

# AHP Clinical Back Pain Initiative

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UR-Medicine Professor of Medicine/Cardiology  
AHP Medical Director  
September 15, 2016

# Key Goals

- Recognize that Costs of spine care have gone up 6-8 fold since 1996
- Indirect costs such as lost work days and decreased productivity has gone up by even more
- There is considerable variation in care from initial assessment to advanced therapies
- Drug costs can be appreciable
- Selecting care that is of value to the patient



# Setting the Course from the Starting Gate

- Much of the trajectory of spine care is set at the starting visit
- Sometimes the starting visit is an ED, Urgent Care, PCP, or specialist
- Imaging costs are a large part of the cost, and often are based on patient expectations
- Indirect costs of imaging, including "wording" can affect downstream treatment



# Monroe County Medical Society has clear guidelines - recently updated

- Red flags include fever of 38 degrees Celsius
- Unrelenting night pain or pain at rest
- Leg weakness
- Condition began more than 6 weeks ago with progressive and distal pain and numbness
- Progressive neurological deficit



## Red flags - aggressive management appropriate, but...

- No red flags -- reassurance for 6 weeks
- Explain that imaging cannot identify a cause
- Recommend remaining active
- Heat
- Exercise, physical therapy



# Medications

- First line: acetaminophen or NSAIDs
- Muscle relaxants as second choice



## Follow- up in 1-3 weeks only if:

- No significant improvement
- Significant pain beyond a week
- Symptoms persist, worsen or progress



# Patient Engagement

- Early referral to physical therapy
- Chiropractic Care
- Definition of when to return to a specialist
- Honest description of the benefits of surgery





# The AHP Back Pain Initiative

- Development of broad consensus among PCP's, specialists, physical therapy, chiropractic on treatment
- Imaging Consensus
- Developing overall approach to patients from visit one
- Defining when to refer and to whom to refer



# AHP Back Pain Committee Members

John Bisognano, MD, PhD

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Paul Rubery, MD

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& Rehabilitation

# Active Spine Program & Musculoskeletal Workplace Wellness

AHP Clinical Grand Rounds

Kostantinos Vasalos MS, PT, CSCS, MSBA

9/15/16

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# Active Spine Program - Principles

- An evidence-based active approach to conservative management of acute and chronic spine pain (**Bio-Psycho-Social**)
- Treatment for cervical, thoracic, lumbar and sacroiliac pain
- Program addresses range of motion, flexibility, motor control (biomechanics), strength and endurance
- Includes aerobic exercise, general mobility, hip & core stabilization exercises, functional movement
- Minimizes use of passive modalities, mobilization and soft tissue techniques only as needed
- Staff Trained On Basic Principles Of CBT / Emphasis of Group Physical Activity
- Focus on Improving Function not pain

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# Active Spine Program – Access

Sports and Spine  
Rehabilitation

## Fast Track Service

We know how important it is to evaluate an injury as quickly as possible. That is why we have developed the Fast Track Service. Our Fast Track service allows a patient to get expedited access to care through physical therapy with close physician oversight.

**TO SCHEDULE A "FAST TRACK"  
APPOINTMENT FOR YOUR PATIENT, CALL**

**(585) 851-0700 - PENFIELD**

**(585) 341-9150 - BRIGHTON**

**(585) 225-6296 - GREECE**

SEND AN eRECORD REFERRAL TO ORTHO SPORTS PT

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- Fast Track- Promotion To Primary Care / Ortho / Community
- Screen For “Red Flags”
- Conservative Care – Close communication with specialist (Vertically Integrated Team)

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# Active Spine Program - Multi-disciplinary Care

## **Physical Therapists**

- Subspecialty trained to handle sports medicine (SCS) , spine (OCS), and general orthopedic related issues
- Certified Strength and Conditioning Specialists

## **Athletic Trainers**

- Experienced in working with high school, collegiate and professional athletes
- Certified Strength and Conditioning Specialists

## **Acupuncture**

## **Mental Skills Coaching / CBT**

- Goal setting, motivation, positive thought, stress, reduction

## **Sports Nutritionist**

- Weight management
- Diet

## **Exercise Physiologist**

## **Physician Specialists**

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# Active Spine Program - Patient Outcomes

Complete- 6 – 12 week Rehabilitation Program (2013)

n =514

Average Visits per referral: 6

Group Average Outcomes:

Oswestry Scores: 12.9% reduction

Pain Score: 34% reduction

Aerobic Capacity: 8% improvement

Body Composition (Fat Percentage): 7% reduction

Exercise Self Efficacy: 12% improvement

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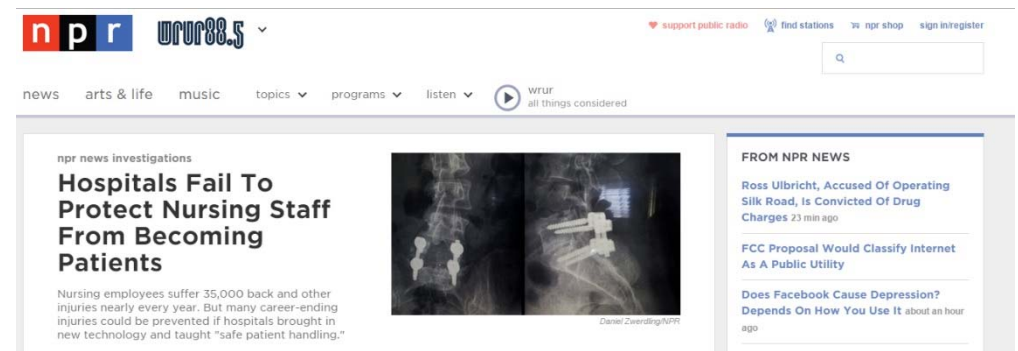
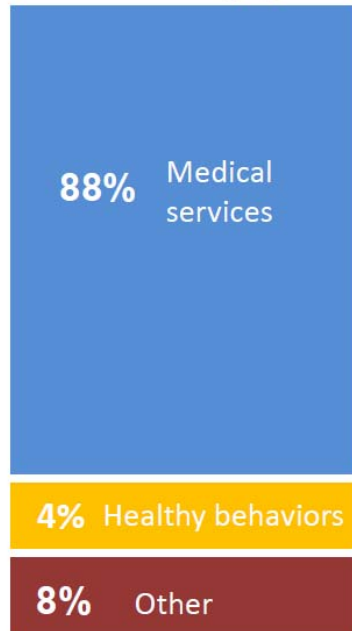
# DRIVERS → Transitioning From Patient Care To Population Health And Wellness

