Military Health System: Innovations To Move From Healthcare To Health

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Conflict of Interest

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Has no real or apparent conflicts of interest to report.
Learning Objectives

• Explain the scope of the Military Health System (MHS) and the perspective of MHS Innovation.

• Explain the historical meaning and perception of innovation over time and its relevance to Healthcare, Health, and Health IT.

• Identify innovative clinical processes and emerging healthcare information technologies that the MHS has created and adopted in the past.

• Describe a framework for health information technology used in the MHS that has the potential to create a system for health and define the future of Health IT.
MILITARY HEALTH SYSTEM: Who are We?

- **9.5 million beneficiaries under our care**
  - 1.8 million are active duty or reserve status
  - 50% are retired or family members of retirees

- **Facilities:**
  - 55 military hospitals across the globe
  - 373 military medical clinics
  - 245 military dental clinics

- **Type of Care:**
  - Inpatient: 1,045,000 admissions per year (24% military facilities)
  - Outpatient: 49,340,000 appointments per year (50% military facilities)
  - Births: 119,000 per year (39% military facilities)
  - Prescriptions: 128,900,000 per year (36% military facilities)

- **Combat Casualty Care: (Why we exist)**
  - Casualty survival rate in Iraq/Afghanistan is best in U.S. history
  - 50% more survive than in WWII and 40% more than in Vietnam
  - Joint Trauma System has saved 1000’s of lives

Source: http://health.mil
MILITARY HEALTH SYSTEM: Perspective of Innovation

What do we innovate?
- Clinical Care
- Research
- Education

Where do we innovate?
- Combat
- Community
- Global

With whom do we innovate?
- Commercial
- Academic
- Government
Vision: Achieve excellence in Health and Readiness by accelerating progress in the MHS.
...or simply: “Accelerate Progress”

Mission: Create a model of Health and Readiness for the U.S. Department of Defense by accelerating progress through empowered individuals, inspired communities, engaged leadership, and transparent collaboration across the full spectrum of military operations.

How we do it:

1. **PARTNER**: Establish a portfolio of commercial, academic, and government strategic partnerships across the MHS

2. **ACCELERATE**: Accelerate innovation by identifying, collecting, evaluating, funding, and piloting relevant initiatives aligned to the MHS Improvement Plan.

3. **CONNECT**: Become a learning organization by sharing best practices and ideas across the MHS using multiple communication channels

4. **EMPOWER**: Empower individuals and Service Innovation leads by promoting collaboration and enhancing capacity
“A Proclamation against Those that Doeth Innovate”

Edward VI (1548)

Source: Godin
INNOVATION HISTORY

“Proclamation for the Establishing of the Peace and Quiet of the Church of England: Suppressing Dissent, Innovation, and Controversy”

Charles I (1626)

Source: Godin
INNOVATION TRAJECTORY
Technological Progression

existential

environmental

experiential

Digital Self

- The Renaissance
- Scientific Revolution
- Metaphysics, Natural Philosophy
- Da Vinci, Shakespeare, Newton

- Telegraph, Telephone, Radio
- Journalism, Cinema, Television
- Assembly Lines, Mass Production
- Edison, Ford, Einstein, Disney

- Computers, Cellular Phones, Internet
- Email, Blogs, Podcasts, Facebook
- Google, Apple, Twitter, Skype, Periscope
- Jobs, Page/Brin, Bezos, Musk

Protestant Reformation
1400’s - 1700’s

Industrial Revolution
1800’s - 1900’s

Digital Age
1970’s - 2000’s

Digital Self
INNOVATION TRAJECTORY: Healthcare to Health

1400's - 1700's (Protestant Reformation)
- Medieval Medicine
- Humours, Herbalism
- Global Epidemics
- Vesalius, Paré, Harvey

1800's - 1900's (Industrial Revolution)
- Modern Age of Medicine
- Cures, Treatments, and Procedures
- Medical Industrial Complex
- Lister, Osler, Flexner, Salk

1970's - 2000's (Digital Age)
- Next Medicine
- Prevention \textit{and} Treatment
- Communities of Health
- Sacks, Cousins, Bortz

HIMSS 2016
WISDOM PARADIGM: DIKUW Model

**Evolution of ‘Data’ to ‘Wisdom’**

- **Data**
  - add Context

- **Information**
  - Answers “How?”
  - correlations

- **Knowledge**
  - Answers “Why?”

- **Understanding**

- **Wisdom**

**Question:** If we are discussing *health information technology*, what kinds of things can we do with data and information to move along the DIKUW spectrum?
HEALTH IT FRAMEWORK: “Steffensen Six”

Goal: Be Comprehensive and Comprehensible
HEALTHCARE FRAMEWORK: “Steffensen Six”

Healthcare Access & Accessibility

Healthcare Analysis & Execution

Healthcare Interoperability & Standards

Healthcare Distribution & Portability

Healthcare Archive & Retrieval

Healthcare Representation & Visualization

Goal: Be Comprehensive and Comprehensible
HEALTHCARE FRAMEWORK: “Steffensen Six”

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HEALTH FRAMEWORK: “Steffensen Six”

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HEALTH FRAMEWORK: “Steffensen Six”

- Health Access & Accessibility
- Health Analysis & Execution
- Health Interoperability & Standards
- Health Distribution & Portability
- Health Archive & Retrieval
- Health Representation & Visualization

Goal: Be Comprehensive and Comprehensible
DoD/VA Historical Snapshot: Healthcare IT Landscape
Questions:

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