LEAN ADVANCEMENT INITIATIVE

Applying Lean in an Academic Medical Center
Lessons Learned

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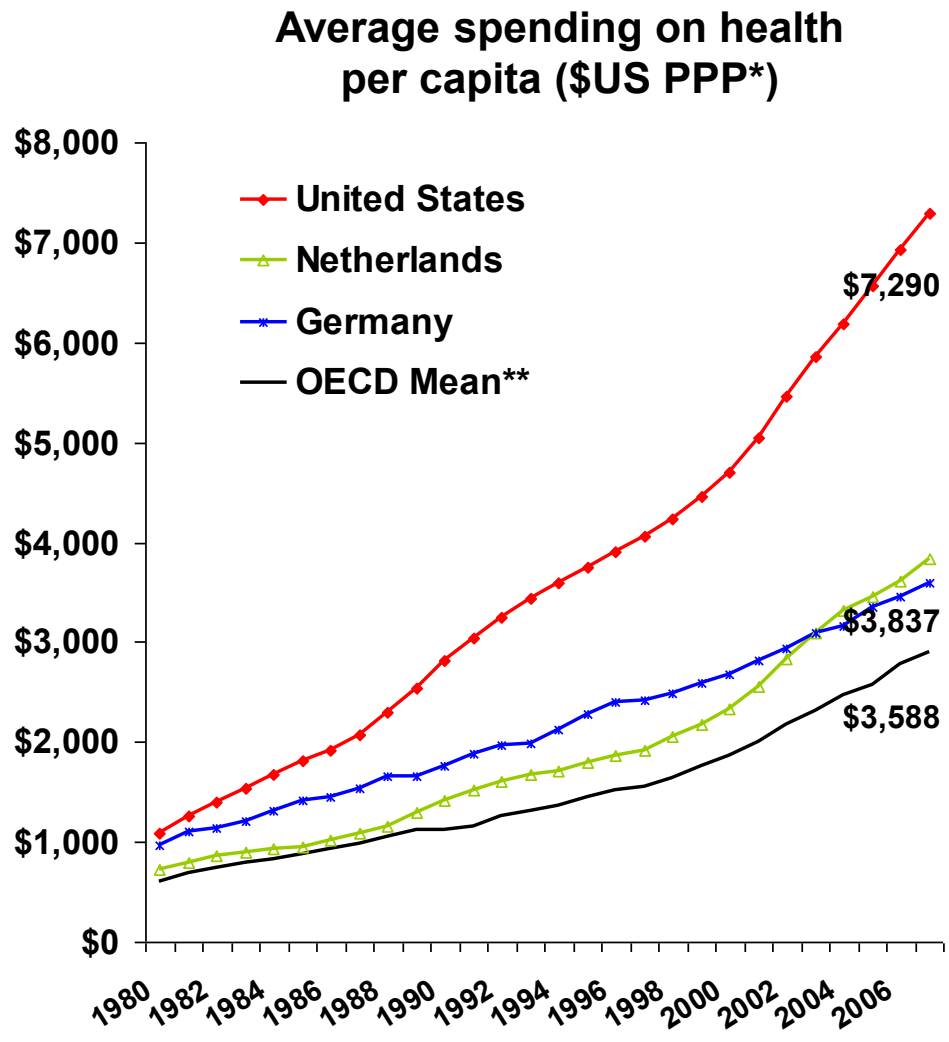
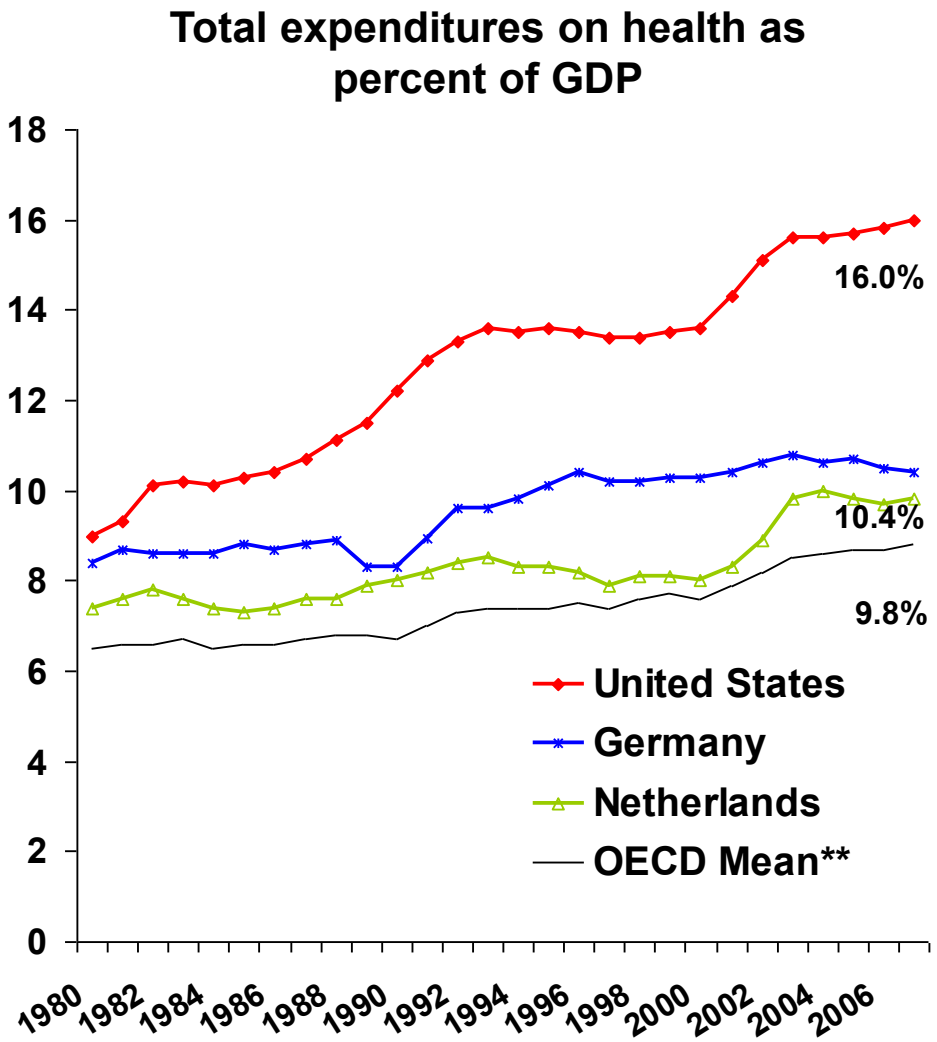
International Comparison of Spending on Health, 1980–2007