Facing the challenges in health care

## Drivers of health



## Where money spent



Average Surgical Low Back Related WC Claim:

**\$200,000**

(Not Including Lost Productivity)





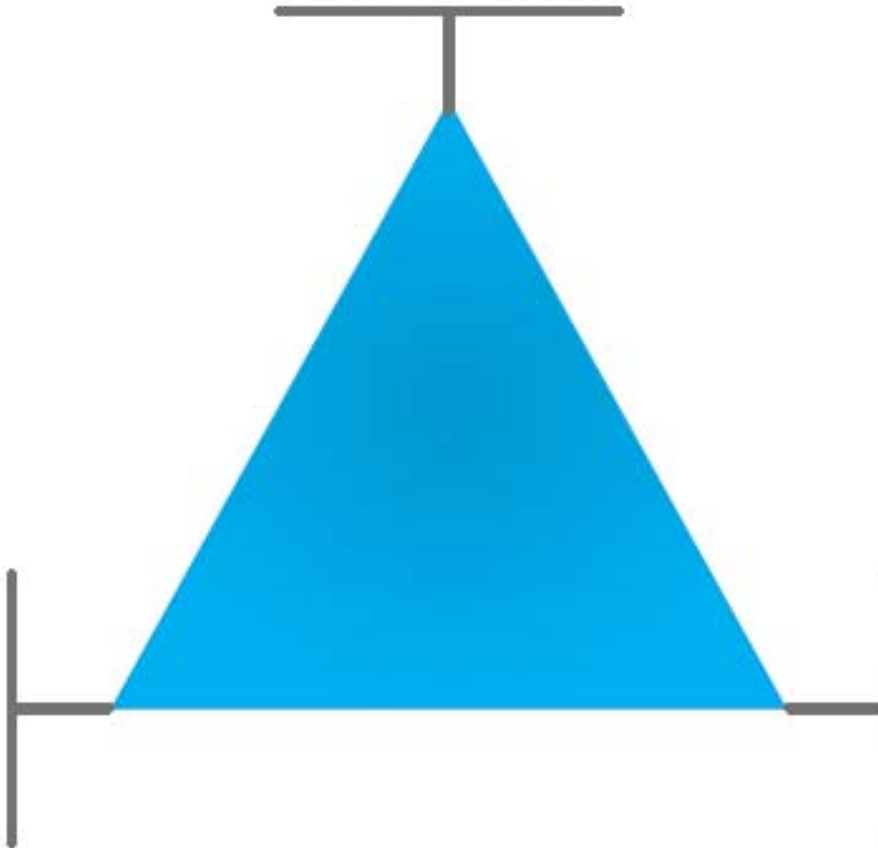
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& Rehabilitation

**ORTHOMETRICS**  
USING SCIENCE TO PREVENT INJURY AND ENHANCE PERFORMANCE

**Utilize Science To Reliably &  
Accurately Identify Modifiable MSK  
Disease Risk Factors**

**Enhance  
Population MSK  
Wellness**



**Utilize  
Technology To  
Maintain Cost  
Effectiveness**

# Orthopedics And Rehabilitation: Musculoskeletal Wellness and Injury Prevention Program

## HISTORY:

### Factors that contribute MSK injury and absenteeism

#### Individual

- Age, BMI , Gender, Injury History,  
Socio-Economic....

#### Physiologic

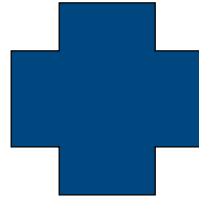
- Size, Posture, Flexibility, Strength,  
Coordination....

#### Vocation specific

- Ergonomics, Force, Repetitions,  
Vibration....

#### Psycho-Social

- Resiliency, Fear Avoidance, Ability to  
cope with injury/illness....



### Physical Exam: 3D - Imaging



# Results Profiling → Stratify → Recommendations/Intervention

## Ortho- Management (OM) Eligible:

Subsidized 12 – week exercise program

Personalized exercise instruction and specialty visits (Acupuncture, Active Release Therapy, Athletic Performance, Nutrition)

