Spine Pain & Opioids: A Tale of Two Epidemics

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Stanford University School of Medicine
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<table>
<thead>
<tr>
<th>Condition-specific Care Innovations (Originating in CERC Design Research)</th>
<th>Specialty-specific Care Innovations (Originating in CERC Bright Spots Research)</th>
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</thead>
<tbody>
<tr>
<td>Chronic kidney disease care 2.6%</td>
<td>Primary care 12.5%</td>
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<tr>
<td>Cancer care (2) 1.9%</td>
<td>Non-interventional cardiology 5.2%</td>
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<td>Surgical care 1.9%</td>
<td>Nephrology 2.7%</td>
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<td>Maternity care 1.0%</td>
<td>Oncology 2.6%</td>
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<tr>
<td><strong>Spine pain care 0.9%</strong></td>
<td>Endocrinology 1.2%</td>
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<tr>
<td>ICU care 0.8%</td>
<td>A-ICU 10%</td>
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43.3% trend reduction possible from implementation of CERC innovations at scale
Today’s Discussion

1) A patient's clinical journey from low back pain to disability

2) Core components of the CERC “ICE” model

3) Potential cost savings from implementing “ICE”

4) Clinical trial design

5) Clinical measures
Faster US Spending Growth and Worse Outcomes for Spine Pain

Source: Opioid Painkiller Prescriptions Pose Danger Without Oversight
“Worrying thoughts have been going through my mind a lot of the time in the last 2 weeks”

“I feel that my pain is terrible and that it’s never going to get any better”

“It’s really not safe for a person with a condition like mine to be physically active”

Persistent Pain **IS** a Mental Health Problem
“Usual” Care Pathways with Perverse Incentives
• Risk of overdose ↑ 4.6X
  → > 50 MME
• Starting dose for oxycodone prescription
  → 90 MME
• Median dose taken by overdose victims
  → 60 MME

Ease of access = Exponential Rate of Opioid Related Deaths
The STarT Back Musculoskeletal Screening Tool

Patient name: ________________________ Date: ____________

Thinking about the last 2 weeks tick your response to the following questions:

<table>
<thead>
<tr>
<th></th>
<th>Disagree</th>
<th>Agree</th>
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<tbody>
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<td>8</td>
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9. Overall, how bothersome has your pain been in the last 2 weeks?

Not at all  Slightly  Moderately  Very much  Extremely

0    0    0    1    1

Originally developed by:
© Keele University 01/08/07
Funded by Arthritis Research UK

STarTBack Screening Tool
“ICE” for High Value Spine Care
**Before**

$2,600 PMPY

- Encounters ($851)
- Procedures ($774)
- Imaging ($258)
- Opioids ($181)
- MISC ($516)

**After**

$1,950 PMPY

- Implementation
  - Encounters ($545)
  - Procedures ($453)
  - Imaging ($156)
  - Opioids ($100)
  - MISC ($516)

**25% reduction by year 3**

Estimated NET impact of the **“ICE” model**
- Retail chain with 250,000 employees

- Top 10% of injured workers accounted for 80% of all medical and disability costs

- Six month pilot using a risk assessment questionnaire and CBT course in conjunction with PCP

- Over 40% reduction in costs with higher RTW rates

Results of “Bright spots” Implementations
- HMO in Pacific NW
- 100% reduction of spine surgery
- 19% reduction opioid orders
- >40% reduction in PCP/Pain visits

Results of “Bright spots” Implementations
<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
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<tbody>
<tr>
<td>Trial Design</td>
<td>Block and cluster-randomized open-label multi-centered pragmatic randomized clinical trial</td>
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<tr>
<td>Inclusion Criteria</td>
<td>Adult patients with &lt; 6 week onset in neck or back pain</td>
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<tr>
<td>Exclusion Criteria (major)</td>
<td>Presence of red flag symptoms / signs</td>
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<td>Known opioid addiction</td>
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<td>Worker’s comp status</td>
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<tr>
<td>Treatment arms</td>
<td>1. Usual care</td>
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<td>2. Complementary Alternative Medicine (IPT)</td>
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<td>3. ICE Model</td>
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<tr>
<td>Outcome</td>
<td>1. Spine related utilization (patient report)</td>
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<td>2. Pain, function, quality of life, pain self efficacy (patient report)</td>
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</tbody>
</table>

**SPINE-CARE Trial Design and Timeline**
Eugene Hsu MD, MBA
Sarah Maltby MBBS
Larry Huan MD
Arthur Wood MD
Sierra Matula MD, MSHS

Thank You!