

Establishing a Transitional Pain Service

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**Canadian Anesthesiology Society
Montreal, Quebec
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University Health Network

Toronto General Hospital Toronto Western Hospital Princess Margaret Hospital

PRESENTER DISCLOSURE

- Dr. Hance Clarke Declares Relationships with the Following Commercial Interests:
 - Grants/Research Support: MOH, Scientus Pharma
 - Speakers Bureau/Honoraria: Abvie Corp, **Indivior**
 - Other: Employee of UHN Anesthesia Associates

Roadmap

- Results associated with the Transitional Pain Service
- Cost associated with running a TPS
- Evolution of the Transitional Pain Service



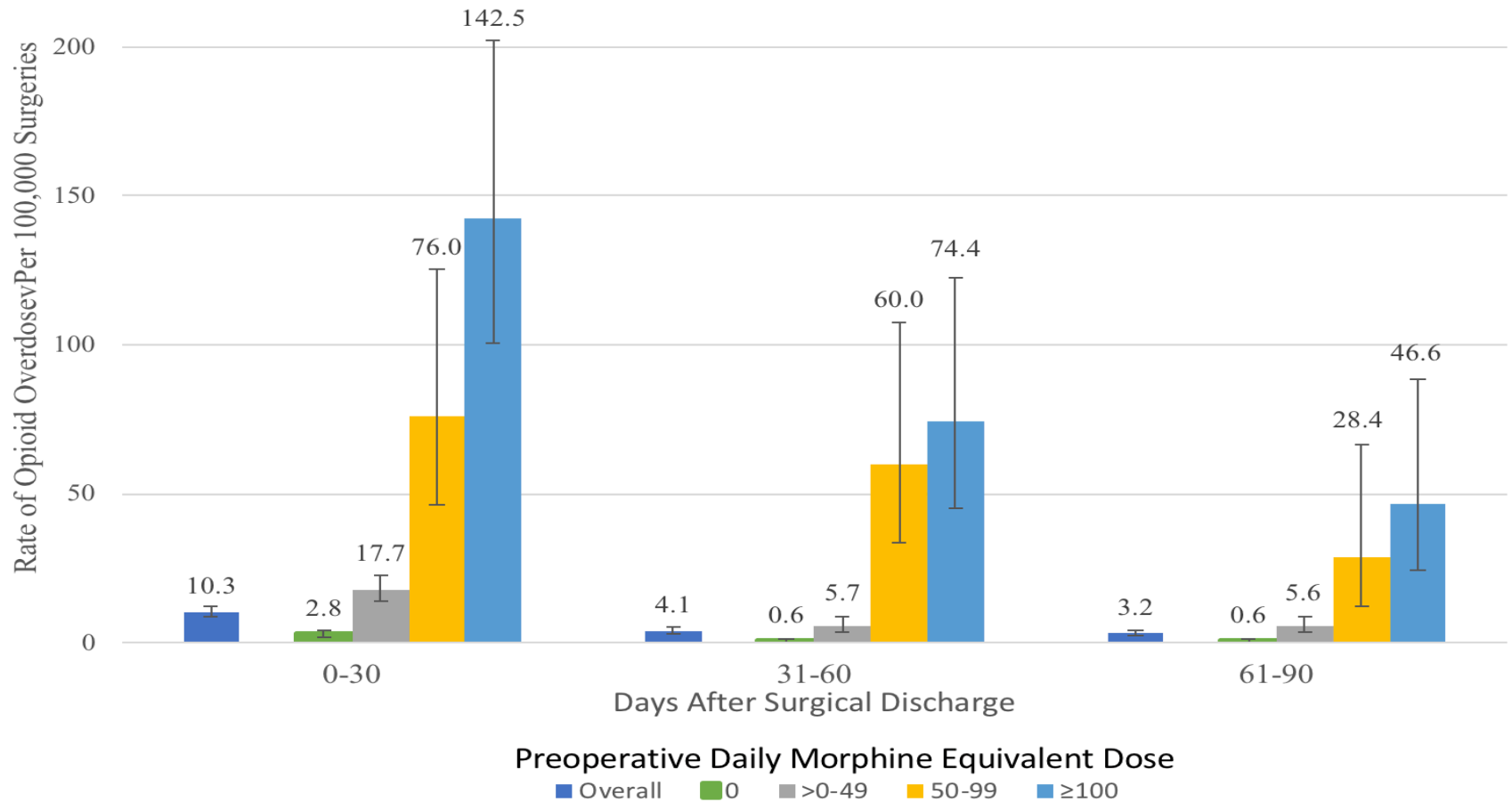
University Health Network

Toronto General Hospital Toronto Western Hospital Princess Margaret Hospital

Two Distinct Populations

- Non-Chronic Pain Patient (80 - 85%)
- Chronic Pain Patient / Persistent Opioid Patient (15 -20%)

Postoperative Opioid Overdose




Rate of Postoperative Opioid Overdose in Entire Cohort Stratified by Preoperative Daily Morphine Equivalent Dose

TGH Transitional Pain Program

Journal of Pain Research

Dovepress

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PERSPECTIVES

The Toronto General Hospital Transitional Pain Service: development and implementation of a multidisciplinary program to prevent chronic postsurgical pain

This article was published in the following Dove Press journal:

Journal of Pain Research

12 October 2015

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First of Its Kind Program Aims to Break the Chronic Pain Cycle

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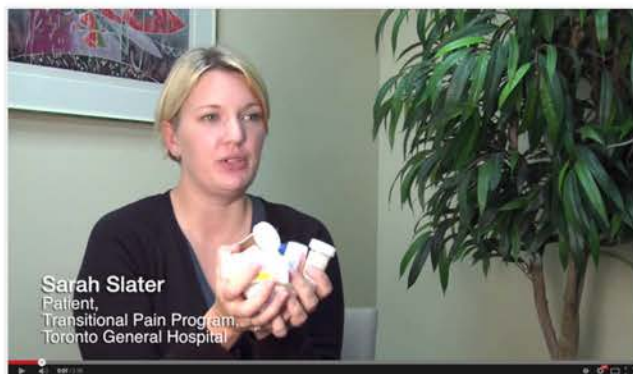
Toronto General Hospital program uses new methods to prevent pain killer addictions after surgery

Acupuncture, exercise, psychological techniques and non-opioid pain medications used to prevent patients from developing chronic pain.

TGH Transitional Pain Service



Transitional Pain Program - Expert Quote - Dr. Hance Clarke



Transitional Pain Program - Patient Profile - Sarah Slater



Goals: Transitional Pain Service

1. Modify trajectory of postoperative pain
2. Provide regular monitoring and safe weaning of opioids
3. Team-based approach to management of pain and return to baseline level of function
4. Facilitate safe discharge and transition from hospital to community.