Work with licensed medical/exercise professionals

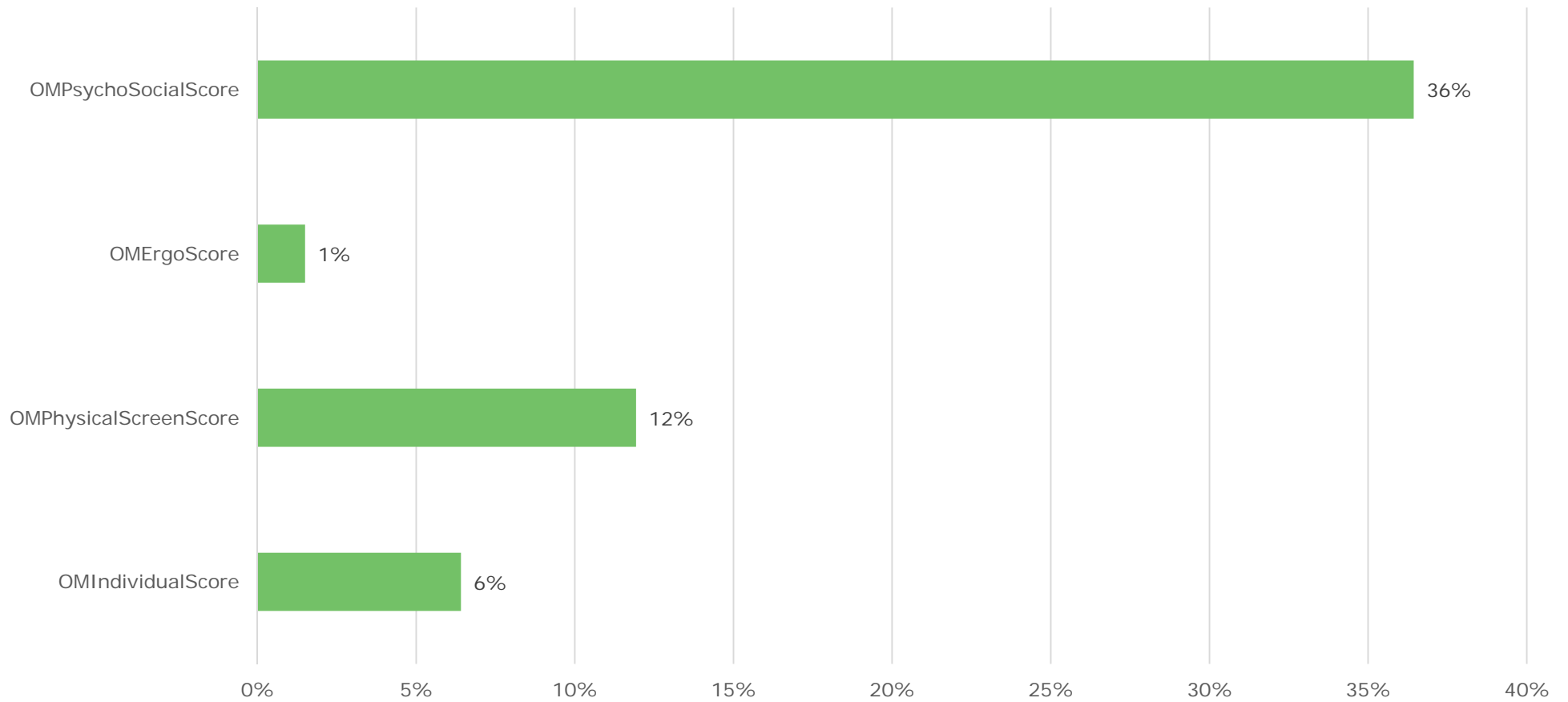
## Not Eligible? : Host of wellness options

- Group Exercise Class
- Active Release Therapy
- Individual exercise session
- Athletic Performance training

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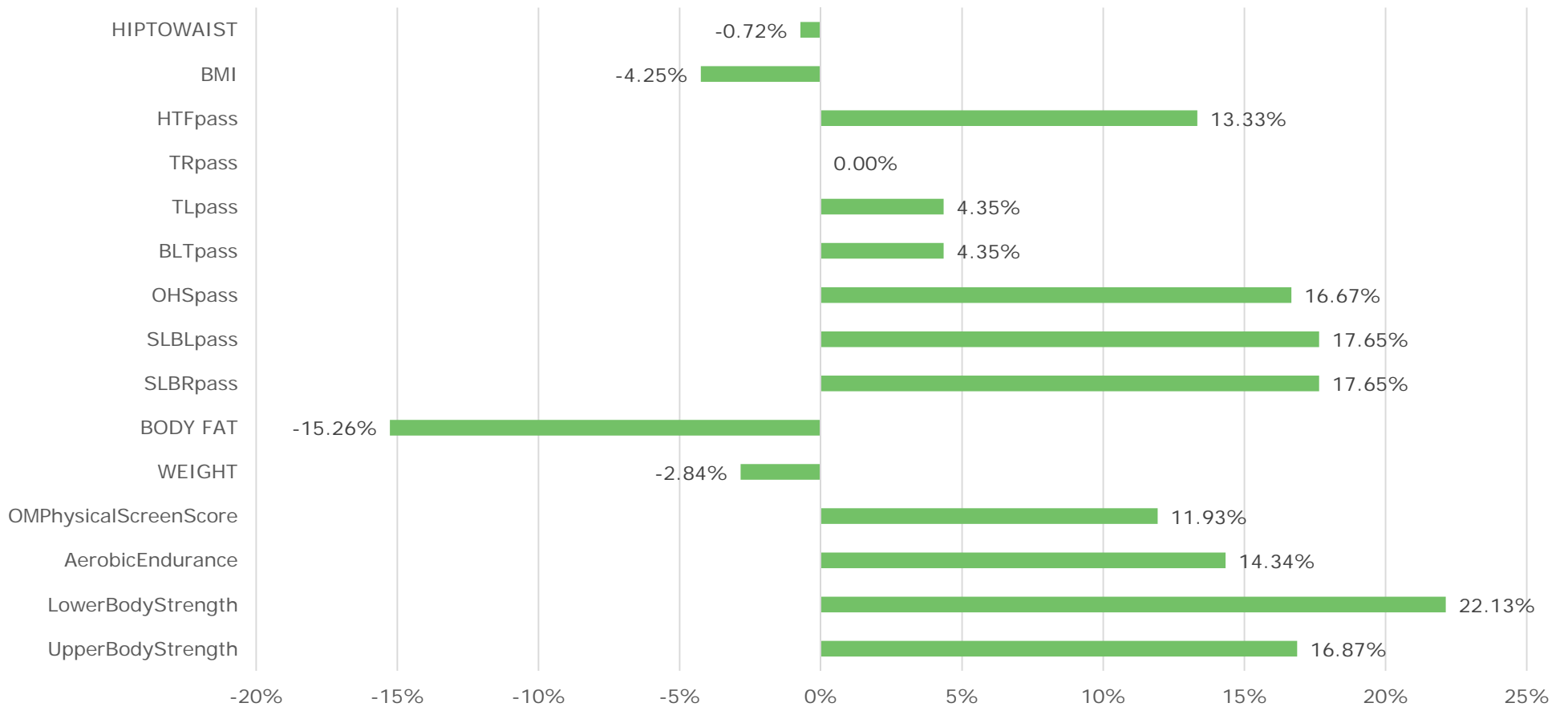
# Health Outcomes

