

eHealth Research: Opportunities and Challenges

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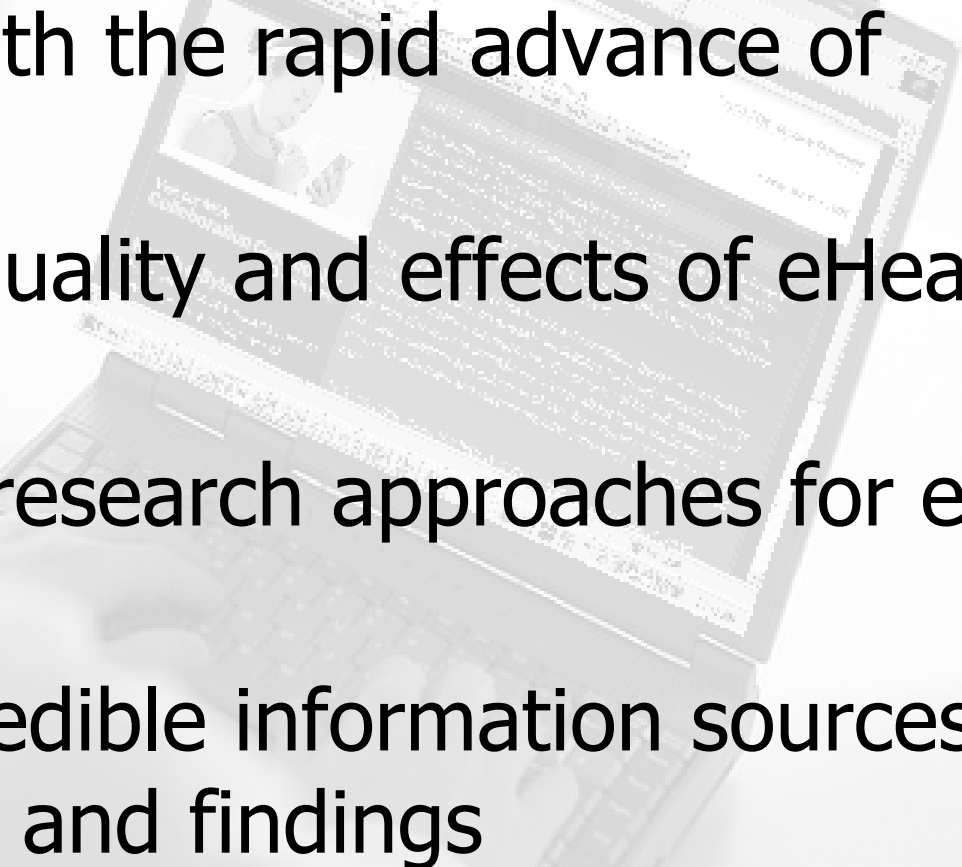
eHealth: Computers, the Internet and
Health Care Delivery
November 17, 2004

DEFINING eHEALTH



- Use of emerging *interactive* technologies to enable health improvement and health care services
- Technologies include the Internet, interactive TV, interactive voice response systems, kiosks, wireless networks, PDAs, CD-ROMs, DVD-ROMs

eHEALTH CHALLENGES

- Keeping up with the rapid advance of technology
 - Determining quality and effects of eHealth applications
 - Investigating research approaches for eHealth programs
 - Developing credible information sources on research tools and findings
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eHEALTH: THE POTENTIAL

A hand is holding a tablet computer. The screen of the tablet displays a healthcare application interface with various text and graphics, including what appears to be a patient profile or a list of items. The background is a light, neutral color.

- Provide evidence-based, interactive tools to empower consumer self-management
- Enhance practice/provider efficiency and work flow
- Enhance patient-provider communication

eHEALTH: THE EVIDENCE

Emerging programs for health behavior change:

- Smoking cessation
- Physical activity
- Nutrition
- Weight loss

Lenert, L., Munoz, R.F., Stoddard, J., Kelucchi, K., Bansod, A., Skoczen, S., Perez-Stable, E. Design and pilot evaluation of an internet smoking cessation program. *J Am Med Inform Assoc.* 10:16-20, 2003.

Marshall, A.L., Leslie, E.R., Bauman, A.E., Marcus, B.H., Owen, N. Print versus website physical activity programs: A randomized trial. *Am J Prev Med* 25(2):88-94, 2003.

Irvine, A.B., Ary, D.V., Grove, D.A., Gilfillan-Morton, L. The effectiveness of an interactive multimedia program to influence eating habits. *Health Education Research* 19(3):290-305, 2004.

