



QuickTime™ and a
F (Uncompressed) decompresso
are needed to see this picture.

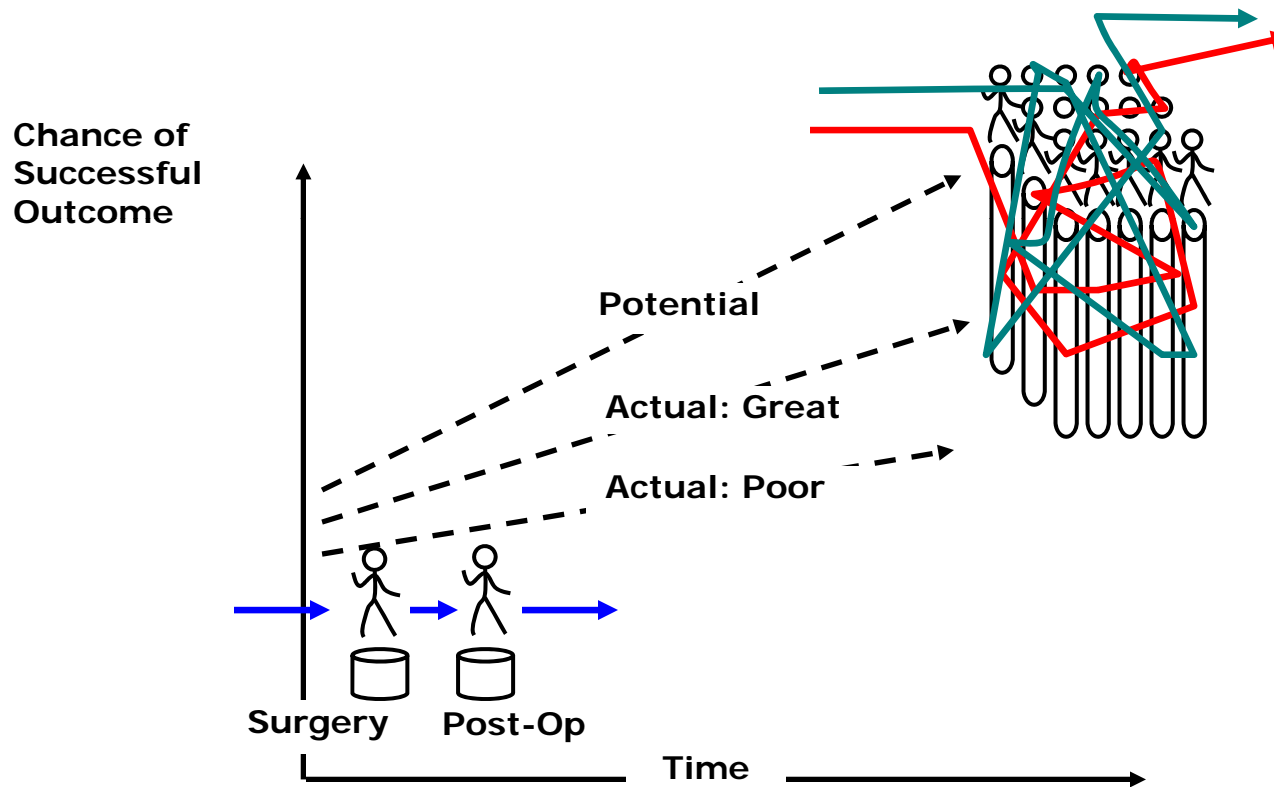
Having Our Cake *and* Eating it Too: Better Care for More People with Less Effort and Cost

Steven J. Spear
Senior Lecturer, MIT
Senior Fellow, IHI



QuickTime™ and a
F (Uncompressed) decompresso
re needed to see this picture.

Health care: Good News Bad News





QuickTime™ and a
F (Uncompressed) decompresso
are needed to see this picture.

Success Examples

- **Allegheny General Hospital**
Eliminating Central Line Infections
- **South Side Pharmacy**
Medication Administration
- **Massachusetts General Hospital**
Primary care
- **Shadyside Hospital**
Patient Falls
- **Virginia Mason Medical Center**
Institution wide transformation



Central Line Infections at Allegheny General

QuickTime™ and a
F (Uncompressed) decompresso
are needed to see this picture.

