PERSISTENT POST-SURGICAL PAIN

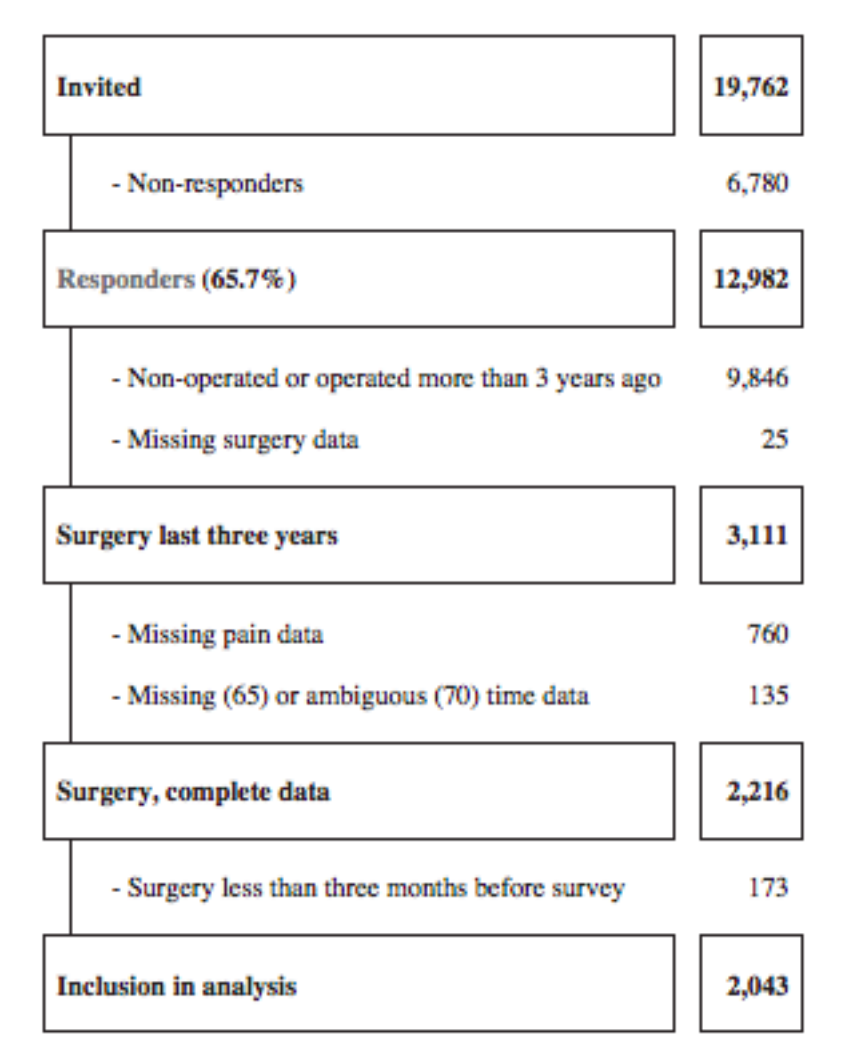
David Magee

08/11/2018

Objectives

- Persistent post-surgical pain
- Data from a cancer centre (Royal Marsden Hospital)
- Focus / Relevance to Acute Pain Services
- Transitional Pain Services
- Future research

Prevalence



Invited	**19,762**
- Non-responders	6,780
Responders (65.7%)	**12,982**
- Non-operated or operated more than 3 years ago	9,846
- Missing surgery data	25
Surgery last three years	**3,111**
- Missing pain data	760
- Missing (65) or ambiguous (70) time data	135
Surgery, complete data	**2,216**
- Surgery less than three months before survey	173
Inclusion in analysis	**2,043**

- Persistent pain 40.4%
- Moderate to severe-pain 18.3%

IASP

PAIN® 153 (2012) 1390–1396

PAIN®

www.elsevier.com/locate/pain

Persistent postsurgical pain in a general population: Prevalence and predictors in the Tromsø study

Aslak Johansen [a,*], Luis Romundstad [b], Christopher S. Nielsen [c], Henrik Schirmer [d], Audun Stubhaug [e]

How common is Pain?

