



# ISE & Healthcare

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**W** COLLEGE OF ENGINEERING  
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# Healthcare Trends & Terminology



Health Care Reform – Value Based Purchasing” (VBP)  
Medicare Access and CHIP Reauthorization Act (MACRA)  
“Care Transformation”

“Accountable Care Organizations (ACO) & Primary Care Medical Home (PCMH)

Business Intelligence/Decision Support/”Big Data”

Population health, preventive care and predictive modeling

Patient safety/”patient engagement”

Electronic Medical Records (EMR) & Health Information Exchange (HIE)

Mobile health technology/voice and handwriting recognition/barcoding

Wearable/implantable technology

Smart homes/gerotechnology

Nanotechnology

Telemedicine

Meaningful Use/quality management

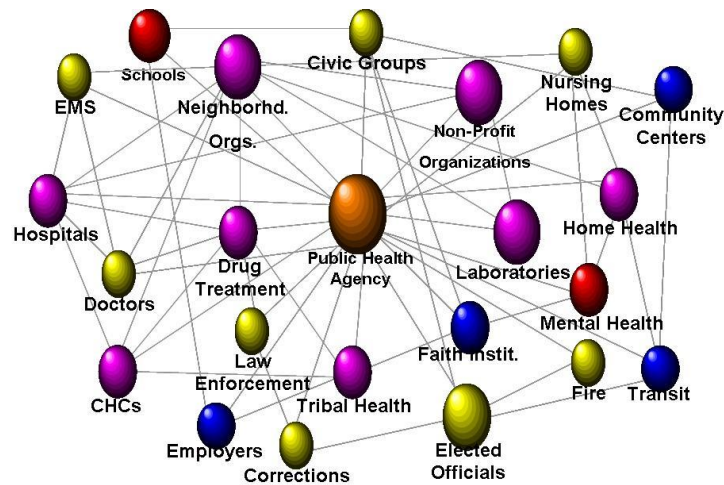
Lean/Agile

ICD-10

“Pre-hospital care” (emergency medical services)



# Job Titles and Venues



## Employment Settings

- Providers (hospitals/clinics/urgent care) and health plans
- Vendors (software, medical devices, nanotechnology)
- Emerging health entities (start-ups or e-health companies)
- Health division of established firms (Google, Microsoft, Apple, Intel, etc.)
- “Retail” medicine (brick & mortar) and online pharmacies/other services
- Public sector/public health
- Non-profits, global health/disaster relief
- Life sciences or virtual reality firms
- Architectural firms
- Consulting firms
- Big data firms



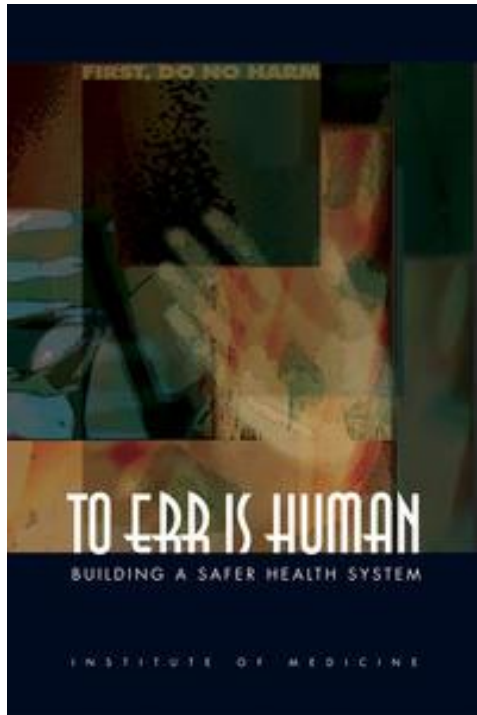
## “Code Words” in Job Descriptions

- Analyst/Analytics:  
(revenue cycle, value chain, security, financial, clinical value, data, supply chain, utilization mgmt, outcomes mgmt, systems, business, sourcing, research)
  - Program Operations, Process redesign
  - Decision support, clinical decision support, Business Intelligence
  - Care Transformation
  - Project Manager/Coordinator
  - Materials and Logistics
  - Optimization
  - Virtual Reality
- EMR Implementation analyst
  - Lean/Agile
  - Cost/policy/financial/predictive/statistical modeling
  - Quality/performance management
  - Compliance or “Meaningful Use”
  - Design/Ergonomic/Reliability
  - Epidemiology

