Observatório de Prospectiva da Engenharia e da Tecnologia

1.º Congresso Nacional sobre os Novos Hospitais
Tagus Park – 26 de Maio de 2009

HEALTH CARE IN AMERICA

General overview of health care cost, technology, and financing

According to World Health Statistics

- $2,260,000,000,000 annual cost in the US
- 15.2% of US GDP in 2005
- $7, 439 per person
- No universal health care

Who have health insurance?

- 84% of the population -- through

Employers	(59%)
Government	(28%)
Privately purchased	(9%)

Overlap of about 10% due to shift in population

45.7 million are without insurance

How well is money spent?

- WHO statistics:

US	1st	in expenditures
	37th	in overall performance
	72nd	in overall level of health

Comparing data from 191 nations

Spending is not evenly distributed

- 1% of population spend 27%
- 5% of population spend 50% (incl. the top 1%)
- 95% of population spend 50%

- By age
  - Over 45 years of age – top 10%
  - Under 45 years of age – bottom 90%

Who provides health care?

- Services
  - Ambulatory care
  - Home health care
  - Concierge medicine
- Facilities
  - Hospitals
  - Emergency clinics
  - Walk-in clinics
  - Parental, family-planning, and dysplasia clinics
  - Hospices

Medicine Supporting Industry

- Pharmaceutical industry
- Medical technology industry — 57% R&D
- Non-profit private organizations — 7% R&D

  (e.g. Howard Hughes Medical Institute, Sloan Kettering Institute)
- The National Institutes of Health — 36% R&D

Spending on health care grows faster than the US economy

- Reasons:

  Development and diffusion of new technology

  Legal aspects: malpractice suits, countersuits, insurance claims, legal fees

Medical technology

- Procedures
  - New medical and surgical procedures (e.g. angioplasty, joint replacement, etc.)
  - Drugs (biologic agents)
- Equipment
  - CT scanners, implantable defibrillators, diagnostic laboratory equipment, monitors, etc.
- Processes
  - New support systems (electronic medical records, telemedicine, transmission of information, etc.)

Improvements

- Heart disease treatment changed over time
  - Beta-blockers
  - Clot-busters
  - Coronary artery bypass
  - Angioplasty
  - Drug-eluting stents
- Mortality rate dropped from 345.2 to 186.0 (per 100,000) in 20 years

Improvements

- Pre-mature births
  - Special ventilators
  - Artificial pulmonary surfactant
  - Neo-natal intensive care
  - Steroids

Mortality dropped to 1/3 of its 1950s level

New technology contributes to increased costs because:

- New treatment to previously untreatable conditions (AIDS, diabetes)
- Advances in clinical ability to previously untreatable acute conditions (coronary bypass, graft)
- Treatment of secondary illnesses
- Expansion of patient population
- On-going incremental improvement

But leads to savings eventually because:

- New vaccine results in fewer people needing costly treatment
- Extending treatment to new conditions
- Enlarging treatment population (e.g. better anesthesia to offer surgery to people too frail to undergo surgery)

Can spending increase continue?

- Capital budget curtailed in hospitals
- New services in niche areas spring up
- Instead of buying new, repair the old
- Match level of expertise to need
- Innovate
  - Change hours
  - Change departments
  - Get the right person at the right place at the right time

Disruptive Innovations

- Create a system where the clinician's skill level is matched to the medical problem
- Invest less money in high-end technologies and more in technologies that simplify complex problems
- Create new organizations to do the disrupting
- Overcome the inertia of regulations

Medicare

- Financed by payroll taxes: 1.45% by employee and matching amount by employer
- Covers:
  - hospital insurance and nursing home stays
  - physicians, nursing services, lab. Expenses, diagnostic services

Medicare

- Has drug insurance program administered by private insurance companies (Part D)
- Total cost: $290 billion ($290,000,000,000) annually
- 1.2 million health care providers
- Satisfaction is generally acceptable (4-6 on a scale of 1-6)

Medicaid

- Health insurance plan for low-income people
- Government pays part (in some cases all) of individual's medical bill
- Guidelines from Federal Government, but
- Each state has its own guidelines for eligibility

Canadian health care system

- Few years ago many claimed it to be the best
- Today it is
  - Overtaxed
  - Faces crisis
  - Patients seek treatments abroad
  - Waiting time
    - For specialist
    - For major elective surgery
    - For specialized treatment

Canadian health care system

- Waiting time
  - 57% waited 4 weeks or longer to see specialist
  - 24% waited 4 hours or longer in ER
- Canadian Government invested $5.5 billion to solve problem
- By 2010 Canada would establish patient wait time guarantees

American health care system

- Many are desperately unhappy with it
- 16% of Americans are without any health care insurance
- Best care is available, but not everyone can afford it
- There are regulatory inefficiencies and inequities

American health care system

- Most heavily regulated industry in the US
- Regulations yield a benefit (in savings) of $170 billion, but cost the public $340 billion
- Emergency treatment is an area of hidden taxation
  - Since 1986 law mandates everyone to be treated regardless of ability to pay
  - More than 10 million illegal aliens in the US use it as sole medical care

American health care system

- 50% of emergency treatments are not paid for
- Some reimbursement by federal and state programs
- Rest is absorbed by the particular hospital

Comparison

- Available number of physicians and medical professionals
- US 2.7 practicing doctors (per 1000)
- Canada 2.2 practicing doctors (per 1000)
- OECD average is 3.0 doctors (per 1000)
- Cost higher in US, lower in Canada

Universal health care policy of Obama Administration

- Many sees health care as right and complain that it is too expensive
- Obama Administration wants make it affordable and accessible to all
- Wants to build on existing system
- Invest in:
  - Health information technology
  - Prevention
  - Care coordination

Why is American health care expensive?

- AMA monopoly of the supply of physicians
- Regulating insurance deductibles (by Fed. Gov't) raises the cost of insurance
- Frivolous and fraudulent law suits (courts and Congress don't want to stop it—most members are trial lawyers)
- Excess litigation
- Expensive malpractice insurance
- Defensive medicine (unnecessary tests)

Sources of Financing

- Health care depends on effective financial management as much as on quality care.
- Need companies to help doctors manage their cash-flow
- Provide capital to:
  - Group practice physicians
  - Nursing homes
  - Hospitals
  - Home health-care companies
  - Mental health care providers
  - Rehab. Or physical therapy companies
  - MRI, radiology, laboratories, etc.

Why do they need financing?

- Too new to get bank financing (less than 3yrs.)
- Accounts receivable for payroll
- Expansion or working capital
- Acquisition financing

New hospital financing

- State issues lease revenue bonds
- Channeled through well established financial concerns (e.g. First Boston, Lehman Brothers, et al.)
- Since the financial melt-down this is a huge problem
- Example of Owensboro Medical Health System (OMHS)

What lies ahead?

- Over 10 years $630 billion reserve fund to pay for new health care
- Raised through tax increases
- Reducing and eliminating Medicare fraud and abuse (cost: approx. $311 million)
- Health and Human Services would get $76.8 billion excluding Medicare and Medicaid
- NIH $6 billion for cancer research
- $1 billion for promoting healthy life-styles
- $19 billion for computerizing health records

What lies ahead?

- Food and Drug Administration to get $1 billion for food safety oversight, reducing food-borne illnesses, and inspecting food facilities
- Overall cost appears to be more than most major catastrophes.