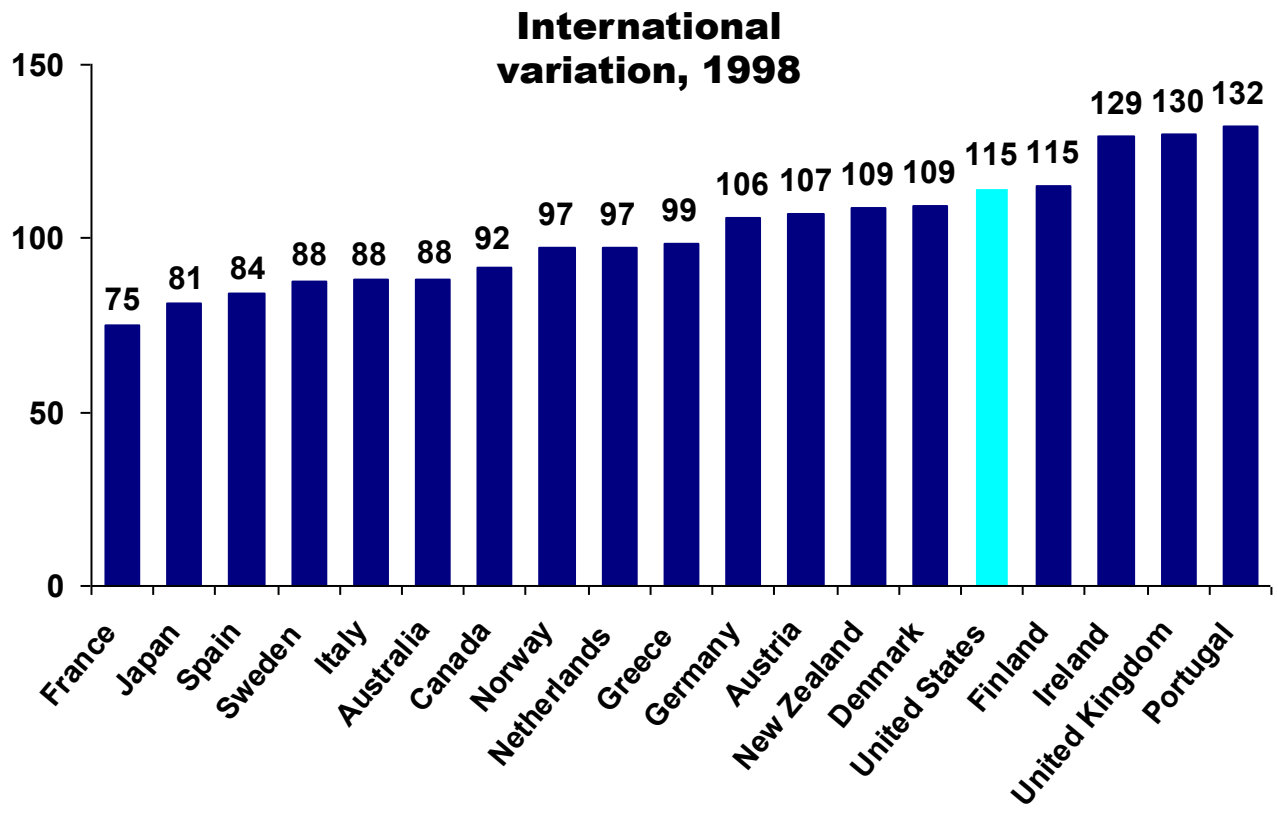


* PPP=Purchasing Power Parity. ** All 30 OECD countries except U.S.
Source: OECD Health Data 2009, Version 06/20/09.

Mortality Amenable to Health Care

Mortality from causes considered amenable to health care is deaths before age 75 that are potentially preventable with timely and appropriate medical care

