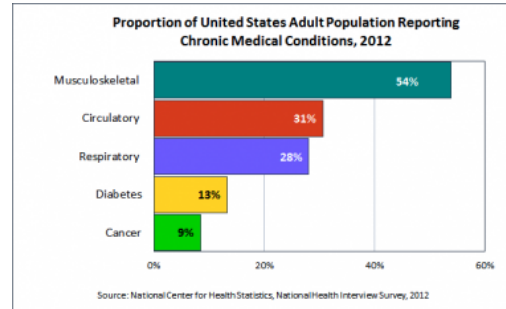


# Health Care Transformation

Who drives Musculo-skeletal?  
How are they going to do it?

McKenzie Conference of the Americas  
Miami, FL - August, 2016

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## Problems - solutions



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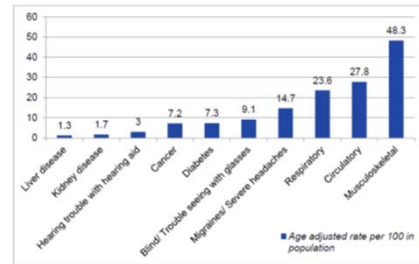
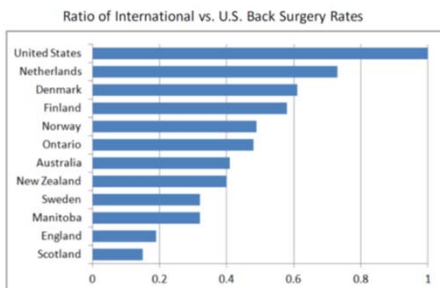


Figure 1. Prevalence of self-reported primary medical conditions for persons ages 18 or older, United States, 2005 (BMUS, 2008:1).

## Establish the Rationale for Direct Contracting of MSDs



100

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## MSD's Burden on Society

Medicare – 57 M lives - \$51.8 B  
Medicaid – 70 M lives - \$21.8 B  
Employers – 149 M lives - \$100 B

MSD's – account for 4.6% of the U.S. economy (varies 2%-8%)

SIEs – cover 55.4% of U.S. Healthcare costs

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## Consensus for Change

### Physician Organizations in Support of Change

The American Academy Of Family Physicians  
 The American College Of Physicians  
 The American College Of Emergency Physicians  
 The American Academy Of Pediatrics  
 The American Geriatrics Society  
 The American Academy Of Physical Medicine And Rehabilitation  
 The American Osteopathic Association  
 The American Academy Of Orthopaedic Surgeons  
 The American College Of Rheumatology

### Recommendations of the Committee

- a collaborative effort be carried out to assess how well physicians entering practice are prepared to deal with the musculoskeletal problems
- the faculty and administration at U.S. medical schools should re-assess the curriculum with respect to the need for more musculoskeletal education
- medical schools should place more emphasis on these MSD conditions so that young physicians entering their residencies will feel as well prepared to deal with such conditions as they are prepared to deal with problems found in other body systems.

Clauser K, Jackson D. It's past time to reform the musculoskeletal curriculum. *Academic Medicine*. Vol. 76, No. 7/June 2001

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JGIM.2006.1988 (Rev. 11/21/14) 81

### How emergency physicians approach low back pain: choosing costly options.

## Differences in the Surgical Treatment of Lower Back Pain Among Spine Surgeons in the United States

Abstract  
 Lubelski, Daniel MD; Williams, Seth K, MD; O'Rourke, Colin MS; Obuchowski, Nancy A, PhD; Wang, Jeff C, MD; Stoenmetz, Michael R, MD; Healy, Alfred J, PA; Benzal, Edward C, MD; Modic, Michael T, MD; Querrey, Robert MD; Rivz, Thomas E, MD

### Abstract

**Study Design:** Electronic survey  
**Objective:** To identify the surgical treatment patterns for low back pain (LBP), among U.S. spine surgeons. Specifically determine (1) differences in surgical treatment responses based on various demographic variables, (2) probability of disagreement based on surgeon subgroups.  
**Summary of Background Data:** Multiple surgical and nonsurgical treatments exist for LBP. Without strong evidence or clear guidelines for the indications and optimal treatments, there is substantial variability in surgical treatments used.  
**Methods:** A total of 445 U.S. spine surgeons completed a survey of clinical and radiographic case scenarios on patients with mechanical LBP, no leg pain, and concordant discograms. Surgical treatment options included no surgery, acetabular lumbar interbody fusion (ALIF), posterolateral fusion with pedicle screws, transforaminal posterior lumbar interbody fusion (TLIF/PLIF), etc. Statistical significance was set at 0.01 to account for multiple comparisons.

