



MAYO CLINIC ROBERT D. AND PATRICIA E. KERN  
**CENTER FOR THE SCIENCE OF  
HEALTH CARE DELIVERY**



# NOHARM

*Non-pharmacological Options in post-operative Hospital-based And Rehabilitation pain Management pragmatic trial*

*a HEAL and PRISM UG3/UH3 Demonstration Project*

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# Pragmatic trial to promote non-pharmacological pain care after surgery touching patients across peri-operative continuum



**1. Access conversation guide via portal:**  
Develop individualized NPPC plan



**2. Presurgical check in:**  
Confirm NPPC plan, revise per preference, view video PRN



**3. In-hospital therapy:**  
Initiate NPPC plan, emphasize self-management, adapt PRN



**4. Hospital discharge:**  
Review NPPC plan, provide supplies, education, & local resources



**5. Access conversation guide via portal:**  
Refer to NPPC resources, complete PRO screening



**6. Post-operative clinic follow up:**  
Query use of NPPC, trouble shoot, opioid taper PRN



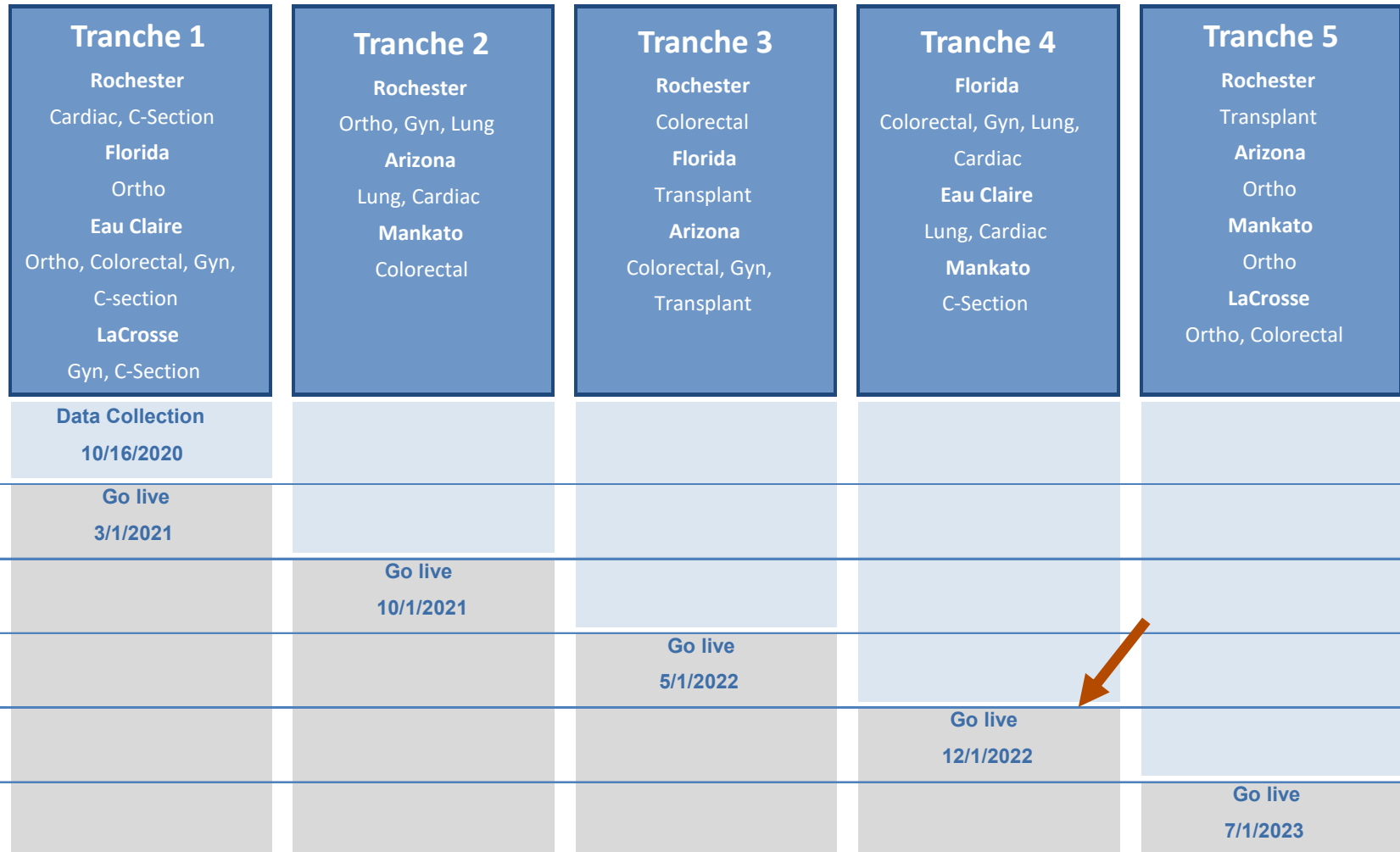
**Potential adverse event - increased pain:**  
Alert clinical team, prompt referral



**Potential response:**  
Medication Therapy Management visit with pharmacist

**Perioperative Care Pathway**

# Stepped-wedge cluster-randomized trial



# Non-Pharmacological Pain Care

## **Movement**

- Walking
- Yoga
- Tai Chi

## **Relaxation**

- Meditation
- Relaxed Breathing
- Music Listening
- Guided Imagery
- Muscle Relaxation
- Aromatherapy

## **Physical**

- Acupressure
- Massage
- Cold or Heat
- TENS

# Current Status

1. 63,744/80,000 patients accrued
2. On track for accrual through Jan 31, 2024
3. Outcome measurement closes May 31, 2024

# Barriers Scorecard

Barriers	Level of Difficulty*				
	1	2	3	4	5
Enrollment and engagement of patients/subjects	X				
Engagement of clinicians and health systems			X		
Data collection and merging datasets			X		
Regulatory issues (IRBs and consent)		X			
Stability of control intervention			X		
Implementing/delivering intervention across healthcare organizations			X		

\*Your best guess! 1 = little difficulty 5 = extreme difficulty

# Top challenges

- Unpredictable EHR instability
  - Intervention assignment logic
  - PROM assignment logic
- Consistency of staffing and staff engagement
  - Turnover, cross-coverage, use of locums
- Competing staff demands
- EHR data abstraction and curation

# Recent Generalizable Lesson Learned

- Critical importance of:
  - Scheduled, standardized EHR functionality checks
  - Continued engagement & implementation
    - Effective approaches are contextual
    - Chocolate is a powerful catalyst
- Delicate balance between clinician buy-in and annoyance
- “Passive” and “scalable” are relative terms
- Culture, Culture, Culture



# Data We're Planning to Share via ICPSR

- Demographics
- Comorbidities
- Surgical type
- Patient Reported Outcomes (PROMIS, NRS)
  - Primary – pain, physical function
  - Secondary – anxiety, self-efficacy
- Opioid use – self-report, administered, prescriptions
- NPPC Use

# Current Data Sharing Plan & Obstacles

- Share select elements of cleaned, curated analytic data set
- Obstacles
  - Optimal SQL query specification
    - Medications
    - Comorbidities
  - Inconsistent EHR data entry patterns across sites
  - Time consuming variable adjudication
  - Analyst effort

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# Thank You

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