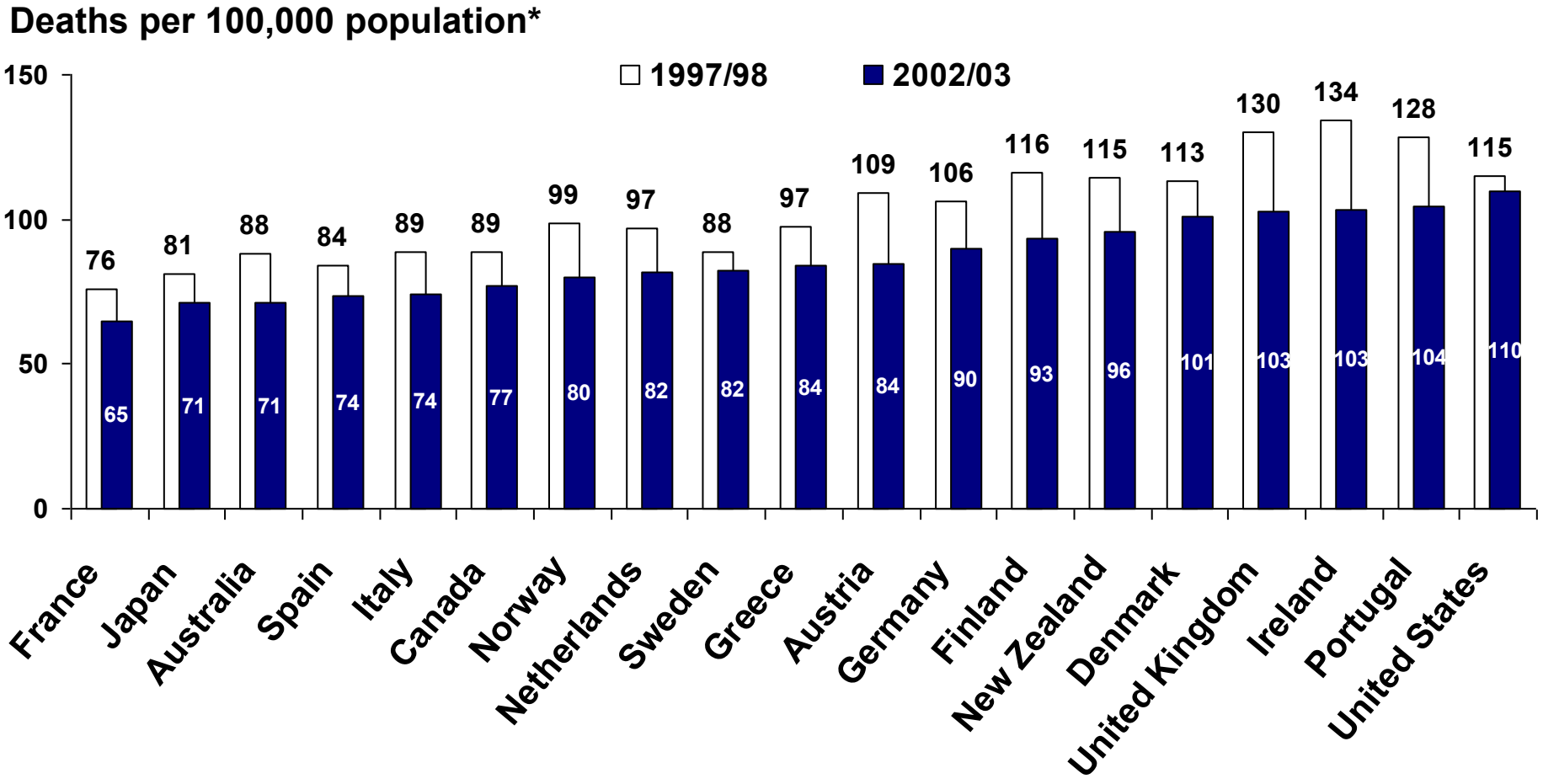
Deaths per 100,000 population*



Courtesy of The Commonwealth Fund. Used with permission.

*** Countries' age-standardized death rates, ages 0–74; includes ischemic heart disease.**
See Technical Appendix for list of conditions considered amenable to health care in the analysis.