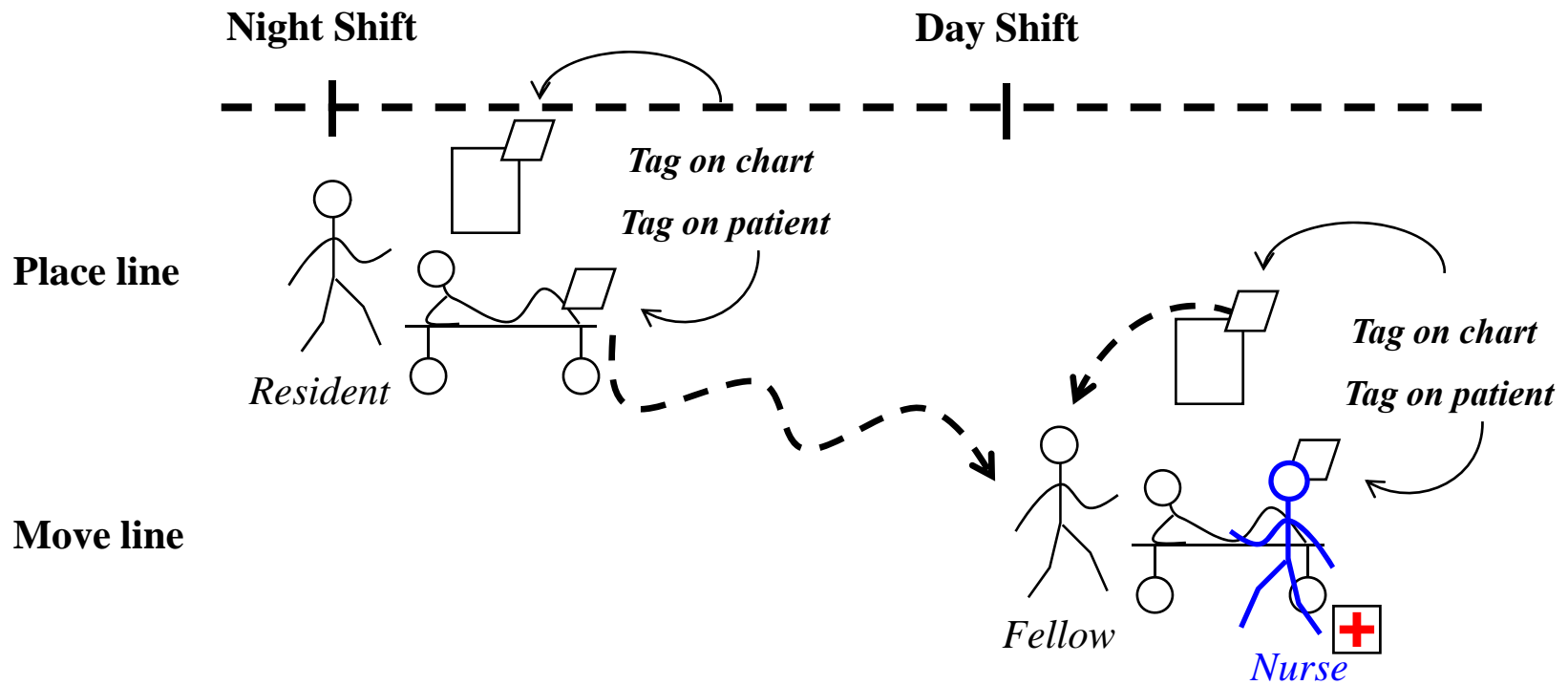
	FY 03 (Baseline)	FY 04 Year 1	FY 05 Year 2	FY 06 Year 3 (10 months)
Intensive care unit admissions	1,753	1,798	1,829	1,832
Central lines employed	1,110	1,321	1,487	1,898
Line days	4,687	5,052	6,705	7,716
Infections	49	6	11	3
Patients infected	37	6	11	3
Rates (infections per 1,000 line days)	10.5	1.2	1.6	0.39
Deaths	19 (51%)	1 (16%)	2 (18%)	0 (0%)

Cited from: "Using Real-Time Problem Solving to Eliminate Central Line Infections," R Shannon and co-authors. *Jnt Comm J on Qual and Pt. Safety*, (2006)

© Steven J. Spear 2009



QuickTime™ and a
F (Uncompressed) decompresso
are needed to see this picture.





