Using Your IE Skills in Health Care

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1996 - US spent $1.035 trillion on health care
~ 14 percent of the US GDP
Expenses increasing at 4-5 percent annually (were increasing at 10+ percent in 1980s)
44 million people without health care insurance
Insurance premiums continue to increase
Health Care Industry

- Major financial pressures:
  - health care must become more efficient, use less resources while continuing to provide high quality of care
  - the Juran Institute has estimated that ~ 35 percent of health care costs are “waste” - duplication, non-value added, unnecessary redundancies, etc.
What is a Management Engineer?

- Industrial Engineer in a hospital environment
- Helps integrate people, equipment, facilities, and other resources to improve work results
- Uses skills learned in IE (Process Design, Flowcharting, Layout Optimization, Forecasting Methodologies, etc.)
- Performs cost-saving & quality improvement projects
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Typical Management Engineering Projects

- Productivity Management - monitor performance, cost and effectiveness of operations
- Staffing and Scheduling
- Process Improvement
- Inventory Management
- Simulation
- Benchmarking
- Facility Design and Capacity Analysis
- Operations and Systems Analysis
- Quality Improvement Team Facilitation/Teaching
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History of IEs in Health Care

1911 - Frank Gilbreth, surgical tray layout

1952 - AHA establishes its committee on methods improvement

1st full time management engineer employed at Cleveland Clinic

Slide courtesy of UAB Hospital
Where Can I Find Job Openings in Health Care?

- Society for Health Systems News
- Job Listing at Annual QQPHS Conference
- Solutions Magazine (IIE)
- HIMSS News
- Jobs Listing from Annual HIMSS Conference
- Modern Healthcare
- Hospitals & Health Networks
How Can I Learn More about Health Care?

- Professional Organizations
  - Society for Health Systems (SHS)
  - Healthcare Information and Management Systems Society (HIMSS)
  - Institute for Healthcare Improvement (IHI)
  - ASQ Health Care Division (ASQ-HCD)

- Dr. Cook’s Health Care Course

- NDSU Rx/Nursing Programs/Health Care Admin Classes

- Co-op Programs/Internships/Summer Employment and Volunteer at Local Hospitals

- Senior Design Projects
Why Health Care?

- It will ALWAYS be needed
- It provides an almost endless variety of opportunities
- It’s the largest industry in the world
- Work primarily with people and processes rather than machines and products
- Make a significant impact on the lives of people in the community… …not just “the bottom line”
QUESTIONS????