Initial Ministry Funding

- 290K in 2014
- Stretched over 2 years
- Research / Clinical Database with REB Approval to Publish
- 2-3 years to demonstrate and publish
- We published 12 TPS related manuscripts within the first 2.5 years of starting the service

Transitional Pain Service Team

- APS Nurse Practitioner(s) /Physician
- Transitional Pain Service Co-ordinator
- Transitional Pain Service Admin Assistant
- Clinical Psychologist
- Social Worker(s) with various surgical services
- TPS (Acute / Chronic) Pain Physician

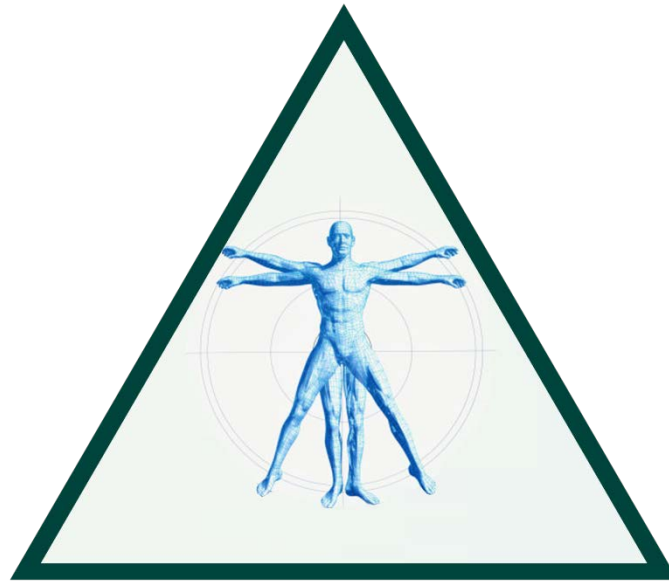
Referral Criteria for the TPS

- Psychological co-morbidities (Dr. Aliza Weinrib)
- Average NRS >5 on POD #4 / POD #5 and still on APS
- Repeat consult to APS post discharge from service
- Pre-operative Chronic Pain Diagnosis +/- chronic opioids
- > 80 mg of PO morphine in initial 24 hours after surgery
- Long acting opioid (hm-contin or oxyneo)
- Previous / Current addiction (case by case)
- Delayed D/C due to pain

Triad of Chronic Pain Treatment

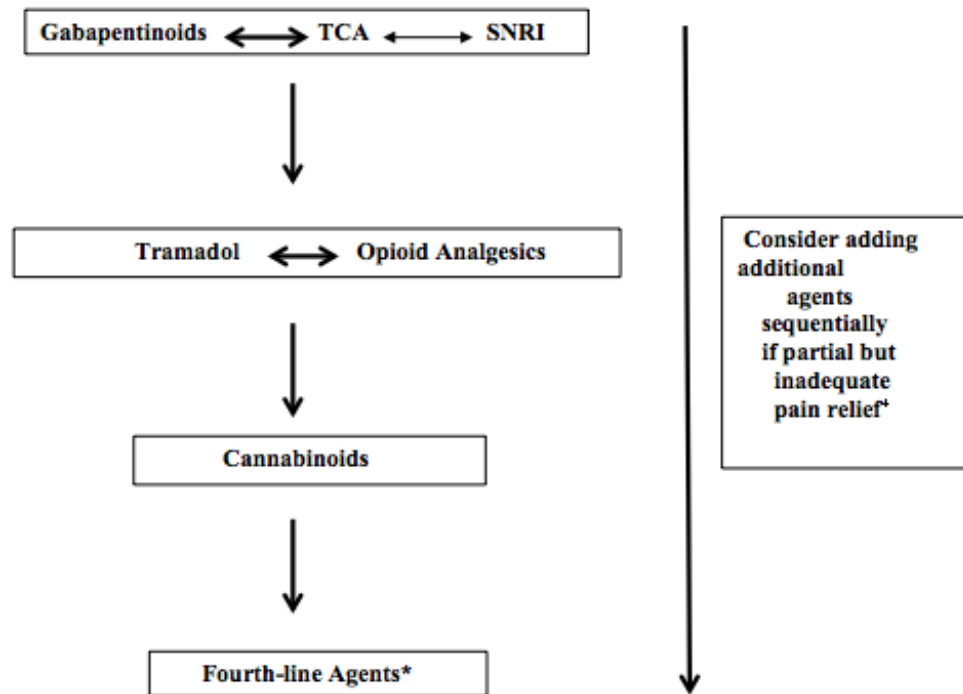
Physical / Rehabilitative

Psychological



Medical

New Chronic Neuropathic Pain Guidelines



Algorithm for the pharmacological management of neuropathic pain

*topical lidocaine(second-line for postherpetic neuralgia), methadone, lamotrigine, lacosamide, tapentadol, botulinum toxin

+ limited randomized controlled trial evidence to support add-on combination therapy

Acceptance and Commitment Therapy for Post-Surgical Pain

Better pain coping

*Less depression and
anxiety*

*Less medication
usage as appropriate*



ACCEPTANCE

- mindfully noticing pain
- watching thoughts
- accepting emotions
- accepting circumstances

COMMITTED ACTION

- taking manageable & consistent steps toward personal recovery goals
- choosing when to engage in activities based on values (rather than pain)

Better functioning

Less time in hospital

*More engaged in
physiotherapy*




Psychological Treatments for the management of postsurgical pain

Patient Related Outcome Measures

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REVIEW

Psychological treatments for the management of postsurgical pain: a systematic review of randomized controlled trials

This article was published in the following Dove Press journal:
Patient Related Outcome Measures



Judith L Nicholls¹
Muhammad A Azam^{1,2}
Lindsay C Burns^{1,2}
Marina Englesakis³
Ainsley M Sutherland¹
Aliza Z Weinrib^{1,2}
Joel Katz^{1,2,4}
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¹Pain Research Unit, Department of Anesthesia and Pain Medicine, Toronto General Hospital, ²Department of Psychology, York University, ³Library and Information Services, University Health Network, ⁴Department of Anesthesia, University of Toronto, Toronto, ON, Canada

Background: Inadequately managed pain is a risk factor for chronic postsurgical pain (CPSP) a growing public health challenge. Multidisciplinary pain-management programs with psychological approaches, including cognitive behavioral therapy (CBT), acceptance and commitment therapy (ACT), and mindfulness-based psychotherapy, have shown efficacy as treatments for chronic pain, and show promise as timely interventions in the pre/perioperative periods for the management of PSP. We reviewed the literature to identify randomized controlled trials evaluating the efficacy of these psychotherapy approaches on pain-related surgical outcomes.

Materials and methods: We searched Medline, Medline-In-Process, Embase and Embase Classic, and PsycInfo to identify studies meeting our search criteria. After title and abstract review, selected articles were rated for risk of bias.

Results: Six papers based on five trials (four back surgery, one cardiac surgery) met our inclusion criteria. Four papers employed CBT and two CBT-physiotherapy variant; no ACT or mindfulness-based studies were identified. Considerable heterogeneity was observed in the timing and delivery of psychological interventions and length of follow-up (1 week to 2–3 years). Whereas pain-intensity reporting varied widely, pain disability was reported using consistent

Demographics of TPS Patients

Demographic	Opioid Naïve (n = 111)	Non-Opioid Naïve (n = 139)	Significance Level (p) †
Age	49.0	52.4	0.063
Female	61 (55%)	50 (36%)	0.003*
# of TPS visits	5.6	5.8	0.187
Recreational drug use ††	16.2%	25.9%	0.07
Alcohol dependence	12.5%	17.3%	0.35
Smoking status			0.3
Past	45.3%	40.5%	
Current	19.8%	29.4%	
Comorbidities			
Chronic pain	35.8%	81.7%	0.0004**
Pulmonary disease	25.6%	22.2%	0.574
Heart failure	4.7%	7.9%	0.41
Diabetes	12.6%	21.6%	0.001*
Peptic Ulcer Disease	3.6%	8.6%	0.002*
GERD	34.2%	45.3%	0.004*