QuickTime™ and a
F (Uncompressed) decompresso
are needed to see this picture.

Patient Flow—West Penn Allegheny

	Before	After
From sign-in to registration	Up to two hours	0
Registration	12 to 60 minutes	3 minutes
Chart assembly	9 hours per day	2 1/4 hours per day
Time reworking charts	70 minutes	0
Unnecessary blood bank reports	10 to 11 per day	0
Incomplete lab results	7 out of 42 patients	0

Cited from: "Using Real-Time Problem Solving to Eliminate Central Line Infections," R Shannon and co-authors. *Jnt Comm J on Qual and Pt. Safety*, (2006)

© Steven J. Spear 2009

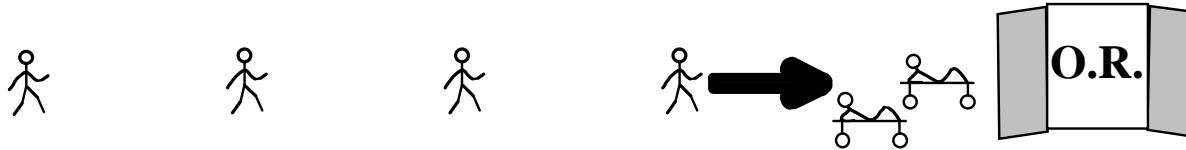


QuickTime™ and a
F (Uncompressed) decompresso
are needed to see this picture.

System

Define *expected* output: 42 patients/day

Sign in Register History Vita signs Blood sample





QuickTime™ and a
F (Uncompressed) decompresso
are needed to see this picture.

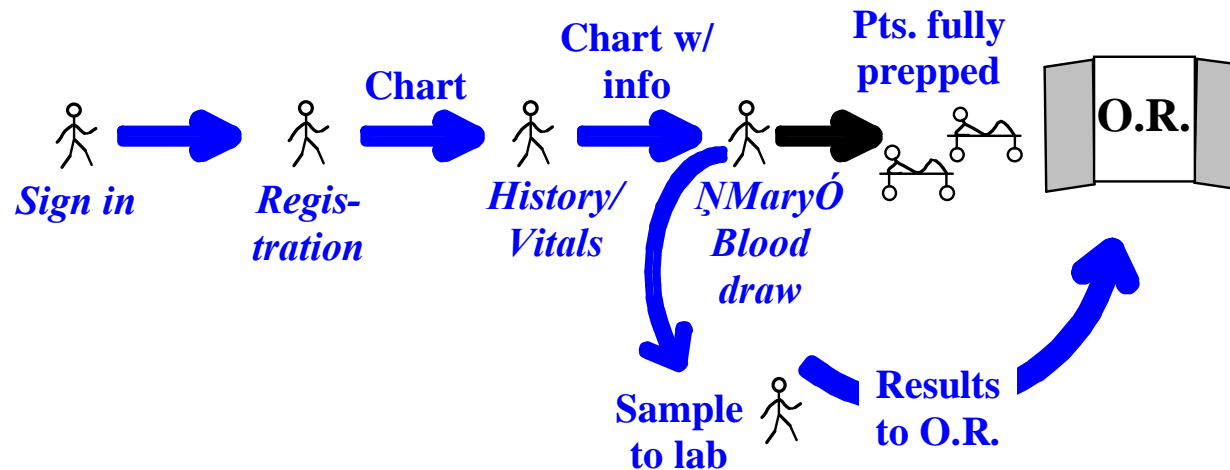
System

Define *expected* output: 42 patients/day

- Sign in
- Register
- History
- Vital signs
- Blood sample

Pathway

Define who is expected to provide
what to whom in what order.





