

Transforming Health through information technology

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President's Information Technology Advisory Committee
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A Case Study



- 70 YO woman with 10 year h/o leukemia
- Compliant with all MD advice and visits
- 3 month history of low grade fevers, waxing and waning
- No focal source of infection

Case Study #2



- Poohbear: an 8 year old Bouvier
- h/o knee surgery with prosthesis
- presents for routine dental cleaning

Institute of Medicine Report – March 2001

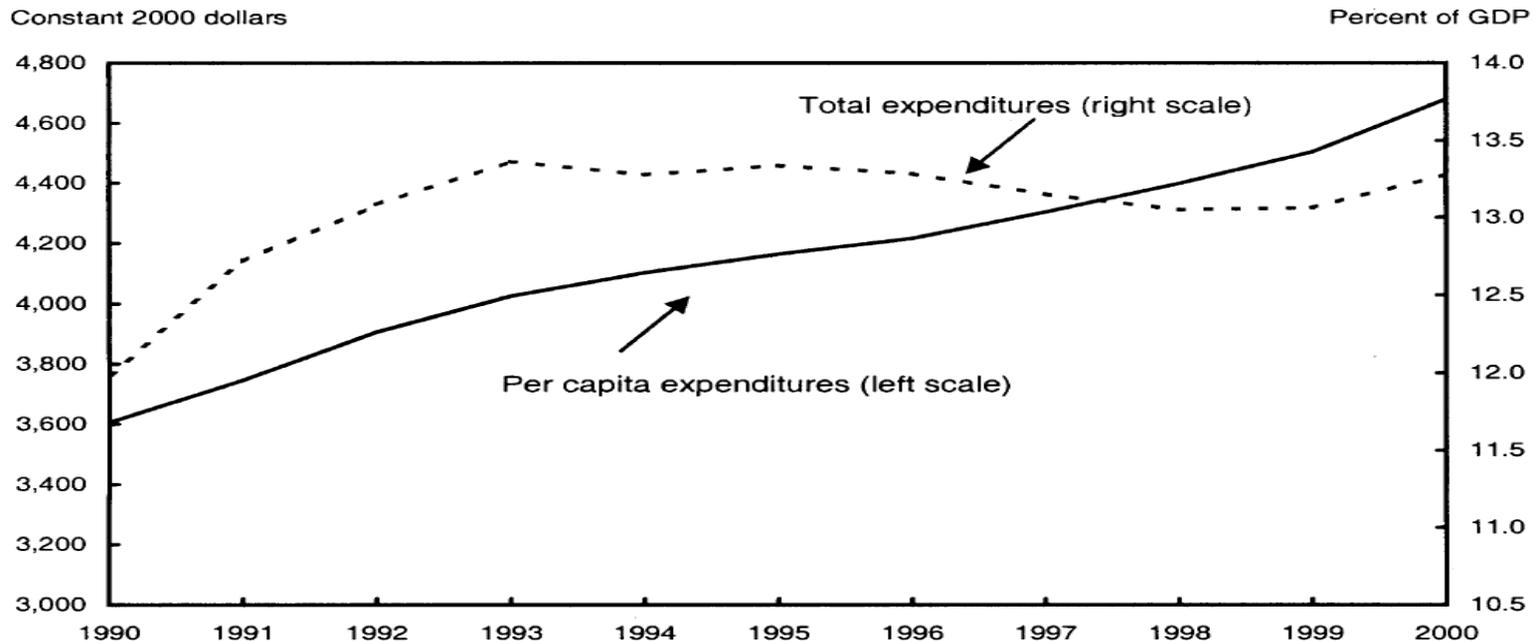
- “The US healthcare system is **in need of fundamental change**...Healthcare today harms too frequently, and fails to deliver its potential benefits routinely”
- “The performance of the healthcare system varies considerably. It may be exemplary, but often is not, and **millions of Americans fail to receive effective care.**”
- “A highly fragmented delivery system that **largely lacks even rudimentary clinical information capabilities** results in poorly designed care processes characterized by **unnecessary duplication of services** and long waiting times and delays.”

In other words... The System Is Broken

- 12% of physician orders are not executed as written
- 20% of laboratory tests are requested because previous studies are not accessible.
- 1 in 7 hospital admissions occurs because caregivers do not have access to previous medical records.
- 98,000 Americans die each year from medical errors that arise in the hospital setting.