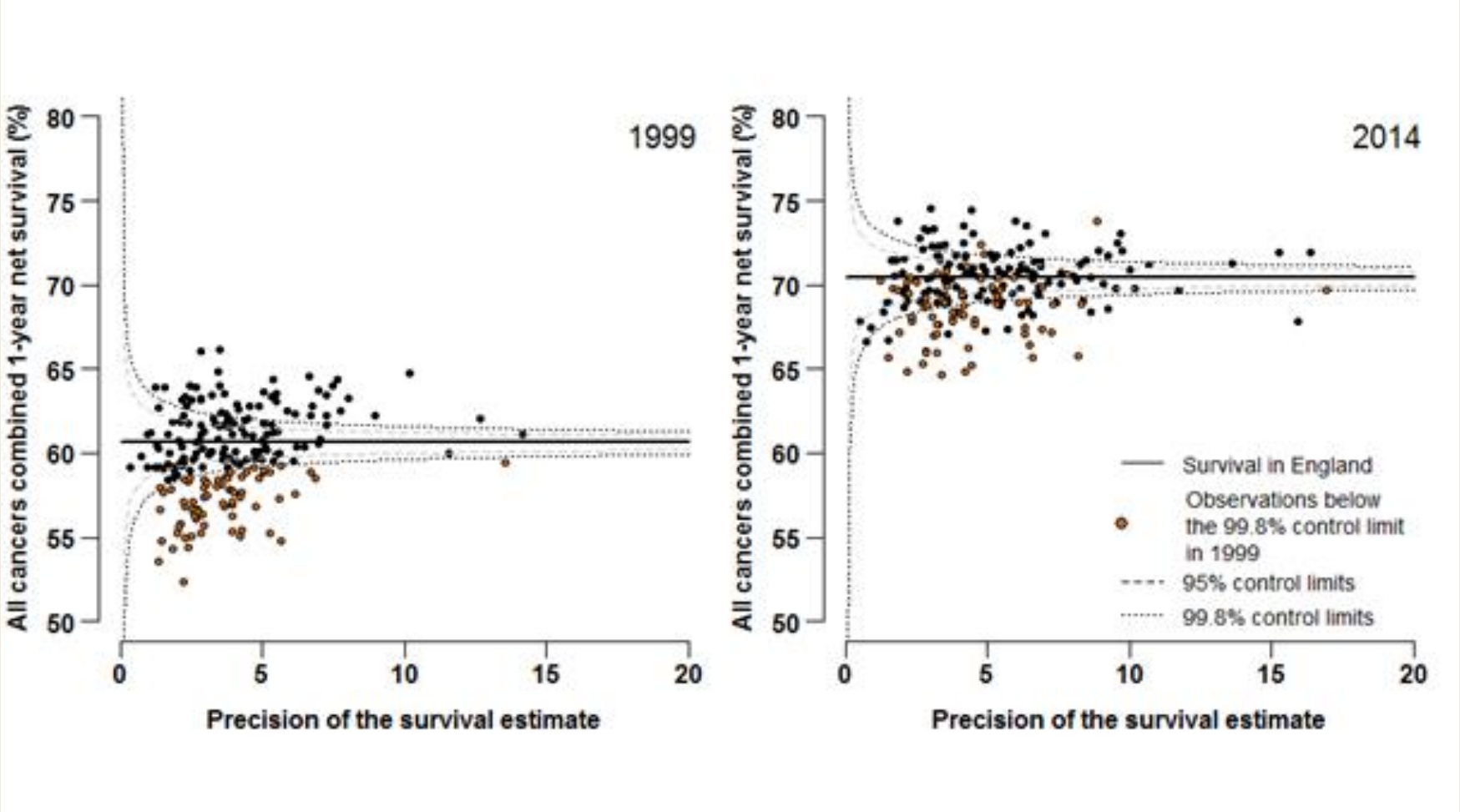
Review Article

Update on Prevalence of Pain in Patients With Cancer: Systematic Review and Meta-Analysis

Marieke H.J. van den Beuken-van Everdingen, MD, PhD, Laura M.J. Hochstenbach, MSc,
Elbert A.J. Joosten, PhD, Vivianne C.G. Tjan-Heijnen, MD, PhD, and Daisy J.A. Janssen, MD, PhD

- Advanced/metastatic = 66.4%
- During active treatment = 55.0%
- After curative treatment = 39.3%

Increasing cancer survivors



Office of National Statistics

Incidence

Procedure	Incidence of PPSP
Breast Surgery	20 – 50%
Limb amputation	50 – 85%
Hysterectomy	5 – 30%
Cardiac surgery	30 – 55%
Hernia repair	5 – 35%
Thoracotomy	5 – 65%

British Journal of Anaesthesia **107** (1): 25–9 (2011)
Advance Access publication 24 May 2011 · doi:10.1093/bja/aer116

BJA

Persistent postoperative pain: where are we now?

G. Niraj[1] and D. J. Rowbotham[2*]

[1] University Hospitals of Leicester, UK
[2] Department of Health Sciences, University of Leicester, UK
* Corresponding author: Department of Anaesthesia, Leicester Royal Infirmary, Leicester LE1 5WW, UK. E-mail: djr8@le.ac.uk

Proposed Criteria

BJA
British Journal of Anaesthesia
Volume 113, Number 1, July 2014

British Journal of Anaesthesia **113** (1): 1–4 (2014)
Advance Access publication 18 February 2014 · doi:10.1093/bja/aeu012

EDITORIAL I

Defining persistent post-surgical pain: is an update required?

