# Panel on Transforming Health Care

## Status Report

**President's Information Technology
Advisory Committee
Meeting**

September 20, 2000

Sherrilynne Fuller, Co-Chair

Ted Shortliffe, Co-Chair

# Overall Goal

- Develop an IT research strategy and rationale to enable the "Transforming the Practice of Health Care" vision of the PITAC February 1999 report

- Inspired by the vision statement in the 1999 report

# Panel on Transforming Health Care Members

Co-Chairs:

Sherrilynne S. Fuller, Ph.D.
University of Washington

Edward H. Shortliffe, M.D., Ph.D.
 Columbia University

PITAC Members:

Robert E. Kahn, Ph.D.
Corp. for National Research Initiatives

John P. Miller, Ph.D.
Montana State University

Larry Smarr, Ph.D.
University of California - San Diego

Other Panel Members:
Bruce Davie, Ph.D.
Cisco Systems

Don E. Detmer, M.D.
University of Virginia

John Glaser, Ph.D.
Partners HealthCare System

Eric Horvitz, M.D., Ph.D.
Microsoft Research

Takeo Kanade, Ph.D.
Carnegie Mellon University

Sid Karin, Ph.D.
San Diego Supercomputer Center

Russell J. Ricci, M.D.
IBM Corporation

Bonnie Webber, Ph.D.
University of Edinburgh

# Summary of Meetings

- ## February 25, 2000 at NSF, with briefings by:
  - —Don Lindberg, NLM
  - —Mike Fitzmaurice, AHRQ
  - —Carol Dahl, NCI
  - —Joined Digital Libraries Panel session on Biomedical Research and Health Care Applications (Milton Corn, NIH/NLM)

# Summary of Meetings

- ## May 17, 2000 at NSF

    —Discussed and endorsed the NRC report "Networking Health: Prescriptions for the Internet" research agenda and recommendations (http://www.cstb.org )

# Summary of Meetings

- ## July 27, 2000 at NSF, with briefings by:
    - —Michael Huerta, NIH
    - —Michael Marron, NIH/NCRR
    - —Glenn Rogers and Ray Russo, FDA
    - —Ruzena Bajcsy, NSF

# Panel Teleconferences

- ## August 11, 2000

  —NSF, Dr. Mary Clutter, Assistant Director of the Directorate for Biological Sciences

- ## September 12, 2000

  —CDC

  - Dr. James Hughes, Director, National Center for Infectious Diseases

  - Dr. John Loonsk, Associate Director for Informatics and the CIO for the National Center for Infectious Diseases

# Panel Teleconferences

- ## September 14, 2000
  - ### —DHHS
    - Ms. Eileen Salinsky, Director of the Public Health Policy Division, Office of the Assistant Secretary for Planning and Evaluation (ASPE) Office of Health Policy
    - Ms. Christy Schmidt, Deputy to DAS of Health Policy, ASPE Office of Health Policy
    - Ms. Betsy DJamoos, DAS for Policy Initiatives, Office of the Secretary
    - Mr. Brian Burns, DASIRM Deputy CIO, Office of the Secretary
    - Mr. Jim Scanlon, Director, Division of Data Policy, ASPE Office of Program Systems
    - Mr. Dan Gaylin, Senior Advisory, ASPE Office of Health Policy
    - Mr. Bill Braithwaite, Senior Advisor for Health Informatics, ASPE Office of Health Policy

# Panel Teleconferences

- ## September 15, 2000

  - ### —CDC

    - Dr. William Yasnoff, Associate Director for Science, Public Health Practice Program Office

    - Dr. Patrick O'Carroll, Medical Officer, Public Health Practice Program Office

    - Mr. Jim Seligman, CIO and Associate Director for Program Support, Office of the Director

    - Dr. Claire Broome, Senior Advisor to the Director for Integrated Health Information Systems, Office of the Director

    - Mr. Charlie Rothwell, Associate Director ODPS, National Center for Health Statistics

# Context for the Report

- One goal of our Nation should be a healthy population – this is key to attaining other important national goals such as quality of life, a sound economy, and national security.  IT can play a crucial role in achieving these goals economically and efficiently.

- Biological research in the new century is an information creation, management, and analysis task.  The mandatory role for IT in biomedicine is now unquestioned.

- IT can also help provide better feedback loops for connecting providers, policymakers, and patients with late-breaking research and discussions about clinical decision-making policy.

