



# The Primary Spine Care Model: Front-end Efficiency in Workers' Comp

Donald R. Murphy, DC, FRCC

Clinical Assistant Professor, Dept of Family Medicine

Alpert Medical School of Brown University

Director of Clinical Pathways

Spine Care Partners

Director of Primary Spine Care

Ortho RI

Monday, March 25<sup>th</sup>, 2024

2:40-3:00pm

# Low Back Pain...

... “a 20th century medical disaster” –  
Gordon Waddell, MD, 1995

**Advances in the Management and Treatment of Back Pain**

**Viewpoint**

**Low back pain: a call for action**

Richard A. Deyo, MD, MPH, Sobal K. Mirza, MD, MPH, Judith A. Thibodeau, MD, MPH, Brook I. Martin, MPH

Chronic back pain is among the most common patient complaints. Its prevalence and burden have increased rapidly in recent decades. Advances in the management and treatment of back pain have been limited. We suggest a need for a better understanding of the basic science of pain mechanisms, more rigorous and independent trials of many treatments, a stronger regulatory stance toward approval and post-marketing surveillance of new drugs and devices for chronic pain, and a chronic disease model for managing chronic back pain. (J Am Board Fam Med 2009;22:62–68.)

Low back pain is the leading worldwide cause of years lost to disability and its burden is growing alongside the increasing and ageing population. Because these population shifts are more rapid in low-income and middle-income countries, where adequate resources to address the problem might not exist, the effects will be especially severe. Implementation of these programmes is especially urgent in some low-income and middle-income countries where increasing obesity rates and rapid industrial growth and consequent reductions in physical activity are occurring in urban areas. Health system and societal initiatives addressing low back pain should act in synergy to reduce the burden of low back pain.

**Trends in the Management and Treatment of Back Pain**

Carthy, PhD, MPH; Roger B. Davis, ScD; Bruce E. Landon, MD, MBA, MSc

Invited Commentary page 1581  
Supplemental content at [jamainternalmedicine.com](http://jamainternalmedicine.com)

Using nationally representative data from the National Ambulatory Medical Care Survey and the National Hospital Ambulatory Medical Care Survey, we identified visits with a chief symptom and/or primary diagnosis of back or neck pain with secondary symptoms and diagnoses of back or neck pain. We identified “red flags,” including fever, neurologic symptoms, or cancer, using logistic regression adjusted for patient and health care characteristics and weighted to reflect national estimates. We also present estimates of the proportion of visits identified by symptom duration and whether the health care professional was the primary care physician (PCP).

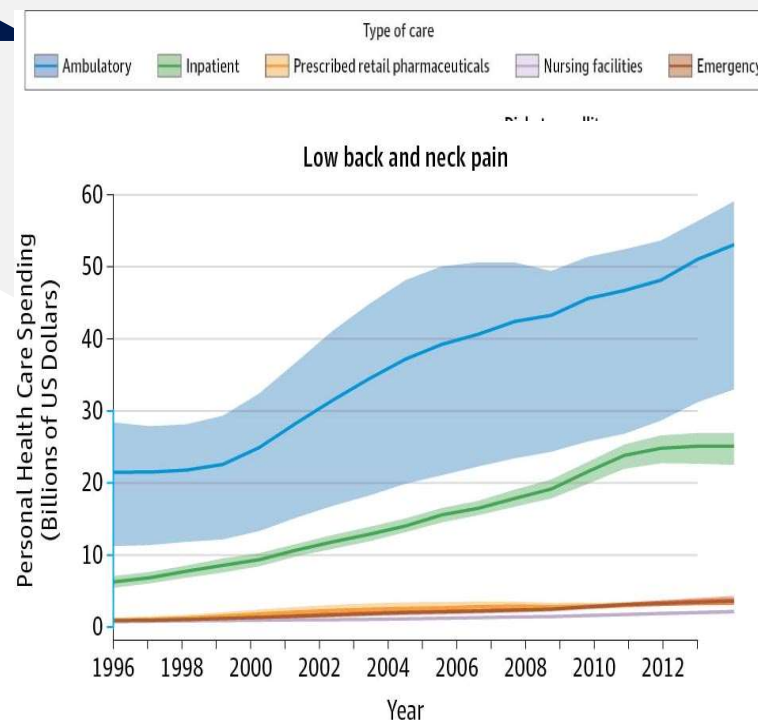
## And it's gotten worse!