## ORTHOMETRICS DOMAIN



# Health Outcomes

## FUNCTIONAL MOVEMENT EXAMINATION

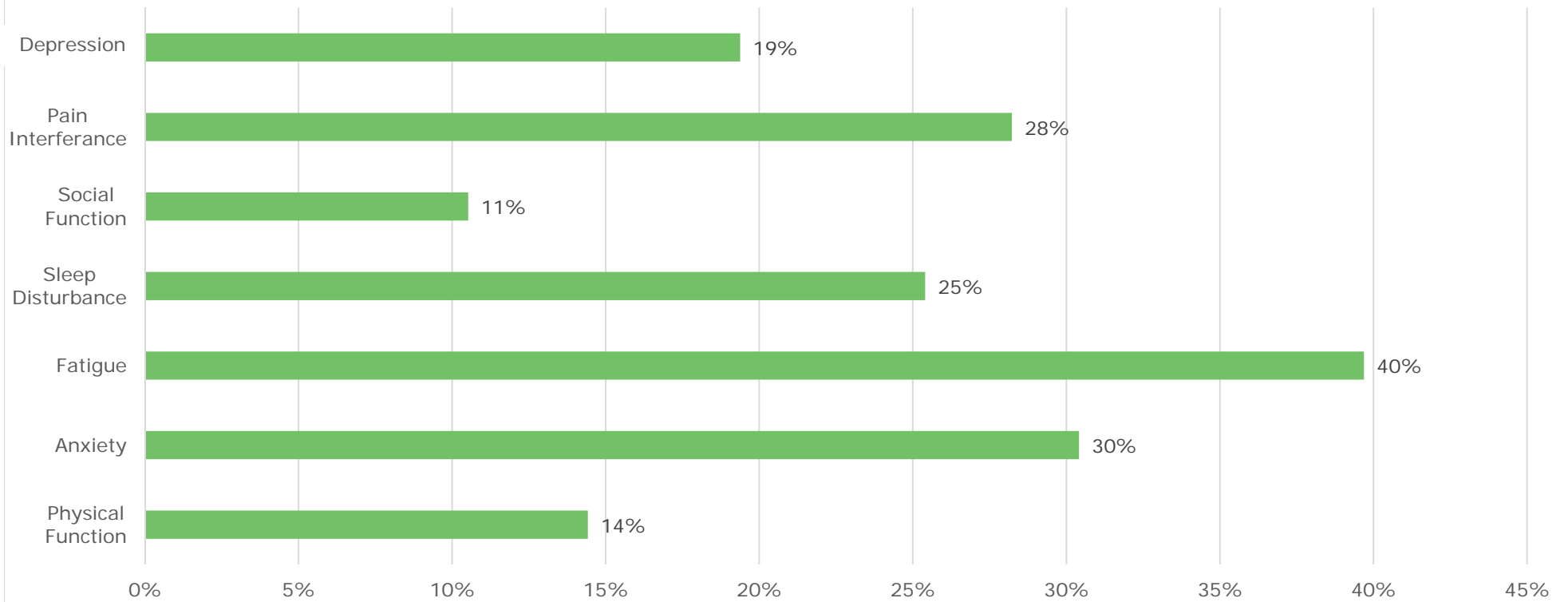


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# Health Outcomes

PROMIS DATA

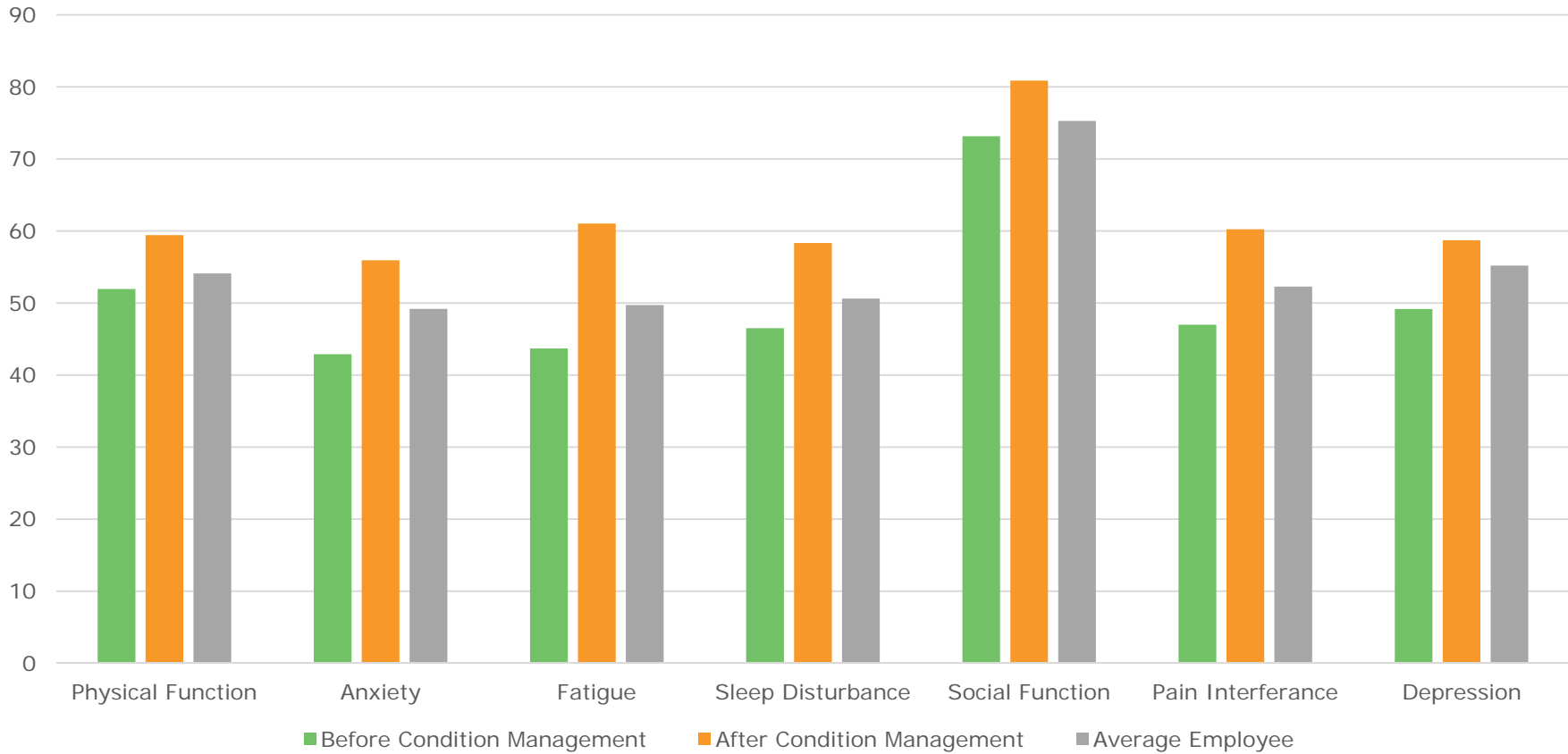


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# Health Outcomes

OrthoMetrics Condition Management Improves PROMIS Scores to Above that of the Average Employee

