

National Academies of Sciences

The Role of Nonpharmacological Approaches to Pain Management

Session 1: Nonpharmacological Approaches to Pain Management – Evidence on Effectiveness and Safety, and Emerging Models of Care

What health care services are provided to persons with pain?

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Overview

- **Total Health Care Expenditures and Summary of Non-Rx \$**
- **Identification of Pain Condition to Focus On**
- **Non-Rx Services Provided for Pain**

*Just as RCTs have limitations, claims based analyses, particularly high level roll-ups, have **limitations**:*

- *Consumers pay for covered services **out of pocket**, particularly for some of the services we will be discussing – **acupuncture, manipulation, massage**, etc*
- ***Non-covered** services, like **yoga, VR and mindfulness**, are not represented in claims data, however pilot programs are underway*
- ***Incorrect coding** introduces artifacts when categorizing data*
- ***Benefit designs, prior authorization, network strategies** introduce distortions*
- ***Carved out benefits**, like dental, mental health, Rx, may not be present for some segments*
- ***Rx data** is not associated with a diagnosis*

Venues like this bring together multiple points of view which helps us all better understand the role of non-Rx therapies.

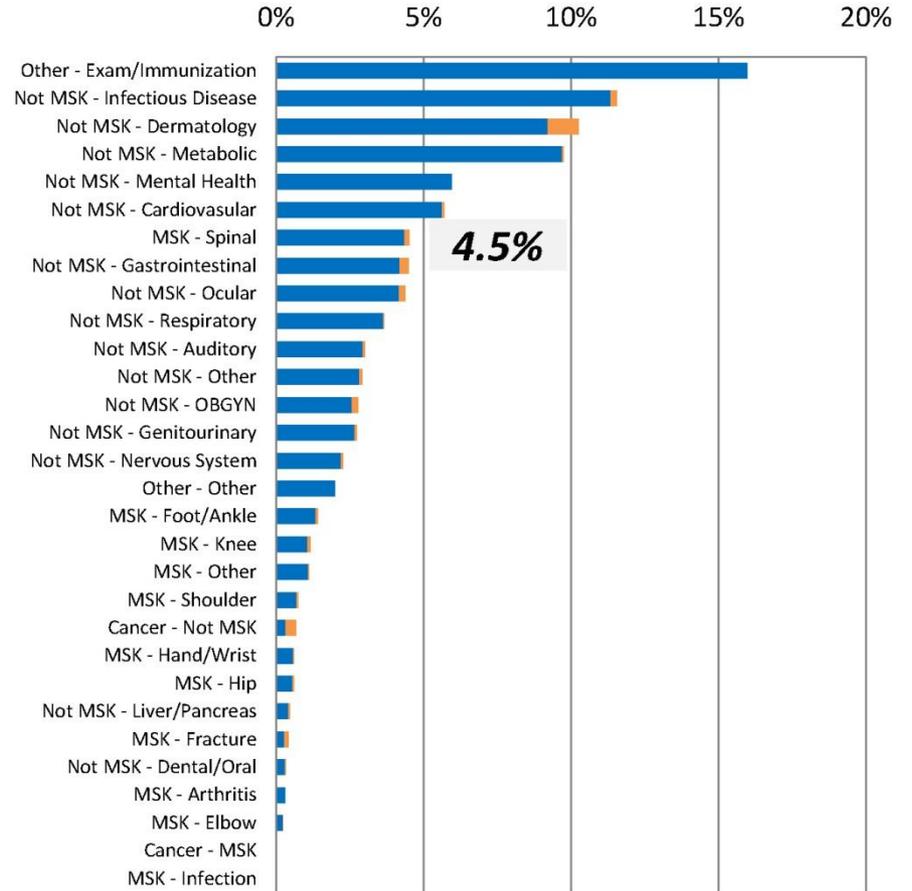
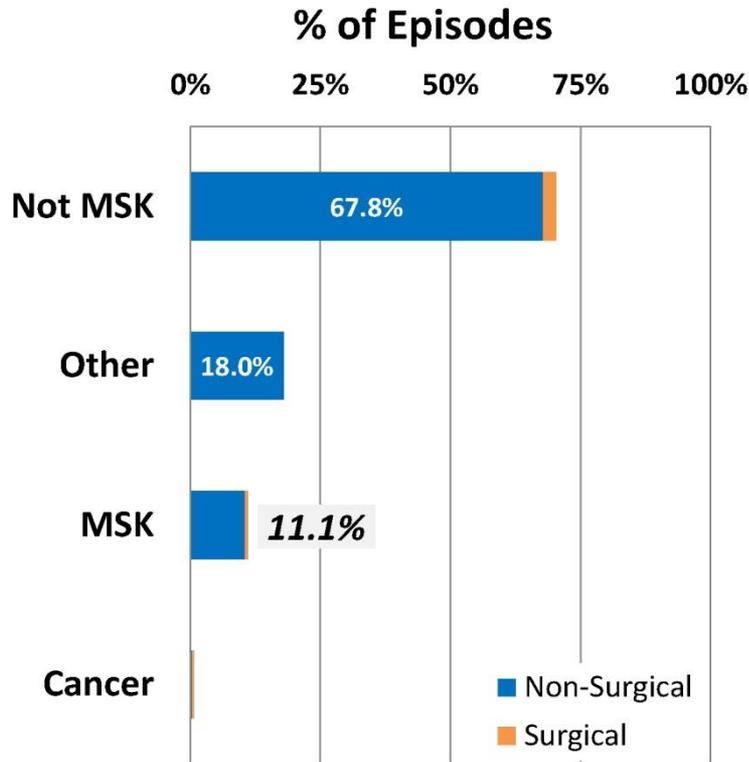
Summary of Expenditures