# Examples of IT Research Challenges Relevant to Biomedical and Health Care Applications

- Interactive large-scale biological simulations
- Data-driven modeling of biological processes
- Data mining in large clinical and biological databases
- Multimodal information management: text, audio, images, and motion
- Biomedically motivated user-interface hardware and software
- Advanced networking services, including QOS and wireless
- Development and availability of high end systems to support biomedical research, simulations, and modeling
- Privacy, security, and authentication
- Language understanding / text processing
- Clinical records and their integration
- Access to information systems for people with disabilities
- Automated policy inference
- Research to better understand the implications of IT on the health care system

# Observations

- IT can facilitate fundamental transformations in biomedical science, health care delivery, and health promotion

- Such transformations are essential to assure a healthy populace with equitable access to the best health care available

- Scientific challenges in IT for biomedicine are independent of application domain

- Biomedicine can help to motivate fundamental IT research that is of broad applicability, both within biomedicine and in other segments of society

- The biomedical research and health care communities lack a cultural recognition and acceptance of these issues

# Observations

- The biomedical community, including the federal research agencies, has tended to rely on IT innovations that are produced by investments in other parts of government

  - This adversely affects the pace at which biomedicine benefits from IT research

  - Solutions to IT research issues may never reflect the needs of biomedicine without involvement of the biomedical community

- Achieving the potential of IT to improve health care will be constrained until we develop a larger cadre of researchers and practitioners who operate at the nexus of health and computing/communications

# Observations

- The U.S. lacks an accepted national vision for IT in health care

- A critical and enabling investment in biomedical computing infrastructure and enabling technologies has not yet occurred

- A number of difficult public policy and regulatory issues constrain adoption of IT health care applications by health organizations and consumers

- Advances in IT are critical in order for DHHS to accomplish its mission to improve the quality of U.S. health care

# Observations

- The role and management of IT in DHHS has several limitations:

  - DHHS' decentralized management approach has adversely affected both the development of a coherent IT vision and departmental activities regarding IT and its role in health care and biomedical research

  - There is a lack of coordinated IT effort and leadership across the agencies within DHHS

  - The absence of leadership and budget at the departmental level leaves the agencies within DHHS functioning without coordination and guidance

  - The individual agencies do not believe they have a mandate to support IT research, even if it is fundamental to their mission

  - DHHS is not perceived as a significant player in federal IT policy development

# Recommendations

- Under development, but they follow logically from the committee's observations as discussed today

# Back up slides

# Summary of May 17th Meeting

- Attendees:

  Sherrilynne Fuller

  Ted Shortliffe

  John Glaser

  Bruce Davie, from CA telephone teleconference

  Don Detmer, from UK via VTC

  Eric Horvitz, from WA telephone teleconference

  Takeo Kanade, from CMU via VTC

  Sid Karin, from UCSD via VTC

  John Miller

  Russ Ricci

# Summary of May 17th Meeting

- **Accomplishments**

  —Endorsed the NRC report "Networking Health: Prescriptions for the Internet" research agenda and recommendations (http://www.cstb.org )

  —Agreed to add to the NRC report's research agenda to expand beyond Internet-centric research

  —Discussed next steps to determine the research needs, management structure and policies to accomplish the vision for transforming health care

    – meet with senior-level managers from relevant government organizations to discuss their views on needs and concerns

    – gather and assess other recent studies and consider incorporating or supporting their recommendations in whole or in part

    – identify policy/management issues to facilitate achieving the research agenda

  —Developed schedule for completing the report

# Summary of July 27th Meeting

- Attendees:

  **Sherrilynne Fuller**

  **Ted Shortliffe**

  **John Miller, from MT via VTC**

  **Joe Thompson**

  **Bruce Davie**

  **Don Detmer**

  **John Glaser, from MA via telephone teleconference**

  **Eric Horvitz, from WA telephone teleconference**

  **Sid Karin**

  **Russ Ricci, from UK via telephone teleconference**

# Summary of July 27th Meeting

- **Meeting Speakers**
  - Michael Huerta, NIH presentation, "NIH Changes in IT Research Support"
  - Michael Marron, NCRR presentation, "Biomedical Technology Shared Research Resources"
  - Glenn Rogers and Ray Russo, FDA presentation "Uses and Challenges of IT in FDA and the Practice of Health Care"
  - Ruzena Bajcsy, NSF presentation

- **Action Item**
  - Arrange teleconferences with various senior managers from NSF, NIH, AHRQ, NLM, and FDA to discuss their thoughts regarding critical IT challenges to improve health care in the U.S.