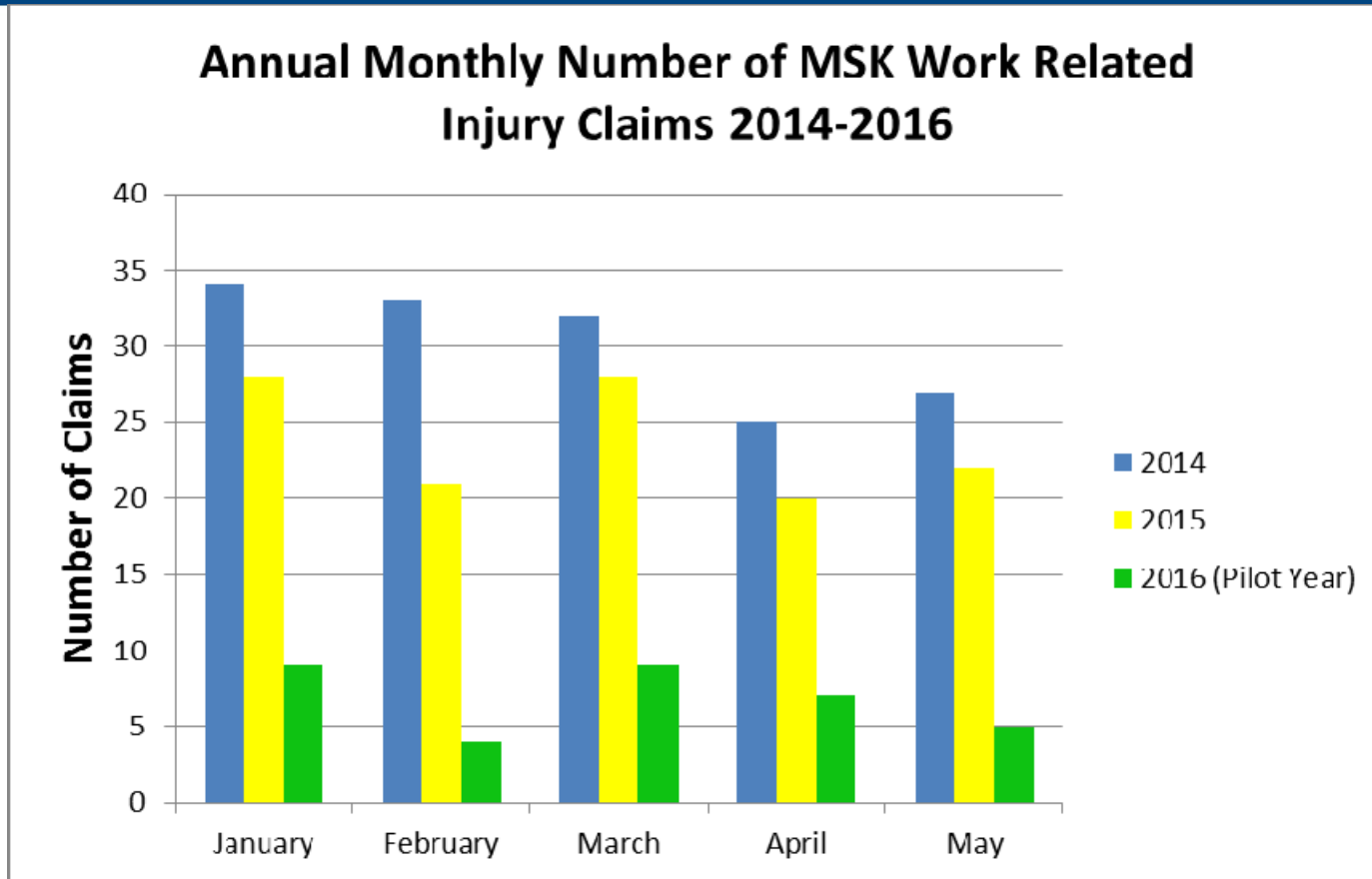


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# Financial Outcomes



**85 Total Claims Less Than the Same Period Last Year = \$2.72M**

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# Comprehensive Back Pain Initiative

## *Acute Low Back Pain Treatment Paradigms for a Post Opioid Era*

John Markman MD

Director Neuromedicine Pain Management Center | Translational Pain Research  
Professor, Departments of Neurosurgery and Neurology  
University of Rochester School of Medicine and Dentistry

Prepared for:

**Accountable Health Partners (AHP) Clinical Grand  
Rounds**

15 September 2016





## Department of Health

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Commissioner

**SALLY DRESLIN, M.S., R.N.**  
Executive Deputy Commissioner

### **New Legislation Enacted to Limit Initial Opioid Prescribing to a 7 Day Supply for Acute Pain**

**TO FURTHER REDUCE OVERPRESCRIBING OF OPIOID MEDICATIONS, EFFECTIVE JULY 22, 2016, INITIAL OPIOID PRESCRIBING FOR ACUTE PAIN IS LIMITED TO A 7 DAY SUPPLY PER NEW YORK STATE PUBLIC HEALTH LAW SECTION 3331, 5. (b), (c).** A practitioner may not initially prescribe more than a 7-day supply of an opioid medication for acute pain. Acute pain is defined as pain, whether resulting from disease, accidental or intentional trauma, or other cause, that the practitioner reasonably expects to last only a short period of time. This rule **SHALL NOT** include prescribing for chronic pain, pain being treated as a part of cancer care, hospice or other end-of-life care, or pain being treated as part of palliative care practices. Upon any subsequent consultations for the same pain, the practitioner may issue, in accordance with existing rules and regulations, any appropriate renewal, refill, or new prescription for an opioid.