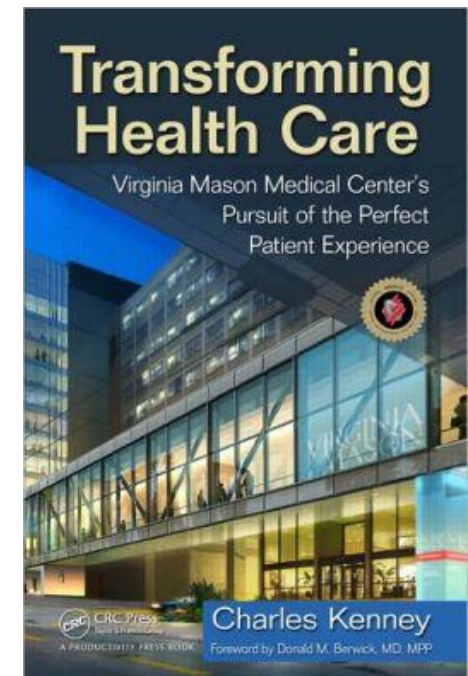
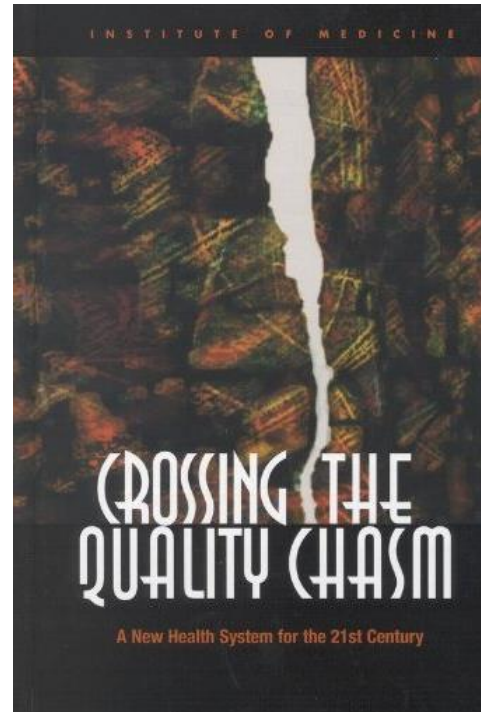
Note: you will not see the words Industrial Engineer in healthcare job descriptions. “Management Engineer” sometimes used in midwest & south part of US.