M. U. Werner[1]* and U. E. Kongsgaard[2]

[1] Department of Neuroanaesthesia, Multidisciplinary Pain Center, Copenhagen University Hospitals, Rigshospitalet, Copenhagen, Denmark
[2] Division of Emergencies and Critical Care, Department of Anaesthesiology, Oslo University Hospital and Medical Faculty, University of Oslo, Oslo, Norway

* Corresponding author. E-mail: mads.u.werner@gmail.com

- Pain that develops, or increases in intensity, after a surgical procedure
- May be a continuation of acute post-surgery pain or develop after asymptomatic period
- Pain should be present for 3-6months duration
- Pain should significantly affect Quality of Life

Proposed Criteria

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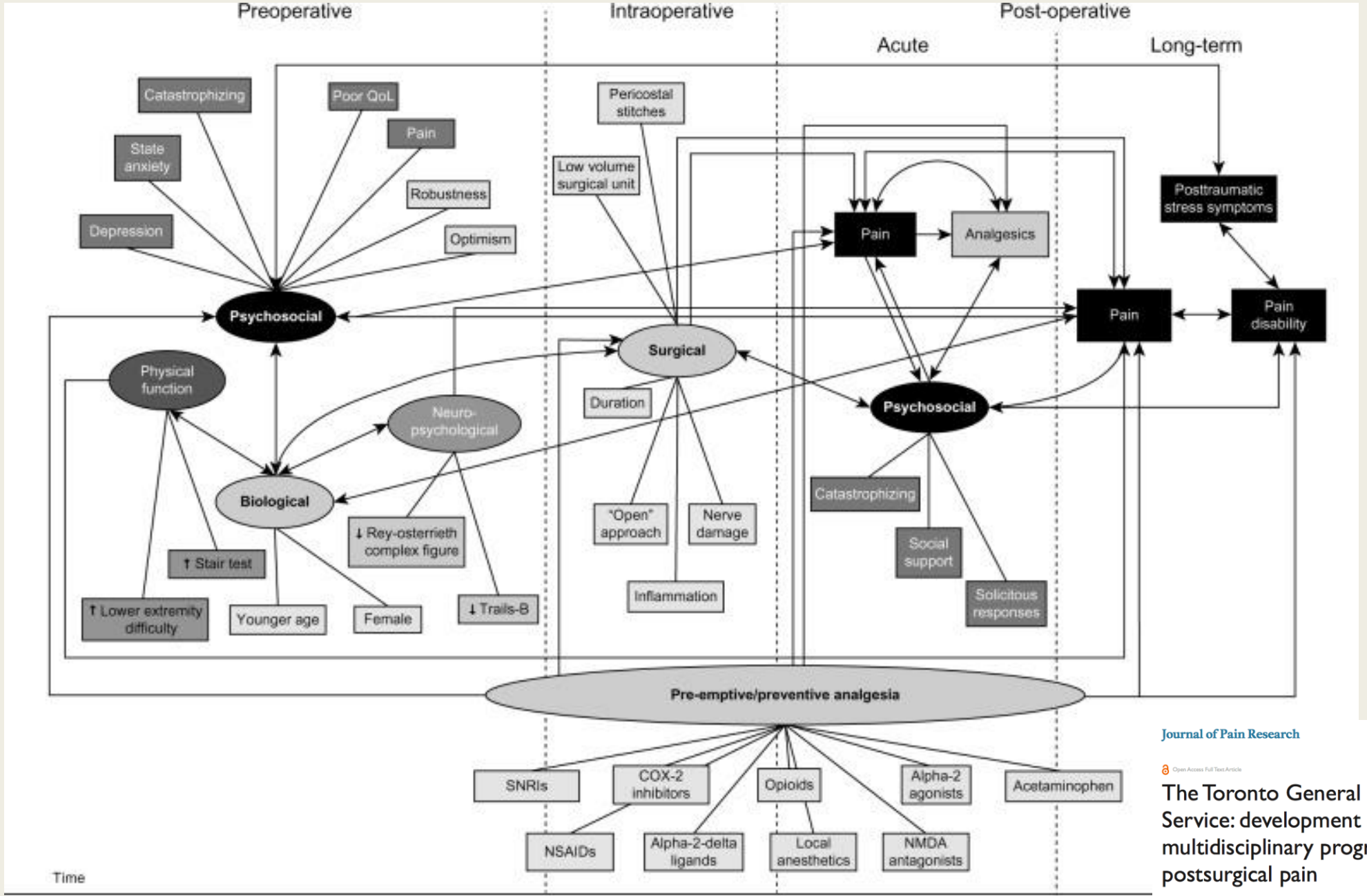
[2] Division of Emergencies and Critical Care, Department of Anaesthesiology, Oslo University Hospital and Medical Faculty, University of Oslo, Oslo, Norway

