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RESULTS

The State of Lean-Six Sigma in Hospitals Today

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Alexander ‘Sandy’ Eastlick

IMA Consulting

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How Many Hospitals in the U.S. as of 4/2011?

- A.) 3,025
- B.) 4,025
- C.) 5,025
- D.) 7,015

B.) 4,025 hospitals, with 756,784 staffed beds (average of 188.0 beds per hospital)

Source: American Hospital Directory

Answer to a Question Not Asked

D.) 7,015 hospitals the answer in 1978, when the US population was 218,500,000.

- Within 34 years, decline of 42.5% in the number of hospitals

In 1978, 7,015 hospitals housed 1,381,000 beds

- The same 34 years, decline of 45.2% in the number of beds
- Average of 196.8 beds per hospital

Source for 1978 data: Hospital Management Engineering: A Guide to the Improvement of Hospital Management Systems, Harold E. Smalley, Prentice-Hall, Inc., p.6, 1982

A Question to Ponder

While the U.S. Population increased 42.6% in 34 years (311,591,917 U.S. Census Bureau projection for year ending 2011), how can you explain the drop in the numbers of hospitals and their capacities?

2011 ACHE Survey – Key Results

Listed by the average rank and percent of "#1" response

• Financial challenges	2.5	77%
• Healthcare reform implementation	4.5	53%
• Patient safety and quality	4.6	31%
• Governmental mandates	4.6	32%
• Care for the uninsured	5.2	28%
• Physician-hospital relations	5.3	30%
• Patient satisfaction	5.6	16%
• Technology	7.2	10%
• Personnel shortages	7.4	11%

Note: In 2011 the survey was confined to CEOs of community hospitals (nonfederal, short-term, non-specialty hospitals).

Let Us Take a Look at

- Specific concerns for the top three issues facing today's hospital CEOs
- If and how Lean 6σ (or any TQM initiative) may be of benefit to CEOs

Top Issue # 3: Patient Safety and Quality

• Engaging physicians in improving the culture of quality	72%
• Redesigning care processes	58%
• Pay for performance	50%
• Redesigning work environment to reduce errors	43%
• Non-payment for "never" events, i.e., preventable medical errors	35%
• Public reporting of outcomes data	31%
• Medication errors	31%
• Compliance with accrediting organizations e.g., JCAHO, NCQA	30%
• Leapfrog demands	29%
• Nosocomial infections	21%
• Other n = 5	

If number of respondents is fewer than 50, only numbers are provided.

Top Issue # 2: Healthcare Reform Implementation

- Reduce operating costs 67%
- Alignment of provider and payor incentives 60%
- Regulatory/legislative uncertainty affecting strategic planning 55%
- Align with physicians more closely 54%
- Develop information system integrated with primary care doctors 51%
- Study avoidable readmissions to avoid penalties 45%
- Obtain funding from the American Recovery and Reinvestment Act for electronic records 40%
- Hire one or more primary care physicians 34%
- Study avoidable infections to avoid penalties 25%
- Other n = 7

If number of respondents is fewer than 50, only numbers are provided.

Top Issue # 1: Financial Challenges

• Medicaid reimbursement	88%
• Government funding cuts	88%
• Medicare reimbursement	78%
• Bad debt	71%
• Decreasing inpatient volume	54%
• Increasing costs for staff, supplies, etc.	51%
• Inadequate funding for capital improvements	43%
• Managed care payments	38%
• Other commercial insurance reimbursement	35%
• Emergency Department	31%
• Revenue cycle management (converting charges to cash)	28%
• Competition from specialty hospitals	13%
• Other n = 34	

