

# Management of Lumbar Spinal Stenosis An Evidence Based Medicine Approach

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# From Quantity To Quality



# Two Biggest Drivers Of Healthcare For 50 Years

- The 1965 Medicare Amendment to the Social Security Act



- The 2010 Patient Protection and Affordable Care Act - ACA

[U.S. Department of Health & Human Services](#)

# Why Reform?

- U.S. has highest per capita spending on health care of any nation—50% greater than 2nd highest.
- Current U.S. healthcare costs are projected at nearly \$2.5 trillion, 17% of the entire economy.
- Annual U.S. Spine Care \$90 billion (\$15B fusion)
- Over the past decade
  - Incidence has increased by 34%
  - Cost has increased by 65% (10-fold increase surgery)

# Unsustainable Cost Of U.S. Healthcare System

**TABLE 1.** National Health Care and Surgical Care Expenditures Percent GDP and Per Capita Expenditures-US Economy\*

Year	2005	2010	2015	2020	2025
Surgical % GDP	4.6	5.2	5.8	6.5	7.3
National % GDP	15.9	17.8	20.0	22.5	25.2
Surgical per cap exp. <sup>†</sup>	\$1615	\$1812	\$2033	\$2282	\$2561
Natl. per cap exp. <sup>‡</sup>	\$5572	\$6252	\$7015	\$7871	\$8832

All categories  $P < 0.01$ .

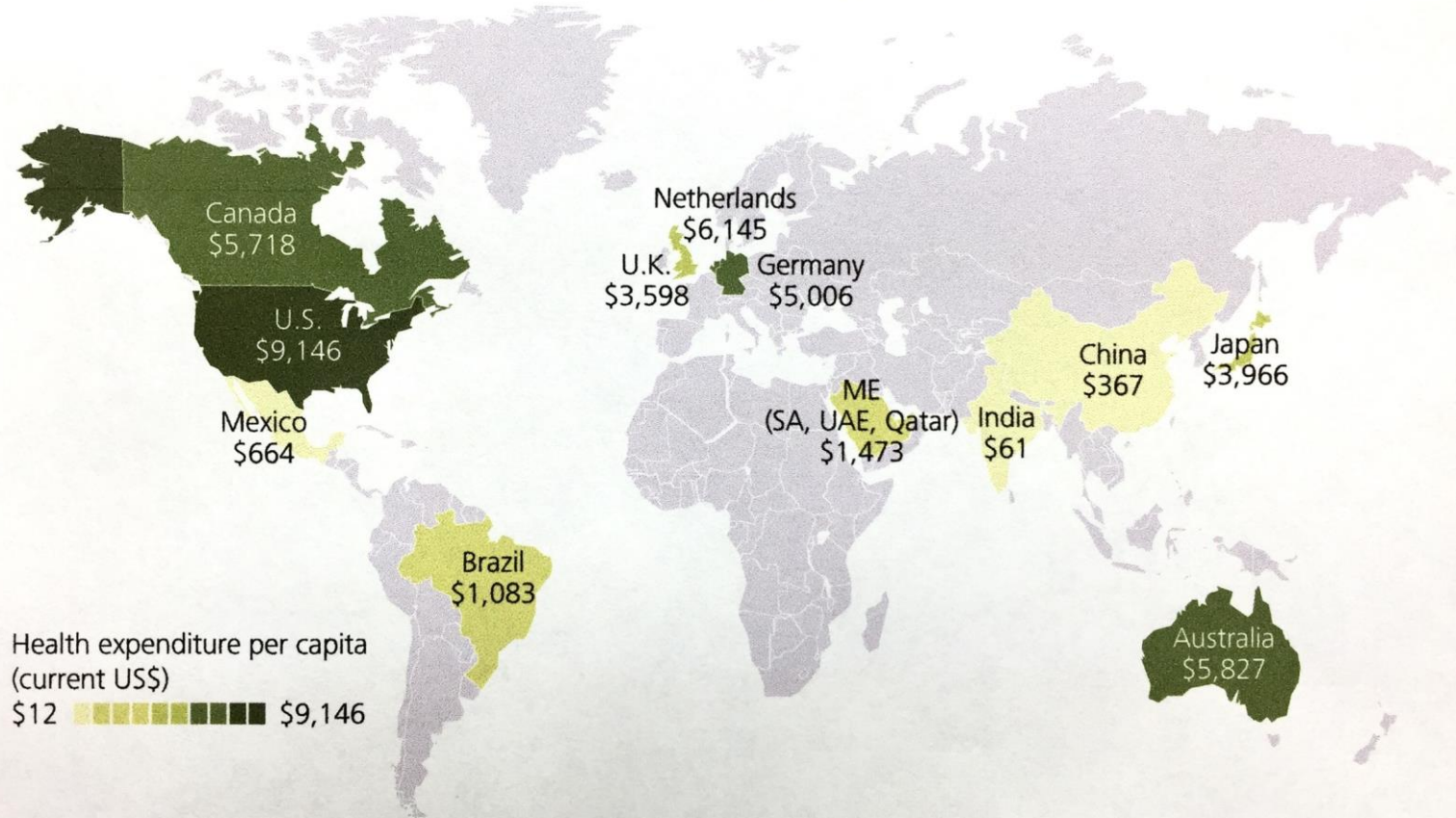
\*In 2005 dollars.