2017 Summary	Commercial	Medicare	Medicaid	Total
Enrollees (millions)	12.7M	3.9M	5.7M	22.3M
Allowed \$ (Billions \$)				
Outpatient	\$ 23.5	\$ 10.8	\$ 6.3	\$ 40.6
Physician	\$ 21.0	\$ 11.9	\$ 4.2	\$ 37.1
Inpatient	\$ 14.9	\$ 13.4	\$ 4.8	\$ 33.1
Rx	\$ 11.0	\$ 8.4	\$ 4.9	\$ 24.3
Mental Health	\$ 1.4	\$ 0.4	\$ 1.3	\$ 3.1
Total	\$ 71.8	\$ 44.9	\$ 21.5	\$ 138.2

Services of Interest (Millions \$ and *estimated % of Total)								
Imaging	\$ 8,396	11.3%	\$ 9,467	21.3%	\$ 3,648	16.9%	\$ 21,512	15.4%
Injection	\$ 386	0.5%	\$ 595	1.3%	\$ 149	0.7%	\$ 1,130	0.8%
Total	\$ 8,782	11.9%	\$ 10,062	22.6%	\$ 3,797	17.6%	\$ 22,641	16.2%
NonRx Services of Interest (Millions \$ and *estimated % of Total)								
Therapy - Active Procedures	\$ 1,005	1.4%	\$ 887	2.0%	\$ 287	1.3%	\$ 2,179	1.6%
Therapy - Manual/Massage	\$ 322	0.4%	\$ 129	0.3%	\$ 50	0.2%	\$ 500	0.4%
Manipulative Treatment - Chiropractic	\$ 330	0.4%	\$ 96	0.2%	\$ 13	0.1%	\$ 439	0.3%
Acupuncture	\$ 136	0.2%	\$ 9	0.0%	\$ 1	0.0%	\$ 146	0.1%
Therapy - Passive Modalities	\$ 64	0.1%	\$ 20	0.0%	\$ 16	0.1%	\$ 99	0.1%
Manipulative Treatment - Osteopathic	\$ 9	0.0%	\$ 3	0.0%	\$ 1	0.0%	\$ 13	0.0%
Total	\$ 1,866	2.5%	\$ 1,144	2.6%	\$ 367	1.7%	\$ 3,376	2.4%