* Corresponding author. E-mail: mads.u.werner@gmail.com

- Pain location:
  - Within surgical field
  - Projected to the innervation territory of a nerve situated in the surgical field
  - Or referred to an appropriate dermatome
- Other causes excluded e.g. infection or continuing malignancy

Risk Factors for PPSP



Journal of Pain Research
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PERSPECTIVES

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

Royal College of Anaesthetists

PERIOPERATIVE MEDICINE

Prevention

British Journal of Anaesthesia **111** (5): 711–20 (2013)
Advance Access publication 28 June 2013 · doi:10.1093/bja/aet213

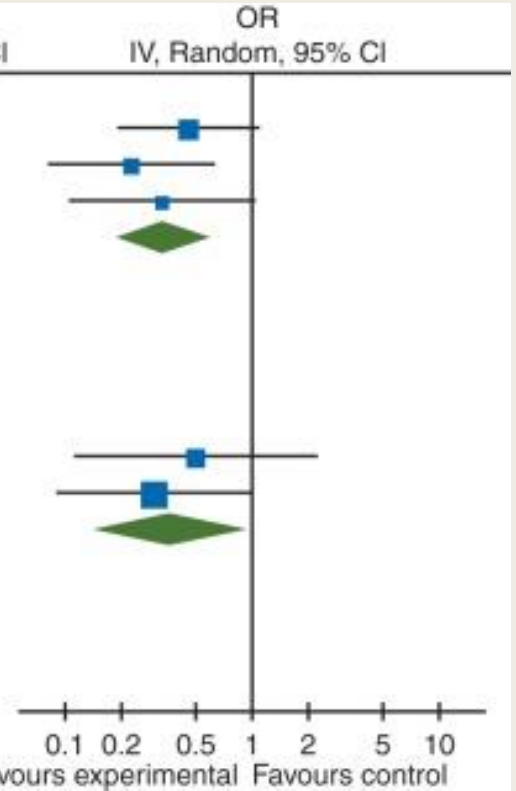
BJA

CME

Regional anaesthesia to prevent chronic pain after surgery: a Cochrane systematic review and meta-analysis†

M. H. Andreae[1]* and D. A. Andreae[2]

Study or subgroup	Favours regional Events	Total	Conventional pain control Events	Total	Weight	OR IV, Random, 95% CI
1.1.1 Thoracotomy (epidural analgesia)						
Ju 2008	26	48	31	43	43.4%	0.46 [0.19, 1.10]
Lu 2008	9	62	12	28	31.4%	0.23 [0.08, 0.63]
Senturk 2002	25	46	18	23	25.2%	0.33 [0.10, 1.04]
Subtotal (95% CI)		156		94	100.0%	0.34 [0.19, 0.60]
Total events	60		61			
Heterogeneity: τ^2=0.00; χ^2=1.04, df=2 (P=0.59); I^2=0%						
Test for overall effect: Z=3.69 (P=0.0002)						
1.1.2 Breast cancer surgery (paravertebral block)						
Ibarra 2011	5	15	7	14	39.3%	0.50 [0.11, 2.24]
Kairaluoma 2006	5	30	12	30	60.7%	0.30 [0.09, 1.00]
Subtotal (95% CI)		45		44	100.0%	0.37 [0.14, 0.94]
Total events	10		19			
Heterogeneity: τ^2=0.00; χ^2=0.27, df=1 (P=0.60); I^2=0%						
Test for overall effect: Z=2.09 (P=0.04)						



Current Situation in UK

Anaesthesia 2017, 72, 1237–1242 doi:10.1111/anae.14007

Original Article

A survey of acute pain services in the UK*

M. Rockett,[1] R. Vanstone,[2] J. Chand[3] and D. Waeland[4]

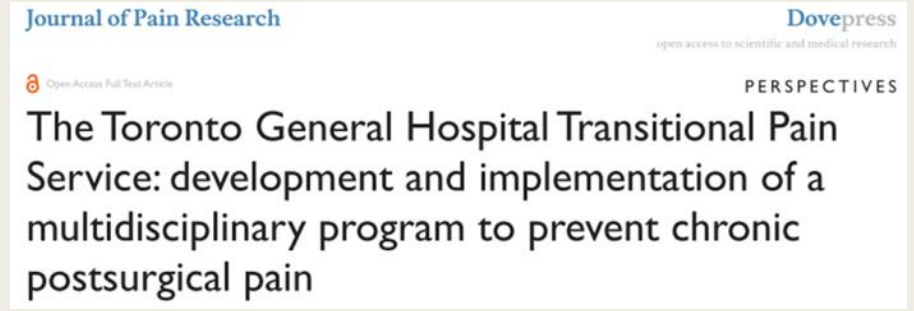
- Survey of 141 acute pain leads from hospitals across the UK

