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Spine in America: Right or Wrong Direction?

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- What is a “Right” and what is a “Wrong” direction is a matter of point of view:
  - Spine Surgeon Specialist
  - Spine Interventional Specialist
  - Spine-related Technologies
  - Non-interventional Spinal Specialist
  - Payor
  - Patient/Population at large

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Need to develop a context in which to frame this discussion

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- Might be more useful to first ask -

  "What Direction is Spine Care Taking In America?"

- I will make several assumptions
  - A horizon of 10 years
  - Current stresses in the healthcare arena will continue
  - I will focus on spinal care (as opposed to research, etc)
  - Frame the answer to this question in a still larger context –

  "What Direction is Healthcare Taking in America?"

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Currently there are 2 strong trends in the American Healthcare "Industry" that are driving the future of American Health care:

Consolidation/Vertical Integration

Increasingly defining Healthcare in terms of **Population Health Measures**

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Consolidation/Vertical Integration:

Physician consolidation – this has been going on for a long time

- Formation of Large Specialty Groups
- IPAs – Often FP groups that increase their spectrum of care by either consolidating with specialty groups or contracting with them
- Acquisition of large numbers of physician groups by hospitals
  - In 2016, for the first time, < half of physicians groups were privately owned
  - AAOS Census Report
    - 2012 – 62% of orthopedic surgeons in private or group practice
    - 2018 - 36% of orthopedic surgeons in private or group practice

All are an attempt to mitigate the increasing burdens of documentation and administration in the light of decreasing reimbursements for practitioners

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Consolidation/Vertical Integration:

Hospitals – (Beth Israel Deaconess - Lahey Clinic in Boston; attempted merger of Memorial Hermann and Baylor Scott & White in Texas)

- market penetration
- price negotiation,
- basic economics – sharing of administration, IT costs, etc.

Payors – (top four US private insurance companies control 40% of market - there have been 2 attempts at mergers between 2 of these 4 companies in the last decade)

- market penetration
- price negotiation,
- basic economics – sharing of administration, IT costs, etc.

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Consolidation/Vertical integration:

Payors and PBMs, etc. – (CVS/Aetna; OPTUM/United Healthcare; Express Scripts/Cigna)

- cost savings
- freer cash flow
- pressure of PBMs for more transparency

Heath Technology Companies – Johnson & Johnson (Everything), Medtronic (Almost everything-Mazur), Stryker-Biomet (lots of stuff – 50 acquisitions –K2M)

- Allows increased market penetration
- Allows B2B price negotiations and contracting
- ***Diminishes the need for innovation and R&D by fostering the purchasing of startups and smaller companies for certain technologies rather than providing their own R & D**

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Consolidation/Vertical integration:

Vertical Integration - *in microeconomics and management, vertical integration is an arrangement whereby the supply chain of a company is owned by that company*

Each of these 5 groups (Physician groups, Hospitals, Payors, Payors and PBMs and Health Technology Companies) are currently undergoing varying degrees of vertical integration

Potentially, it is conceivable that all five of these components of healthcare delivery could be integrated – which introduces the emergence of the concept of the Big Kahuna:

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HAVEN

HAVEN - Joint Healthcare Non-profit Organization being formed by Amazon-Berkshire Hathaway-JP Morgan.

"This could be Heaven or this could be Hell…"

Hotel California

The Eagles

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The second strong trend that is driving American Healthcare:

Increasingly defining Healthcare in terms of **Population Health Measures**

Def: "Population Health refers to viewing "health" as that of the a population as a whole, especially as the subject of Government regulation and support"

Introducing the concepts of Population Health into mainstream American Healthcare represents a radical departure from support for traditional mainstream care which focuses on the *individual* to support for much broader and inclusive determinants of health.

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Population Health Measures:

Population health concepts are fundamental to the healthcare reforms currently being implemented in the US.

Some of the tools of Public Health Measures that we are all becoming aware of include:

- Registries
- Establishment and adherence to complex clinical guidelines
- Monitoring and measuring clinical and cost matrices
- Tracking specific outcomes
- Demands for more communication, education and interaction with patients

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Population Health Measures:

Some of the goals of Public Health Measures include:

- Access to wide and diverse populations of patients
- Management of care for these patients across the health spectrum
- Deceased cost of care: patient/population
- Improved quality of care: patient/population
- Improved management of care: patient/population

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Population Health Measures:

Some of the metrics used in Public Health Measures;

- Cost of care/population member
- Patient-centered outcomes
- Value (= **outcomes/cost**)
- Patient satisfaction evaluations
- Patient re-admission rates
- Global measures of populations' health

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Population Health Measures:

Healthcare Reform:

Even though Obama Care has not been fully implemented and health care reform is clearly a work in progress, the demands that it imposes on the US Healthcare System continue to change the economics of health care delivery and place increased burdens on those delivering this healthcare.

