

Trends and Opportunities in the Healthcare Market

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Agenda

Open Access + Open Code + Open Data

Market Opportunities:

Reactive

Re-distribution {Rationing}

Re-engineering

Remote (mobile Chronic Care Model)

(Data) Repositories

ROI

Open Access, Open Code, Open Data

Open Access:

- **Scientific knowledge**
- **All federally-funded research becomes publicly available**

Open (Source) Code:

- **Growing quantity, quality of Open Source software**
- **Economic factors increasing adoption**

Open Data:

- **Massive amounts of government data freely available for processing**
- **Commitment to data availability, usability**
- **www.Data.gov**
- **www.GeoData.gov**

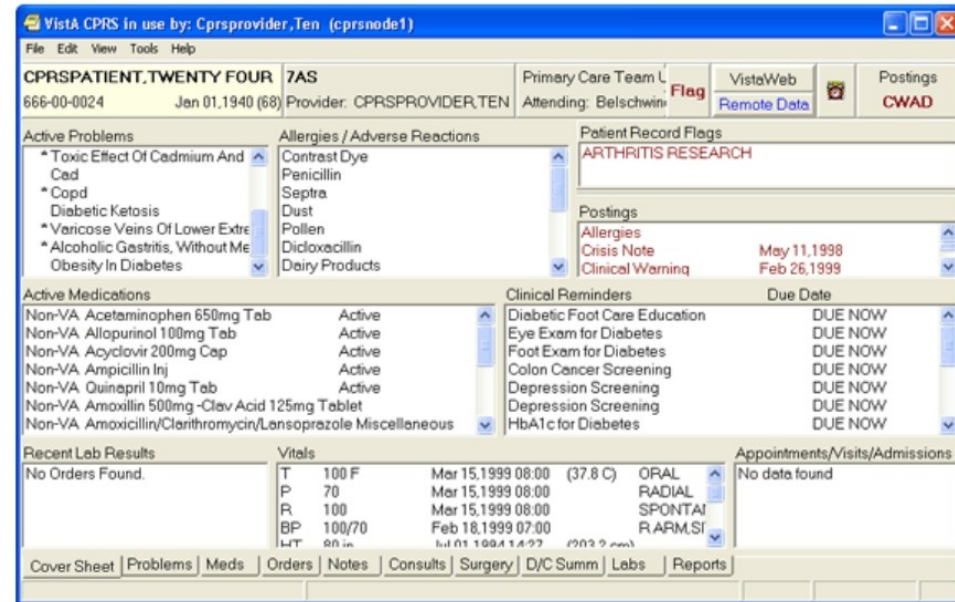
Open Source Health IT

HIT Vendors

- Huge push to deploy Electronic Medical Records (“EMRs”)

VistA

- Used at VA, largest medical system in US
- 04M veterans
- 180K medical staff
- 163 hospitals, 800 clinics, and 135 nursing homes.



Reactive

Universal Healthcare:

- **Likely to succeed (vs. vested interests)**
- **Increasing hope of funding prevention**

Change of Focus:

- **From repairing illness**
- **To “guaranteed health performance”**
- **GE sells aircraft engines' uptime**

Opportunities:

- **Develop “Health Failure Avoidance” systems**
- **Predictive Modeling applied to human body**

Re-distribution {Rationing}

“Generational Balance”

White House budget '10

- Defense \$755B
- SS \$696B
- Medicare \$452B
- Medicaid \$290B
- Interest \$176B
- Total Outlays: \$3.6T

65% federal budget!

- What's left for kids?
Youngsters? Moms?

Opportunities:

- Technology to improve kids', youngsters' health
- Apply elderly-focused devices to young users
- Target diseases that affect young Americans

Re-engineering

Re-design Healthcare:

- **Enormously wasteful, inefficient industry**
- **Designed to maximize billing, not health**
- **Patient's interests not always addressed**
- **Huge asymmetry of information: docs know much more than most patients**

Opportunities:

- **“6 Sigma for Health”**
- **Lean Manufacturing**
- **“Artificial Intelligence” consumer advisor: best treatments per patient**
- **High-end Decision Support Systems**

Remote (mobile Chronic Care Model)

Push Care to Homes:

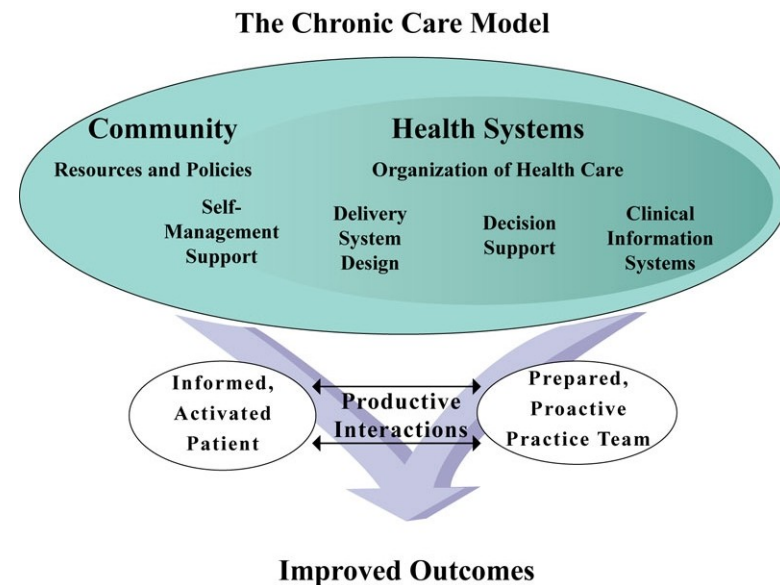
- Greater interest in remote care
- Universal Healthcare likely provide funding

Failures to date due to:

- Lack of long-term ROI
- Misplaced focus on tech factor vs. human
- No long-term payer (HMO) interest due to high patient churn

Opportunities:

- Build patient-focused system, NOT tech heavy
- Leverage known models (ie. Chronic Care Model)



(Data) Repositories

Tsunami of Health Data:

- **Single individual can generate TB raw data**
 - Genes, proteins
 - Clinical records
- **Output of academic, government research**
- **Expon. growth, speed of data generation**
- **Fast data changes as science leaps ahead**

Opportunities:

- **Apply Data Mining tools from other domains**
- **Huge Data Warehouses**
- **NLP (“Natural Language Processing”) tuned to health-specific data**

ROI

Effectiveness Studies:

- **Pay for what works!**
- **Healthcare's unique “fee for service” out**
- **Compare, contrast vs. known baseline; not just against a placebo**

Opportunities:

- **Apply widely known Engineering metrics to measure effectiveness**
- **Develop ROI algorithms**

THANK YOU!

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HIT Conference in South Florida

**Interested in HIT, EMRs?
Committed to improving
community's health?**

**Join organization of SoFL
EMR / HIT summit.**

**Venue: university, college
Speakers: people with on-
the-ground expertise
Outcome: commit to
action after the event**

Draft agenda:

- **Introductions**
- **Welcome**
- **Community needs could be addressed with HIT**
- **“Meaningful Use”, fed \$**
- **Open Source healthcare**
- **Resources: academia, tech, providers**
- **Potential collaboration: something together now**
- **Discussion**