**4.6% of the world's population consumes 80% of the  
global opioid supply (99% of its hydrocodone)**

# What is the next *reversal* in the diagnosis and treatment of **acute** low back pain?

1. Activity > Rest
2. Imaging = No imaging in the acute/subacute phase
3. Role of Short-Acting Opioids in ALBP/CLBP  
analgesic efficacy does not reduce chronic burden
4. Oral Steroid = PBO in Acute Radicular Pain  
spinal steroid > pbo for acute radicular pain
5. Gabapentin/pregabalin = PBO
6. Up front self management/non-pharmacologic management

What are the key clinical observations that will inform AHP's pathway?

# What types of evidence justify repositioning opioid therapy from second line analgesic to last resort?



PAIN® 151 (2010) 22–29



www.elsevier.com/locate/pain

Research papers

## The course of opioid prescribing for a new episode of disabling low back pain: Opioid features and dose escalation

Manuel Cifuentes<sup>a,\*</sup>, Barbara Webster<sup>b</sup>, Stephane Genevay<sup>c</sup>, Glenn Pransky<sup>b</sup>

<sup>a</sup>Liberty Mutual Research Institute for Safety, University of Massachusetts Lowell, USA  
<sup>b</sup>Liberty Mutual Research Institute for Safety, USA  
<sup>c</sup>Division of Rheumatology, University Hospitals of Geneva, Switzerland

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**Keywords:**  
Opioids  
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Workers compensation  
Longitudinal analysis  
Opioid strength

**ABSTRACT**

Despite utilization concerns, little information is available on opioid prescribing for acute, disabling low back pain (LBP) and how opioid features (purity, strength, and length of action) and dose change over time. This information is important in targeting guideline implementation efforts and identifying risks for inappropriate prescribing. Using 2002–2003 United States' workers compensation claims, a cohort of 2868 cases with a new episode of work-related LBP and at least one opioid prescription was followed for 2 years. Opioid prescriptions (timing, dose, and formulation), demographics, and medical data were captured. A longitudinal model of change was used to evaluate factors associated with dosing changes. Opioid prescribing typically began early in the course of care (median = 8 days, Inter-Quartile Range (IQR) = 3, 43 days) and was often prolonged (median = 46 days, IQR = 14, 329). At the end of the observation period, 7.1% of non-surgical cases and 30.6% of surgical cases were still receiving opioids. The number of days between the initial LBP report and the first opioid prescription had the greatest association with subsequent dose escalation. Dose escalation was greater with pure formulations, and was not related to clinical severity or surgery. In contrast to previous and current guideline recommendations, opioid prescribing for acute LBP was often prolonged, and longer for surgical cases. These results reinforce recommendations to limit opioid duration, and suggest that consideration of opioid features, purity as an important one, can be part of a strategy to prevent escalating dosages.

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Time to first opioid prescription was the factor most strongly associated with dose escalation

Dose escalation was greater with pure formulations and not related to clinical severity or surgery

# How will AHP prioritize pain reduction relative to functional outcomes?



PAIN® 154 (2013) 1038–1044

PAIN®

www.elsevier.com/locate/pain

## Opioid use among low back pain patients in primary care: Is opioid prescription associated with disability at 6-month follow-up?

Julie Ashworth<sup>a,b,c,\*</sup>, Daniel J. Green<sup>a</sup>, Kate M. Dunn<sup>a</sup>, Kelvin P. Jordan<sup>a</sup>

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<sup>b</sup> IMPACT Community Pain Service, Staffordshire & Stoke-on-Trent Partnership Trust, Staffordshire, UK

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Opioids

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### ABSTRACT

Opioid prescribing for chronic noncancer pain is increasing, but there is limited knowledge about longer-term outcomes of people receiving opioids for conditions such as back pain. This study aimed to explore the relationship between prescribed opioids and disability among patients consulting in primary care with back pain. A total of 715 participants from a prospective cohort study, who gave consent for review of medical and prescribing records and completed baseline and 6 month follow-up questionnaires, were included. Opioid prescription data were obtained from electronic prescribing records, and morphine equivalent doses were calculated. The primary outcome was disability (Roland-Morris Disability Questionnaire [RMDQ]) at 6 months. Multivariable linear regression was used to examine the association between opioid prescription at baseline and RMDQ score at 6 months. Analyses were adjusted for potential confounders using propensity scores reflecting the probability of opioid prescription given baseline characteristics. In the baseline period, 234 participants (32.7%) were prescribed opioids. In the final multivariable analysis, opioid prescription at baseline was significantly associated with higher disability at 6-month follow-up ( $P < .022$ ), but the magnitude of this effect was small, with a mean RMDQ score of 1.18 (95% confidence interval: 0.17 to 2.19) points higher among those prescribed opioids compared to those who were not. Our findings indicate that even after adjusting for a substantial number of potential confounders, opioids were associated with slightly worse functioning in back pain patients at 6-month follow-up. Further research may help us to understand the mechanisms underlying these findings and inform clinical decisions regarding the usefulness of opioids for back pain.

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Opioid prescription at baseline was significantly associated with a small but higher disability level (RMDQ) at 6 months

# How will AHP prioritize the external validity of clinical effectiveness relative to the internal validity of RCTs?

Research

Original Investigation

## Naproxen With Cyclobenzaprine, Oxycodone/Acetaminophen, or Placebo for Treating Acute Low Back Pain A Randomized Clinical Trial

Benjamin W. Friedman, MD, MS; Andrew A. Dym, BS; Michelle Davitt, MD; Lynne Holden, MD; Clemencia Solorzano, PharmD; David Esses, MD; Polly E. Bijur, PhD; E. John Gallagher, MD

**IMPORTANCE** Low back pain (LBP) is responsible for more than 2.5 million visits to US emergency departments (EDs) annually. These patients are usually treated with nonsteroidal anti-inflammatory drugs, acetaminophen, opioids, or skeletal muscle relaxants, often in combination.

**OBJECTIVE** To compare functional outcomes and pain at 1 week and 3 months after an ED visit for acute LBP among patients randomized to a 10-day course of (1) naproxen + placebo; (2) naproxen + cyclobenzaprine; or (3) naproxen + oxycodone/acetaminophen.