In our limited time let's focus on treatment of pain in commercial population

Deeper Dive Into Pain

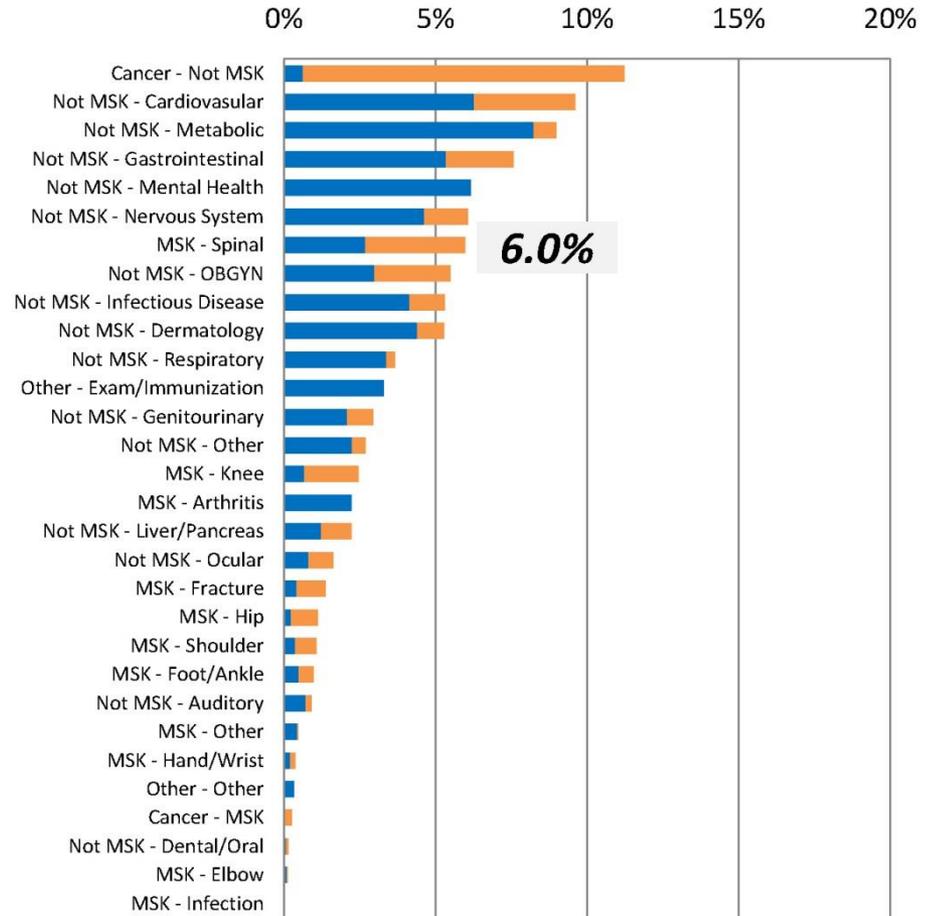
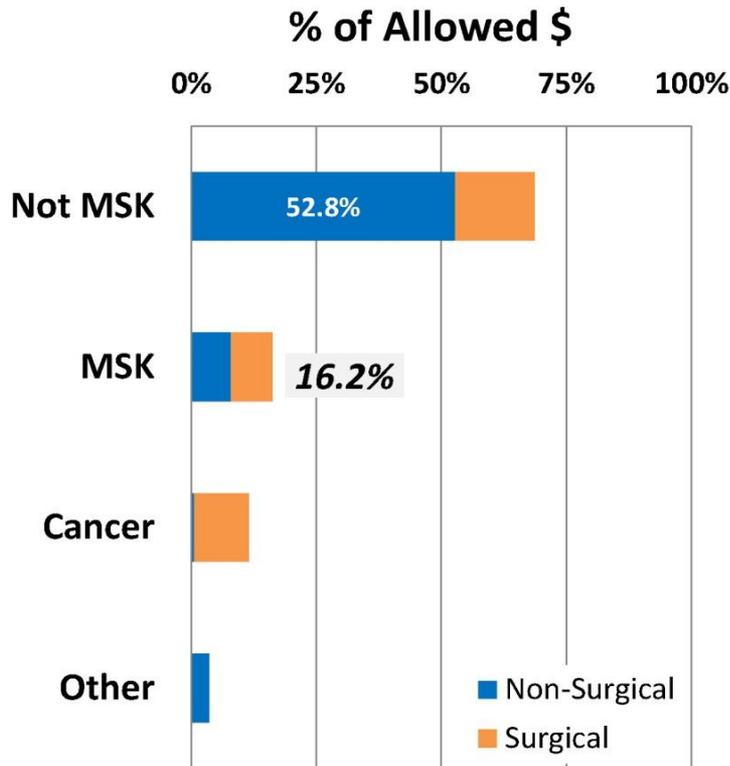