TPS = transitional pain service, GERD = gastroesophageal reflux disease

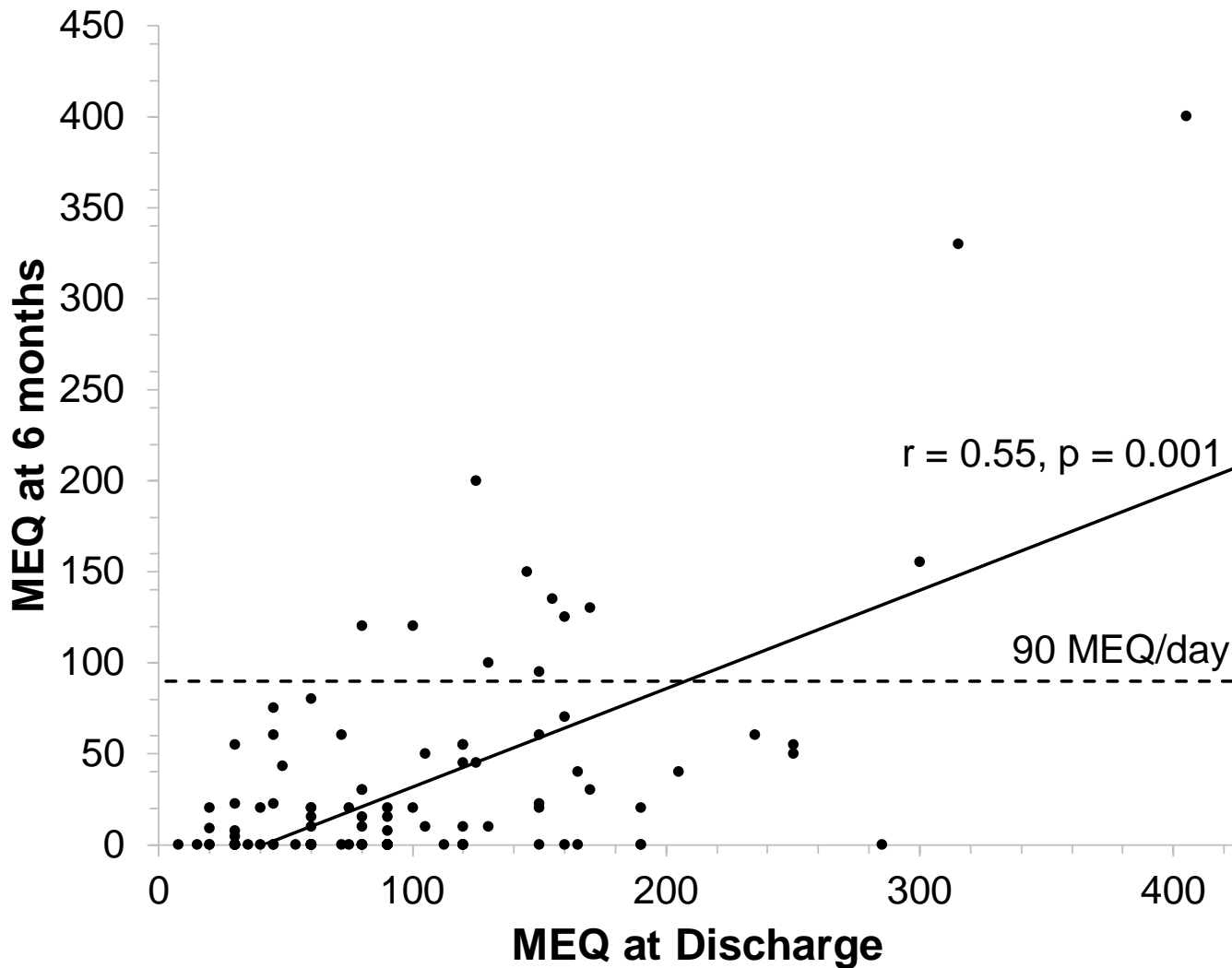
* $p < 0.005$

** $p < 0.0005$

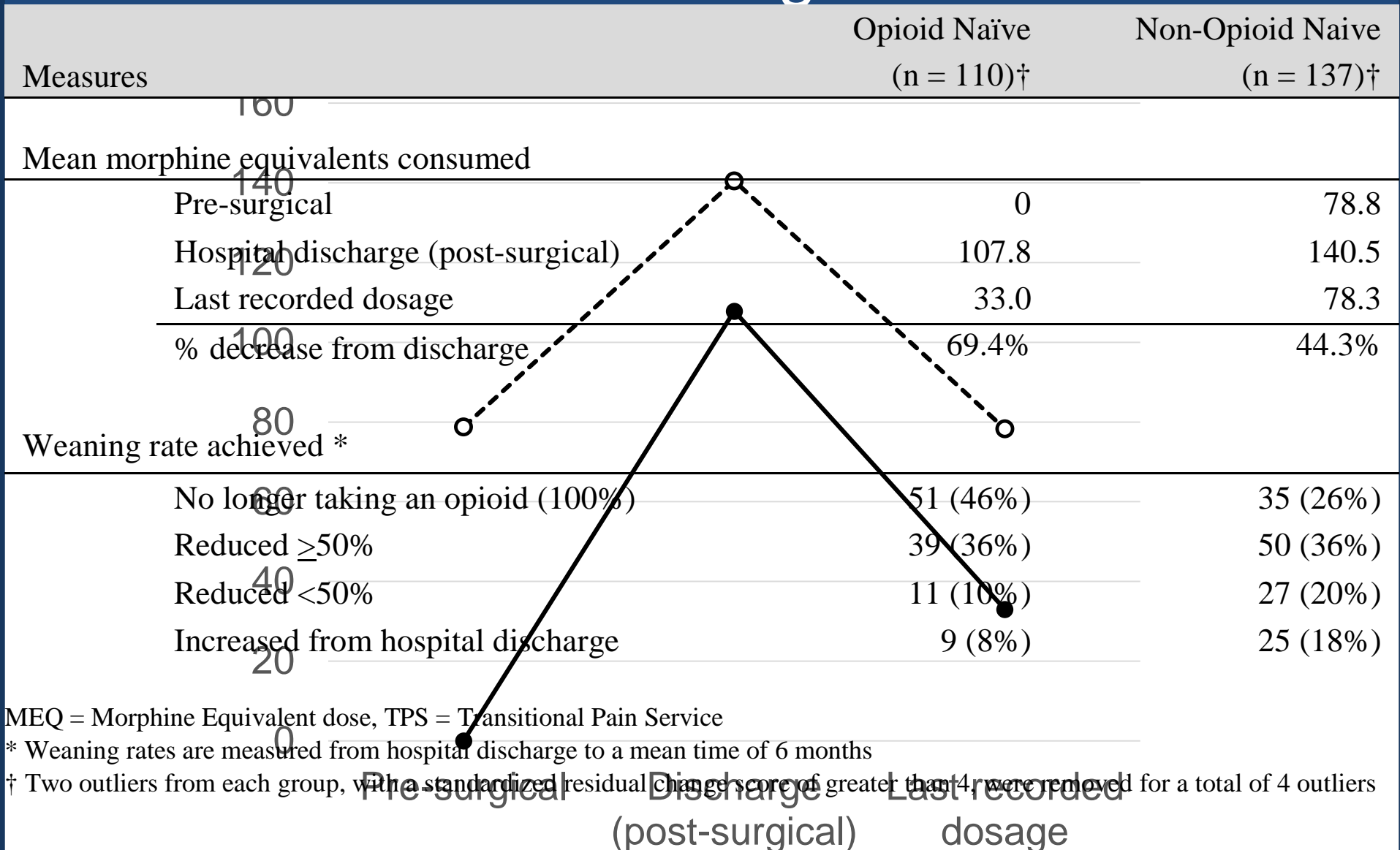
† Significance levels were compared using chi square with the exception of “Age” and “# of TPS Visits” (t-test)