Current Situation in UK

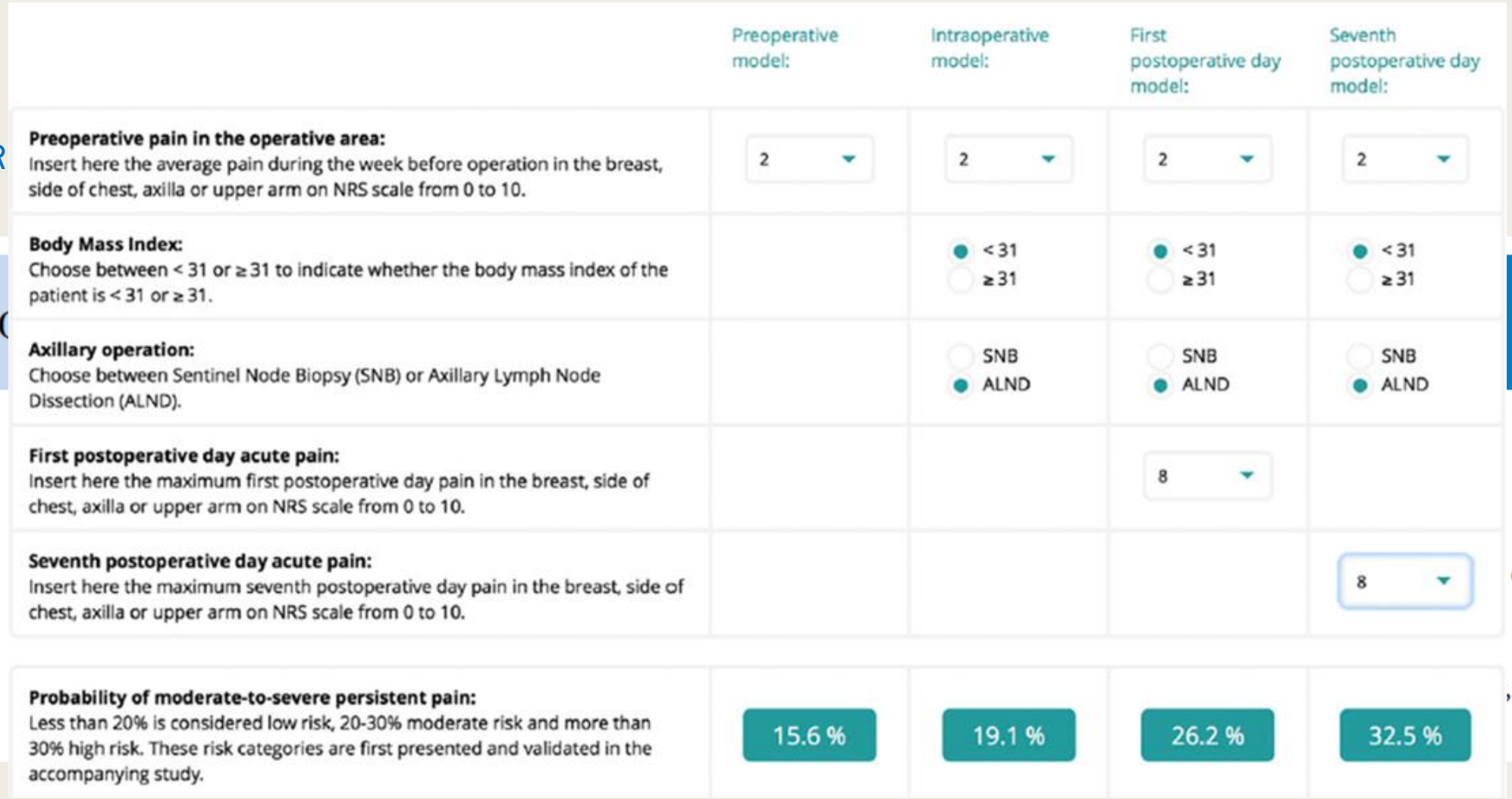
- 51% of acute pain leads perceived that acute and chronic services were not integrated
- 58% did not have any team members who worked in chronic pain clinics
- 95% of APS reviewed patients with chronic pain
- 12% had no access to advice on chronic pain management
- 1/3 of APS had additional roles – critical care outreach, vascular access & resus’

Components of a Transitional Pain Service – Common Themes

- Education
- Reassurance
- Normalisation of behaviour
- Risk stratification / prediction
- ‘Ownership’ and control of symptoms