QuickTime™ and a
F (Uncompressed) decompresso
are needed to see this picture.

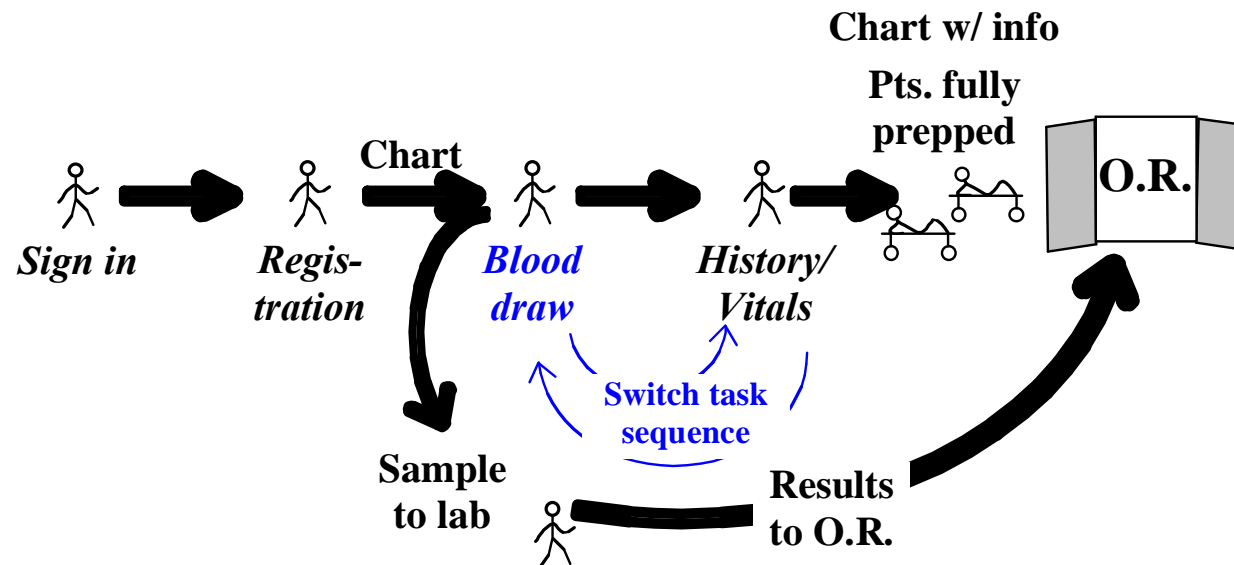
System

Define *expected* output: 42 patients/day

Sign in Register History Vital signs Blood sample

Pathway

Redefine who is expected to provide what to whom in





System

Define *expected* output: 42 patients/day:

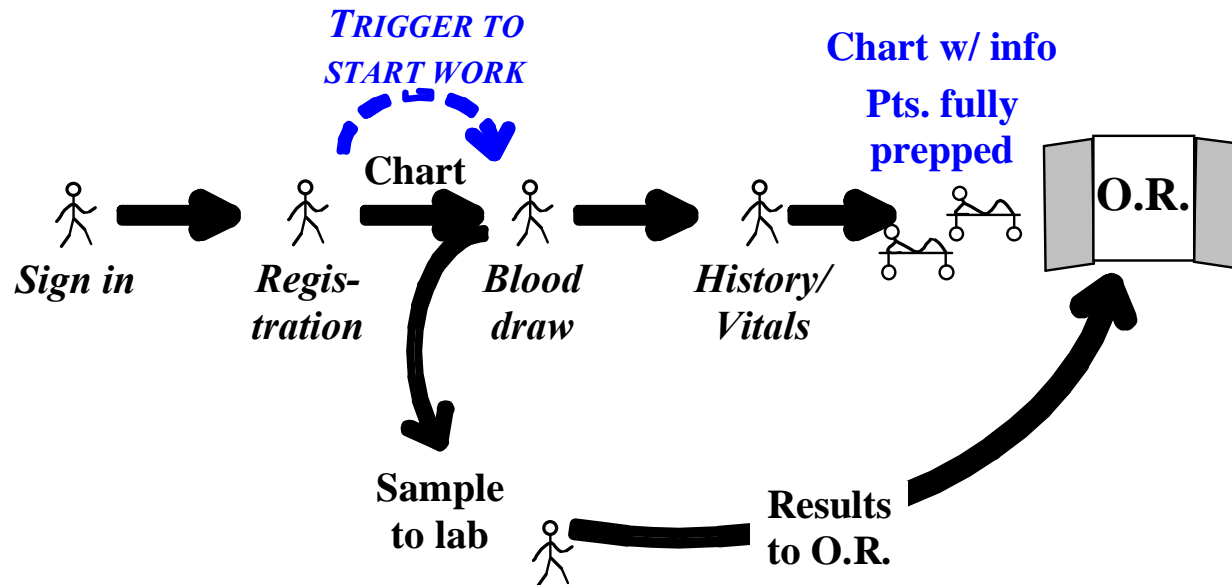
Sign in Register History Vital signs Blood sample