+ Supplemental content at [jama.com](http://jama.com)

+ CME Quiz at [jamanetworkcme.com](http://jamanetworkcme.com) and CME Questions page 1640

- ED in Bronx
- Double Blind, 3-group study (  $n = 323$ , arm 107)
- Nontraumatic, nonradicular LBP  $< 2$  weeks
- Naproxen + Oxycodone 5mg-10mg or Flexeril 5mg-10mg or PBO

Table 5. Three-Month Outcomes<sup>a</sup>

Outcome Variable	Naproxen + Placebo (n = 107)	Naproxen + Cyclobenzaprine (n = 108)	Naproxen + Oxycodone/ Acetaminophen (n = 108)	Difference, % (95% CI)		
				Cyclobenzaprine vs Placebo	Oxycodone/ Acetaminophen vs Placebo	Cyclobenzaprine vs Oxycodone/ Acetaminophen
<b>RMDQ<sup>b</sup></b>						
Mean (95% CI) score	3.8 (2.6 to 5.1)	4.5 (3.0 to 5.9)	4.6 (3.2 to 6.1)	0.6 (-1.3 to 2.6)	0.8 (-1.1 to 2.7)	0.2 (-1.9 to 2.2)
Median (IQR) score	0 (0 to 3)	0 (0 to 5)	0 (0 to 8)			
	No. (%)					
<b>Worst LBP during previous 72 h</b>						
Mild/none	79 (74)	81 (75)	87 (81)			
Moderate/severe	28 (26)	27 (25)	21 (19)	1 (-11 to 13)	7 (-4 to 18)	6 (-6 to 17)
<b>Frequency of LBP during previous 72 h</b>						
Never/rarely	78 (73)	80 (74)	79 (73)			
Sometimes	10 (9)	16 (15)	11 (10)	7 (-3 to 16) <sup>c</sup>	1 (-9 to 11) <sup>c</sup>	6 (-4 to 15) <sup>c</sup>
Frequently/always	19 (18)	12 (11)	18 (17)			
<b>Use of medication for LBP within 72 h</b>						
No meds	79 (74)	82 (76)	88 (81)			
Took meds	28 (26)	26 (24)	20 (19)	2 (-10 to 14)	8 (-3 to 19)	6 (-5 to 16)
Opioid use within 72 h	3 (3)	1 (1)	2 (2)	2 (-2 to 5)	1 (-3 to 5)	1 (-2 to 4)

Abbreviations: IQR, interquartile range; LBP, low back pain; RMDQ, Roland Morris Disability Questionnaire.

<sup>a</sup> These data include imputed values for 29 patients lost to follow-up at 3-month follow-up. Multiple imputation models included the following variables: age, sex, investigational medication, baseline RMDQ, 7-d RMDQ.

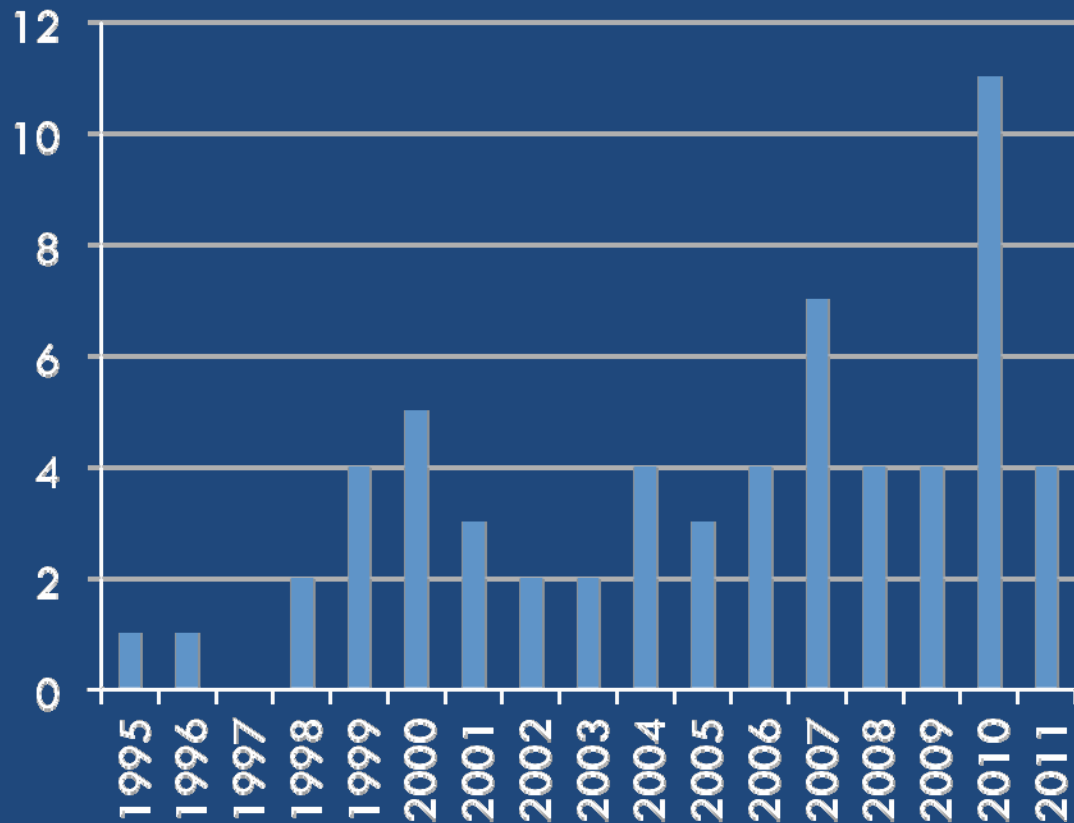
<sup>b</sup> The RMDQ is a 24-item instrument measuring low back pain-related functional impairment; 0 indicates no functional impairment; 24 indicates maximum functional impairment.

<sup>c</sup> Differences were based on never/rarely/sometimes responses vs frequently/always.