Source

- Commercial ASO and Fully Insured membership
- Complete episodes ending in 2017
- Excludes dental claims

- 33.4M complete episodes
- \$22.5B allowed
- 1.7B MME

Deeper Dive Into Pain

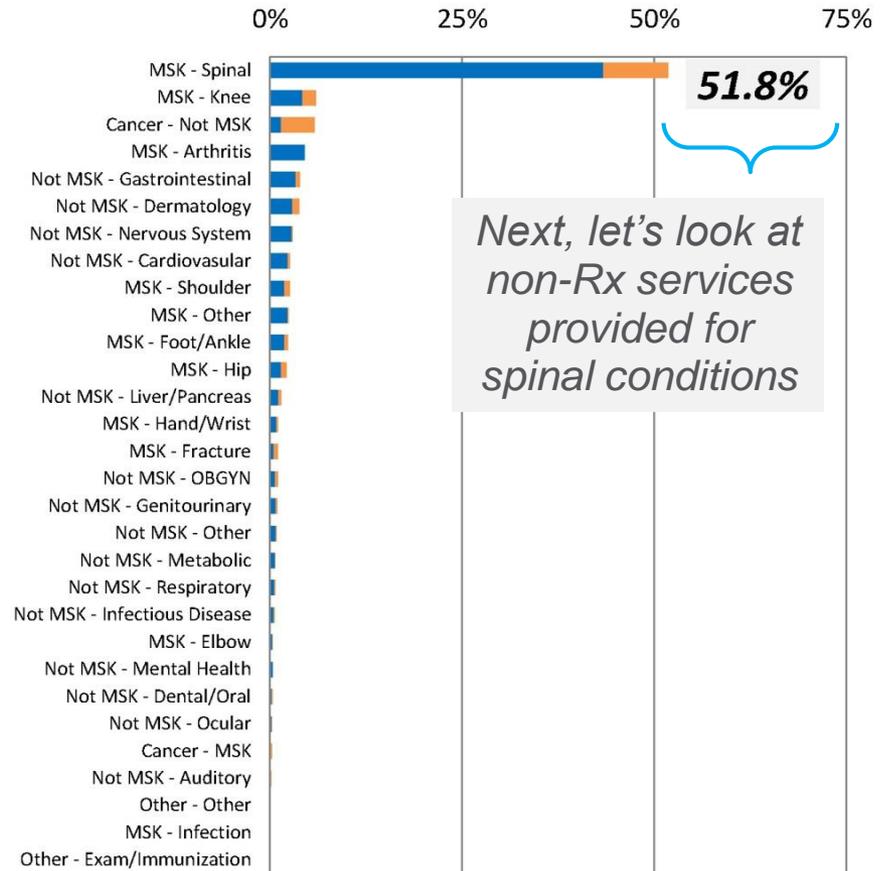
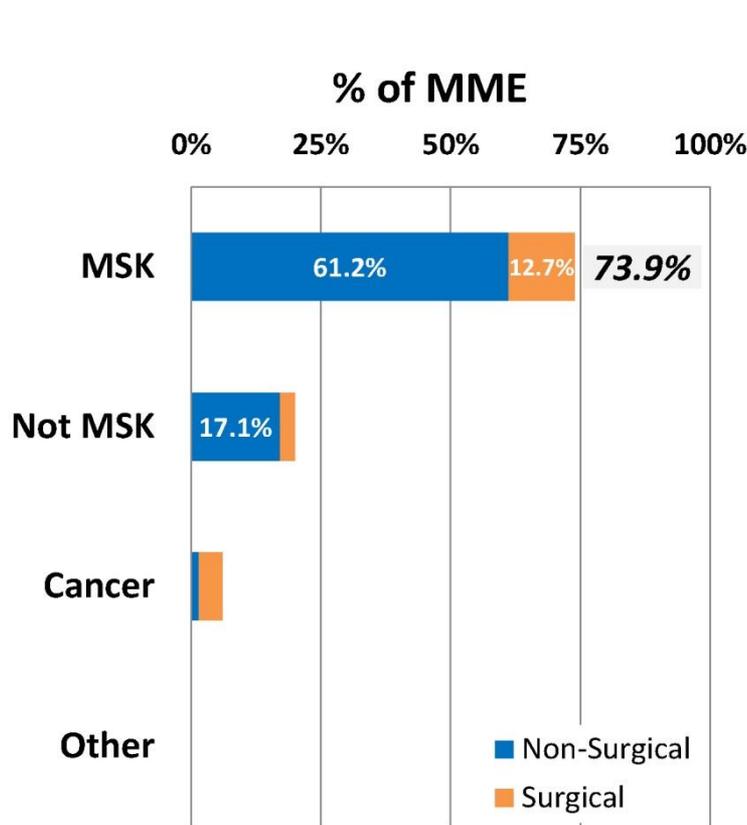


