



**Joint Colloquium of the IACA, PBSS and IAAHS Sections
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HM6: Technology's Facilitation of Quality Healthcare

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Agenda

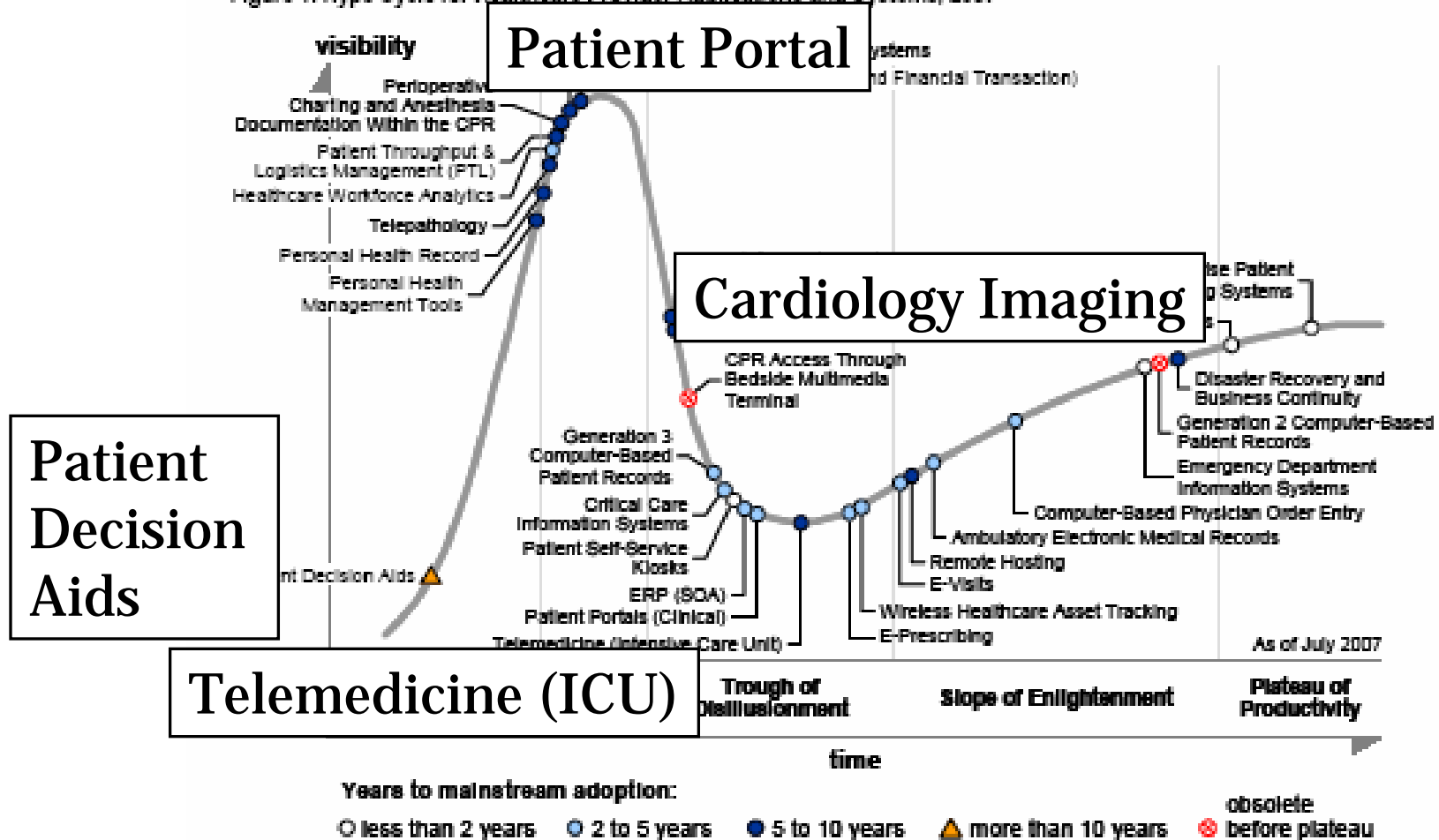
- How technology got involved
- The Actuary's dilemma
- The issue with Health Services
- What it will take to succeed
- The panel reacts

It's Technology's Fault

- Facilitate change
 - Local to regional to global
 - Remote capabilities
 - Sharing of information
- Unreasonable expectations
 - Full empowerment
 - Unlimited capacity
 - Instant information

The Hype Curve

Figure 1. Hype Cycle for Healthcare Provider Applications and Systems, 2007



Still Hot?