There are many reasons why there is a perceived need for health care reform in the US, but the fundamental need is …

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We spend entirely too much money on healthcare in the US for unacceptably poor outcomes

Projected US GDP for 2019:	21.9 Trillion $
Current Spend on Healthcare in US:	17.9% of GDP
Most recent ranking of US among 11 Western Industrialized nations on quality, efficiency, access, etc. :	**Last**

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A major way spending is being controlled in healthcare reform is by implementing new models of reimbursement for Providers

American medicine has traditionally been based on a fee-for-service model (volume-based model) in which services are unbundled and paid for separately – most recently using RVUs as the metric

- Incentivizes Provider treatments
- Payments are based on treatment quantity
- Payments are *not* based on treatment quality

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Under Healthcare Reform, American medicine is being transitioned from a Fee-for-service model to Value-based reimbursement models that reward quality and efficiency in determining reimbursements.

This change is going to profoundly affect the future of Spinal Care in the US.

Furthermore, this change in reimbursement models will affect different aspects of spinal care differently

Let's try to figure out how this is going to work out:

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Value-based care

Value-based outcomes …

Changes in the entire health-care process in America

As value-based reimbursement models become more pervasive in the American healthcare system, I feel that, in addition to the continued downward pressure on reimbursement to providers, it will become increasingly difficult to introduce the most up-to-date techniques, technologies and instrumentation into the practice of spine.

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There will result in a need for greater physician-system alignments:

Hospital employment of physicians

Service line co-management

“Clinical Integration” protocols

The various Value-based payment models, some of which are already being trialed by CMS and other payors -

Fall along a continuum requiring increasing degrees of clinical and financial integration from providers

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To accomplish this integration, increasing degrees of “Risk” will be required to be assumed by **all** - *but the Payor!*

All the surgeons and interventionists in this room today, are familiar with the concept of “Risk” as pertains to patient safety and liability

However, in the new healthcare, “Risk” is defined more holistically across a number of different domains as well.

This more holistic approach to defining and dealing with “Risk” is deemed **Enterprise Risk Management** – the complex integration of the notion of risk into the entire enterprise of a healthcare entity.

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Spine practitioners have now to consider a wider range of factors when discussing risk, but simplistically for the practitioner, “Risk” now translates into *Cost* and *Loss* for the *Enterprise*

Fee for Service Model: Spine surgeons and interventionalists evaluated on their productivity and thus the amount of financial “value” they brought to a healthcare entity as a conduit for cash.

Value-based Model: Typically, a health care entity is given a specific amount of money to provide for an episode of care for a specific health problem (e.g. Back Pain) within a specific population covered

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Facts

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Facts and Implications

Spinal surgeons and interventionalists provide expensive services

Every time these services are utilized in a covered population, for example in the treatment of back pain, these types of practitioners are no longer looked upon as a conduit of cash to the health care Enterprise but rather as a cash **loss** to the Enterprise

The practitioners and their services, so loved in the *Fee for Service* system are now viewed as a "Risk" to the *Value-based* system

(Cost = Loss)

The services of spine surgeons and interventionalists are now a "***Risk***" that needs to be **Managed!**

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This is producing a serious conundrum for all of us in this room:

"How do we maintain quality care at decreasing cost?"

Spinal interventions are increasingly technology-intensive endeavors -

Frameless stereotaxy; Robotic Surgical Systems; Endoscopic MBB ablations, etc.

Development of such interventions and the regulatory burden of bringing them to market has become increasingly complex and invariably, introduction into practice of improved technology comes at an increased price.

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In a system where the “Value” of such technology is evaluated by the following equation:

Value = Patient Centered Outcomes/Cost

It is obvious that the increased cost of a new technology has to lead to improved outcomes or there is no value to the technology.

Furthermore, these improved outcomes have to compare favorably (comparative effectiveness) to the outcomes and costs of other approaches to treating the problem at hand.

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Unfortunately, the evidence base that is available for surgical and interventional treatment in common spinal problems, such as back pain - itself one of the leading maladies and causes of disability in the world - is not very supportive of many of our commonly used interventions:

- Simple decompression for back pain in Spinal Stenosis without radiculopathy
- Spinal fusion without deformity
- ESIs for axial pain only
- RFA for sacral joint pain

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The coming world of health care reform, as currently being visualized and implemented, will be based on the economics of “reality”

(i.e. outcomes and cost)

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What are the implications of this evolving system of healthcare for the various Stakeholders in Spine Care in America?

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Implications for Spinal Surgeons:

Facts:

- Spinal surgery is expensive
- The evidence base for patient-centered outcomes for many of our interventional procedures is often lacking strong support for those procedures
- Spinal surgery has the potential to cause serious (and expensive) complications – this additional expense (**Risk**) has to be absorbed and managed by the healthcare system
- Alternative treatment modalities for common conditions such as lower back pain have been shown to be as effective in many cases as surgical intervention with lower cost and complication rates

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Implications for Spinal Surgeons

Probabilities:

- Surgical interventions as solutions to common spinal problems such as back pain are likely to be less valued and thus less utilized in the coming healthcare environment
- New and developing technologies, unless supported by strong evidence of their superiority to current interventions or, if only equally effective but introduced at a decreased cost (Value = Outcomes/Cost) are unlikely to be accepted in the coming healthcare environment
- There will continue to be a need for surgical interventions for selected spinal conditions (deformity, trauma, tumor, infection)