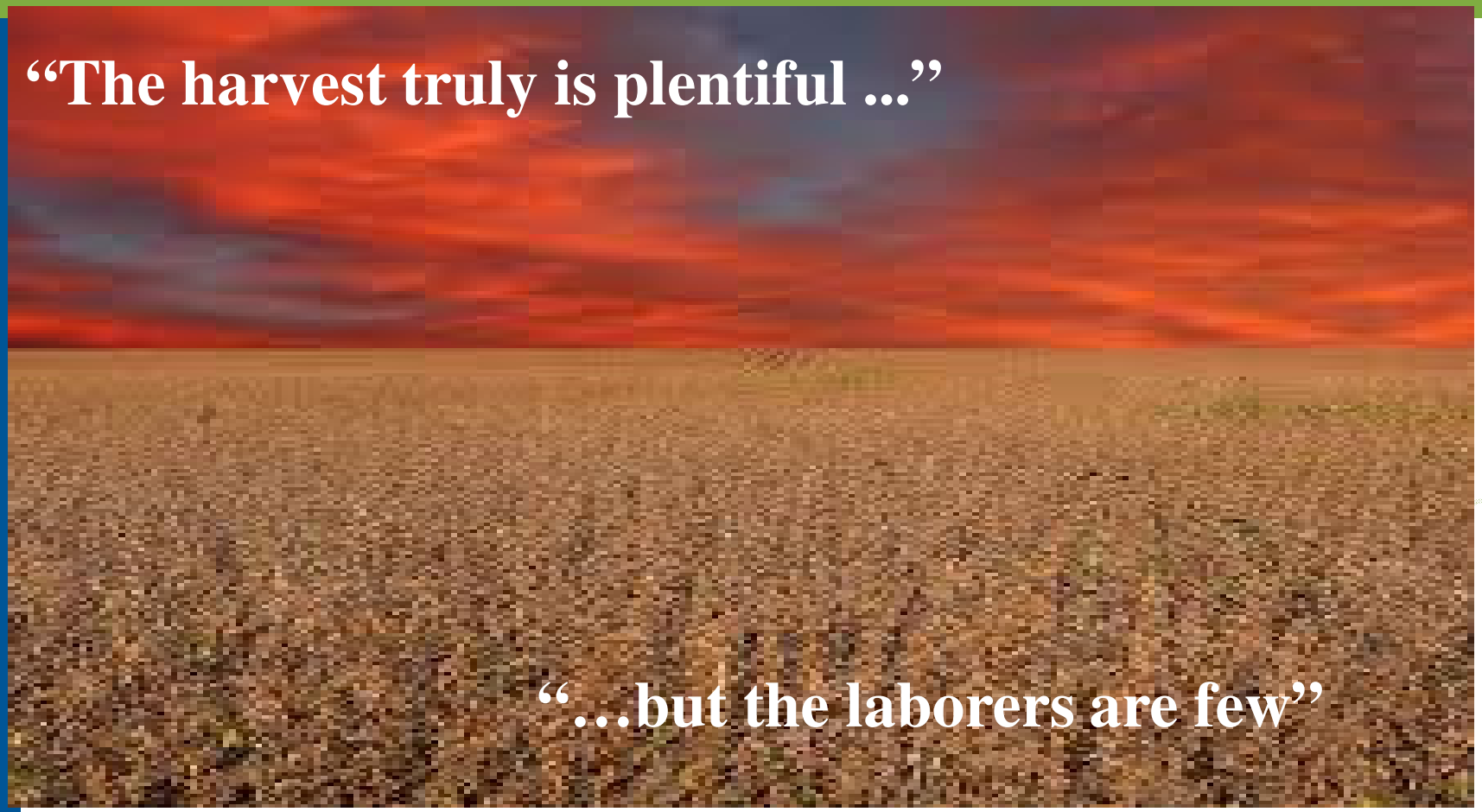
If number of respondents is fewer than 50, only numbers are provided.