- 2000–2004: 105<sup>th</sup> in disability
- 2013: 3<sup>rd</sup> in costs

### Yes, worse!

- 2000–2004: 105<sup>th</sup> in disability
- 2013: 3<sup>rd</sup> in costs

- Now #1 in both!



Buchbinder R, et al. Placing the global burden of low back pain in context. *Best Pract Res Clin Rheumatol*. 2013 Oct;27(5):575-89.

Dieleman JL, et al. US Spending on Personal Health Care and Public Health, 1996-2013. *Jama*. 2016 Dec 27;316(24):2627-46.

Dieleman JL, Cao J, Chapin A, Chen C, Li Z, Liu A, et al. US Health Care Spending by Payer and Health Condition, 1996-2016. *Jama*. 2020 Mar 3;323(9):863-84.

# Solutions?

- Yes!
- Thinking “outside the box”

# The “First Contact” determines downstream results

- Transition from acute LBP to chronic LBP independently results from:
  - Early opioid
  - Early imaging
  - Early specialist (physiatrist, orthopedist, neurologist, neurosurgeon, or pain specialist)

Stevans JM et al. Risk Factors Associated With Transition From Acute to Chronic Low Back Pain in US Patients Seeking Primary Care. JAMA Netw Open. 2021 Feb 1;4(2):e2037371

## The “First Contact” determines downstream results

Odds of having surgery based on first provider seen:

- Surgeon first: OR 8.69 (95% CI 5.03-15.01)
- Occ Med or Chiro first: OR  $\leq$  1.39 (95% CI 0.67-2.87)
- Controlled for severity

Keeney BJ, et al. Early predictors of lumbar spine surgery after occupational back injury: results from a prospective study of workers in Washington State. Spine 2013;38(11):953-64.

## The “First Contact” determines downstream results

- Seeing a PT first leads to:
  - Lower total costs
  - Decreased likelihood of opioid
  - Decreased likelihood of imaging



Denninger TR et al. The Influence of Patient Choice of First Provider on Costs and Outcomes: Analysis From a Physical Therapy Patient Registry. The Journal of orthopaedic and sports physical therapy. 2018 Feb;48(2):63-71



# **Cost and Disability in Workers Comp**

## **Workers Compensation Research Institute**



**Donald R. Murphy, D.C., FRCC** chiropractic physician and clinical assistant professor, Dept of Family Medicine, Alpert Medical School of Brown University



**Dongchun Wang** is an economist with WCRI



**Kathryn Mueller, M.D.**, professor at the Colorado School of Public Health and former medical director, Division of Workers' Compensation in Colorado



**Randall Lea, M.D.**, orthopedic surgeon and senior research fellow at WCRI



# Exclusive Chiropractic Care Associated With Lower Costs And Shorter Temporary Disability Duration

	Exclusive Chiropractic Care	<u>Matched</u> Non-Chiropractic Physical Medicine (Subset 1)	% Difference
Overall Medical Costs Per Claim	\$1,491	\$2,794	- 47%*
Indemnity Payments Per Claim	\$809	\$1,250	- 35%*
Temporary Disability Duration In Weeks Per Claim	1.4	1.9	- 26%*

\* Statistically Significant At 5%

## Other studies have found in WC:

- Seeing a chiropractor first leads to
  - Shorter duration of disability
  - Decreased likelihood of recurrence

Controlled for severity

Blanchette MA et al. Association Between the Type of First Healthcare Provider and the Duration of Financial Compensation for Occupational Back Pain. Journal of occupational rehabilitation. 2017 Sep;27(3):382-92.