Data: International estimates—World Health Organization, WHO mortality database (Nolte and McKee 2003); State estimates—K. Hempstead, Rutgers University using Nolte and McKee methodology.

Mortality Amenable to Health Care



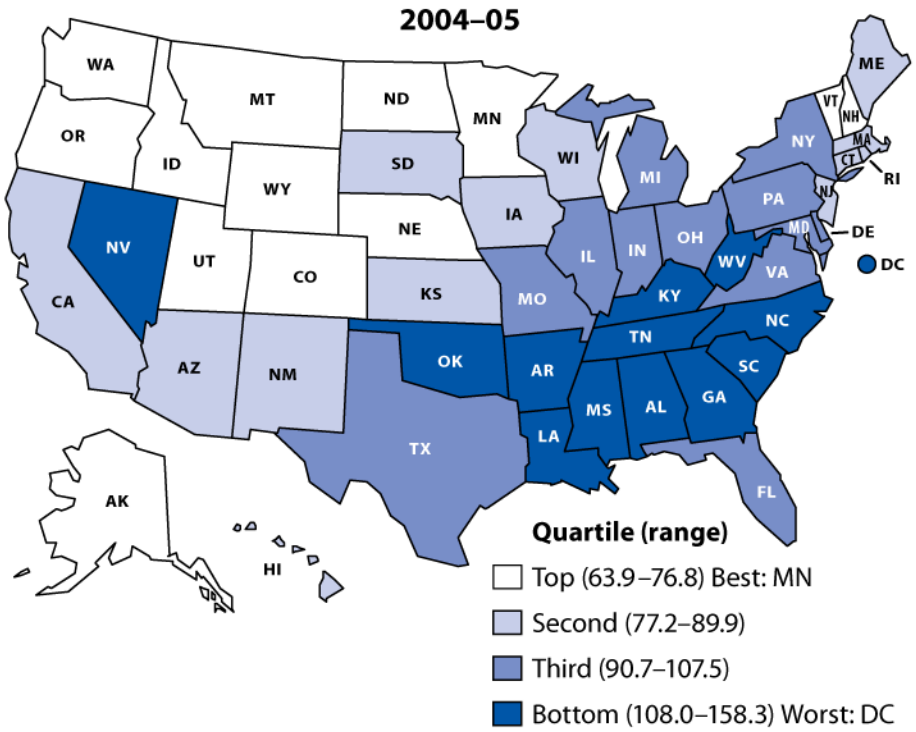
* Countries' age-standardized death rates before age 75; including ischemic heart disease, diabetes, stroke, and bacterial infections.