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Services Provided for Spinal Conditions

2017 Commercial \$ Spent on AHRQ Categories 205 and 212				
SPONDYLOSIS; INTERVERTEBRAL DISORDERS and OTHER BONE DISEASE AND MUSCULOSKELETAL DISORDERS				
Procedure*	Allowed \$ (Millions)	% of Spine Total	% of Overall Total	
Surgical	\$673.1	17.3%	79.6%	
Imaging	\$581.8	14.9%		
Office Visit - Evaluation	\$573.1	14.7%		
Neurological	\$472.6	12.1%		
Injection	\$310.6	8.0%		
Anesthesia	\$190.9	4.9%		
DME	\$140.3	3.6%		
Lab	\$56.8	1.5%		
Fracture	\$27.8	0.7%		
Pathology	\$9.4	0.2%		
Mental Health	\$1.0	0.0%		
Other	\$64.5	1.7%	20.4%	2.5%
Manipulative Treatment - Chiropractic	\$281.8	7.2%		
Therapy - Active Procedures	\$268.3	6.9%		
Therapy - Manual/Massage	\$119.6	3.1%		
Acupuncture	\$90.8	2.3%		
Therapy - Passive Modalities	\$26.5	0.7%		
Manipulative Treatment - Osteopathic	\$7.2	0.2%		
Total	\$3,896.2			

*Data excludes "unknown" codes, and Rx claims which could not definitively be allocated to the AHRQ categories