Components of a Transitional Pain Service – Common Themes



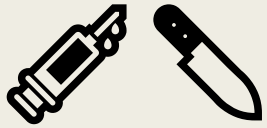
	Preoperative model:	Intraoperative model:	First postoperative day model:	Seventh postoperative day model:
Preoperative pain in the operative area: Insert here the average pain during the week before operation in the breast, side of chest, axilla or upper arm on NRS scale from 0 to 10.	2	2	2	2
Body Mass Index: Choose between < 31 or ≥ 31 to indicate whether the body mass index of the patient is < 31 or ≥ 31.		● < 31 ○ ≥ 31	● < 31 ○ ≥ 31	● < 31 ○ ≥ 31
Axillary operation: Choose between Sentinel Node Biopsy (SNB) or Axillary Lymph Node Dissection (ALND).		○ SNB ● ALND	○ SNB ● ALND	○ SNB ● ALND
First postoperative day acute pain: Insert here the maximum first postoperative day pain in the breast, side of chest, axilla or upper arm on NRS scale from 0 to 10.			8	
Seventh postoperative day acute pain: Insert here the maximum seventh postoperative day pain in the breast, side of chest, axilla or upper arm on NRS scale from 0 to 10.				8
Probability of moderate-to-severe persistent pain: Less than 20% is considered low risk, 20-30% moderate risk and more than 30% high risk. These risk categories are first presented and validated in the accompanying study.	15.6 %	19.1 %	26.2 %	32.5 %

http://www.hus.fi/breastsurgery/predictivemodel

Transitional Pain Service – Toronto Style CA

- Multi-disciplinary – Psychology, Pain physicians/nurse specialist, Physiotherapy
- Bespoke/personalised
- Utilise existing resource

Pre-operative period

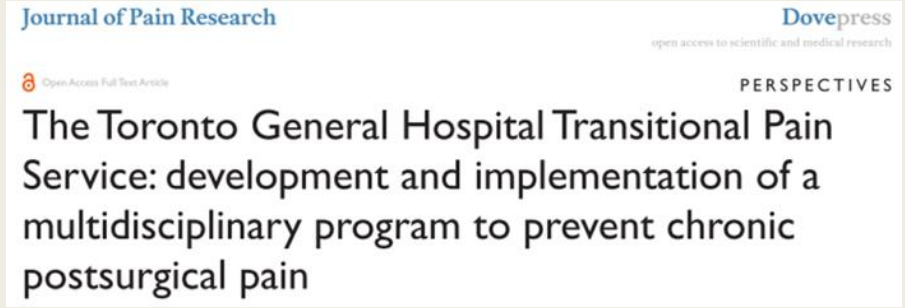


Peri-operative period

Post-operative period

AIMS:

- Seamless across patient journey
- Manage opioid medication
- Improve coping/functional levels post-surgery



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PERSPECTIVES

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

Transitional Pain Service – Toronto Style CA

Pre-operative assessment

Peri-operative period

Post-operative period

- ~ 12.5% identified with ‘Pain Alert’
- Subset of complex patients – ‘multidisciplinary management plan’
- Pre-surgical psychology led workshop (ACT)

- TPS referral if ↑ pain scores, ↑ opioid use, ↑ emotional distress
- Patient education, analgesia optimisation

- TPS coordinator makes contact within 3 days
- F/U in clinic within 2-3 weeks
- Opioid risk assessment +/- opioid contract
- Physiotherapy +/- acupuncture
- Psychological support (ACT)

Transitional Pain Service – Evidence

CANADIAN JOURNAL OF PAIN/REVUE CANADIENNE DE LA DOULEUR
2017, VOL. 1, NO. 1, 37–49
https://doi.org/10.1080/24740527.2017.1325317