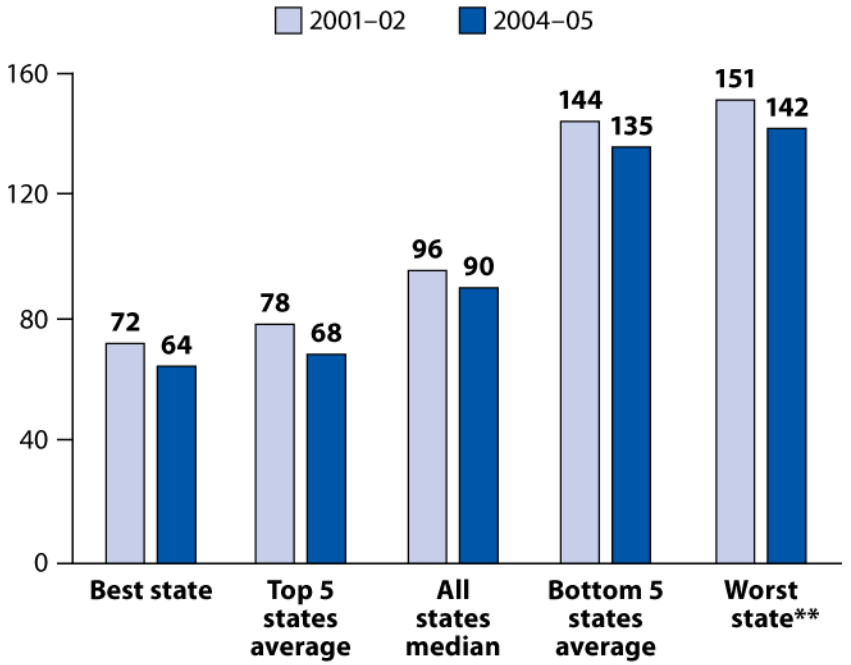
Data: E. Nolte and C. M. McKee, London School of Hygiene and Tropical Medicine analysis of World Health Organization mortality files (Nolte and McKee 2008).

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008.

Mortality Amenable to Health Care by State

Deaths* per 100,000 Population





* Age-standardized deaths before age 75 from select causes; includes ischemic heart disease.
** Excludes District of Columbia.
DATA: Analysis of 2001–02 and 2004–05 CDC Multiple Cause-of-Death data files using Nolte and McKee methodology, *BMJ* 2003
SOURCE: Commonwealth Fund State Scorecard on Health System Performance, 2009

S. C. Schoenbaum, C. Schoen, J. L. Nicholson, and J. C. Cantor, Mortality Anable to Health Care in the United States: The Roles of Demographics and Health Systems Performance, *Journal of Public Health Policy*, published online Aug. 25, 2011.

The US Healthcare System

What we pay for

Image; Flickr. thisisbossi. CC BY-NC-SA.

What we get

Image; Flickr. dave_7. CC BY.

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Lesson 1

Focus on true North Metrics

TRUE NORTH METRICS

SAFETY/QUALITY

- *Preventable Mortality*
- *Medication Errors*

PEOPLE

- *OSHA Recordable Injuries*
- *HAT Scores*
- *Employee Engagement Index*

FINANCIAL STEWARDSHIP

- *Operating Margin*
- *Productivity*

Image by MIT OpenCourseWare. Based on Figure 13 from Toussaint, John and Roger A. Gerard. On the Mend. Lean Enterprise Institute, 2010.

Slide Courtesy of John Toussaint

UMassMemorial Medical Group

Patient Satisfaction **Access to Care**

Faculty and Staff Satisfaction **Faculty Productivity** **Net Income to Plan**

Lesson 2
Find your Potato Head

TRAUMA CENTER

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Lesson 3

Find some clear (safe) examples of waste in your organization and highlight them.


GREEN
MOUNTAIN
COFFEE
ROASTERS
Great Tasting Coffee Crafted with Care
FRESH
Chilled
Cream


GREEN
MOUNTAIN
COFFEE
ROASTERS
Great Tasting Coffee Crafted with Care™
FRESH
Chilled
Cream

Lesson 4

Find some “bright spots” in your organization and highlight them.