Hospital CEO Talent Pool

Compounding the 42.5% decline in the Number of hospitals and total beds during the past 34 years:

- Hospital CEO average tenure – 3.8 to 5.5 years
- Turnover rate for hospital CEO – between 16-18%
- Normal "germination time" for Lean 6σ – at least 5 years
- Conclusion: lack of constancy of vision and purpose

Hospital Need for Lean 6σ – Current State



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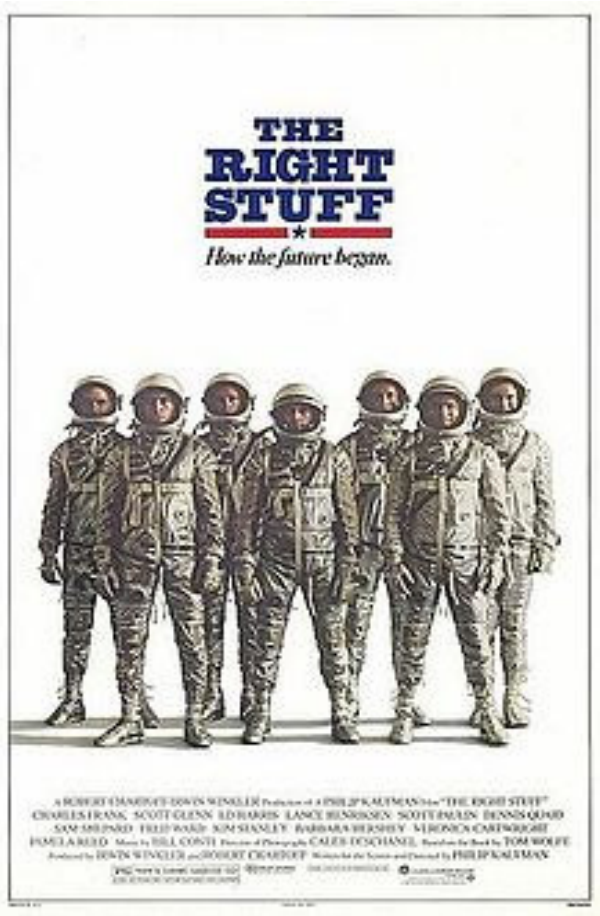
Hospital Need for Lean 6σ – Current State

CEOs with Tenure +



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What is "the Right Stuff"???

1. Willingness to erase pre-conceived notions of what Lean 6σ is and what it is not
2. A visionary capable of articulating "that which is not yet"
3. Understanding of lack of mature successful models among hospitals to copy
4. Observes and learns novel improvement applications outside the hospital setting
5. Expect to become personally involved, not to be delegated
6. Already proven to be a calculated risk-taker
7. Extreme confidence in the power of staff participation
8. Sustained improvements come from cultural system transformation and away from project mentality
9. One who celebrates successes while learning from failures
10. A clear strategic plan for action

Lean 6σ Action Plan

Getting Started:

- Find a change agent, a leader, personally responsible for transformation
- Get the knowledge of techniques and implementation an integral part of a system from a mentor or consultant
- Find a lever by seizing a crisis or creating one to begin the transformation
- Map the value streams of current states to graphically tell a story
- Begin as soon as possible with a relevant solution to a visible problem
- Demand immediate results from multiple minor improvements
- Get momentum then expand the scope to link improvements to the efforts

Source: Lean Enterprise Institute

Lean 6σ Action Plan

Organizing to Channel and Promote Efforts:

- Identify natural product lines and processes to apply value streams
- Create intentional means to publicize successes of efforts
- Create a non-threatening policy to deal with and "excess" staff
- Devise a growth strategy
- Remove anchors and those along for the ride

- Once something is fixed, fix it!!

Lean 6σ Action Plan

Installing Business Systems to Encourage Lean 6σ Thinking:

- Utilize policy deployment
- Create an improvements accounting system to quantify savings
- Pay for performance whenever possible
- Make performance standards and measurements transparent
- Teach techniques, skills and philosophy to everyone
- Right-size facility, equipment, information systems and other tools (not too big, not too small)

Lean 6σ Action Plan

Completing the Transformation:

- Convince suppliers and customers to take the same journey
- Develop a global strategy that extends influence
- Convert from top-down leadership to all-involved leadership based upon observing, questioning, coaching, and teaching with roots in scientific methods and plan-do-check-act

Hospital Lean 6σ Execution – The Current State

Very Few Successful Models with demonstrated Right Stuff!!

