T E** Out of Pain: Innovative Bundling of Interventions to Enhance Pain Care Quality

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 New Orleans, Louisiana




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### Presentation Objectives

- I. Overview an innovative 6-component patient-centered pain management bundle
- II. Describe strategies and resources that any acute care facility can use to implement & measure BITE Pain Therapy project-related outcomes
- III. Discuss preliminary project outcomes




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### Acknowledgments

- Co-Investigators
  - Patricia Brandon, RN-BC
  - Danielle Haydell, BSN, RN, CCTN
  - Laura Martin, DNP, RN
  - Armin Schubert, MD
  - Rene Meadows, MD
- Leadership & Staff Nurses from participating units
  - Gastrointestinal Surgical Stepdown Unit (GISSU)
  - Postoperative Surgical Services Unit (POSS)
  - Transplant Unit (TSU)
- Tulane University Public Service Interns
- Consultant
  - Susan Beck, PhD, APRN, FAAN, AOCN, Professor, University of Utah




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### Background

- **Inadequate acute pain management**
  - Contributes to chronic pain syndrome in 10 to 50% via multiple signaling pathways
- **Pain cost > \$635B annually**
- **More than combined cost of**
  - Diabetes
  - CV disease
  - Cancer
- **IOM pain report recommends**
  - Interprofessional collaboration
  - Patient-centered interventions
- **Joint Commission (2015)**
  - Adjunctive nonpharmacological options



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Vasopoulou & Lema (2010). When does acute pain become chronic. *Br J Anaesth*, 105(S1), i59-i65.  
IOM (2011). *Relieving pain in America*.

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### Supporting Evidence

- **Literature review**
  - OvidMedline & CINAHL
  - 2003-2014
- **47 articles synthesized**
  - Multi-modal pain management
  - Complementary & nonpharmacological modalities
  - Cognitive-behavioral therapy
- **NDNQI Pain Care Toolkit**
- **Concept of *bundling*\***



\*Bird et al. (2010). Adherence to ventilator-associated pneumonia bundle and incidence of ventilator-associated pneumonia in the surgical intensive care unit. *Archives of Surgery*, 145(5), 465-470.  
\*Paal et al. (2014). Improving adherence to PALS septic shock guidelines. *Pediatrics*, 133(5), pp. e1359-1369.

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### Clinical Question

**Does implementation of a 6-component pain management bundle on medical / surgical units improve patients' perception of pain care quality?**



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## BITE Pain

**Bundling Interventions To Enhance Pain Care Quality**

- Design – Implementation Science Methodology
- Setting – 3 Medical Surgical Units
- Data Analysis Plan – Interrupted Time Series
- Study Period – October 1, 2014 – September 30, 2017







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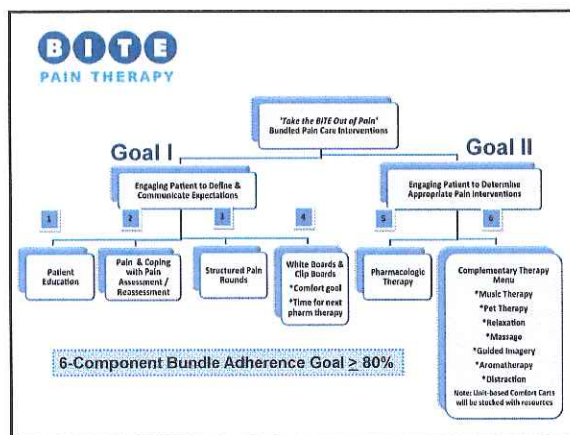
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**Pain Rating Scale**

0	2	4	6	8	10
No hurt	Hurts a little bit	Hurts a little more	Hurts even more	Hurts worse	Hurts worst
No Pain	Mild Pain	Moderate Pain	Severe Pain		

**Coping Rating Scale**

10	8	6	4	2	0
Coping All The Time	Coping Most Of The Time	Coping Sometimes	Seldom Coping	Never Coping	




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### Take the BITE Out of Pain

#### Complementary Therapy Menu

**Therapies you and your nurse can do now**

<b>Music Therapy</b> •TV Channel 40 •Listen to your music	<b>Relaxation<sup>1</sup></b> •Deep breathing •Stretching •Progressive muscle relaxation •Prayer •Meditation	<b>Guided Imagery<sup>1</sup></b> •Meditate on images on music TV Channel 20 •Create own images  <sup>1</sup> Ask your nurse for instructions	<b>Distraction</b> •Read •Electronic games •Crossword puzzles, word searches •Board games •Watch TV
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**Ask your nurse about arranging the following therapies**

<b>Music Therapy<sup>2</sup></b> •Live music in your room	<b>Massage Therapy</b> •Personalized hand massage	<b>Aromatherapy</b> •Essential oils to smell	<b>Distraction Resources</b> •Crossword puzzles, word searches •Checkers/Chess •Books •Have someone read to you <sup>2</sup>
<b>Pet Therapy<sup>2</sup></b> •Pet visit in your room	<b>Positioning</b> •Repositioning •Elevation of extremity	<b>Physical Agents</b> •Heat or cold	