Lean Processes that Typically Exist in Hospitals

- Trauma Activations
- Code STEMI
- Code Stroke
- Central Line Bundle
- WHO Surgical Checklist
- Integrated Care Pathways

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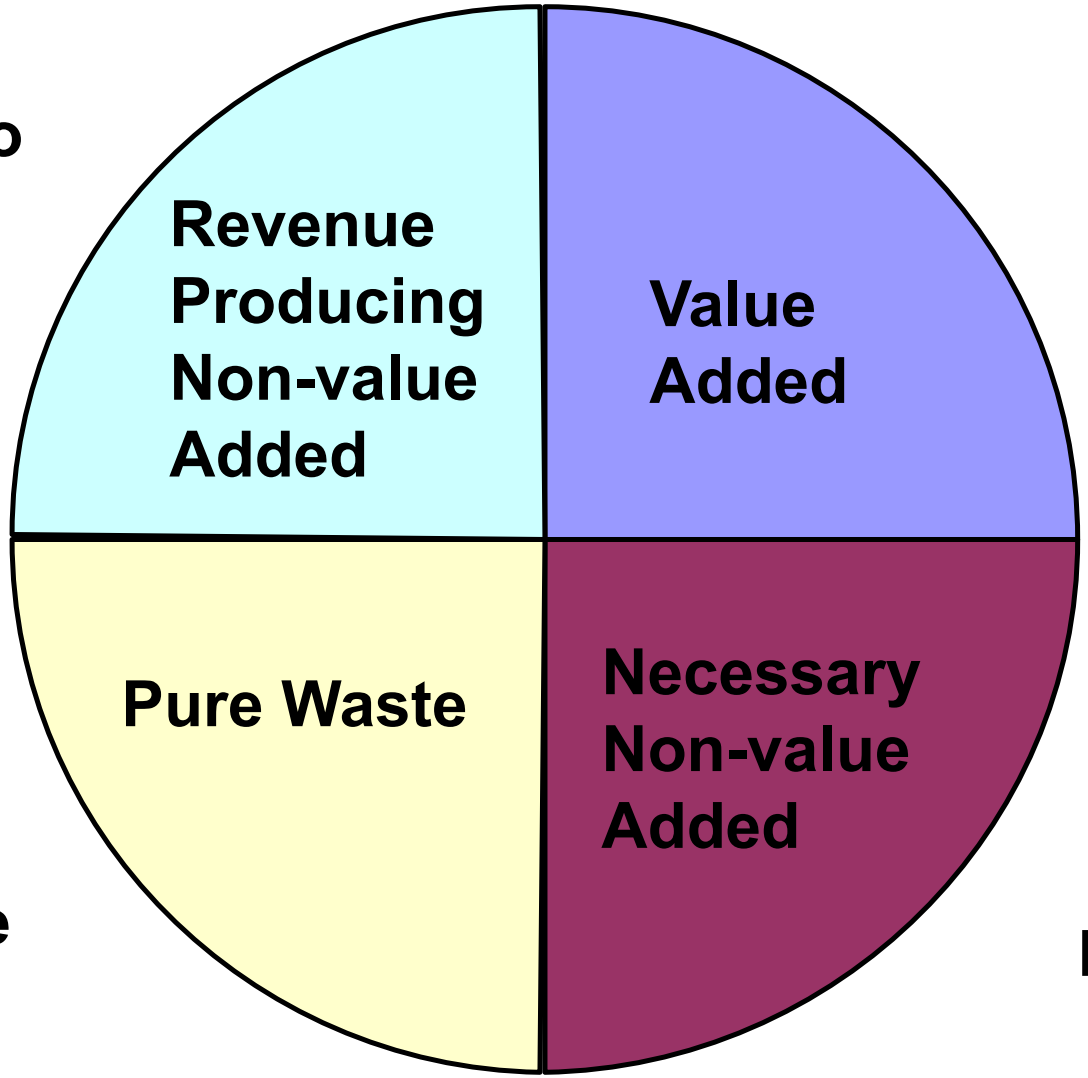
Lesson 5

Reducing Waste Improves Staff and Patient Satisfaction

Ethically Obligated to Eliminate

Maximize



Eliminate

Minimize

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Lesson 6

Create an experimental system.

