NORMALIZING NON-PHARMACOLOGICAL PAIN MODALITIES IN PERIOPERATIVE CARE

AN NIH HEAL CONSORTIUM AND PRISM INITIATIVE PRAGMATIC TRIAL

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OBJECTIVES

01 Describe the design and implementation of the NOHARM pragmatic trial

02 Discuss how its design aims to test strategies for normalizing non-pharmacological pain care within the workflows of diverse busy academic surgery practices.

03 Elucidate challenges to implementing normalization interventions across multiple practices and
BACKGROUND

• Prescriptions for narcotic pain relief after surgery result in unintended prolonged opioid use for hundreds of thousands of Americans.

• Prolonged opioid use leads to dependence, addiction, diversion, and overdoses on a national scale.

• Non-pharmacological pain care (NPPC) is effective and recommended by guidelines for perioperative pain while offering a more favorable risk-to-benefit ratio.

• Patient and clinician decision support interventions are effective in encouraging patient-centered and guideline-concordant care in many other areas of medicine and hold great promise for promoting and facilitating post-operative non-pharmacologic pain management.¹

• The Non-pharmacological Options in Postoperative Hospital-Based And Rehabilitation Pain Management (NOHARM) study seeks to transform pain management in the post-operative setting by increasing patient awareness and use of non-pharmacologic ways of managing pain.
**Challenges:**

- Perioperative care encompasses diverse:
  - Clinicians
  - Settings
  - Workflows
  - Diseases and conditions

- Series of “saturated” clinical touch points
  - None in isolation suffice to advance NPPC use

- Patients have varied and evolving NPPC preferences
The EHR offers a common point of convergence

Prompt clinicians via CDS to:
- Introduce NOHARM NPPC
- Normalize use
- Support options
- Direct patients to NOHARM resources

EHR Nexus for multi-stakeholder bi-directional information exchange

Direct patients via portal-based messages to:
- Learn about NPPC and opioid harms/benefits
- Select preference-concordant NPPC options
- Troubleshoot and advance NPPC use
- Access resources
EHR BUILD

- Surgery Order Placed
- Registry & CG Assignment
- NPPC Selections Entered
- Prompt NPCC Selection if Missing & Encourage Use
- Pain >1/10; RN Initiates Selection-Matched Intervention
- RNs Prompted to Query re: Use NPPC Each Shift
- PTs & OTs Integrate NPPC in Treatment
- NPPC Info on D/C Summary
- Opioid Refill Request; Portal Message to Prompt NPPC
- Off Registry at 3 Months

Opioid Refill Request; Portal Message to Prompt NPPC
NOHARM INTERVENTION:


2. Suite of self-management educational materials and zoom support calls

3. Clinician-directed Epic-based Clinical Decision Support (CDS)

(The goal is NOT to deny patients access to necessary or helpful pharmacologic options.)
### NON-PHARM PAIN CARE (NPPC): VALIDATED FOR POST-OP PAIN MANAGEMENT

<table>
<thead>
<tr>
<th>Movement</th>
<th>Physical</th>
<th>Relaxation</th>
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<tbody>
<tr>
<td>Walking</td>
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<td>Yoga</td>
<td>Massage</td>
<td>Breathing</td>
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<td>Tai Chi</td>
<td>Cold or Heat</td>
<td>Music</td>
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<td></td>
<td>TENS</td>
<td>Guided Imagery</td>
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- Meditation
- Breathing
- Music
- Guided Imagery
- Muscle Relaxation
- Aromatherapy
1. Test the impact of a bundled NOHARM Healing after Surgery Guide + clinical decision support intervention embedded within an EHR on pain and function 3 months following surgery.

2. Test the impact of a bundled NOHARM Healing after Surgery Guide + clinical decision support intervention embedded within an EHR on anxiety and opioid use during the 3 months following surgery.

3. Conduct a mixed methods analysis of patient and care team factors that affect the routine adoption, implementation, and sustainable use of the intervention.
# Healing After Surgery: Stepped Wedge Design

<table>
<thead>
<tr>
<th>Tranche 1</th>
<th>Tranche 2</th>
<th>Tranche 3</th>
<th>Tranche 4</th>
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## EPRO COLLECTION

<table>
<thead>
<tr>
<th>Time Point</th>
<th>Control Group</th>
<th>Intervention Group</th>
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<tr>
<td>Baseline</td>
<td>Pain, Physical Function, Anxiety PROMIS-CATs; Opioid Use</td>
<td>Pain, Physical Function, Anxiety PROMIS-CATs; Opioid Use</td>
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<td>1 Month Post-Surgery</td>
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<td>2 Months Post-Surgery</td>
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<tr>
<td>3 Months Post-Surgery</td>
<td>Pain, Physical Function, Anxiety PROMIS-CATs; Opioid Use</td>
<td>Pain, Physical Function, Anxiety PROMIS-CATs; Opioid Use; NPPC Use</td>
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</tbody>
</table>
IMPLIMENTATION

• No direct changes to opioid dispensing or prescribing

• Waiver of informed consent b/c Standard of Care trial

• Patients automatically enrolled when they have surgery scheduled by a practice this initiative is live for

• Patients not aware they are part of a study

• Patients receive information about non-medication options for pain management through the patient portal and by mail

• Nursing staff provide support by providing educational materials, recording selections, documenting pain interventions, and encouraging use of non-medication pain options after discharge
PATIENT SUPPORT

- Healing After Surgery group Zoom calls held 3x week

- Instructions for joining sent via portal message, on AVS, and in Healing After Surgery booklet

- Patient toll-free number and website listed in Healing After Surgery booklet
CLINICAL SUPPORT

“Boots on the Ground” team (BOG) train clinical staff, provide support during implementation, communicate through site visits and other communication platforms.

Staff had access to BOG pager and email address.

BOG members at each site were first point of contact and “face” of the study.

Instructions and resources posted on nursing units and available through EPIC.
IMPLEMENTATION CHALLENGES

• COVID resulted in reduced surgical scheduling, short staffing, high turnover, reduced scheduling of in-person visits and trainings

• Varying levels of engagement by nursing leadership

• Time constraints, competing priorities, lack of confidence in providing education

• Patient engagement may be associated with familiarity and prior experiences with NPPC options