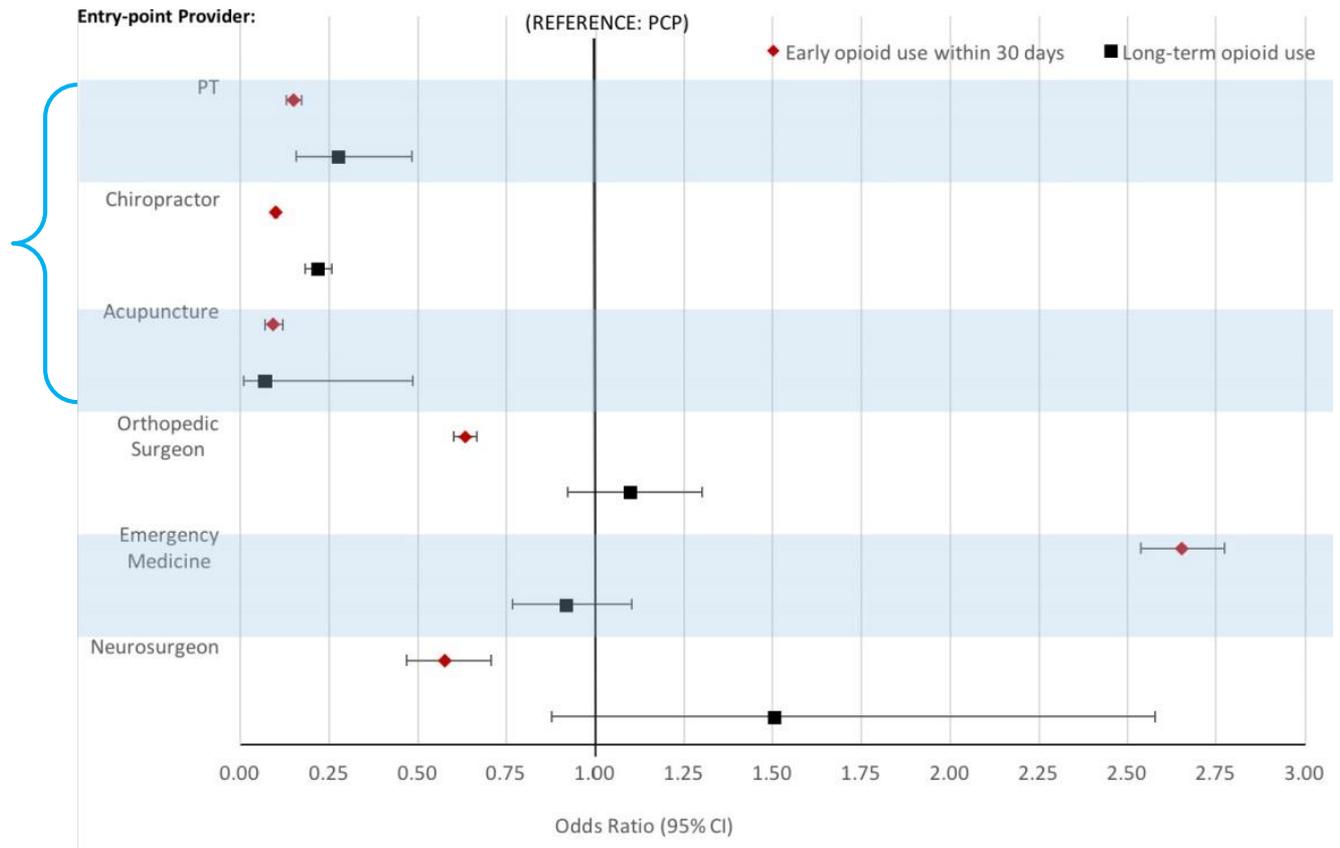
Non-Rx Services Provided For Range of Conditions

