...there are now many examples of the positive impact Lean is having in hospitals throughout the world. As a sample, Lean methods have resulted in improvements to:

**Safety and Quality**

Reduced central-line-associated bloodstream infections by 76%, reducing patient deaths from such infections by 95% and saving $1 million—*Allegheny Hospital, Pennsylvania*

Reduced hospital acquired infections, saving 57 lives, reducing ICU length of stay and reducing costs by over $5 million over two years —*University of Pennsylvania Medical Center*

Reduced readmission rates for chronic obstructive pulmonary disease (COPD) patients by 48%—*UPMC St. Margaret Hospital, Pennsylvania*

Reduced falls by 22%, reducing costs by more than $500,000 —*Hanover Regional Medical Center, North Carolina*

Reduced pressure ulcers by 56% in three pilot areas over two years, with a 30% decrease system-wide —*BJC Healthcare, Missouri*

Avoidance of 87 readmissions for congestive heart failure in 12 months across four hospitals, saving $830,000 —*Four hospitals in California*

Reduced sepsis mortality from 24% to 9%, reducing the average cost per case from $15,772 to $12,771 —*Presence Health, Illinois*

**Waiting Times and Length of Stay**

Reduced patient waiting time for non-emergent orthopedic surgery from 14 weeks to 31 hours (from first call to surgery); improved inpatient satisfaction scores from 68% “very satisfied” to 90%—*ThedaCare, Wisconsin*

Reduced emergency patient length of stay by 29% and avoided $1.25 million in new emergency department (ED) construction—*Avera McKennan, South Dakota*

Reduced waiting times for screening colonoscopies from 6 weeks to less than 24 hours while reducing cost per patient by 9.5% — *Palo Alto Medical Foundation, California*

Increased the percentage of atrial fibrillation patients treated within 40 days from 11% to 94% *HealthEast, Minnesota*
Flow

Reduced turnaround time for clinical laboratory results by 60% in 2004 without adding headcount or new instrumentation; further reduced times by another 33% from 2008 to 2010—Alegent Health, Nebraska\textsuperscript{vii, xiii}

Reduced instrument decontamination and sterilization cycle time by 54% while improving productivity by 16%—Kingston General Hospital, Ontario\textsuperscript{xiv}

Reduced late surgery starts from 50% to 30%, reduced rescheduled procedures from 20% to 4.4%, while increasing cases per month from 329 to 351 – New York City Health and Hospitals Corporation\textsuperscript{v}

Reducing O.R. turnover time from 60 minutes to 30 minutes, increasing utilization rates from 25% to 65% and achieving 100% on time starts in a pilot area – Guangdong Provincial Hospital of Traditional Chinese Medicine, China\textsuperscript{xvi}

Satisfaction

Improved patient / family satisfaction rates in the NICU from 45\textsuperscript{th} percentile to 99\textsuperscript{th} percentile – Franciscan St. Francis, Indianapolis\textsuperscript{xvii}

Improved physician satisfaction from 63\textsuperscript{rd} percentile to 87\textsuperscript{th}, being highest rated in overall care among 170 California medical groups for two consecutive years – Sutter Gould Medical Foundation, California\textsuperscript{xviii, xix}

Improved emergency department patient satisfaction from 5\textsuperscript{th} percentile to 98\textsuperscript{th} percentile in just four months (through door-to-doc times falling from 67 to 18 minutes) – Sumner Regional Medical Center, Tennessee.\textsuperscript{xx}

Financial

Bottom-line benefit of almost $200 million over seven years, while achieving “the lowest observed-to-expected mortality among the academic health center members of the University Health system Consortium in 2011” and avoiding layoffs—Denver Health, Colorado\textsuperscript{xxi}

Avoidance of $180 million in capital spending through Lean improvements—Seattle Children’s Hospital, Washington\textsuperscript{xxii}

Improved operating margin by 44%, from 1.70% in fiscal year 2011 to 3.06% in fiscal year 2014 —HealthEast, Minnesota\textsuperscript{xxiii}


Rice.


xxviii http://www.benzinga.com/pressreleases/15/06/p5606947/healthcare-value-network-members-share-new-quarterly-results#ixzz3dW7OMAlD