†† Recreational drug use was self-reported non-prescription use of cannabis, cocaine, LSD, gabapentin, or unspecified

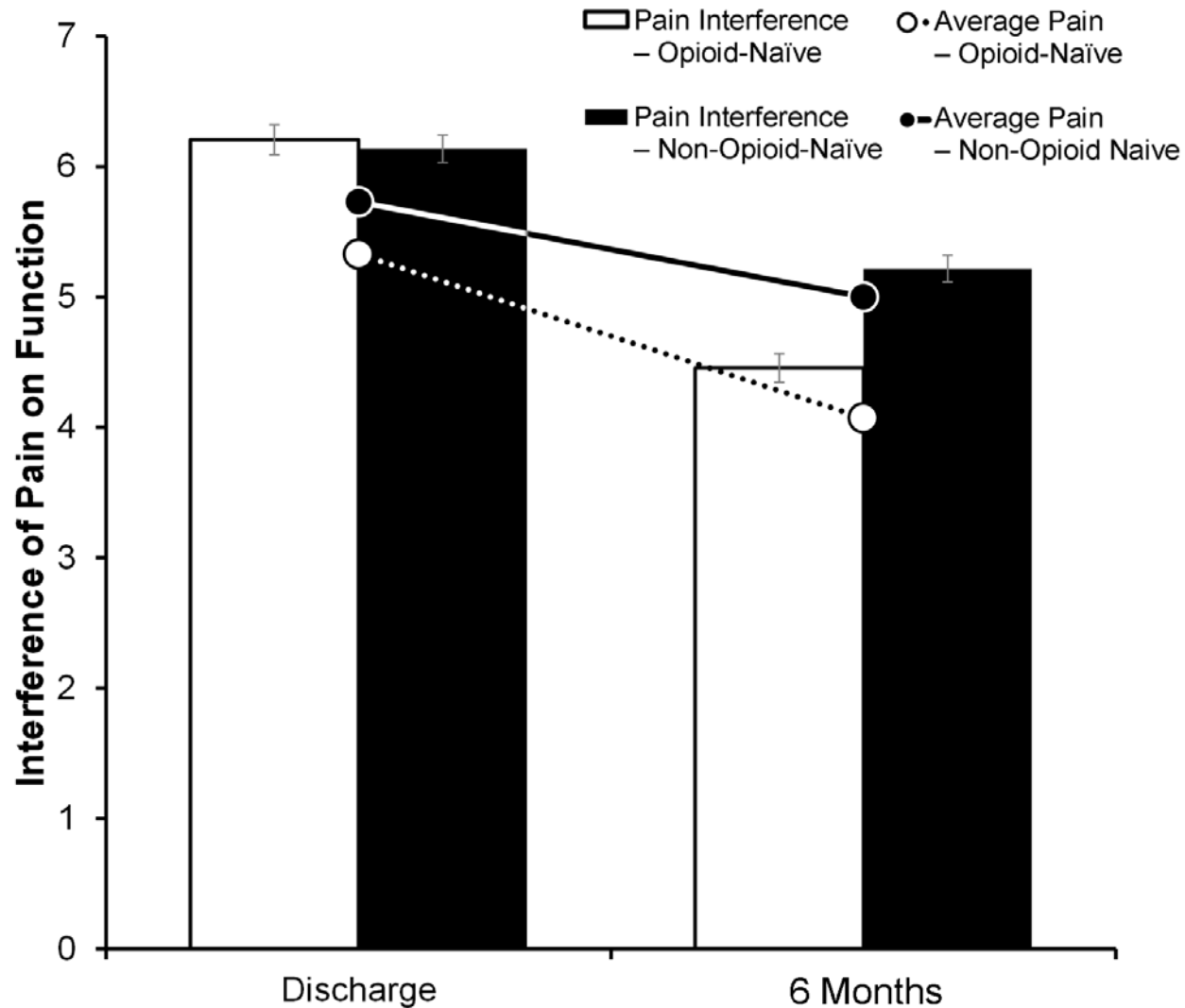
MEQ at Discharge Predicting Weaning Rates in Opioid-Naïve Patients



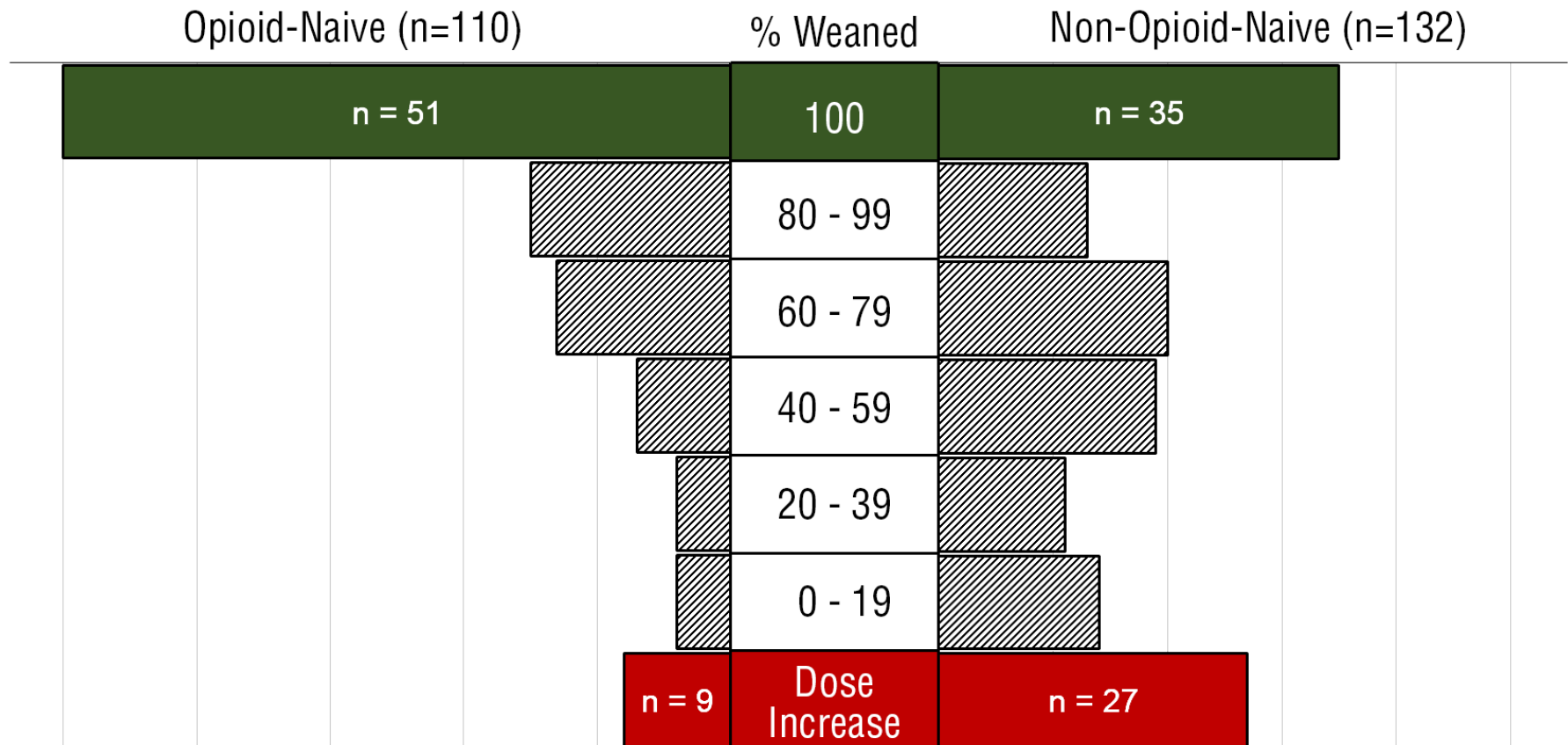
Summary of Opioid Consumption and Weaning Rates