<sup>†</sup>Surgical health care expenditures per capita.

<sup>‡</sup>National health care expenditures per capita.

Figure 1: Countries' GDP and per-capita health care spending, 2013

Health care expenditure varies greatly around the world



Source: D TTL Global Life Sciences and Health Care (LSHC) Industry Group analysis of The World Health Organization Global Health Expenditure database (see <http://apps.who.int/nha/database> for most recent update)

# Quality - IOM

## *Healthcare Delivery*

- **Safe** – avoiding injury
- **Effective** – providing care when appropriate, achieve desired results
- **Timely** – reducing harmful delays
- **Efficient** – avoiding waste
- **Patient-centered** – respectful/responsive to patient preference
- **Equitable** – race, ethnicity, location, economic status

# IOM, HHS, AHRQ, PCORI, CMS

- Eliminate non-effective care/treatments, purchase only high-value treatments
- Financially incentivize providers/hospital to deliver care above quality benchmarks
- **Goal is to purchase high-value treatments from high quality providers**

# Disease State Management- Lumbar Spinal Stenosis

- All HCPs appreciate that *symptomatic spinal stenosis* presents **differently** to clinicians and lands at different places on the *disease continuum*
- Most agree, in the absence of acute trauma and/or bowel and bladder complaints, **stenosis management usually begins conservatively** and may progress to surgical management
- Most agree that if surgical management is required, **a direct visualized microsurgical (less invasive) decompression** is advisable and is supported in numerous peer reviewed publications
- Most agree also there are patients that present early (less facet involvement) and later (tremendous facet disease) that need decompression *and literature supports different clinical outcomes for symptomatic spinal stenosis requiring decompression*

# Disease State Presentation – Cont.

- Those presenting early, having less facet disease, low ODI, and low VAS back pain scores could be ***successfully decompressed*** without the concern for lingering persistent low back pain post op
- However, those presenting with moderate to severe spinal stenosis, needing decompression, having severely arthritic facets, and up to a grade 1 spondy, having higher ODI, and VAS back pain, ***most likely may not have predictably good results*** and may have post op back symptoms that persist
- This is ***the ILS patient that studies have shown benefits from decompression and interlaminar stabilization***
- Hi ODI, Hi VAS, bad facets and needs decompression.....the literature has spoken.....alone, or is something better?
- Defining the unmet clinical need and medical necessity

# TRANSITION ZONE

- Todd Lanman, MD in Becker's 2016 described the patient population that is very active, has significant neurogenic and mechanical components of their disease, and needs open microsurgical decompression
- Decompression is essential but not enough
- Decompression and fusion is too debilitating
- *The Transition Zone* of pathology and high end patient expectations suggest coflex® and disc replacements have a vital role of stabilization after decompression

The spinal stenosis continuum is the highway to the (Danger) ***TRANSITION ZONE***

# Degenerative Spinal Stenosis

*“Any type of narrowing of the central spinal canal or nerve root canals (intervertebral foramina) resulting in compression of neurovascular elements.”*



**Patient suffering from central, foraminal, & subarticular recess stenosis**

# Facet Joint Degenerative

- Damaged cartilage
- Synovitis/synovial cysts
- Osteophyte formations
- Subchondral bone cysts
- Capsule/ligament relaxation
- Subluxations