Lesson 7

Go and see for yourself what the problem is for problems can only be solved where they exist.

Genchi Genbutsu

Lesson 8

Inflexibility is the greatest barrier to successfully applying Lean in health care and it is best overcome by Genchi Genbutsu

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Lesson 9

Standardization must occur before you can have innovation and improvement

“It is impossible to improve any process until it is standardized. If the process is shifting from here to there than any improvement will just be one more variation that is occasionally used and mostly ignored. One must standardize the process before improvements can be made.”

Masaaki Imai

The first step in improving the treatment of any disease is standardizing its care. If the treatment of an acute or chronic condition within our system is variable, any effort at improvement will just be one more variation that is occasionally used and mostly ignored. We must standardize our care using evidence- or consensus-based pathways before we can improve it using discovery and innovation.

Based on work by Masaaki Imai in the book Kaizen

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Lesson 10

Front line staff suggestions are always better and more acceptable that mangers solutions

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QS x AS = likelihood of success

Why Lean?

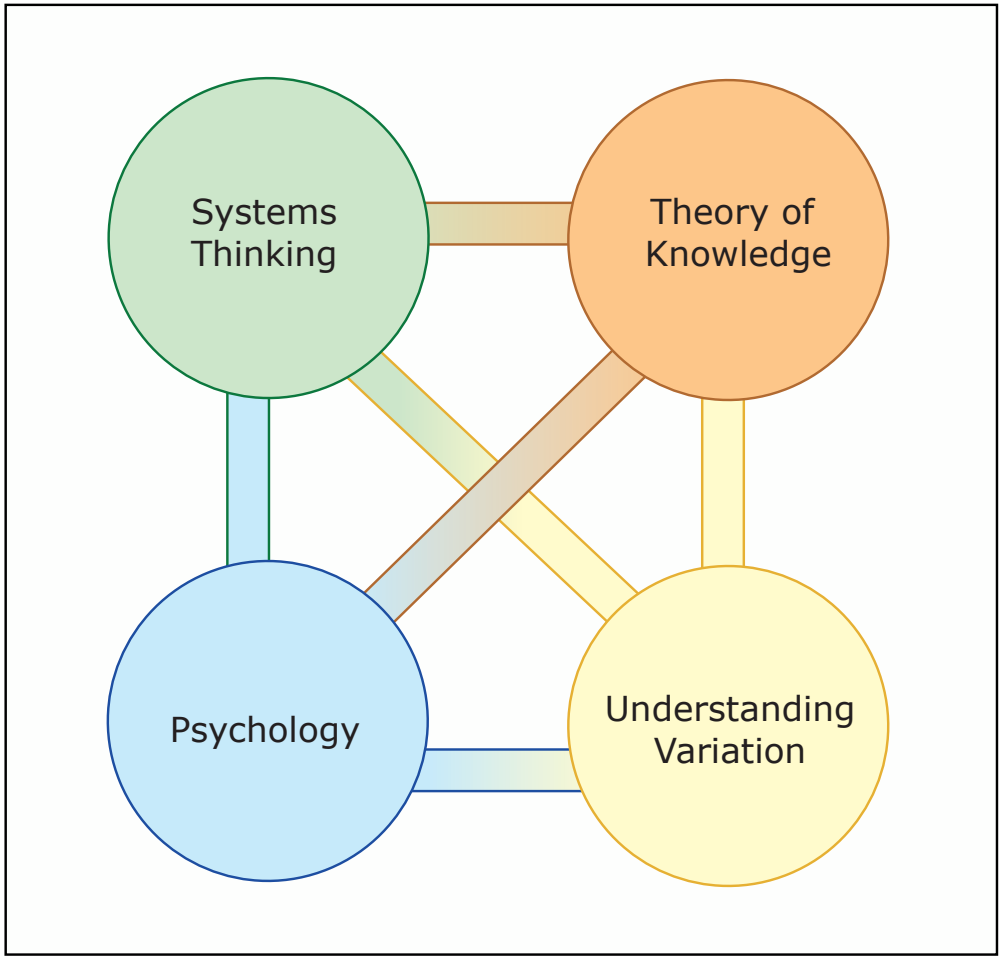
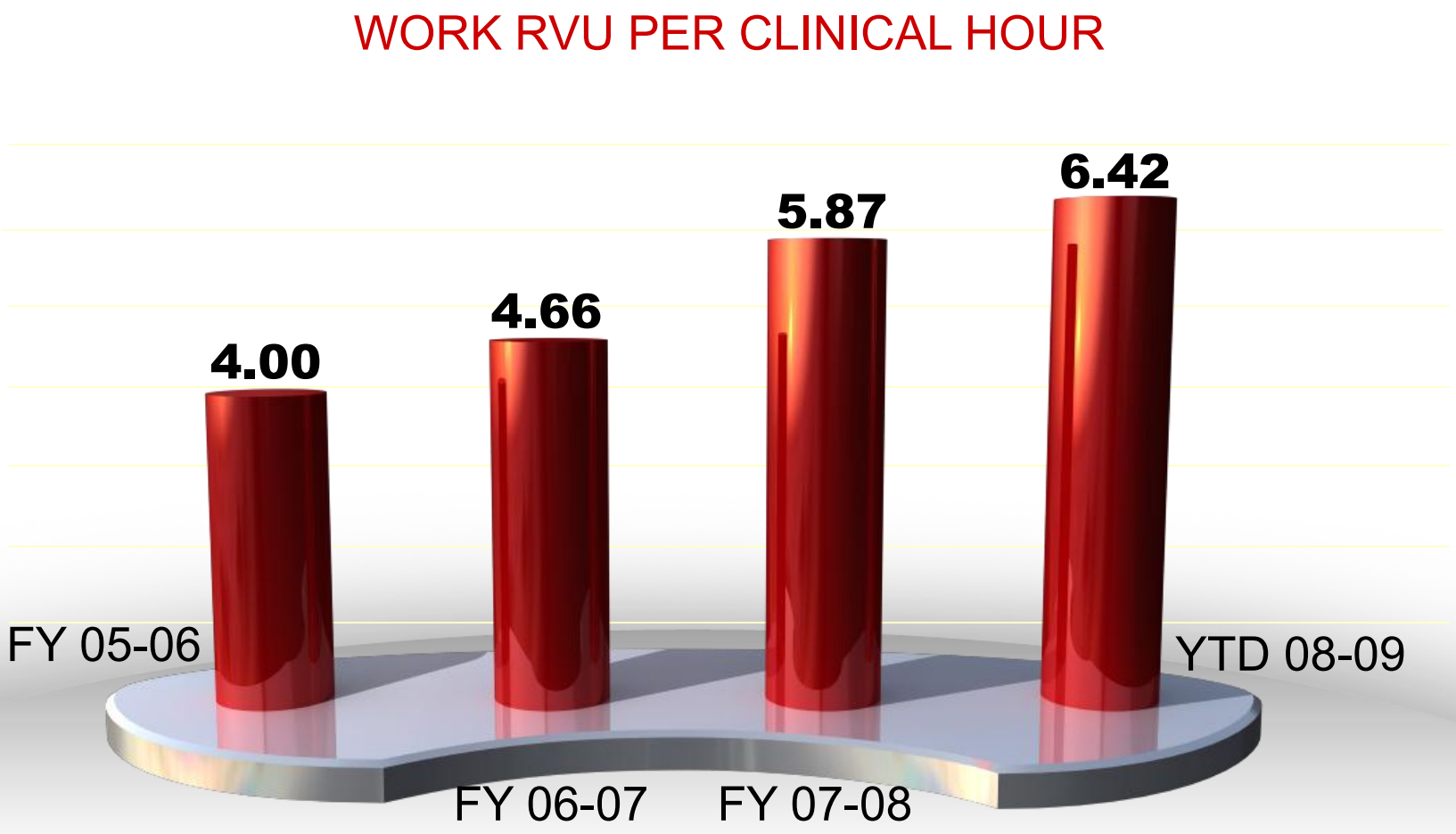


Image by MIT OpenCourseWare.

Lesson 11

When working with physicians always focus on using Lean to reduce physician muda and increasing physician productivity

Lean has improved physician productivity by > 50%



16.660J / ESD.62J / 16.853 Introduction to Lean Six Sigma Methods

IAP 2012