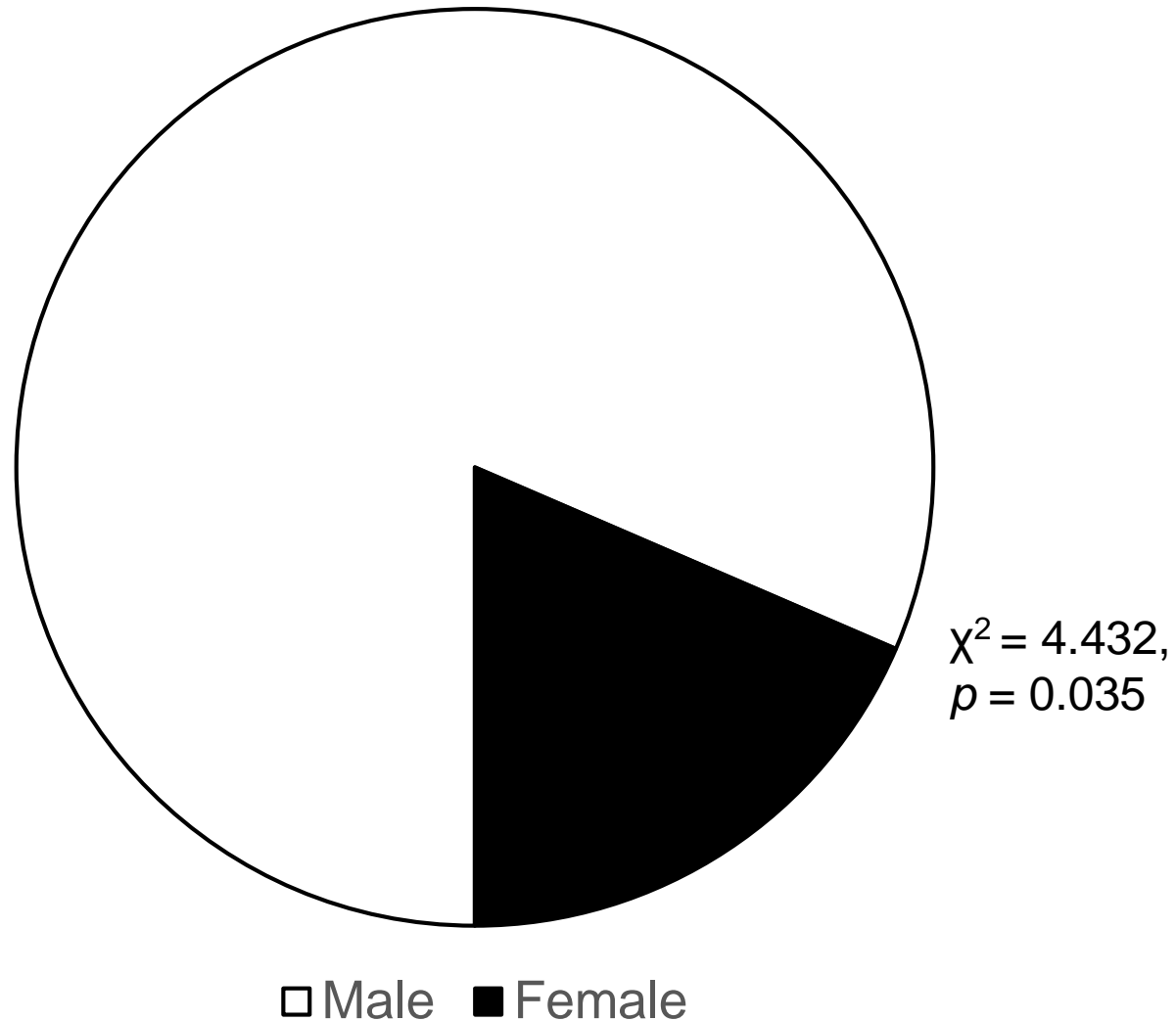
Maintenance of Pain Control of Function



TPS Postsurgical Opioid Weaning



Gender Difference in TPS Patients who *Increased* Opioid Consumption



Recoup Trial



(Reducing Opioid Use for Patients with Chronic Pain Following Surgery)



Recoup Trial Objectives

1. To determine whether the Transitional Pain Service Program is more effective in weaning patients off opioids than the control intervention without negatively affecting their experienced interference with daily activities due to pain
2. An economic and healthcare utilization analysis of the program via linkage to provincial administrative databases
3. A qualitative study of patient and provider perspectives of the intervention. The protocol for the qualitative portion of the research program is detailed in a separate document.

Outcome Measures

Primary Measures:

- Opioid weaning
- Brief Pain Inventory-Short Form (BPI-SF)

Secondary Measures:

- Patient Global Impression of Change (PGIC)
- Pain Intensity
- ID Pain Questionnaire
- Patient Health Questionnaire (PHQ)
- Pain Catastrophizing Scale (PCS)
- The Psychological Inflexibility Pain Scale (PIPS)
- Transitional Pain Patient Satisfaction Scale
- Opioid dose (during follow-up visits)
- Urinalysis (at baseline and 12 months)

**First of Its Kind Program Aims
to Break the Chronic Pain Cycle**

World First Transitional Pain Service

**Optimizing Care for
Complex Post-Surgical Pain Patients**



Dr. Hance Clarke



Dr. Joel Katz



Transitional Pain Service – Outcomes/Future Directions

1. 35 % of long-term opioid-users were weaned off opioids completely
2. TPS involvement resulted in:
 - ✓ better in-hospital pain control and a faster trajectory to mild pain
 - ✓ reduced hospital length of stay by 3 days
3. Tailored psychological interventions improved quality-of-life
4. Currently developing a Pain & Addiction Service for UHN in-patients

Chronic pain and i.v. drug use: Cost to Institution of poorly managed care

Patient Population*	No. of Cases	Avg. LOS (days)	Avg. PSS – Pharmacy	Avg. Total Direct Cost	Avg. Total Case Cost
Infective Endocarditis **	12	11	\$713	\$16,701	\$22,180
Infective Endocarditis + Chronic Pain / IVDU	2	44	\$3,472	\$54,045	\$72,093