Taylor & Francis
Taylor & Francis Group

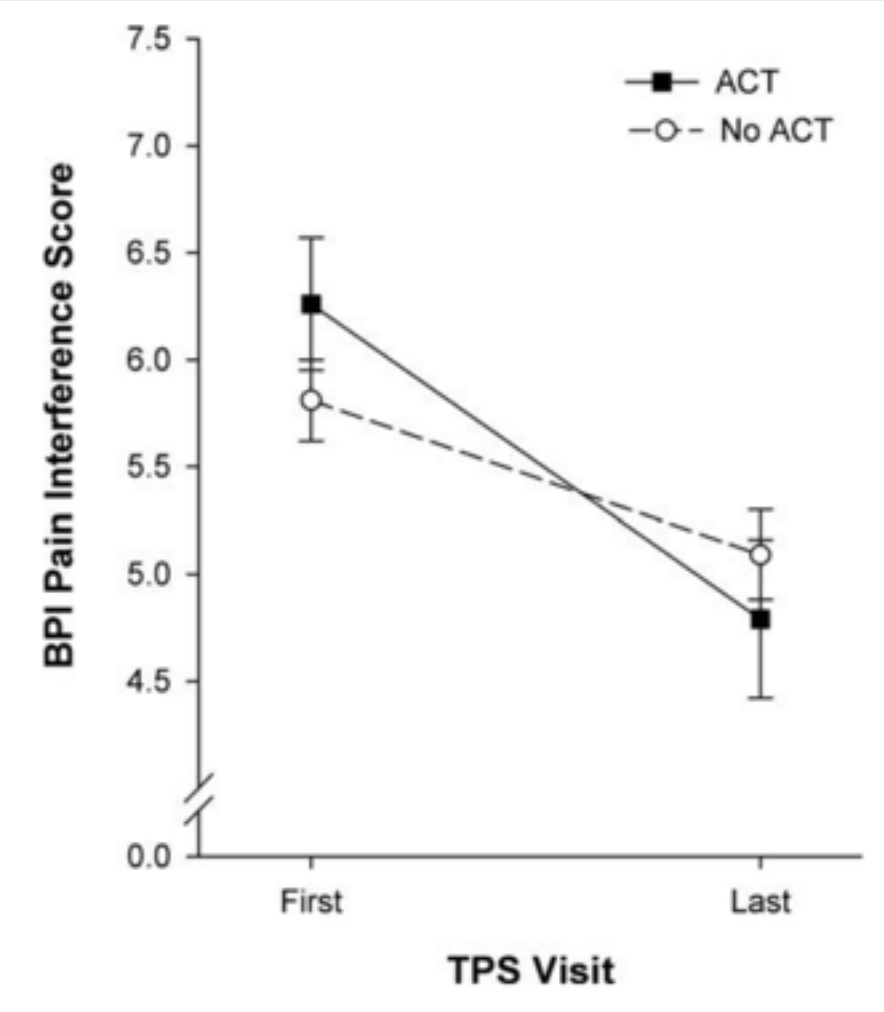
OPEN ACCESS Check for updates

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

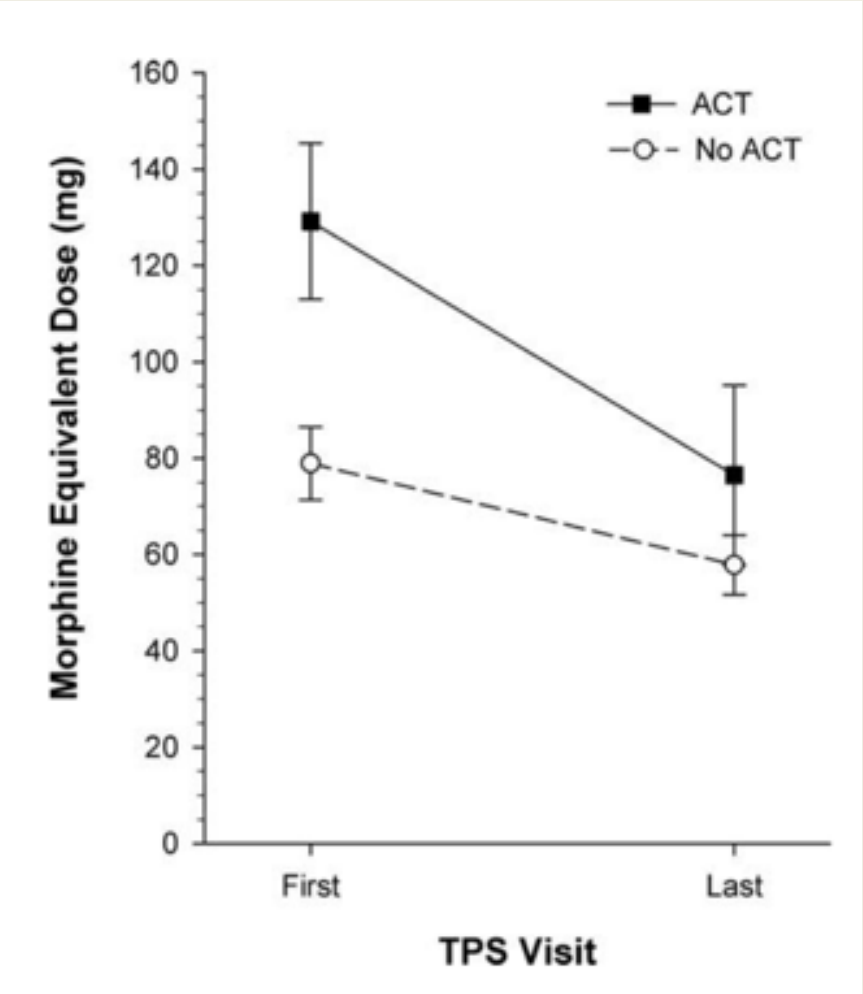
Muhammad Abid Azam [a,b], Aliza Z. Weinrib[a,b], Janice Montbriand [a], Lindsay C. Burns[a,b], Kayla McMillan[a], Hance Clarke[a], and Joel Katz [a,b]