Rapid Rise in Health Expenditure

Health care expenditures grew substantially during the 1990s, both per capita and as a share of GDP.



Source: Department of Health and Human Services (Centers for Medicare and Medicaid Services).

Four Solutions to the Cost Crisis

- Raise payroll taxes
- Raise the retirement age
- Increase the federal deficit
- Use health information technology to reduce costs of care and improve quality

IOM Report – July 2003

Key Elements of Health Information Technology

- A secure, portable, personal electronic health record delivered via a National Health Information Infrastructure
- Computerized Physician Order Entry in-hospital and ePrescribing from physician's offices
- Clinical decision-support
- Connectivity for exchange of information among caregivers



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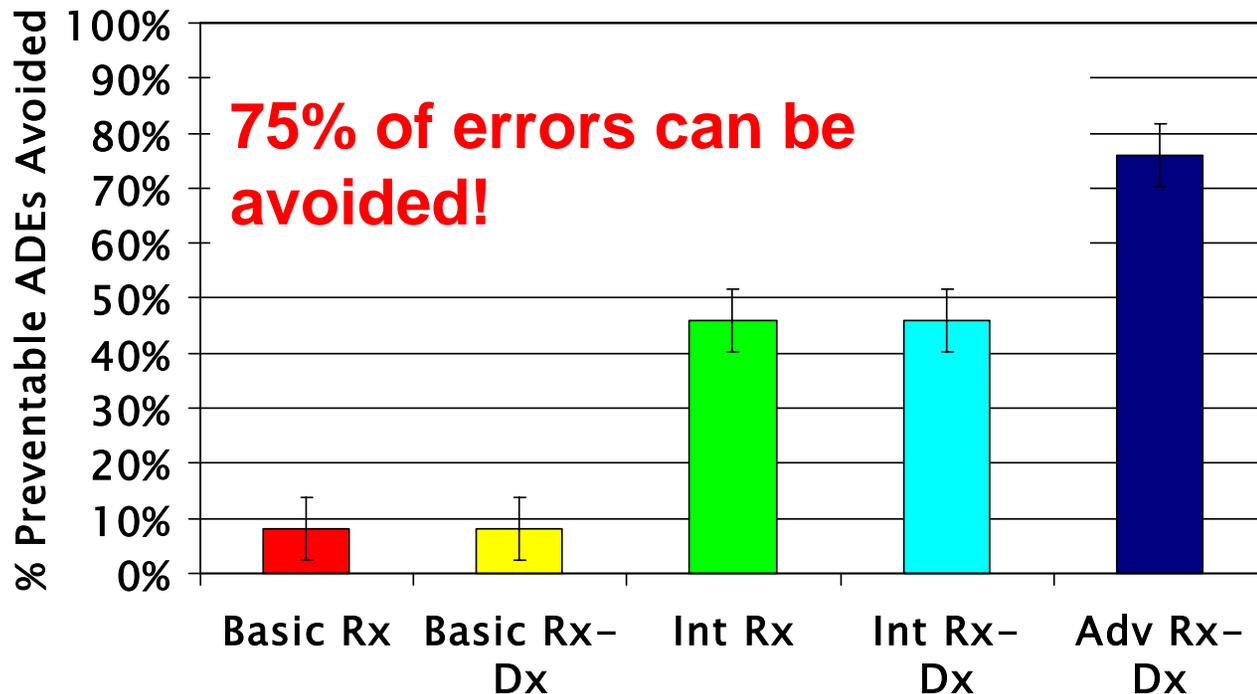
Our System Today:

except for military and veterans healthcare

- Fewer than 5% of America's hospitals have electronic health records and order entry
- We have few mechanisms to share lab results, diagnostic studies and other health information among doctors and hospitals for the patient's benefit
- Every time you go to a new doctor it's another clipboard and another "tell me why you are here."