ents with urgent or emergent  
 ine. However, inadequacies  
 g physicians in a number of  
 rns in particular.  
 rns and faculty at a universi  
 neyed.  
 residents and 43% of attend  
 g junior residents, senior  
 in their musculoskeletal educ  
 id attending staff. Given the

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## Global Core Findings and Recommendations

- Medical students are **seldom assessed** for their competency to take an appropriate history and examine the musculoskeletal system
- When they have been examined for basic competency, **most have failed**
- There is a clear need to improve the competency of **all doctors** in the assessment and management of MSD conditions and the education in most medical schools need to be reconsidered
- It is recommended that **one method** of assessing the MSD system be taught irrespective of which specialty is teaching it.
- Competency is essential in history and examination and **similar approaches** are recommended for PCP's, Rheumatologists, Orthopedists, or Rehabilitation specialists.
- Teaching and training should preferably be integrated, **multidisciplinary**, and ensure a consistent approach to the learning objectives.

Woolf AD, Walsh NE. Global Core recommendations for a musculoskeletal undergraduate curriculum. *Ann Rheum Dis* 2004, 63: 517-524

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## The New York Times

Health Insurance Deductibles Outpacing Wage Increases, Study Finds  
 By GINA KOLATA OCT. 28, 2011

The Spine as Profit Center  
 By LINDA SASLOW  
 Published: December 30, 2006

A Surplus of Treatment Options, Few of Them Good  
 By LESLIE BENGER  
 February 20, 2010

Health Spending in U.S. Topped \$3 Trillion Last Year  
 By BEED ABELESON  
 Published: August 7, 1994

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## Key points of a review of literature of medical student MSD training

- physicians have received inadequate training during medical school on how to examine, diagnose and manage these conditions(MSD)
- Surveys of students, residents and practicing physicians consistently demonstrate lack of confidence in diagnosing and managing musculoskeletal problems
- Passing scores on Friedman-Berstein for medical and surgical interns, medical practitioners and students – low passing rates
- Interviews of students and teachers in medical school have determined that barriers include: students lack of basic MS anatomy knowledge, lack of consistency of what is taught, lack of teacher confidence in MSD clinical teaching, lack of reinforcement of clinical skills

Seetha, U., et al., Musculoskeletal education in US medical schools: lessons from the past and suggestions for the future, *Curr Rev Musculoskelet Med*, 2011, Sep: 4(3): 91-98

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White Paper: Musculoskeletal Disorders, Workforce Health and Productivity in the United States, CWHP, June 2015

“The generally low mortality rates may be one reason why there is less attention and indeed funding for MSD’s, as their impact is not viewed as being substantial as those of diseases with higher mortality rates.”

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**Neutralize Drivers of Excessive Care**  
CMS Quality Measure Development Plan (MDP)

- **Clinical Care**
  - Advocates measures to honor patient preferences and encourage shared decision-making.
  - Calls for measures that are cross-cutting and, where relevant, apply to more than one specialty.
  - Invites focused measures for specialties with clear gaps.
  - Promotes development of clear economic, clinical, and humanistic outcomes (ECHO) outcome measures.
- **Patient and Caregiver Experience**
  - Calls for patient-reported outcomes measures (PROMs).
  - Invites measures related to additional topics important to patients and families and caregivers (e.g., knowledge, skill, and confidence for self-management).
- **Population Health and Prevention**
  - Advocates development and adaptation of outcome measures at a population level (e.g., for communities or other identified populations) to assess the effectiveness of the health promotion and preventive services delivered by professionals.
  - Promotes measures relevant to IOM Vital Signs topics (e.g., life expectancy, well-being, addictive behavior).
  - Calls for measures to support detection or prevention of chronic disease (e.g., chronic kidney disease).
- **Safety**
  - Calls for measures of diagnostic accuracy.
  - Promotes medication safety in relation to important drug classes.
- **Care Coordination**
  - Promotes assessment of team-based care (e.g., timely exchange of clinical information).
  - Calls for effective use of new technologies, such as telehealth.
- **Affordable Care**
  - Advocates measures to detect over-utilization (e.g., overuse of clinical tests and procedures).

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ACOs / Viewpoint, 2012, United Health Care Services Inc.

**Centers for Medicare and Medicaid Services (CMS)**  
Quality Measure Development Plan (MDP)

MDP provides a strategic framework for **clinician quality measure development** around the Medicare Merit-Based Incentive Payment System (MIPS) and advanced/eligible Medicare Alternative Payment Models (APMs)

Note: MACRA refers to the Medicare Access and Children's Health Insurance Program (CHIP) Reauthorization Act of 2015

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On Solving Problems

“We cannot solve our problems with the same thinking we used when we created them.”