Technologies

- **Handwriting Recognition**
- **Speech Recognition**
- **Network Acceleration**
- **Bluetooth**
- **Server Virtualization**
- **Biometrics**
- **Natural Language Processing**
- **Medical Device Integration**
- **Information Lifecycle Management**

Applications

- **Enterprise Patient Scheduling**
- **Home Health Monitoring**
- **Ambulatory Electronic Medical Records**
- **Patient Portals**
- **Personal Health Record**
- **E-Visits**
- **E-Prescribing**
- **Patient Decision Aids**
- **Cardiology Imaging Systems**

■ Less than 2 years ■ 2-5 years ■ 5-10 years ■ More than 10 years

What the IT World is Doing

- Data capture
- Storage solutions
- Network and wireless communications
- Grid computing
- Security



Actuarial Services

Yair Babad

Health Actuary, Data and Information

- Data is the “blood line” for the actuary
- Do we have all the data we need?
- Can we use all the data we have?
- Can we glean from it all needed information?
- Can we do it effectively and efficiently?

Some of the Needs ...

- Frameworks
 - Reimbursement
 - Clinical
 - Prescription
 - Healthcare
 - Administrative
 - Planning
 - Decision support

Some of the Needs ...

- Usages
 - Pricing
 - Risk adjustment
 - Reserving
 - Coverage Planning
 - Financing
 - Projections
 - Data mining
 - ... and much more

Some of the Needs ...

- Patients
 - Characteristics
 - History
 - Genetics
 - Life style
 - Community
- Population
 - Characteristics
 - Services

Some of the Needs ...

- **Services and providers**
 - Provider organization
 - Healthcare providers
 - Plans, coverage and eligibility
 - Payers and reimbursement plans
 - Costs
- **Government**
 - All of the above
 - Controller and legislator

Interactions and Info Needs

- Currently clinical episodes – single events
- Longitudinal information
 - Per patient
 - Per treatment
 - Per provider
- Rolled-up / down
- Aggregated

Is The Data Available?

- In principle – we have it all (almost)
- In practice – we hardly have it
 - Multiple inconsistent / incoherent sources
 - Different coding schemes
 - Partial data
- Over-abundance of data
- “Islands” of information
- From episode to longitudinal data



Healthcare Services

Eliezer Geisler

Challenges In Healthcare Delivery

A. Slow Implementation Of Information Technologies

- Despite benefits, information technology (IT) is not widely used by providers
- Only 15% of hospitals have some form of computerized physician order entry (CPOE) for dispensing medications
- Less than 12% of providers use computerized patient records
- Financial services spend 10% of revenue on IT—healthcare providers only 2-3%

Challenges In Healthcare Delivery

B. Problems In The Future Of The Healthcare System

- Increased hospital costs and continued inefficiencies
- Changing demographics
- Continued push of innovations in medical technologies account for only 15% of rise in costs

Challenges In Healthcare Delivery

C. Persistent Issues/Problems

- Quality, safety. And patient empowerment issues
- Impacts of legislative initiatives on quality, safety, modernization and efficiency
- Increased competition among providers
- Political uncertainties

The Value and Cost of Care

- New definition of value of care in terms of outcomes and benefits to patients
- Care is uneven in population of have and have nots in quality and access: hence we have different care systems in the country
- Best practices are slow to spread

Why Some Solutions Fail

- Complexity of the HC system creates barriers to meaningful changes
- Providers, insurers, regulators, the medical industry all pushing in different directions
- Problems of HC delivery are global problems faced by all HC systems, regardless of services funding model

Technology is not the cause, nor the cure, for what ails the HC system



What Will it Take to Succeed

The Actuary's Objective

- Consistently meaningful and informative answers to the questions posed to us
- Supported by quality data from all related multiple resources
- In effective and (time) efficient way

What Health Services Need

- Improved cooperation among the actors in technology
- Give preference to technologies that help to improve access to care, quality of care, and consistency of care
- Evaluate healthcare technologies in more than just economic/financial measures (ROI)

What Technology Can Do

- Improve diagnostics and therapeutics
- Allow interactions on a global scale, this helping with storage, networking, and grid computing
- Create innovations in both the clinical and the administrative sides of healthcare delivery

What the IT World Can't/Shouldn't Do

- Set standards
- Create or enforce rules and policies for data stewardship
- Address the human side of security
- Determine who pays



Discussion

What Does the Panel Think?

- Are Electronic Medical Record and National Health Network the Salvation?
- Can We Provide Information?
- What are the barriers to adoption of technology?
- What is an appropriate funding model?
- Will Health Services and Actuarial Services always be at odds?

Bottom Line

- Technology can only go so far
- The system is not the solution
- You can't solve every problem now – but keep moving forward
- Whenever possible, address challenges strategically