Our System Tomorrow:

Preventing Adverse Drug Events through Computerized Order Entry



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Potential Benefits of Health IT

- Saving up to 25% of healthcare costs
-- in excess of \$250 Billion per year
- Saving more than 100,000 lives annually
- Empowering Americans to participate more completely in their health care
- Empowering consumers to make informed choices of caregivers and hospitals

The Role of PITAC: advise on use of NITRD funds

FY 2003 Budget *Estimates* and FY 2004 Budget *Requests* (dollars in millions)

Agency	High End Computing Infrastructure and Applications (HEC I&A)	High End Computing Research and Development (HEC R&D)	Human Computer Interaction and Information Management (HCI & IM)	Large Scale Networking (LSN)	Software Design and Productivity (SDP)	High Confidence Software and Systems (HCSS)	Social, Economic, and Workforce (SEW)	Totals
NIH	77.1	37.8	93.1	128.8	6.8	3.7	12.1	359
NIH	87.6	41.7	99.0	132.2	9.2	3.7	12.2	386
AHRQ			6.4	5.2				12
AHRQ			32.0	25.0				57
TOTALS ^a	481.5	381.1	337.1	328.1	215.9	142.3	90.0	1,976
TOTALS ^b	500.6	394.4	471.3	373.3	178.5	128.1	100.8	2,147

AHRQ: Supports practice-based research networks of primary care physicians across the U.S. and an online medical journal of patient safety incidents including root cause analyses

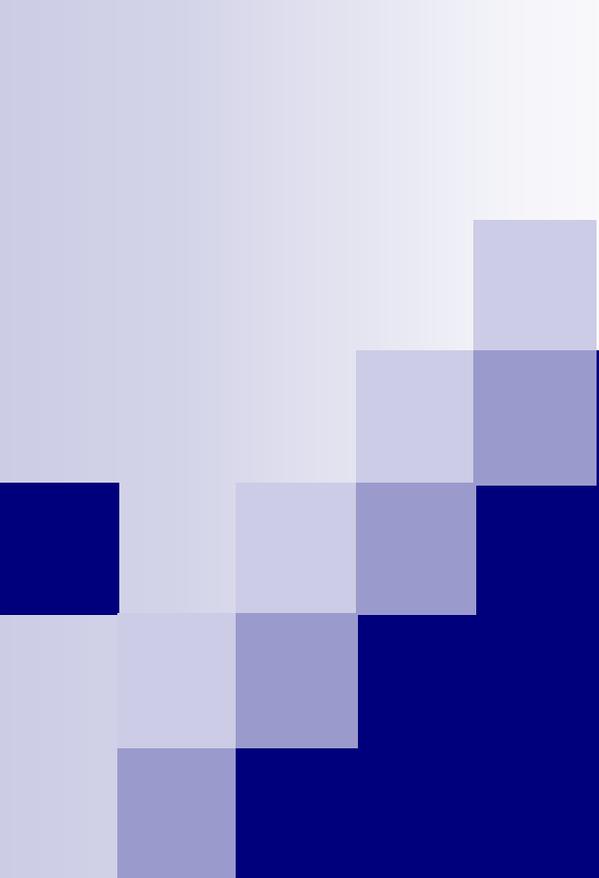
AHRQ: Information management to enable studies of health care and delivery system effectiveness; supports research in toxic to enhance patient safety by reducing medical errors; funds studies of IT methods enabling providers to share information with patients; established and maintains both the National Guidelines Clearinghouse and the National Quality Measures Clearinghouse™ with detailed online information about health care metrics

Questions to be addressed by the Health Subcommittee

- Are there existing health IT investments that can readily be expanded to serve the nation?
- Where should we be investing today, so that we have the health IT solutions for tomorrow?
- What can we achieve as a nation by making those investments?
- What barriers must we overcome?
- How can we empower disparate departments of government to work together more closely around health IT?
- How can we use NITRD funds to stimulate public/private partnerships in this critical area?

Questions for all speakers

- What do you imagine could be achieved in the next few years by aggressive deployment of today's technologies?
- What are the barriers to this?
- What steps should be taken to surmount those barriers and to realize this potential?
- What do you imagine could be achieved in 10 years, with appropriate R&D investments?



Today's Speakers

Dr. Elias Zerhouni

Director, National Institutes of Health



- Bringing Medical Knowledge to the Bedside: The NIH invests \$2.7 Billion annually in biomedical research
 - Evidence suggests that advances in medicine may take years to filter down to daily practice
 - How can information technology make the latest medical knowledge available to every American?
 - How can information technology make clinical trials better, faster, and less expensive?