Cifuentes M, Willetts J, Wasiak R. Health maintenance care in work-related low back pain and its association with disability recurrence. J Occup Environ Med 2011;53(4):396-404



## What it comes down to:

- The “3 deadly sins” in primary care increase risk of becoming chronic:
  - Early opioid
  - Early imaging
  - Early specialist (physiatry, ortho, neuro)

Stevans JM et al. Risk Factors Associated With Transition From Acute to Chronic Low Back Pain in US Patients Seeking Primary Care. JAMA Netw Open. 2021 Feb 1;4(2):e2037371

## What it comes down to:

- Seeing a DC or PT first decreases likelihood of the “3 deadly sins”:
  - Less likelihood of opioid
  - Less likelihood of injections
  - Less likelihood of surgery
- Plus
  - Lower costs
  - Shorter duration of disability
  - Earlier RTW



# The challenge of Chiropractic Medicine and Physical Therapy:

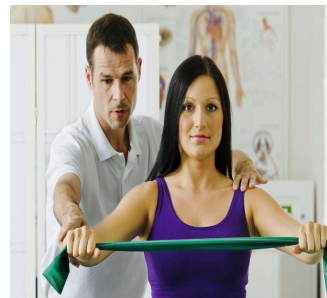
- High variation
- “You never know what you’re gonna get”
- Little standardization of approaches
- Some follow guidelines, others don’t

Cupler ZA et al. Associations between demographics and clinical ideology, beliefs, and practice patterns: a secondary analysis of a survey of randomly sampled United States chiropractors. BMC Complement Med Ther. 2023;23(1):404

## Institute of Medicine has called for a “retooling” of the existing workforce

- “...make better use of the existing health workforce”
- To make new, innovative roles
- “thinking outside the box”

Dower C, et al. It is time to restructure health professions scope-of-practice regulations to remove barriers to care. *Health Affairs* 2013;32(11):1971-6



# Primary Spine Practitioner (PSP)

- Primary care for patients with spine problems



The Spine Journal 1 (2001) 307–309

Editorial

Assisting patients in their choice of treatment options:  
a primary goal of all spine care clinicians

Scott Haldeman, DC, MD, PhD

In the twenty-first century, patients have the desire and the right to influence the type of care they will receive. Unfortunately, at this point in time, the treatment options for patients with spinal pain are so wide and varied that choosing the right treatment is difficult. Patients may seek advice

To make matters more difficult, there does not appear to be a clear winner in the race to become the dominant treatment approach for patients with spinal pain. A recent study by Hansson and Hansson [1] described a prospective cohort of patients from six countries who had received a variety of



The Spine Journal 17 (2017) 1570–1574



A proposal to improve health-care value in spine care delivery:  
the primary spine practitioner

Christine M. Goertz, DC, PhD<sup>a,b,\*</sup>; William B. Weeks, MD, PhD, MBA<sup>a,c,d</sup>; Brian Justice, DC<sup>e,f</sup>,  
Scott Haldeman, MD, PhD, DC<sup>g</sup>

<sup>a</sup>Palmer College of Chiropractic, Palmer Center for Chiropractic Research, 741 Brady St, Davenport, IA 52803, USA

<sup>b</sup>The Spine Institute for Quality, PO Box 4731, Davenport, IA 52808, USA

<sup>c</sup>Geisel School of Medicine at Dartmouth, 1 Rope Ferry Rd, Hanover, NH 03755, USA

<sup>d</sup>The Dartmouth Institute for Health Policy and Clinical Practice, 1 Medical Center Drive, Lebanon, NH 03766, USA

<sup>e</sup>Excelsus Blue Cross Blue Shield, 165 Court St, Rochester, NY 14647, USA