Opioid Addiction and Weaning

Journal of Pain Research

Journal of Pain Research 2017:10 1–9

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CASE REPORT

A case report on the treatment of complex chronic pain and opioid dependence by a multidisciplinary transitional pain service using the ACT Matrix and buprenorphine/naloxone

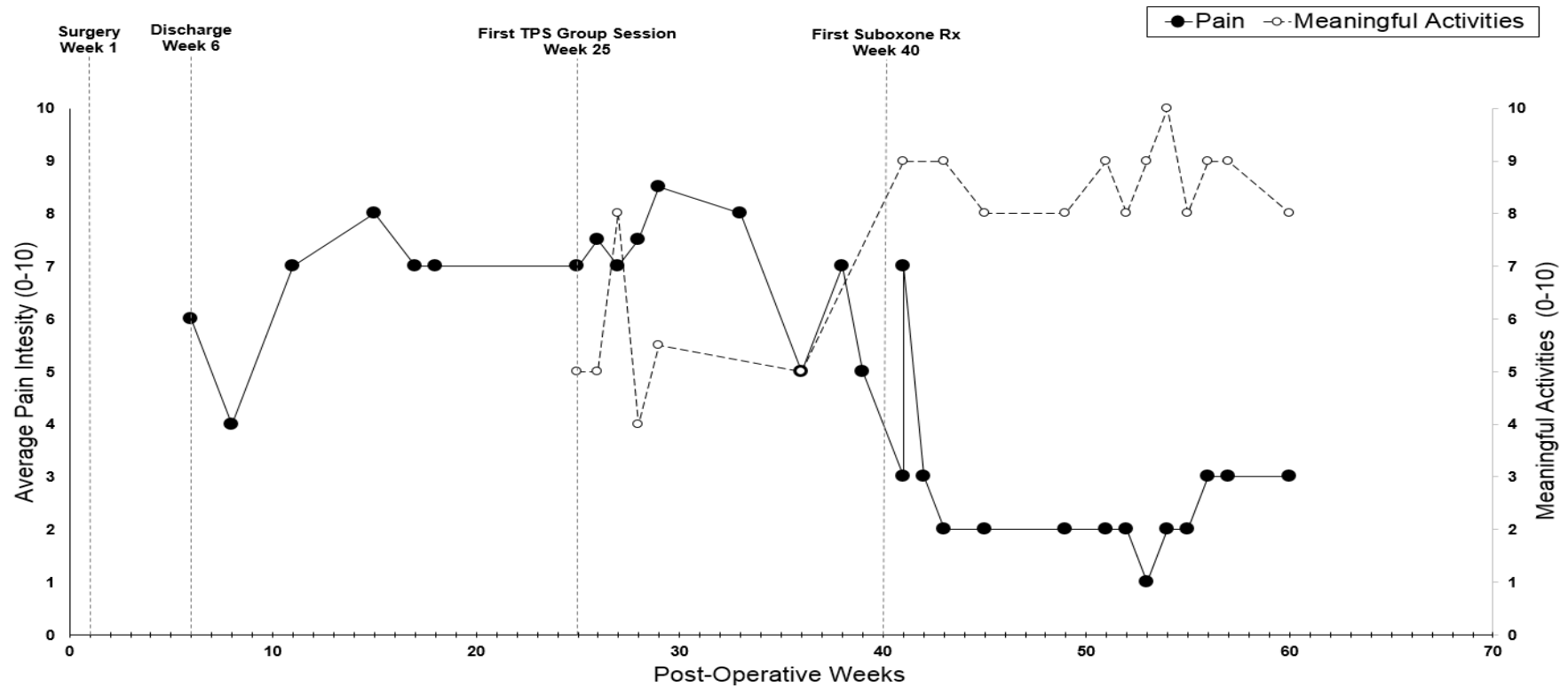
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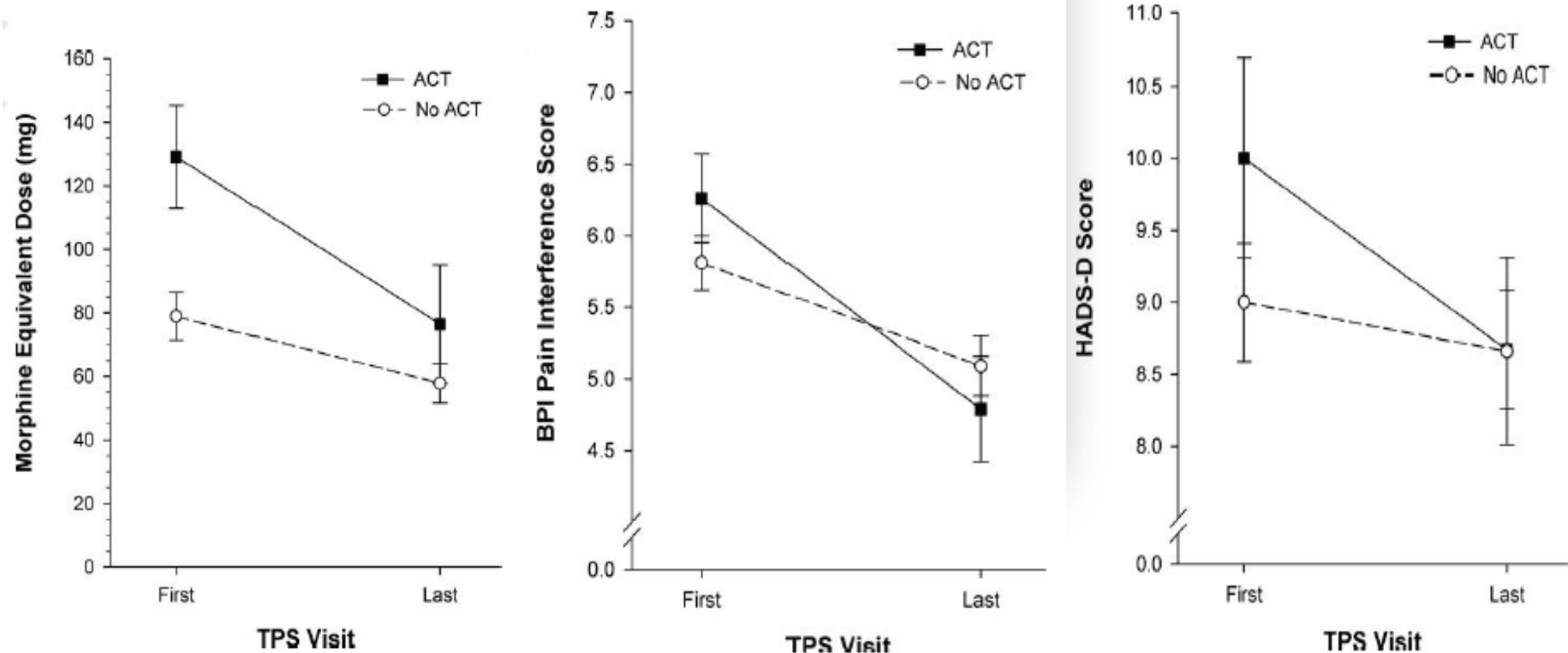
Opioid Weaning in a Long-Term Opioid Ptx



Acceptance and Commitment Therapy to manage pain and opioid use after major surgery: Preliminary outcomes from the Toronto General Hospital Transitional Pain Service