Womble, L.G., Wadden, T.A., McGuckin, B.G., Sargent, S.L., Rothman, R.A., Krauthamer-Ewing, E.S. A randomized controlled trial of a commercial weight loss program. *Obesity Research* 12(6):1011-1018, 2004.

eHEALTH: THE EVIDENCE

Emerging evidence-based programs for chronic illness care and disease management:

- Back pain
- Arthritis
- Diabetes

Lorig, K.R., Laurent, D.D., et. al. Can a back pain e-mail discussion group improve health status and lower health care costs: A randomized study. *Arch Intern Med.* Ap 8:162(7): 792-6, 2002.

Guendelman, S., Meade, K., Benson, M., Chen, Y.Q., Samuels, S. Improving asthma outcomes and self-management behaviors of inner-city children. *Arch Pediatr Adolesc Med* 156(Feb):114-120, 2002.

Meigs, James, B., Cagliero, E., et. al. A controlled trial of web-based diabetes disease management. The MGH Diabetes Primary Care Improvement Project. *Diabetes Care*, 26(3):750, 2003.

Rosen MI, Rigsby MO, Salahi JT, Ryan CE, Cramer JA. "Electronic monitoring and counseling to improve medication adherence." *Behaviour Research and Therapy* 42(4): 409-422, 2004.

GAPS IN CURRENT eHEALTH RESEARCH

- Lack of research findings
- Limited grant funding opportunities
- Limited resources for development



NATIONAL PROGRAM OFFICE

- Five-year, \$10.3 million national program funded by a grant from The Robert Wood Johnson Foundation®
- Housed within the Department of Psychiatry at Brigham and Women's Hospital, Boston, Massachusetts

OUR MISSION

- Foster systematic research on eHealth applications for health behavior change and chronic disease management
- Advance discovery of scientific knowledge about these applications to improve processes and outcomes of care for culturally diverse groups of patients/consumers
- Support provider adherence to evidence-based care

CLEARINGHOUSE FOR DATA, TOOLS, RESULTS

- www.hetinitiative.org
- Collaboration Community fosters linkages between and among researchers and users of eHealth information
- Literature Library, Bulletin Board, industry events, opportunities and news
- Users are encouraged to provide content

2002 CALL FOR PROPOSALS (CFP) OVERVIEW

Sought research proposals that addressed:

- Challenges related to the methodology, design, evaluation and effects of eHealth applications
- The ability to support and maintain health behavior change
- Enhanced patient self-management of chronic disease