<sup>f</sup>Spine Care Partners, LLC, 1687 English Rd, Rochester, NY 14616, USA

<sup>g</sup>World Spine Care, 17602 17th St, Suite 102-263, Tustin, CA 92780, USA

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Murphy et al.  
Chiropractic & Manual Therapies (2022) 30:6  
<https://doi.org/10.1186/s12998-022-00414-8>

Chiropractic &  
Manual Therapies

COMMENTARY

Open Access

## The primary spine practitioner as a new role in healthcare systems in North America

Donald R. Murphy<sup>1</sup>, Brian Justice<sup>2</sup>, Christopher G. Bise<sup>3</sup>, Michael Timko<sup>4</sup>, Joel M. Stevans<sup>5</sup> and Michael J. Schneider<sup>5\*</sup>

### Abstract

**Background:** In an article published in 2011, we discussed the need for a new role in health care systems, referred to as the Primary Spine Practitioner (PSP). The PSP model was proposed to help bring order to the chaotic nature of spine care. Over the past decade, several efforts have applied the concepts presented in that article. The purpose of the present article is to discuss the ongoing need for the PSP role in health care systems, present persistent barriers, report several examples of the model in action, and propose future strategies.



# Primary Responsibility of the PSP

Guiding the patient across the *full cycle*:

## The Full Cycle

Pain/disability/suffering  
experience

**PSP Guidance**

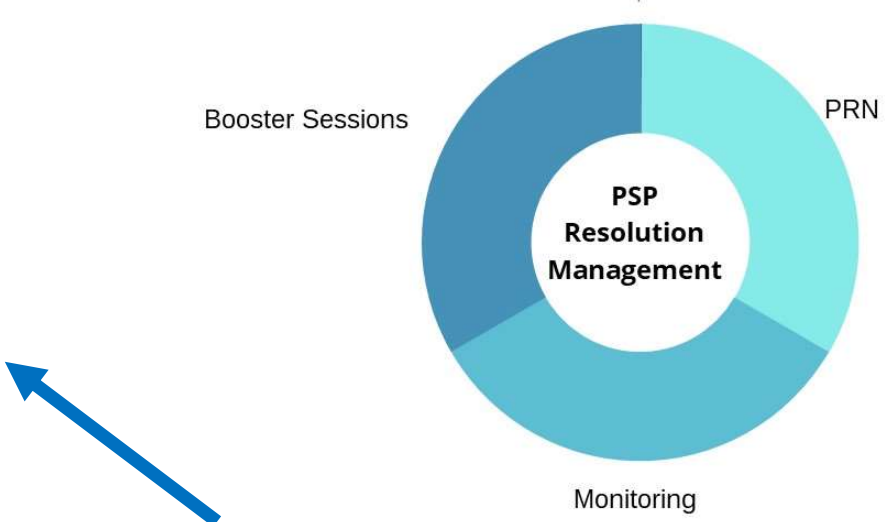
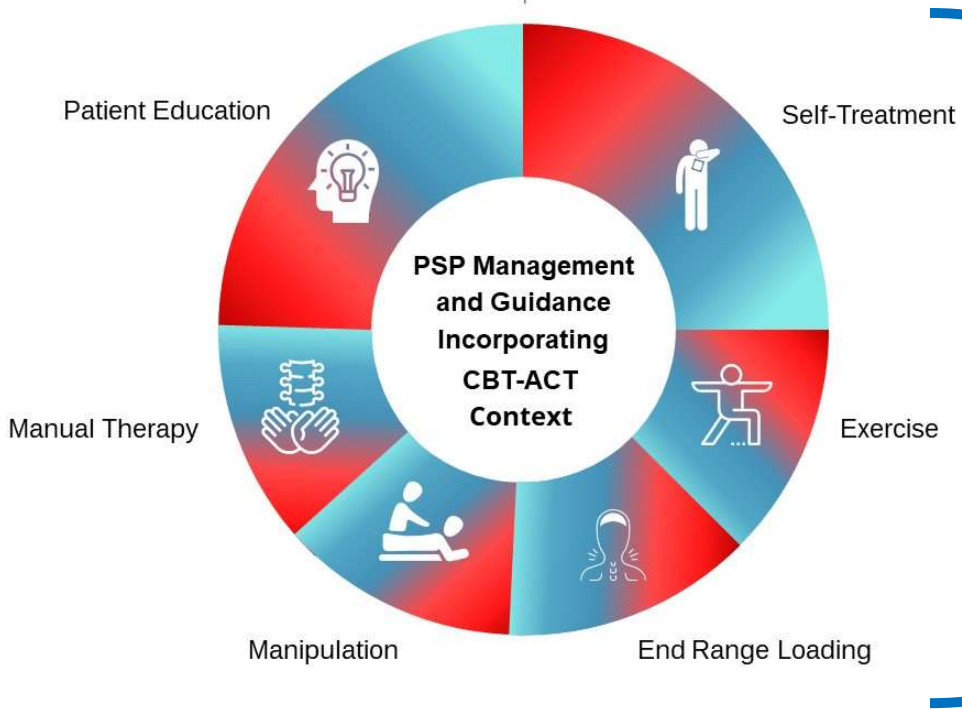
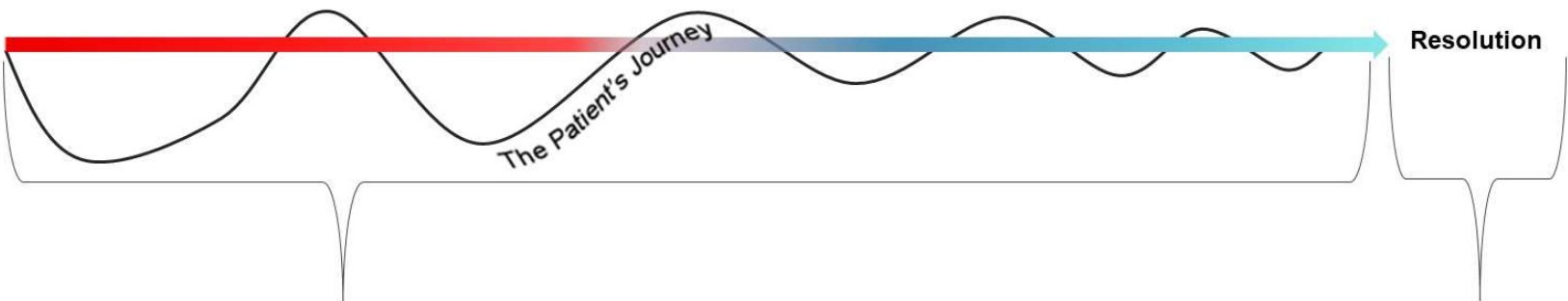
Resolution (and  
beyond)