- 382 patients – 91 referred for ACT psychological input;
    - Moderate to severe pain in the post-operative period
    - Assessed to have anxiety/depression or problem opioid use
    - Marked difficulty coping with post-surgical pain

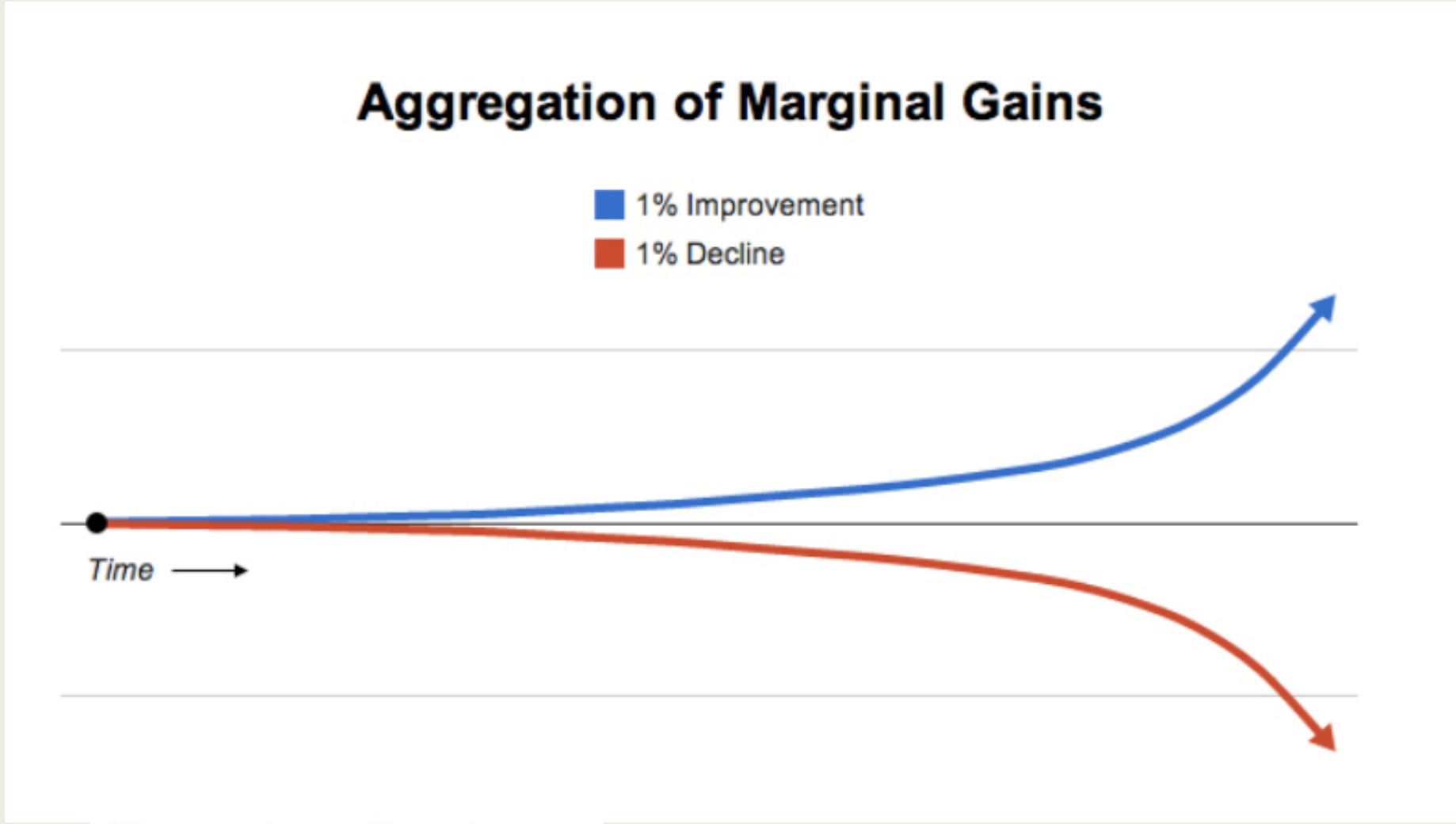
Transitional Pain Service – Evidence



P <0.01 – greater significant reduction in pain score



P <0.001 – greater significant reduction in MED



Surviving Sepsis Campaign

World Health Organization SURGICAL SAFETY CHECKLIST

Summary

- PPSP is common and debilitating

- It represents a large unmet clinical need

- Transition in the peri-operative period is implicated as a key factor

- Complex interventions enable a bundle of evidence-based treatments to be delivered to a target group
    - Challenging to implement
    - Means to address conditions with multi-factorial aetiologies