Pathway

Define who is expected to provide what to whom in what order.

Connection

Define how to make exchanges





System

Define expected output: 42 patients/day:

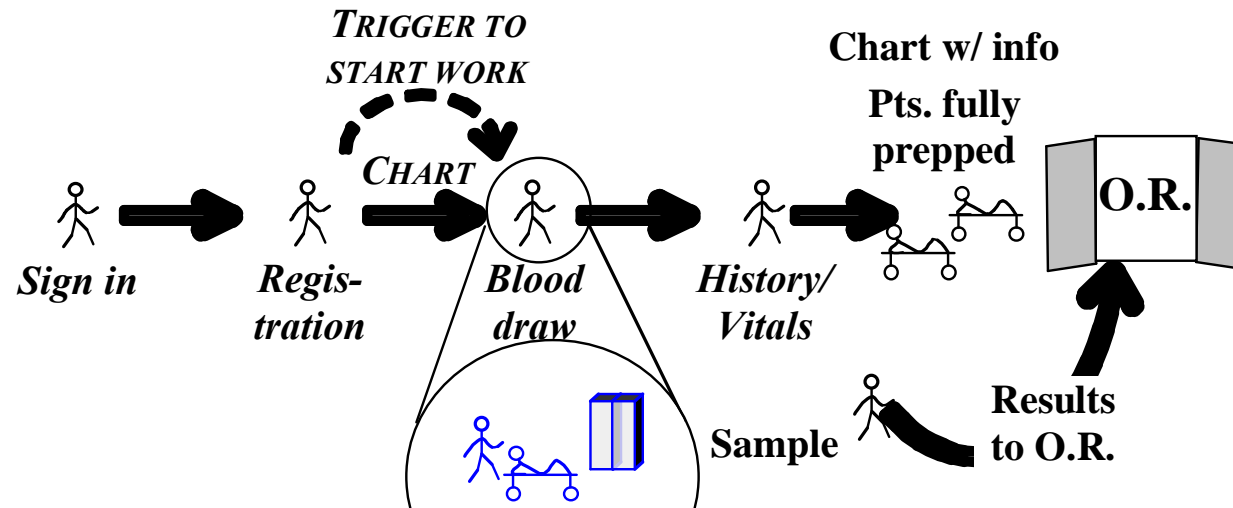
- Sign in
- Register
- History
- Vital signs
- Blood sample

Pathway

Define who is *expected* to provide what to whom in what order.

Connection

Define how to make exchanges



Activity: Define method for performing individual tasks.



QuickTime™ and a
F (Uncompressed) decompresso
are needed to see this picture.

