The PPACT Study: Delivery Collaborative Care for Pain in Primary Care

Lynn DeBar, PhD, MPH
Kaiser Permanente Center for Health Research, Portland OR

Supported by NIH Common Fund and by NINDS through cooperative agreement (with NIDA scientific advisory support) (UH3NW0088731)
The Road Map

- Context
- Pragmatic trials and PPACT (key features / early learnings)
- Where we’re falling short and how to address
- Overall conclusions
CONTEXT
An acute care treatment model for a chronic condition?

- +660% Spine fusion surgeries
- +307% Lumbar spine MRI imaging*
- +249% Epidural + Facet injections
- +65% $ Back pain-related medical expenditures
- -19% × Self-reported functioning
- -72% Multidisciplinary pain treatment centers

Policies/guidelines
- NCQA, State Medical Boards, DEA opioid prescription mandates
- Changes in expectations
- Shifting marijuana laws & policies

Brief visits
- Complicated patients
- Gaps in coordination with specialty care
- Measurement and alert fatigue
- Limited pain treatment options

adapted with permission from Rollin Gallagher
The Paradox of Primary Care Based Pain Services

Primary care most logical setting for treating medically complex chronic pain patients

Structure, process, and staffing of primary care make implementation of best-practice interventions extremely challenging
How is Kaiser Permanente (KP) similar to / different from National Health Care Landscape?

- Integrated delivery system / care and insurance

- PCP-Specialty care: model of care increasingly emulated
  - Physicians salaried; reimbursement not RVU-based
  - Shared responsibility for defined population
  - Complex patients managed within primary care as much as possible

- Semi-autonomous regions / different structures
PPACT: Our Pragmatic Trial Approach
What do we do with the patients with complex pain who “belong to everyone and no one?”

The “ask” from clinical and health plan leadership…

How do we keep our primary care providers from burning out and leaving the health care system?
Pain Management in Usual Care

Interdisciplinary Pain Management
Embedded in Primary Care

Behavioral Health Coach:
Goal setting & Lifestyle Changes

Nurse:
Care Coordination

Pharmacist:
Medication Review

Physical Therapist:
Improved Movement

Primary Care

Addiction Medicine
Behavioral Health
Primary Care
Pain Clinic
Hospital
Membership Services
Rheumatology
Occupational Medicine
Emergency Department
Acupuncture
Chiropractic Services

Neurology / Neurosurgery
Pharmacy
Sleep Clinic
Case Management
Physiatry
PT / OT
Social Work
Pragmatic clinical trials: Responsive to real-world needs

• Target population with greatest need (few exclusions)
• Tailor intervention to what is practical and sustainable
• Embed deeply in everyday clinical practice not orbiting in “parallel research universe”
• Questions and outcomes of highest priority to clinicians, policy makers, and patients
  • Health service use and cost / return on investment (from EHR)
  • Patient-reported outcomes (pragmatic & scalable collection)
NIH Health Care Systems Research Collaboratory Program

Demonstration Projects

The Research Collaboratory is designed in part to support the design and rapid execution of several Pragmatic Clinical Trial Demonstration Projects. These projects address questions of major public health importance that engage health care delivery systems in research partnerships. The data, tools, and resources produced by the Demonstration Projects will be made available to the greater research community to facilitate a broadened base of partnerships with health care systems. A UH3 award provides support for the second phase of research activities initiated with the UH2.

<table>
<thead>
<tr>
<th>Projects</th>
<th>Investigator</th>
<th>Collaboratory Affiliation</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>UH3 Project: Time to Reduce Mortality in End-Stage Renal Disease (TREM)</td>
<td>Dembar, Laura</td>
<td>University of Pennsylvania</td>
<td>TREM</td>
</tr>
<tr>
<td>UH3 Project: Suicide Prevention Outreach Trial (SPOT)</td>
<td>Simon, Gregory</td>
<td>Group Health Cooperatives; Group Health Research Institute</td>
<td>SPOT</td>
</tr>
<tr>
<td>UH3 Project: Strategies and Opportunities to Stop Colorectal Cancer (STOP CRC)</td>
<td>Coronado, Gloria</td>
<td>Kaiser Foundation Research Institute</td>
<td>STOP CRC</td>
</tr>
<tr>
<td>UH3 Project: Pragmatic Trial of Video Education in Nursing Homes (PROVEN)</td>
<td>Mon, Vincent; Volandes, Angelo; Mitchell, Susan</td>
<td>Brown University School of Medicine</td>
<td>PROVEN</td>
</tr>
<tr>
<td>UH3 Project: Lumbar Imaging with Reporting of Epidemiology (LIRE)</td>
<td>Janik, Jeffrey</td>
<td>University of Washington</td>
<td>LIRE</td>
</tr>
<tr>
<td>UH2 Project: Improving Chronic Disease Management with P cinemas (ICD-Pieces)</td>
<td>Vazquez, Miguel</td>
<td>UT Southwestern Medical Center</td>
<td>ICD-Pieces</td>
</tr>
<tr>
<td>UH3 Project: Collaborative Care for Chronic Pain in Primary Care (PACT)</td>
<td>DeBar, Lynne</td>
<td>Kaiser Foundation</td>
<td>PACT</td>
</tr>
<tr>
<td>UH3 Project: Active Basting to Eliminate (ABATE) Infarction</td>
<td>Huang, Susen</td>
<td>University of California, Irvine</td>
<td>ABATE</td>
</tr>
<tr>
<td>UH3 Project: A Policy-Relevant U.S. Triage Care System Pragmatic Trial for PTSD and Combat-Related Trauma Survivors Outcomes and Support (TSOS)</td>
<td>Zetnik, Douglas</td>
<td>University of Washington</td>
<td>TSOS</td>
</tr>
<tr>
<td>UH2 Project: A Blood Pressure Medication Timing Study (BPMedTime)</td>
<td>Rosenthal, Gary</td>
<td>University of Iowa</td>
<td>BPMedTime</td>
</tr>
</tbody>
</table>