# Full Cycle of Care

Pain, Disability and Suffering Experience

Resolution

*The Patient's Journey*

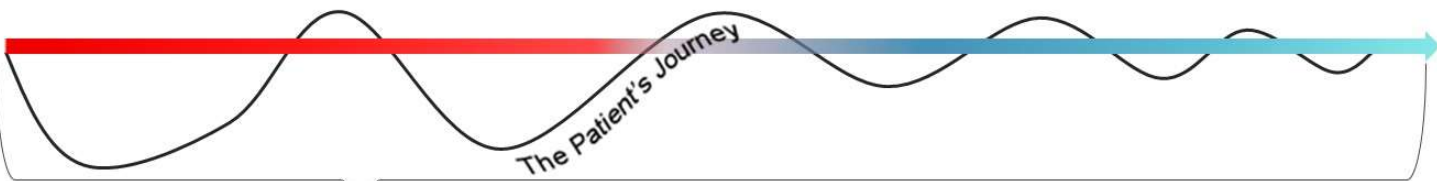


Applicable to the majority of patients with spine problems

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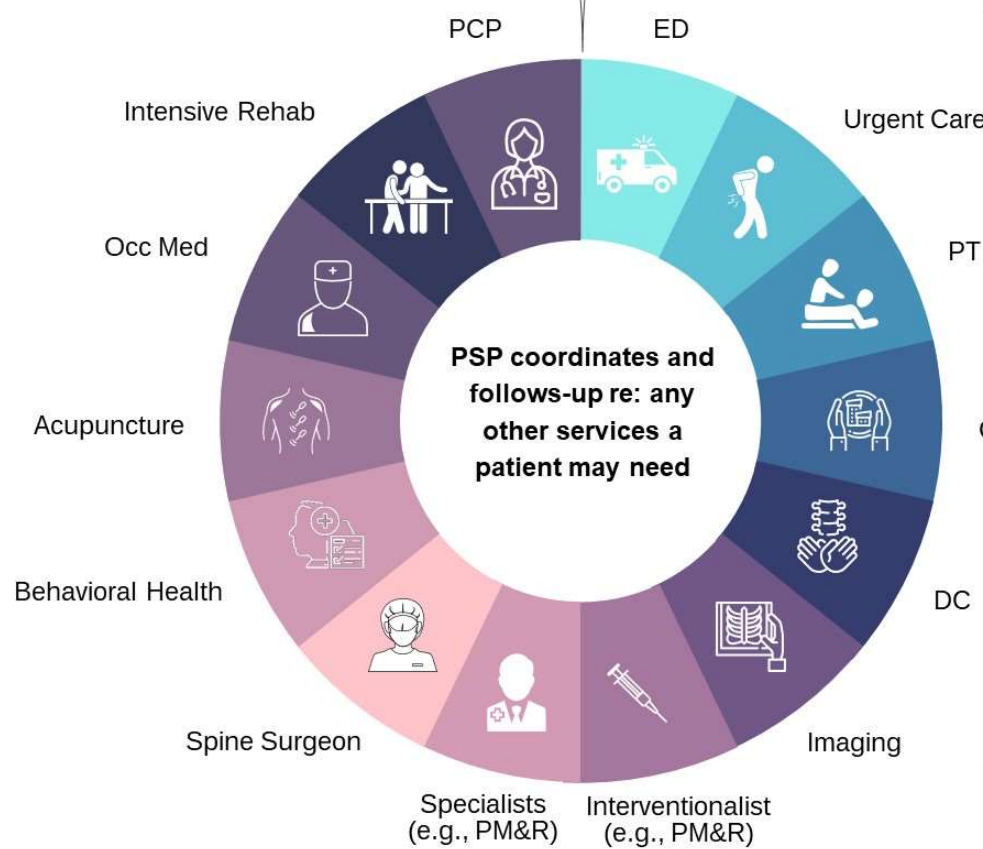
# Full Cycle of Care

Pain, Disability and Suffering Experience



Resolution

The Patient's Journey



Booster Sessions



Ideally in an integrated pathway

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# Primary Spine Practitioner

- Training and certification
  - University of Pittsburgh
- Implementation and support
  - Primary Spine Provider Network



University of Pittsburgh



Primary Spine Practitioner  
Certification Program™

PSPN

PRIMARY SPINE PROVIDER NETWORK

# Is it really a thing?

- Primary Care Systems:
  - Atrius Health (Boston, MA)
  - Dartmouth (Lebanon, NH)
  - Sanford Health (North Dakota)
- Hospital systems:
  - Beth Israel-Deaconess (Plymouth, MA)
  - Rush University Medical Center (Chicago)
- Orthopedics (RI)
- UPMC Center for Spine Health (Pittsburgh, PA)
- Spine Care Facilities in 3<sup>rd</sup> World Countries: World Spine Care



**2024**  
Work Related Injuries  
Workshop

**Thank You!**