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Implications for Spinal Surgeons

Conclusion:

Wrong Direction

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Implications for Spinal Technology Companies

Facts:

- Current technologies in the market place have, in general, remained divorced from normal market pressures (Flat-screen TV vs. the pedicle screw) and thus are expensive
- For various legitimate reasons, new technologies, or even refinements of existing technologies (horizontal evolution) usually come to market at increased costs over the existing technologies and are often even more expensive
- These technologies are often used indiscriminately possibly leading to over-utilization in many cases
- True innovation is often out-sourced

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Implications for Spinal Technology Companies

Probabilities:

- Future economics of the healthcare system is going to increasingly restrict not only the number of surgical procedures but also likely the utilization of many of the technologies we employ today in the operating rooms. (8-year follow up of DS patients in the SPORT study)
- Their likely will be an increased interest and R& D in biologics and regenerative medicine in the treatment of common degenerative conditions of the spine (i.e. Smith-Nephew and Osiris as well as other acquisitions)

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Implications for Spinal Technology Companies

Conclusion:

Wrong Direction 

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Implications for Spinal Interventionalists

Facts:

- Treatments are expensive but often far less than surgical interventions
- The evidence base for the effectiveness of many of the interventions is often weak or lacking
- Because of the ease of administration in most cases and also for an (incorrectly) perceived need to avoid surgery – only as a "last resort" – on some cases, these techniques can be grossly over-utilized.

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Implications for Spinal Interventionalists

Probabilities:

Interventional procedures, particularly injections, will likely continue to be utilized but will continue to experience downward pressure on both the frequency and repetition of utilization as well as their reimbursement.

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Implications for Spinal Interventionalists

Conclusion:

Wrong Direction 

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Implications for Spinal Non-interventionalists

Facts:

- Majority of common spinal complaints such as back pain are not treated surgically
- Patients seek care for these complaints in large numbers
- Even non-interventional spinal care in the form of chiropractic, physical therapy as well as simple OTC medications and remedies tend to be over utilized
- The future roll of the surgeon and spinal interventionalist is likely to diminish for many of these patients

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Implications for Spinal Non-interventionalists

Probabilities:

- While the evidence base is also not strong for many "conservative" spinal treatments, their utilization is likely to increase with relation to the population of patients with specific complaints such as back pain.
- More aggressive (surgical/interventional) care will decrease
- Care with these modalities for a patient within the healthcare system, however, will likely by closely monitored and restricted if treatment is not proving effective

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Implications for Spinal Non-interventionalists

Conclusion:

Right Direction

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Implications for Payors

Facts:

- The government's attempts at brokering health insurance in the ACA would have to be rated as less than successful with many individuals paying higher premiums, costs increasing do to administrative burdens resulting in the exit of many of the insurers administering the programs due to loss of profitability.
- Private insurance companies show profits primarily in the single digits over the long-haul
- Health insurance CEOs, of course, make obscene amounts of money but are actually under-payed relative to their peers in non-insurance companies when compared to similar-sized private-sector companies

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Implications for Payors

- Probabilities:
- Government payors – while the new economics of healthcare and risk sharing could indeed lead to savings for the government, it has proven itself a very poor steward of things financial and it will probably figure out a way to squander any potential savings
- Private payors – it is hard to imagine that leveraging risk and increasingly passing it on to the practitioners of healthcare can do anything but increase savings to payors. This in combination with the inertia of payors to decrease their product costs to the consumer should make for a profitable outcome

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Implications for Payors

Conclusion:

Right Direction 

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Implications for Patients

Facts:

- Low back pain is one of the leading disease burdens in the world
- Treatment varies across the world from essentially blind neglect to vast expenditures of healthcare resources depending on the economic resources available in a country
- Its unlikely that patient outcomes in LBP have been appreciably improved by the vast amount of $ spent in the US vs. lesser economically developed countries
- In fact, years lived with disability with lower back pain have *increased* by 54% world wide between 1990 and 2015. (Lancet, 2018)

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Implications for Patients

Probabilities:

- For the next 10 years, the impact of changes in Spine in American for patients is uncertain
- Curtailing surgical and interventional treatments based on an economic basis alone (rationing) is not likely to benefit spine patients
- However, demanding that surgical and interventional therapies prove their effectiveness over alternative forms of care in the arenas of evidence and comparative effectiveness research ***can*** benefit spine patients ***and*** reduce overall costs.
- Whether such a change can occur remains to be seen

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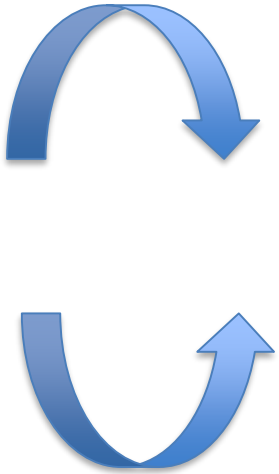
Implications for Patients

Conclusion:



Uncertain Direction

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Thank You

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