*Naproxen + oxycodone or cyclobenzaprine did **not** improve pain or functional outcomes at one week*

# Over 65 RCTs demonstrate efficacy of opioids for pain up to 12 weeks

Publications per year



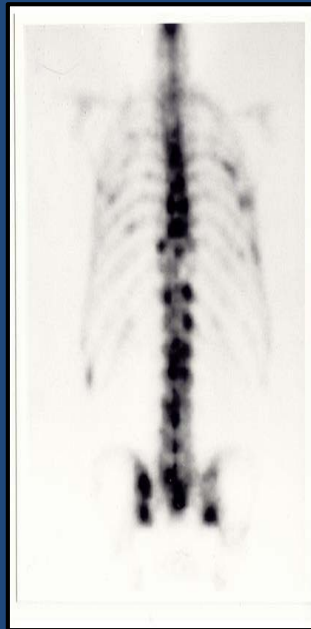
Six Trials have one year follow-up or longer



## Low Back Pain with Specific Spinal Cause



1/10,000



•>50

•Unexplained weight loss

•>1 month



3-2/1,000



•Older age

•Osteoporosis

•Steroid Use

# The Virginia Mason Experience

## Background

Integrated delivery system

Threatened with exclusion from a high performance network (Aetna Aexcel)

Employers identified four high priority conditions:

- lower back pain
- cardiac arrhythmias
- GERD
- migraine headache

## Implementation

Teams (VM staff, Aetna, the Employers)

Review of care processes inconsistent with guidelines and detailed review of individual cases

Specialty care clinics staffed by nurse practitioners with standardized care pathways based on guidelines

Leverage common IT platform

## Key Insights

Analysis of value streams revealed that many decisions made in primary care and ED contributed to higher costs attributed to specialists

Reallocation of payments to VM from imaging to physical therapy



Reduce cost through fundamental redesign of care processes



## Comparison of stratified primary care management for low back pain with current best practice (STarT Back): a randomised controlled trial

*Jonathan C Hill, David G T Whitehurst, Martyn Lewis, Stirling Bryan, Kate M Dunn, Nadine E Foster, Kika Konstantinou, Chris J Main, Elizabeth Mason, Simon Somerville, Gail Sowden, Kanchan Vohora, Elaine M Hay*

### Summary

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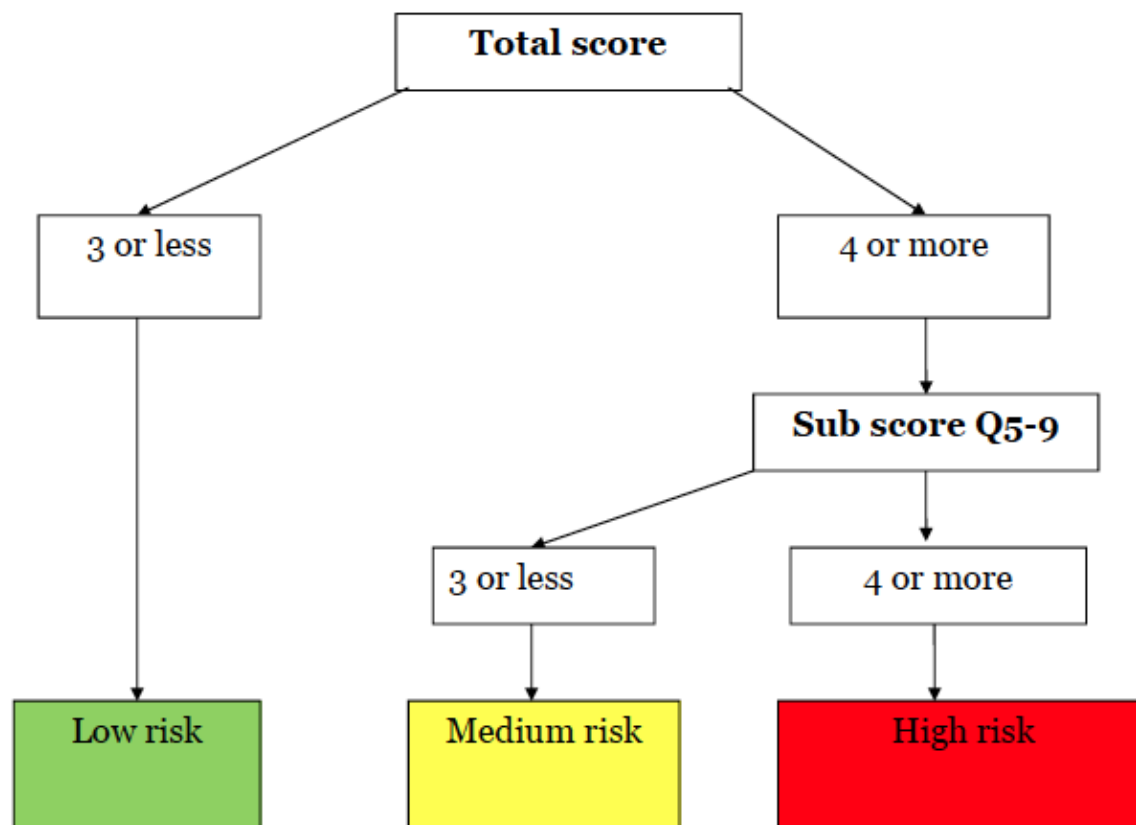
6736(11)60937-9

**Background** Back pain remains a challenge for primary care internationally. One model that has not been tested is stratification of the management according to the patient's prognosis (low, medium, or high risk). We compared the clinical effectiveness and cost-effectiveness of stratified primary care (intervention) with non-stratified current best practice (control).

- n=1573 England Primary Care
- Primary endpoint: RMDQ @12 months
- Compare clinical and cost effectiveness of a primary care intervention
- Medium and High Risk By STarT Back Receive More Intensive Treatment

Psychosocial factors drive patients from low to high risk for a poor outcome from conservative management

## STarT Back Screening Tool: Scoring System



## Selected Challenges for the AHP Low Back Pain Initiative

1. Legacy problem of patients on opioids for chronic spinal pain syndromes
2. Chronic pain after surgical treatment (de novo neuropathic pain syndromes)
3. Wide variation in care across interventional and conservative therapies due to lack of professional consensus about underlying pain mechanisms
4. Lack of nonsurgical therapies for neurogenic claudication in older adults
5. Lack of behavioral health resources for primary mental health problems triaged as CLBP syndromes