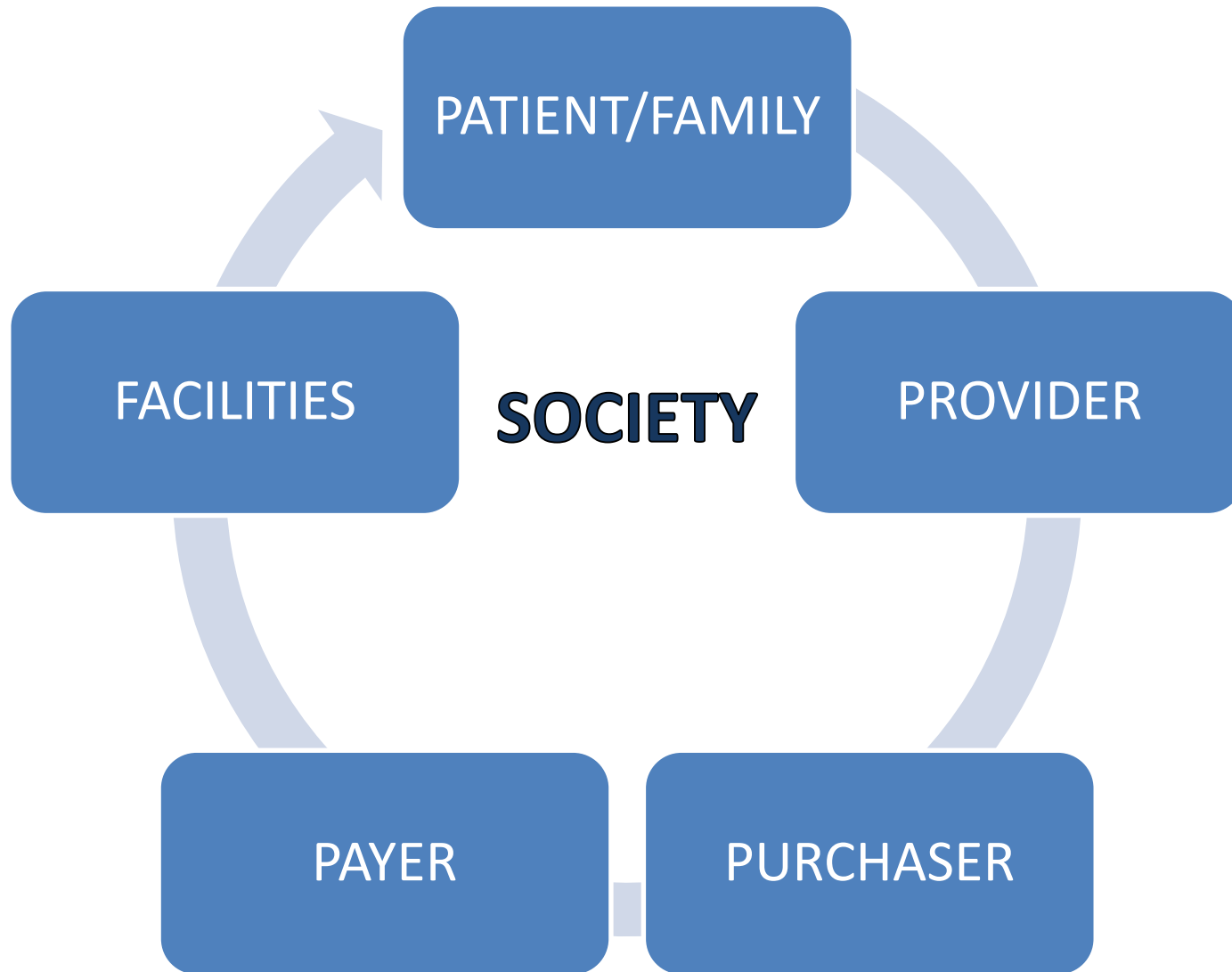
# Surgical Options For Lumbar Stenosis Patient

- Indirect decompression (distraction stabilization)
- Decompression alone
- Decompression with interlaminar stabilization
- Decompression with fusion stabilization

*Each have direct clinical outcomes, multivariate cohort analysis, comparative effectiveness considerations, IDE site vs community use considerations, society guidelines, and levels of evidence discussions*



# Stakeholders In Patient Centric Healthcare



**THANK YOU**