2017 Commercial Conditions For Which Non-Rx Therapies Were Reimbursed														
Service	Acupuncture		CMT		OMT		Therapies					Total		
	Active Procedures	Manual/Massage	Passive Modalities											
2017 Allowed (Millions)	\$ 136	\$ 330	\$ 9	\$ 1,005	\$ 322	\$ 64	\$ 1,866							
% of Total Allowed and Cumulative %														
MSK - Spinal	67.2%	67%	85.4%	85%	80.3%	80%	27.0%	27%	37.6%	38%	43.1%	43%	43.0%	43%
MSK - Joint	14.9%	82%	9.8%	95%	7.1%	87%	28.5%	55%	26.9%	64%	24.6%	68%	23.7%	67%
MSK - Other	4.7%	87%	2.6%	98%	4.7%	92%	14.8%	70%	16.5%	81%	16.3%	84%	12.2%	79%
Cardiac	0.2%	87%	0.0%	98%	0.4%	93%	7.3%	78%	0.2%	81%	0.4%	84%	4.0%	83%
Prevention/Imm	0.1%	87%	0.0%	98%	0.6%	93%	5.3%	83%	3.6%	85%	4.0%	88%	3.6%	86%
Nervous	1.5%	88%	0.6%	98%	1.1%	94%	4.8%	88%	2.2%	87%	2.6%	91%	3.3%	90%
MSK - Arthritis	0.9%	89%	0.1%	99%	0.8%	95%	3.2%	91%	2.1%	89%	2.0%	93%	2.2%	92%
MSK - Fracture	0.0%	89%	0.0%	99%	0.1%	95%	3.0%	94%	2.6%	92%	2.8%	96%	2.1%	94%
Injury & Poisoning	0.1%	90%	0.1%	99%	0.3%	95%	2.0%	96%	1.6%	93%	1.4%	97%	1.4%	95%
Headache	5.6%	95%	1.2%	100%	1.2%	97%	0.3%	96%	0.9%	94%	0.8%	98%	1.0%	96%
Cancer	0.1%	95%	0.0%	100%	0.1%	97%	0.6%	97%	1.1%	95%	0.2%	98%	0.5%	97%
Circulatory	0.0%	95%	0.0%	100%	0.0%	97%	0.3%	97%	1.9%	97%	0.3%	98%	0.5%	97%
Gastrointestinal	1.4%	97%	0.0%	100%	0.4%	97%	0.4%	97%	0.9%	98%	0.3%	99%	0.5%	98%
Endocrine	0.4%	97%	0.0%	100%	0.7%	98%	0.5%	98%	0.2%	98%	0.2%	99%	0.4%	98%
Audiology	0.1%	97%	0.0%	100%	0.3%	98%	0.6%	98%	0.3%	99%	0.1%	99%	0.4%	99%
Behavioral	0.5%	98%	0.0%	100%	0.5%	99%	0.4%	99%	0.1%	99%	0.1%	99%	0.3%	99%
Genitourinary	0.9%	99%	0.0%	100%	0.1%	99%	0.2%	99%	0.4%	99%	0.2%	99%	0.3%	99%
Renal	0.0%	99%	0.0%	100%	0.1%	99%	0.3%	99%	0.3%	99%	0.2%	99%	0.2%	99%
Respiratory	0.4%	99%	0.0%	100%	0.6%	99%	0.3%	100%	0.0%	99%	0.1%	100%	0.2%	100%
Dermatology	0.1%	99%	0.0%	100%	0.0%	99%	0.1%	100%	0.2%	100%	0.2%	100%	0.1%	100%
Obstetrics	0.1%	99%	0.0%	100%	0.2%	100%	0.1%	100%	0.1%	100%	0.1%	100%	0.1%	100%
Infectious	0.5%	100%	0.0%	100%	0.1%	100%	0.0%	100%	0.0%	100%	0.1%	100%	0.1%	100%
Other	0.4%	100%	0.0%	100%	0.2%	100%	0.2%	100%	0.2%	100%	0.2%	100%	0.2%	100%

A bit of an eyechart, but that is the point

Two Final Thoughts: Role of Non-Rx Therapies

75% to 90% less likely to have short or long term exposure to opioids if first provider seen for new onset back pain is a PT, chiropractor or licensed acupuncturist



Source

- Technical Report – *Conservative Therapies for New Onset Low Back Pain and Predictors of Long-term Opioid Use and Misuse*
- Lewis Kazis, ScD, et al
- [Boston University School of Public Health](#)
- Sponsors: [APTA](#), [Optum](#) and [UHC](#)
- **8.8M** episodes of back pain from 2008-2013
- **217k** sample – 2 years continuous eligibility and 12 month clean period before and after onset, other exclusions
- ❖ *Manuscript submitted for publication*

Two Final Thoughts: Coverage ≠ Use

Manipulation and Opioid Use for Non-Surgical Spine Episodes

27,045 Providers Who Were First Provider For At Least 25 Episodes