Albert Einstein

On Solving Problems

“I couldn't repair your brakes, so I made your brake louder.”



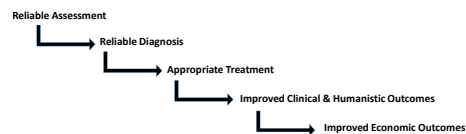
## MDT – Reliability, Validity and Clinical Outcomes

Reliability – lumbar spine  
 Reliability – cervical spine  
 Reliability – peripheral joints  
 Validity – lumbar spine  
 Validity – cervical spine  
 Validity – peripheral joints  
 Clinical outcomes

(c)

## Unreliable Diagnoses Are the Primary Driver of Suboptimal MSD Care Get the Diagnosis Right to Get the Care Right

- A critical, overlooked factor in orthopedic diagnostics has been driving poor economic, clinical, & humanistic outcomes (ECHO)
- Addressing this factor, IMC has helped a broad range of stakeholders improve their health, socioeconomic status, & competitiveness
- Leveraging a reliable assessment process, IMC guarantees & delivers (1) cost-savings, (2) clinical improvements, & (3) patient satisfaction



IMC = Institute for Healthcare Improvement

## Public Domain

11.Ergo. J.Med. 1998 Oct 8;339(15):1021-9

**A comparison of physical therapy, chiropractic manipulation, and provision of an educational booklet for the treatment of patients with low back pain.**

Cherkin DC<sup>1</sup>, Deyo RA, Nance K, Street J, Stanson JR

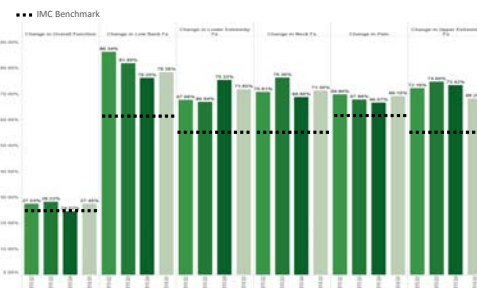
Spine (Phila Pa 1976). 2014 Feb 19;39(7):E182-90. doi: 10.1097/BRS.0000000000000117

**McKenzie lumbar classification: inter-rater agreement by physical therapists with different levels of formal McKenzie postgraduate training.**

Wernicke MV<sup>1</sup>, Coudacher G, Hart DL, Stratford P, Luder J, Wessberg J, Hertova S, Steinhilb L

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## CLINICAL & HUMANISTIC OUTCOMES PERFORMANCE

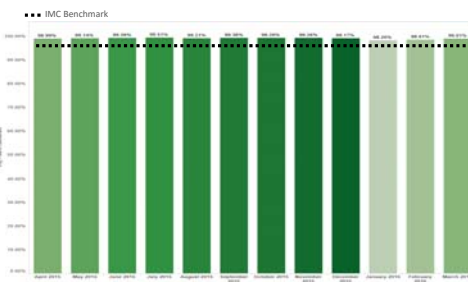


## Pubic Domain

Byrne, 2006 – Ireland	Jackson, 2000
Davies, 2014 – Kentucky	Miller, 2014
Foster, 1998 Britain, Ireland	Poitras, 2005
Gracey, 2001, Ireland	

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## PATIENT-REPORTED SATISFACTION



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## Results, Adjusting for Covariates

Adjusted Model Allowed Fees for Total Costs			
Source	DF	F Value	Pr > F
TRT	1	4.05	0.0442
Gender	1	0.06	0.8087
AGE	1	20.68	<.0001
RETRO_RISK	1	136.04	<.0001

	Unadjusted and Adjusted ALLOWED FEES						
	Community Care (CC)			Mechanical Care (MC)			p <
	N	Mean	Std	N	Mean	Std	
TOTAL Unadjusted	4412	2920	7459	165	1387	4342	0.009
TOTAL Adjusted	4412	2905	109*	165	1749	563*	0.045

Ho: Mean\_CC = Mean\_MC      Ho: LSmean\_CC = LSmean\_MC

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## Results, Focusing on Cost Savings

- CC Cost/Case = \$2,920 (adj. fig. of \$2,905)
- MC Cost/Case = \$1,387 (adj. fig. of \$1,749)
- Delta Savings/Case = \$1,533 or 52.5%  
(adj. fig. of \$1,156 or 39.8%)

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## Conclusions

- HCT is now
- Medical Practice = 18 years
- Physician Training and practice
- Current specialist practice
- Conservative care
- MDT

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