- Serious pursuit of Lean 6σ relatively new (< 10 years of limited history)
- Prominent systems include
  - ThedaCare – Northeast Wisconsin
  - Virginia Mason Health System – Seattle, Washington
- Estimates of only 50+ U.S. hospitals taking similar approaches to quality improvements (Healthcare Value Network)
- Overcome the "project mentality" to become a continuous improvement culture
- Change the perception of quality in hospitals
  - Quality Improvement ≠ good clinical outcomes alone
  - Evidence of Quality ≠ attainment of selected metrics

Quality of Care Linked to Cost of Care

- Nearly 18% of GDP is spent on healthcare
- U.S. spends more per capita than any other industrialized nation
- U.S. ranks in the bottom quartile for life expectancy

Source: Organization for Economic Cooperation and Development Health Data 2011 among 34 countries

Conclusion:

Need to link healthcare quality performance to costs, however success has been elusive

- focus on indicator metrics, compliance, and reporting
- insufficient attention to processes and cost containment

Quality of Care Linked to Cost of Care

Root Causes of Failures to Link Quality to Costs

- Subjective Improvements – What you cannot measure, you cannot manage, and what you cannot manage, you cannot improve
- Under-informed Consumers - Despite on-line posted opinions and available indicator metrics, consumers cannot distinguish which hospital offers the highest quality at the lowest possible cost
- Misinformed Payors – Private payors lack information to correlate spending with value of care for all individual claims in their plans. If information could be correlated, billions would shift to better-performing healthcare providers and drive under-performers to improve

Source: Wisconsin Collaborative for Healthcare Quality

Means of Improvement

"The new system would have to get passing grades on the four-A test: *availability, accessibility, acceptability and affordability*. It would emphasize Preventive medicine, health maintenance, and self care; It would provide for realistic alternatives to hospital confinement; and it would encourage wider use of allied health and paramedical personnel."

Hospital Management Engineering: A Guide to the Improvement of Hospital Management Systems, Harold E. Smalley, Prentice-Hall, Inc., p.9, ***1982***

Success Stories

Akron Children's Hospital: Reduced costs more than $8 million from Jan. 2009 to March 2011, and reduced appointment access waiting times by a total of 74,608 days.

Group Health of Puget Sound: Through a patient-centered medical home, achieved 29% fewer emergency room visits, 6% fewer hospitalizations and a $10.30 per member, per month savings after 21 months.

Gundersen Lutheran: Reduced patient call back rates for unnecessary biopsy from 10% to 5%, and reduced costs by 35% for patients requiring breast biopsy.

Henry Ford Health System: Reduced inpatient harm rates nearly 25% and achieved cost-savings of $85 per patient.

http://www.createvalue.org/delivery/success-stories/

Success Stories

Inova: Decreased ER waiting time by 31% and improved operating margin by $10 million.

Mercy Hospital in Mason City Iowa: Achieved a 53% faster turnaround time for patient blood test results, $470,954 in annual cost savings and $70,000 in construction avoidance.

Seattle Children's Hospital: Reduced overall patient costs by 3.7% and supply expenses by $2.5 million.

ThedaCare: Achieved zero medication reconciliation errors for 4 years in a row and reduced readmission rates to less than 12%.

University of Michigan: Reduced expense associated with red blood cell administration by $200,000 per month while reducing unnecessary transfusions.

http://www.createvalue.org/delivery/success-stories/

Recommended Reading

"Healthcare Delivery Reform Policy", John Toussaint, President and CEO ThedaCare, Appleton, WI, May 28, 2009,

www.createhealthcarevalue.com

- **Demanding More from Healthcare Reform**
- **Encourage Transparent Comparisons Between Providers**
- **Physicians Should Keep Patients Well**
- **Patients Must Take Individual Responsibility**
- **How Do We Get Started?**
  - **Need data on clinical and cost performance**
  - **Increase quality, lower costs by systems redesign and waste removal**

Contact Information

Sandy Eastlick

Senior Consulting Manager

813-679-4312

aeastlick@ima-consulting.com

3 Christy Drive, Suite 100
Chadds Ford, PA 19317
www.ima-consulting.com

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