Muhammad Abid Azam ^{a,b}, Aliza Z. Weinrib^{a,b}, Janice Montbriand ^a, Lindsay C. Burns^{a,b}, Kayla McMillan^a, Hance Clarke^a, and Joel Katz ^{a,b}

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HQO Special Report: 1.3 Million New Prescriptions

2016	New starts	Prescriptions filled	Percentage of prescriptions filled that are new starts
Family doctors	600,549	6,882,720	8.7%
Dentists	222,001	298,722	74.3%
Surgeons	275,778	492,729	55.9%

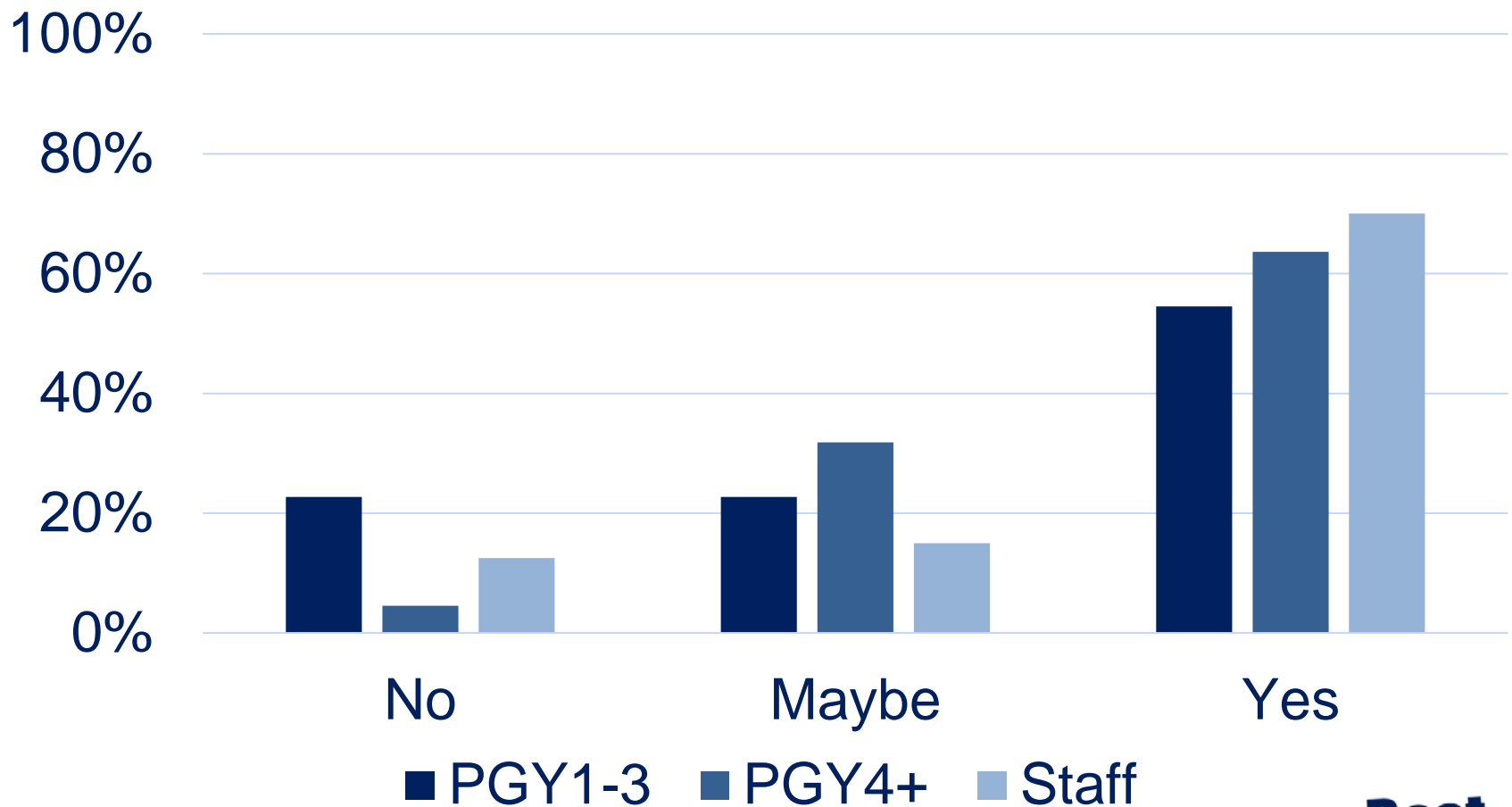
Among family doctors, about 9% of their prescriptions for opioids in 2016 were for new starts. Not surprisingly, new starts among dentists were much higher, at 74%, and among surgeons, new starts of opioids accounted for 56% of their total opioid prescriptions filled.

Opioid Death Tolls Increasing

Ontario's Ministry of Health has convened the following committees:

1. ISOPRAC Committee
2. Health Quality Ontario: Opioid Prescribing for adult and adolescent chronic Pain
3. Health Quality Ontario: Opioid Misuse Disorder
4. Health Quality Ontario: (new) Opioid prescribing for acute pain
5. Ontario Opioid Emergency Task Force
6. Health Quality Ontario: Chronic Pain Committee
7. HQO Postoperative Prescribing Scientific Committee: Hip and Knee

% who feel adequately educated to prescribe pain medications at discharge



- Root Problem:
- Pain Practice Current Standard

THE UNIVERSITY OF TEXAS
MD ANDERSON
CANCER CENTER

9 Follow-Up And Progress Notes

Pain Management Center-Follow-Up Visit

DATE 1/5/05

Temp: 37.1 Pulse: 65 Resp: 14 BP: 131/88 Wt: 110.6

Ambulatory: ☒ Yes ☐ No

Assistive Devices: _____

Pain / Chief Complaint: Fore-head, entire head, too, right eye

How long have you had this pain? Very long time, about 1996

Has pain changed in intensity and/or character since last visit? If yes, describe. Not much change was in emergency room New years eve for pain

Where is it located: (Shade diagram, mark worst spot(s) with an X)

PAIN SCALE: 0 1 2 3 4 5 6 7 8 9 10 Worst

Over the last week, rate:

Worst Pain: 0 1 2 3 4 5 6 7 8 9 10

Least Pain: 0 1 2 3 4 5 6 7 8 9 10

Usually: 0 1 2 3 4 5 6 7 8 9 10

Right Now: 0 1 2 3 4 5 6 7 8 9 10

Acceptable Level: 0 1 2 3 4 5 6 7 8 9 10 Low as possible

Current Medications: Allergies: Tetanus (swelling)

I. Medications

Name	Dose	Frequency	Side Effects	% Pain Relieved
Acetab. 10/500	1 every 4 hrs		none	0
Acetab	1 per day		none	
Toprol 100	1 per day		none	
furosemide	1 per day		none	
methadone	twice daily	(given in ER)	none	15%
dilaudid in pump	13 times daily		none	10%
II. Physical Therapy:	no	yes		
III. TENS Unit:	no	yes		
IV. Nerve Blocks:	no	yes		
V. Other:	no	yes. Specify		