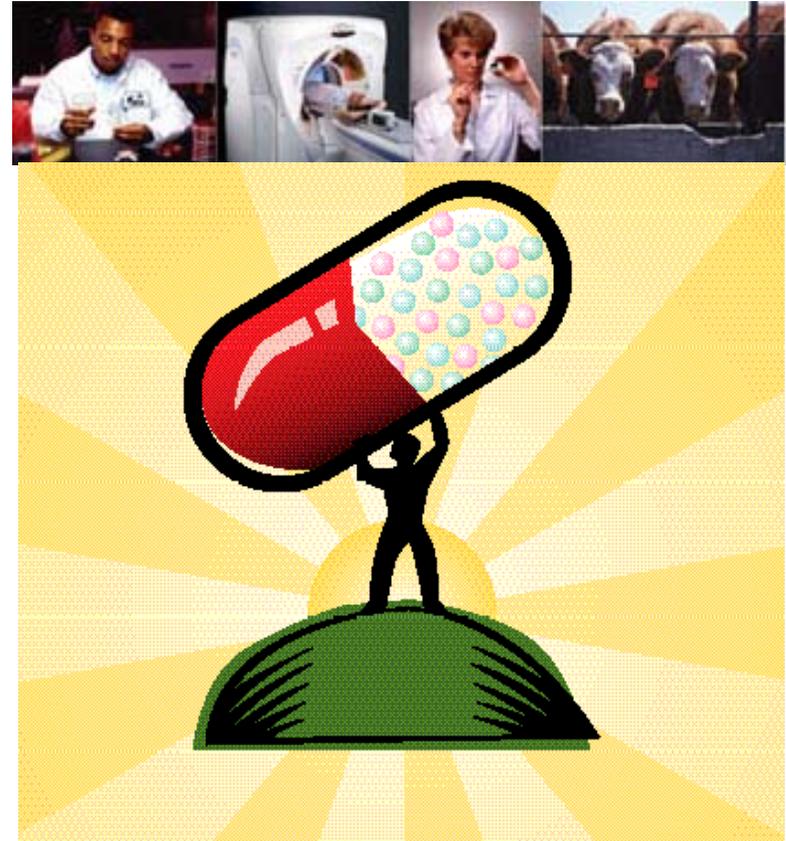


Dr. Mark McClellan

Commissioner, US Food
and Drug Administration



- The FDA faces constant challenges in monitoring the safety and efficacy of pharmaceuticals and medical devices in the marketplace
- How can advances in health IT:
 - Bring new drugs to market sooner
 - Enhance their safety in the marketplace
 - Reduce prescribing errors and adverse events
 - Help consumers make more informed choices



Hon. Anthony Principi

Dr. Jonathan Perlin

Department of Veterans Affairs



- Fewer than 5% of U.S. hospitals have complete health IT solutions
- All 1,300 sites of care administered by the Veterans Health Administration are paperless
- What has this investment done for patient care?
- What has this investment done for patient safety?
- What has this investment done for costs of care?



Major General Kevin Kiley, M.D.

Army NE Regional Medical Command

Safeguarding health in the ambulatory setting



- Few Americans have a personal electronic health record today
- This technology is a reality for increasing numbers of military personnel
 - What health care benefits have been demonstrated?
 - How do patients respond to this technology?



Dr. Carolyn Clancy

Director, AHRQ



- AHRQ is scheduled to receive the first major increased NITRD investment in health IT.
 - What are the critical issues to be addressed under this program?
 - What will be the benefits to the American people?
 - What else needs to be done?



Dr. David Kibbe

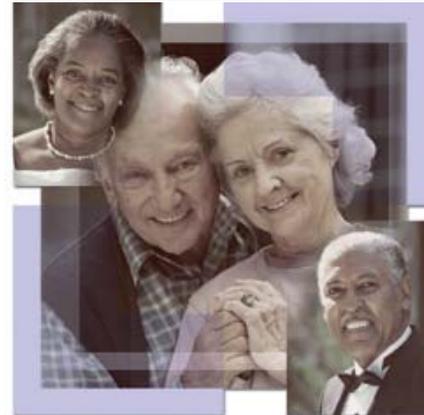
American Academy of Family Practitioners



- Why do America's doctors still practice in a paper-based world?
- Lowering the barriers to implementing IT in the doctor's office
 - What do doctor's want to do?
 - What do patient's demand?
 - Innovative strategies to bring health IT to every doctor and patient in America



Laura Hamblen/AAFP



Laura Hamblen/AAFP