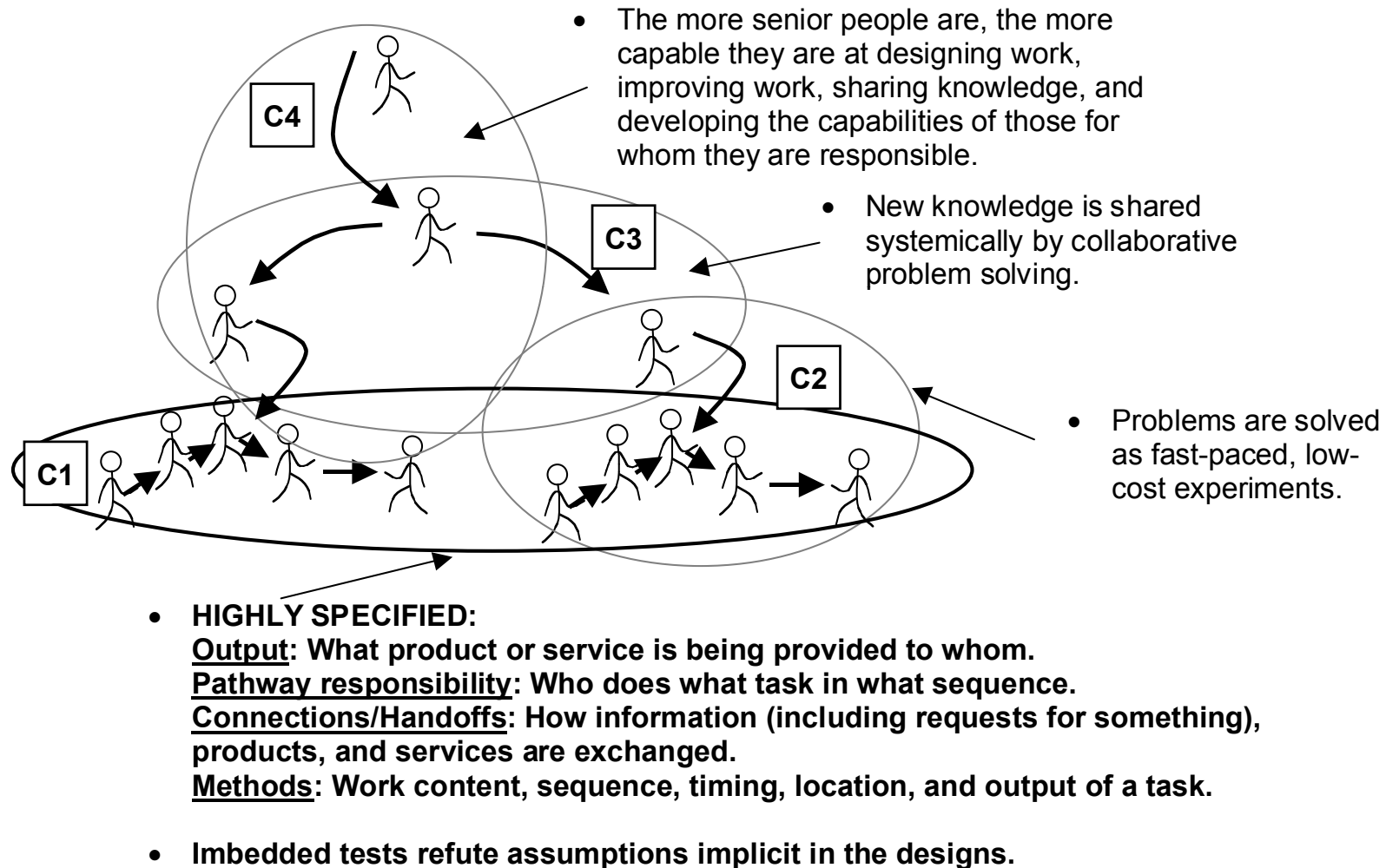
MGH Revere Flu Clinic

	Session 1	Session 2	Session 3
Hours/Session	2	2	2
Flu Shots Administered	43	71	151
Clinical Support Staff FTEs Involved	3.5	2.5	2.5
Flu Shots per Hour of Staff Time	6.1	14.2	30.2



QuickTime™ and a
F (Uncompressed) decompresso
are needed to see this picture.

The Leadership Imperative



Adapted from: "Learning to Lead at Toyota," Spear, Steven J.,
Harvard Business Review, (2004)

© Steven J. Spear 2009



Selected Publications

QuickTime™ and a
F (Uncompressed) decompressor
are needed to see this picture.