# Resources

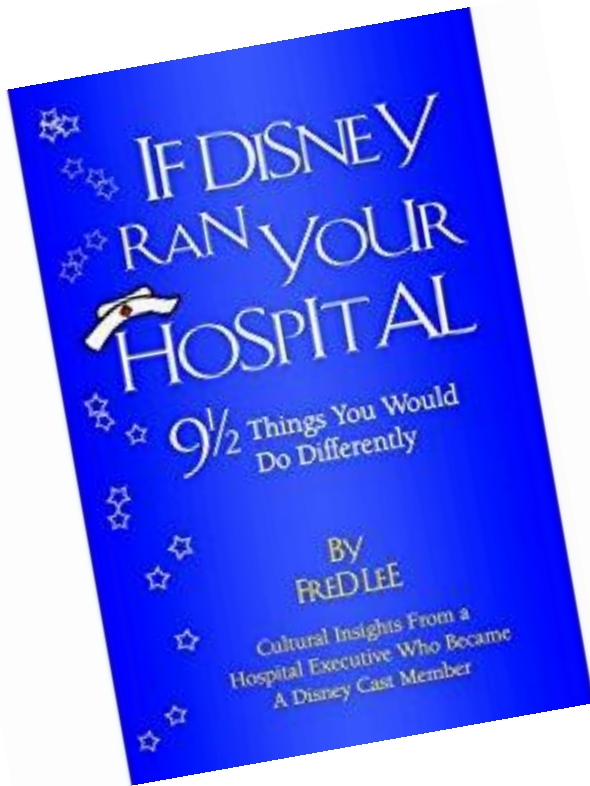




*Institute of Medicine  
publications*



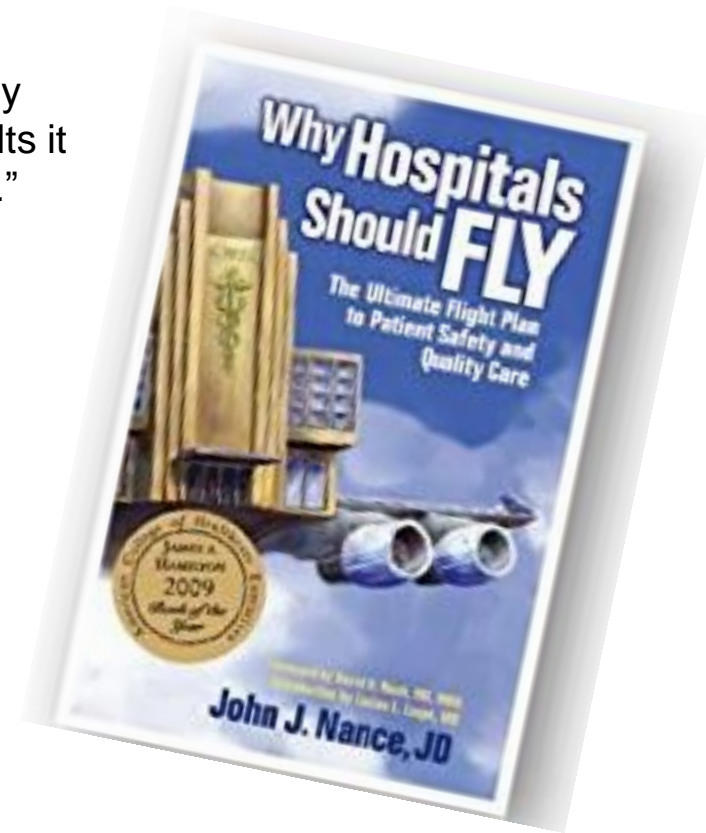




“Every system is perfectly designed to get the results it consistently achieves.”

*Don Berwick, MD*

*Institute for Healthcare Improvement (IHI)*



# UNIVERSAL DESIGN



<http://www.universaldesignonline.com>

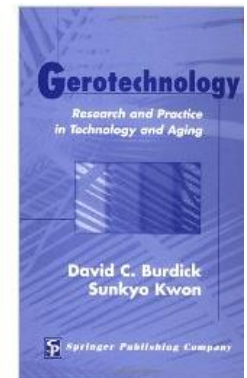




# ***IMAGINE:*** **The Future of Aging.....**



[http://www.youtube.com/  
watch?v=SBH9dkCZsXQ](http://www.youtube.com/watch?v=SBH9dkCZsXQ)



# Associations and Certifications



# Important Associations

- \*\* Healthcare Information and Management Systems Society (HIMSS) \*\*

National: [www.himss.org](http://www.himss.org)

WA state chapter: <http://wa.himsschapter.org/>

HIMSS17 students: <http://www.himssconference.org/register/registration/program-assistants>

Communities: <http://www.himss.org/get-involved/community>

- Project Management Institute (PMI)

<http://www.pmi.org/> & <http://healthcare.vc.pmi.org/Public/Home.aspx>

Puget Sound Chapter: <http://pugetsoundpmi.org/index.php>

- IIE/Society For Health Systems (SHS)

<http://www.iienet2.org/SHS/>





Organization	Certification
HIMSS	<b>Certified Associate in Healthcare Information &amp; Management Systems - CAHIMS</b> <i>(initial credential)</i>
HIMSS	<b>Certified Professional in Healthcare Information &amp; Management Systems – CPHIMS</b> <i>(credential for those with more experience)</i>
PMI	<b>Project Management Professional (PMP)</b> <b>Agile Certified Professional (PMI - ACP)</b>
ACCE	<b>Clinical Engineering Certification (more for medical device work)</b>
Various	<b>Lean Six Sigma certification</b>

### Strategies for leveraging the professional associations:

- Attend the chapter meetings
- VOLUNTEER – it is great networking & they can waive your fees!!
- Ask about scholarships and Emerging/Early Career Professional services
- Consider one of the certifications

# Your Questions .....