Dilaudid Zolof 30mg 3 qday

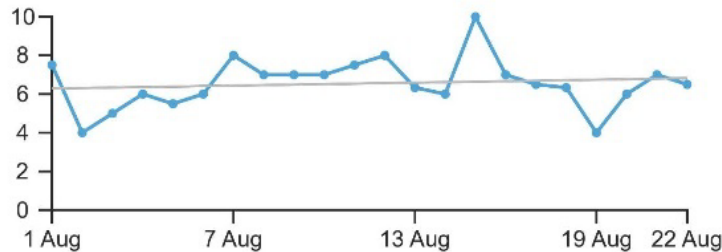
offered

Follow-Up and Progress Notes
File Under: Progress Notes/Dictated Reports

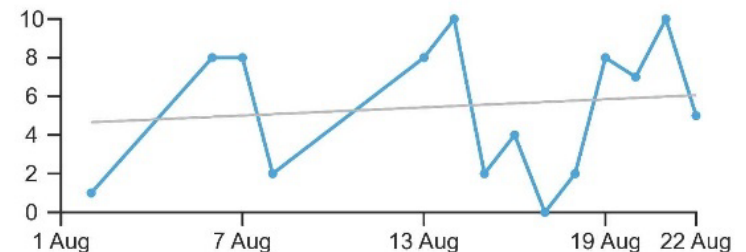
Imagine a better way

Trends

Average Severity: 6.6 ▲0.5
(43 Pain Records) ▲1



Average Function: 5.4 ▲0.9
(14 Daily Reflections) ▲2



Description

Duration

< 1h
1 – 3h
3 – 6h
6 – 12h

All day

Type of Pain

Intermittent

Constant

Meaningful Activities

Connected with supportive people online or through text ▲ 19% 69%
Bathed / Showered ▼ 24% 46%
Did an activity that I enjoyed ▼ 14% 46%

Location

Neck

▲ 14% 53%

Other Associated Symptoms

No Appetite

▲ 18% 73%

Characteristics

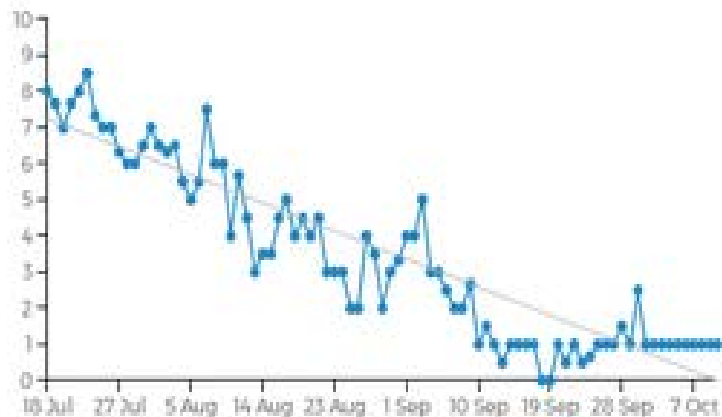
Aching

▲ 4% 82%

What are our goals of treatment?

Pain Severity

Daily Average Trend



Average Pain Severity

3.4 ▼ 3.9

1

Participants

155 ▲ 7

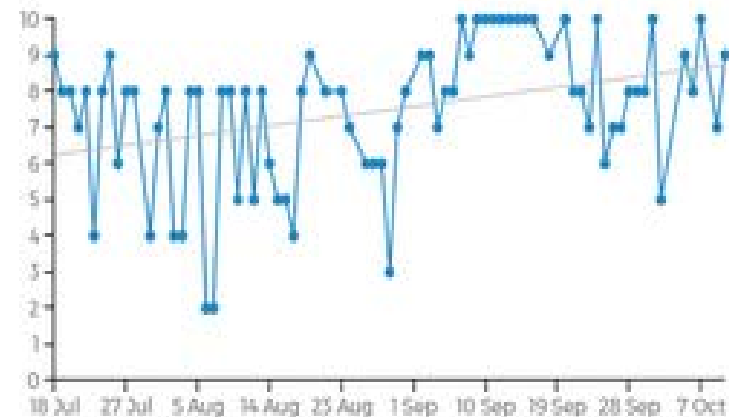
Total Pain Records

75 ▲ 32

Total Daily Reflection
Records

Function

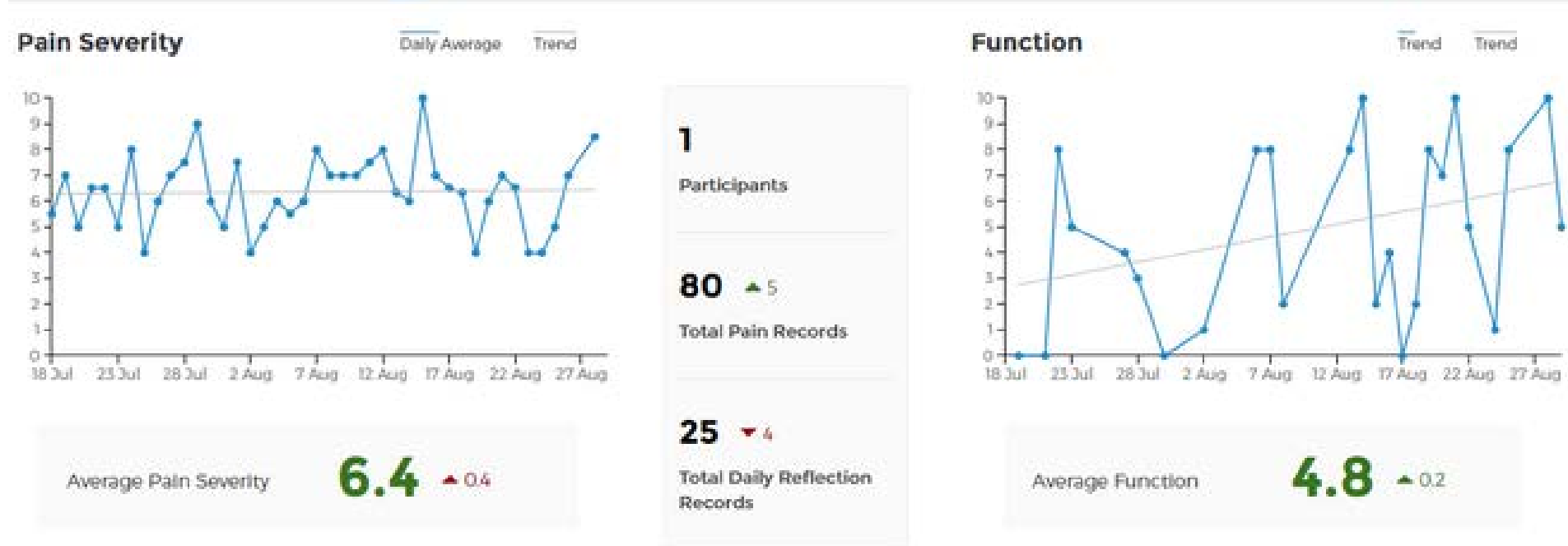
Trend Trend



Average Function

7.5 ▲ 0.6

This should be considered a success!



Budget TPS

Ministry Funded TPS Positions (200K):

1. Database Co-ordinator
2. Administrative Assistant
3. Clinical Psychologist (and Team)

Hospital Funded Positions (180K):

4. NP Acute Pain Service
5. NP Pain & Addiction

Creating a Transitional Pain Service

1. Start with your local business case
2. The Bare minimum for a TPS is an acute pain and chronic pain link
 1. Allied Health (psychologist) to deal with mental Health co-morbidities and a co-ordinator
 2. Create a clinical / research database
 3. Build it and they will come

Questions?