- *Chasing the Rabbit: Why the World's Greatest Organizations Outrace Their Competition*, McGraw Hill, (Fall 2008)
- "Better Care for More People at Less Cost," with Don Berwick *Boston Globe* op-ed (October 2007)
- "Learning from the Masters: By learning from Toyota and Alcoa how to manage complex work processes, hospitals can improve performance," *Cerner Quarterly*, (2006).
- "Fixing Healthcare from the Inside: Teaching Residents to Heal Broken Delivery Processes As They Heal Sick Patients," *Academic Medicine*. (2006).
- "Using Real-Time Problem Solving to Eliminate Central Line Infections," with Richard Shannon and other co-authors. *Joint Commission Journal on Quality and Patient Safety*, (2006)
- "Operational Failures and Interruptions in Hospital Nursing Work," with Anita Tucker, *Health Services Research*, (2006).
- "The Health Factory," *New York Times* [op ed], (2005).
- (#) (*) "Fixing Healthcare from the Inside, Today," *Harvard Business Review* (2005).
- "Ambiguity and Workarounds as Contributors to Medical Error," with Mark Schmidhofer, *Annals of Internal Medicine* (2005).
- "Medical Education as a Process Management Problem," with Elizabeth Armstrong and Marie Mackey, *Academic Medicine* (2004).
- (*) "Learning to Lead at Toyota," *Harvard Business Review*, (2004)
- "Driving Improvement in Patient Care," with Debra Thompson and Gail Wolf, *Journal of Nursing Administration* (2003).
- (*) "The Essence of Just in Time," *Productivity, Planning, and Control*, (2002).
- (x) "When Problem Solving Prevents Organizational Learning," with Anita Tucker and Amy Edmondson, *Journal of Organizational Change Management*, (2002).
- (*) "Decoding the DNA of the Toyota Production System," with H. Kent Bowen, *Harvard Business Review*, (1999).

(#): McKinsey Award, One of top two articles in *Harvard Business Review*, 2005.

(*): Shingo Prize winning articles.

(x): Best paper proceedings, Academy of Management conference, 2001.



Speaker Profile

QuickTime™ and a
F (Uncompressed) decompresso
are needed to see this picture.

Steven Spear (DBA MS MS) is author of the award winning and critically acclaimed book, *Chasing the Rabbit: How Market Leaders Outdistance the Competition*. A Senior Lecturer at the Massachusetts Institute of Technology and a Senior Fellow at the Institute for Healthcare Improvement, Spear is internationally known for his expertise in innovation, operational excellence, and organizational learning, with deep expertise in industry and health care. This reputation is due, in part, to his 1999 *Harvard Business Review* article, "Decoding the DNA of the Toyota Production System," and his 2005 article, "Fixing Healthcare from the Inside, Today" which was an HBR McKinsey Award winner and one of his five works to win a Shingo Research Prize. In *Chasing the Rabbit*, Spear explains how the world's most competitive organizations uncork the tremendous innovative capacity of their people in identifying market needs, developing products and services to meet those needs, and delivering those items with unmatched speed and alacrity, and how other companies can do the same.

Spear has worked with many organizations to develop their capacity for improvement, innovation, and competitiveness. He helped develop and deploy the Alcoa Business System the late 1990s and the Pittsburgh Regional Healthcare Initiative's 'Perfecting Patient Care' a few years after. He has worked with several other leading academic medical centers including Massachusetts General Hospital and Memorial Sloan Kettering, and he is on a patient safety advisory panel for Beth Israel Deaconess Medical Center in Boston. Other clients have included Intel, Lockheed Martin, and Intuit, and he collaborates actively with Toyota and its North American suppliers.

An active thought leader, Spear has published in the *NY Times*, the *Boston Globe*, *Annals of Internal Medicine*, and *Academic Medicine*, and he has spoken to audiences ranging from the Association for Manufacturing Excellence to the Institute of Medicine. Spear was previously employed by Prudential-Bache, the US Congress Office of Technology Assessment, the University of Tokyo, and Harvard Business School. His academic credentials include a doctorate from Harvard Business School, masters in engineering and in management from MIT, and a bachelor's degree in economics from Princeton.