NIH Implementation Team

Team Co-Chairs: Drs. Josephine Briggs (NCCE) and Michael Lauer (NIH)

Clayton Hutto, PhD, MD-NIAID
Stephen Taplin, PhD, MPH-NICHD
Matthew Rudolph, MD, MPH-NIMH
Linda Porter, PhD, RN (NINDS) / Sarah Duffy (NIDA)

Upcoming NIH-VA-DoD NonPharmacological Pain Management Collaboratory

https://www.nihcollaboratory.org
The PRagmatic-Explanatory Continuum Indicator Summary 2 (PRECIS-2) wheel.
Use of PRECIS ratings in the National Institutes of Health (NIH) Health Care Systems Research Collaboratory

Karin E. Johnson¹, Gila Neta², Laura M. Dember³, Gloria D. Coronado⁴, Jerry Suls², David A. Chambers², Sean Rundell⁵, David H. Smith⁴, Benmei Liu³, Stephen Taplin², Catherine M. Stoney⁵, Margaret M. Farrell², and Russell E. Glasgow⁷

---

**Fig. 1** PRECIS wheels as assessed by raters for each of the five trials at two time points. Ratings on a 1–5 scale indicate more explanatory to more pragmatic ratings. The dashed line indicates the planning phase. The solid line indicates the implementation phase.
PPACT Overview

AIM: Coordinate and integrate services feasible/sustainable in primary care for helping patients adopt self-management skills to:

• Manage chronic pain (improve functioning)

• Limit use of opioid medication

• Identify exacerbating factors amenable to treatment

DESIGN: Cluster (PCP)-randomized PCT (106 clusters, 273 PCPs, 851 patients)

ELIGIBILITY: Chronic pain, long term opioid tx (prioritizing high utilizers of primary care, ≥120 MEQ benzodiazepine use)

INTERVENTION: Behavioral specialist, nurse case manager, PT, and pharmacist team; 12 week core CBT + adapted movement groups

OUTCOMES: Pain (3[4]-item PEG), opioids, pain-related health services, and cost
Intervention Description

PCP Component:
- Brief, 1 page summary of intake & discharge assessment provided to and discussed with PCP
- Dashboard of all assessment info documented in chart (linked from problem list)
- Weekly progress notes from PPACT interaction with patient
- PCP expected to make outreach call to patients at program onset (template to guide PCP communication with patient)

Intervention ~4 months in duration
Framework to guide understanding of patient's condition and care planning

- Informs team's communication with PCP and patient
- Promotes importance of activate coping and self care to interrupt cycle
- Highlights multiple areas to target for improved pain and function

- **Green domains:** Reinforce multitude of active strategies
- **Brown domain:** Limit patient reliance on provider dependent treatments
- **Red domain:** Reframe patient mindset away from focusing on cause towards management
Collecting Patient Reported Outcomes (PROs) in pragmatic trials
What does it take to collect PRO data in routine clinical care?

- Opioid therapy plans required for all patients on long-term opioids and included “regular” BPI administration
- 12-item BPI resisted by clinicians (too long, focused on pain intensity)
- Shifted national KP EHR-embedded standard to PEG(S) (Pain, Enjoyment of Life, General Activity, Sleep)

Panel Support Tool – it takes more than EPIC to prompt administration
Establishing Routine BPI Administration in Clinical Workflow
What it **really** takes to collect PRO data in routine clinical care

- Personal Health Record (kp.org)
- Interactive Voice Response (KP Messaging Center)
- Live Call by Medical Assistant
Health Care Delivery System PROs: Lessons Learned

• Routine PRO collection likely to be variable and biased

• Supporting evaluation and improving clinical utility: Simplify assessment and build enhanced infrastructure

• IT / medical informatics partnerships critical
Scoring or compilation of relevant assessments