<sup>2</sup>Call Volunteer Services, 842-5085 to schedule;  
NOTE: Based on availability

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### Outcome Measures

#### Pain Care Quality

- **PainCQ<sup>®</sup> Surveys**
  - Prevalence Methodology
  - **PainCQ-N<sup>®</sup> (14 items)**
    - ⊙ Being Treated Right
    - ⊙ Comprehensive Nursing Pain Care
    - ⊙ Efficacy of Pain Management
  - **PainCQ-I<sup>®</sup> (6 items)**
    - ⊙ Partnership with Health Care Team
    - ⊙ Comprehensive Interdisciplinary Pain Care
- **HCAHPS Pain Management Survey**
  1. How often was your pain well controlled?
  2. How often was everything done to help with your pain?  
<http://www.hcahpsonline.org>
- **Nurse Dose**
  1. Active ingredient (education, experience, skill mix)
  2. Intensity (FTEs, RN:PT ratio, RN HPPD)

Pelt et al. (2013). Confirmatory factor analysis of the PainCQ. HSR. 48(3), 1018-1038

Mangovitch et al. (2011). Nurse dose. Nurs Res. 60(14), 214-230.

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### Preliminary Findings

#### PainCQ-Interdisciplinary & PainCQ-Nursing Survey Results (N=777)

Category	Pre-Intervention (n=141)	Post-Intervention (n=636)
PainCQ-Interdisciplinary	4.41	4.45
PainCQ-Nursing	5.07	5.08

1 Strongly Disagree – 2 Moderately Disagree – 3 Slightly Disagree – 4 Slightly Agree – 5 Moderately Agree – 6 Strongly Agree

MANOVA did not identify a significant difference in PainCQ survey scores based on the nursing unit,  $\Lambda(4,1544) = .618, p = .649$

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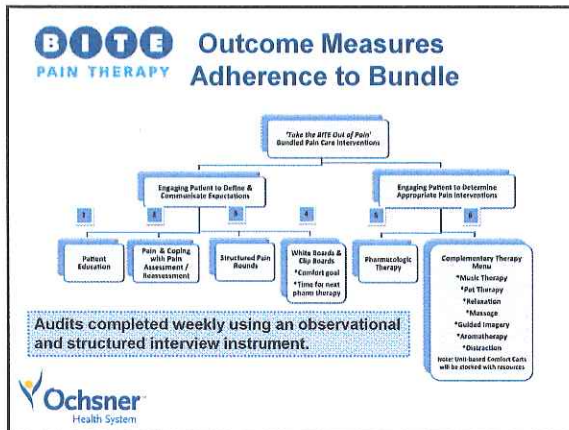
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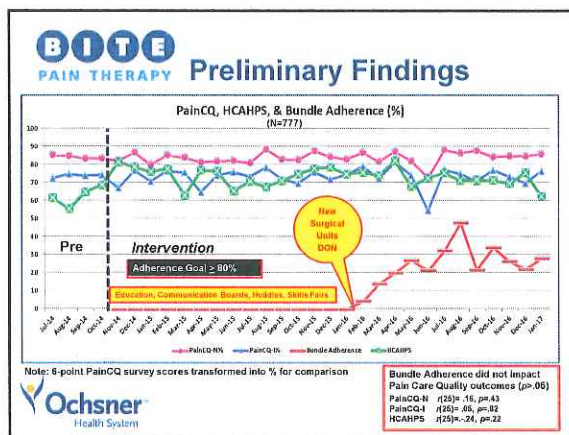
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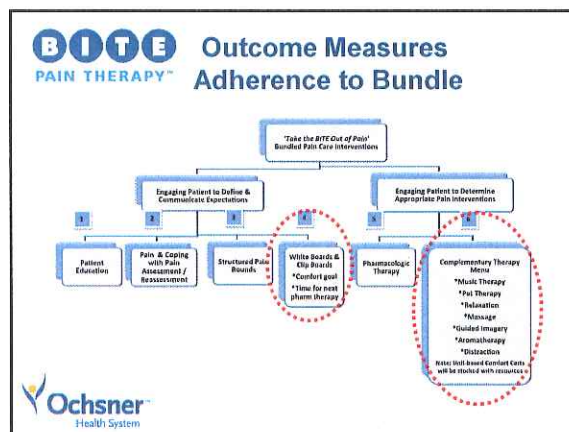
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### Summary / Conclusion



- No significant differences in Pain Care Quality outcomes identified between pre- & post-intervention data
- Any inferences regarding Pain Care Quality outcomes during the 27-month post-intervention period can not be attributed to the intervention
- Final data analyses will explore the impact of Nurse Dose on bundle adherence

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Free licensed BITE Pain Therapy™ Toolkit available

**Ochsner** <https://research.ochsner.org/nursing/bite-pain-therapy-toolkit>  
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