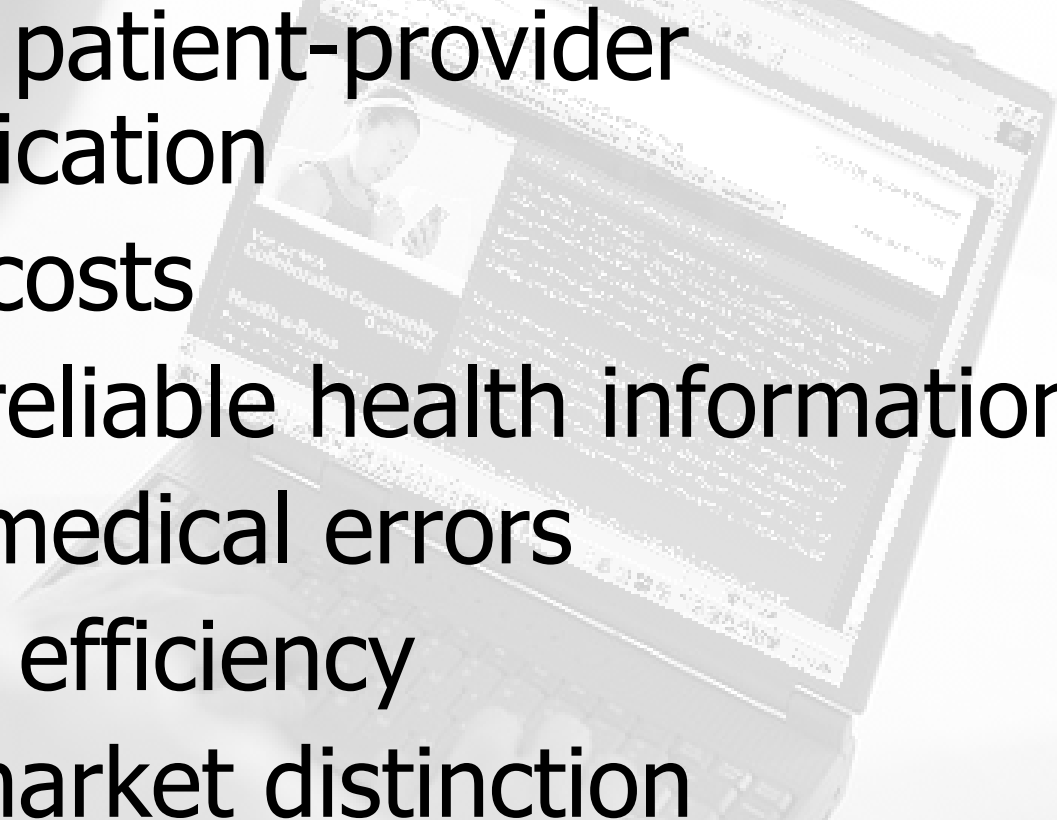
2002 CFP PORTFOLIO

- 18 grants totaling \$4.8 million were awarded to organizations studying diverse topics and populations:
 - 10 Methodology and Design
(1 year; up to \$100,000)
 - 8 Outcome Evaluation
(up to 3 years; up to \$500,000)
- These projects began September 1, 2003

EMERGING 2003 RESEARCH

- *Validation of quality criteria for health information on the World Wide Web*
University of Texas Health Science Center at Houston
- *Two Internet Studies: Reliability of Outcome Data Collected via Internet; Recruiting for Internet Studies from Rural America*
Stanford University
- *A Randomized Controlled Trial of Diabetes Disease Management Over the Internet*
University of Washington

WHY PORTALS?

- Improve patient-provider communication
 - Contain costs
 - Provide reliable health information
 - Reduce medical errors
 - Enhance efficiency
 - Obtain market distinction
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- A laptop is shown in the background, displaying a patient portal interface. The interface includes a search bar at the top, a profile picture of a woman, and a list of items with text such as 'Your Family Communication Community' and 'Health & Style'.

EXAMPLE

Tour of Patient Gateway - Prescription Renewal - Microsoft Internet Explorer provided by Partners HealthCare System

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites History Print Mail News RSS

Address <http://www.patientgateway.org/ptgw/wlogon.htm> Go

PATIENT GATEWAY

Home Feedback Site map Logout Policies

Mail Requests ~ Prescription Health Record Health Library Practice My Profile Help

Demonstration Patient MRN: 6005

▼ Instructions to the Practice

*** Where should the prescription go?**

Phone or fax into Pharmacy Mail it to me
 Mail it to Pharmacy Hold it for pick-up

Select a pharmacy:

From My Profile
 Other Pharmacy

CVS Pharmacy #1866

Name:

Address:

City:

State: MA

Zip:

Phone:

Address and Phone Number
Insurance and Providers
Mail Settings
Contact Info
Pharmacy Settings
Appointment Settings
Change Password

4

2004 CFP OVERVIEW

- Existence of a robust, currently operating, secure patient-provider portal with a critical mass of key functions and users
- Key functions of interest:
 - Bi-Directional Clinical Communication
 - Administrative Transaction Capability
 - Patient Access to Electronic Records
 - Health Behavior Change and Chronic Disease Management Programs

2004 CFP OVERVIEW

- A total of \$2.45 million was awarded to:
 - Aurora Health Care
 - Beth Israel Deaconess Medical Center
 - Geisinger Health
 - The Cleveland Clinic Foundation
 - University of Colorado Health Sciences Center
 - HispaniCare
- These 2-year projects began on September 1, 2004; awards were up to \$400,000

2004 CFP OVERVIEW

- Research is focused on patient outcomes
- Potential for the research to elucidate the factors about patient-provider communication that can serve to promote and integrate health behavior change and chronic disease management into care processes

GRANTEES



Aurora Healthcare

Principal Investigator: Dr. Paul Hartlaub

Weight Management for a Defined Employee Population using an Interactive eHealth Portal

Beth Israel Deaconess Medical Center

Principal Investigator: Dr. Lisa Iezzoni

Improving Chronic Disease Care with PatientSite

Geisinger Clinic

Principal Investigator: Dr. Walter F. Stewart

Does Access to an EHR Patient Portal Influence Chronic Disease Outcomes? A Randomized Trial Assessing Clinical and Behavioral Change Outcomes in Patients with CHF, Diabetes, or Secondary CVD

GRANTEES

- **The Cleveland Clinic Foundation**
- Principal Investigator: Dr. C. Martin Harris
- The Potential of Technology to Improve Chronic Disease Management and Quality of Care

- **University of Colorado Health Sciences Center**
- Principal Investigator: Dr. Stephen Ross
- *D-STAR (Diabetes-System To Access Records): An Online Patient Portal to Improve and Sustain Diabetes Self-Care.*

- **HispaniCare**
- Principal Investigator: Dr. Dirk Schroeder
- *Evaluation of MiDieta (My Diet) eHealth Portal to Facilitate Improved Diets, Increased Fitness-Levels, and Weight-Loss among U.S. Hispanics*

CONTACT US

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