Outside (untethered) Vendor

Online or paper collection

Kaiser Permanente

EMR Provider Summary Report
Is a different approach to process evaluation warranted?
Importance of Two-way Flow of Information / Education
Many stakeholders; no “one size fits all” engagement strategy…

Each KP region includes 3 distinct organizations:
- Permanente Medical Group
- Kaiser Foundation Health Plan
- Kaiser Foundation Hospitals

AMD: Associate Medical Director
Rethink your process evaluation toolkit

- Informal stakeholder conversations
- Mapping (organizational relationships, processes)
- Weekly journaling by study staff
- “Postcards” to inform stakeholders and prompt dialogue
- Rapid Assessment approach
- Along with more traditional qualitative techniques: interviews, naturalistic observation (fieldwork), brief surveys, focus groups
The underbelly of the urgent clinical question…
Q1: Chief champion (VP for Quality) retires; position split
Q2: Primary care champion steps down
Q3: Behavioral health director retires; addiction medicine reshuffled
Q4: Pain medicine chief resigns; addiction medicine/behavioral medicine chief steps down
Q1: Pain medicine leadership change (chief + HP)
Q2: Mental health leadership change (Perm + HP)
Q3: Regionally assigned advisory group reshuffled
Q4: Internal medicine chief steps down
Opioid pill limit

Opioid taper initiative (<120 MED)

Opioid taper initiative (<90 MED)

Benzodiazepine reduction initiative for COT patients
Physiatry Back Pain Clinic rollout

Pain One Stop rollout; Outer Island Pain Assessment initiative

Spine center of excellence rollout

Nurse led pain assessment rollout

Medicaid back pain initiative catalyzed pain BHC staffing
Complex conditions primary care clinic initiative rollout

Primary care behavioral health integration

Primary care behavioral health integration
KPGA loses state contract PCMHD nurse staffing reduced by 80%

Health plan restructured under KPSC leadership

Shift in retirement benefits causes large wave of retirements
NPS draft opened for public comment
NPS finalized and published, CDC primary care-prescribing guidelines published and disseminated
Implications / Potential Actions?

• Consider comparing two active treatments if feasible (less perceived need to “innovate” on top of intervention of interest)

• Build in “Plan-Do-Study-Act” (PDSA) cycles to improve site-level tailoring and increase local staff buy-in

• Plan for constant surveillance / measurement of usual care

• Budget for one or more of the above approaches
WHERE WE’RE FALLING SHORT AND HOW TO ADDRESS...
Engaging highest need patients in pain self-management: How do we increase uptake?

- **Internal validity** (controlled, optimal conditions)
  - (efficacy trials)
- **External validity** (when, how, where, with whom, under what context)
  - (many pragmatic trials)

**“Wicked” problems** (complex, complicated)

Connecting patients with (and active uptake of) skill-based services

Lengthy history of higher dose chronic opioid treatment
COMPONENTS OF THE SOLUTION?
FACT CONGRUENT
STORIES
DESIGN TO OPTIMIZE
“SPREAD”
Second generation technology-driven remote interventions

- Interactive voice response (IVR)-based self-management
- Mobile (Skype) delivery of pain coping skills
- Virtual reality (VR)-based pain treatments
  - Skill acquisition w/tailored multi-sensory tools
  - Enhance motivation (gaming approach)

Incorporating patient-driven models of support

- Existing approaches
  - Peer co-led self management group interventions
  - Individual peer coaching
  - ACPA peer-led support groups

- Peer-led adjunct to remote technology driven skills training?

Goal: Extend natural social networks, complement professional health services, provide emotional, [informational], and appraisal support in sustainable and cost-effective fashion.
IN CONCLUSION?
Lessons learned so far…

• Challenging the status quo requires persistent and *vertical* health care system partnership

• Carefully consider “fit” of core intervention approach for frontline clinical staff and congruence with the organization’s quality improvement approaches

• Health care systems need help for routine collection of Patient Reported Outcomes

• For chronic pain, mind/body split still deeply embedded in “behavior” of health care systems
Thank you to our funders…

Supported by NIH Common Fund and NINDS through a cooperative agreement (with NIDA scientific advisory support) (UH3NW0088731)

and research team…

**KP Research Centers**
- Ashli Owen-Smith
- Connie Trinacty
- Carmit McMullen
- David Smith
- Lindsay Benes
- Bill Vollmer
- Michael Leo

**KP Operations / Clinicians**
- Charles Elder
- Stacey Honda
- Sharin Sakurai
- Kelley DeGraffenreid

**Project Management**
- Allison Bonifay
- Meghan Mayhew

**Other Study Investigators**
- Frank Keefe – Duke
- Rick Deyo – OHSU
- Bob Kerns – Yale
- Michael Von Korff – KPWHRI
- Patrick Finan – John Hopkins
- Nicole Andrews – Royal Brisbane Hospital