Behavioral Informatics: Advances

Thomas Houston MD, MPH
Chief, Division of Health Informatics and Implementation Science,
University of Massachusetts Medical School
Director, VA eHealth QUERI, Bedford VAMC
April 27, 2011

Overview

- Advances in Evidence
- Advances in Technology
- Advances in Implementation
- Advances in Policy
Evidence: Patient empowerment and Self-efficacy

**Systematic Review** *(Samoocha JMIR 2010)*

- Diabetes Empowerment Scale
  (2 studies) SMD = 0.61 (CI 0.29 - 0.94)
- Disease-specific self-efficacy scales
  (9 studies) SMD = 0.23 (CI 0.12 - 0.33)
- Pearlin Mastery Scale
  (1 study) SMD = 2.95 (CI 1.66 - 4.24)

* Variety of web-delivered Behavioral Informatics Interventions

Evidence: Electronic Patient-Provider Communication

**Secure Messaging and Health** *(Zhou et al. Health Affairs, 2010)*

- Patients using asynchronous secure messaging (SM)
  (N = 35,423) with doctors (N = 3,092)
- At follow-up, SM patients had improved on all measures, (2.4-6.5 percent) over non-SM patients* (all p < 0.001).
  * matched (baseline HEDIS measures, age, sex, primary care provider, diagnostic cost group score) to patients who did not use SM.
Technology

- Cyberinfrastructure and Programming Environments
  - Don’t have to start from “Scratch”

Create and share your own interactive stories, games, music, and art

Check out the 1,740,972 projects from around the world!

To create your own projects:

Download Scratch

Technology

- Mobile Technology
- Tracking
- Wearable Sensors
Implementation - Integration

[Image of a computer screen showing a smoking cessation program]

Personal Health Records

[Image of the My heathevet website]

My healthevet

www.myhealth.va.gov

My Health, My Care: 24/7 Access to VA

[Logo of University of Massachusetts Medical School]
<table>
<thead>
<tr>
<th>LEVEL</th>
<th>FUNCTIONALITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Collect patient information, such as self-reported demographic and risk factor information (health behaviors, symptoms, diagnoses, and medications)</td>
</tr>
<tr>
<td>2</td>
<td>Integrate patient information with clinical information through links to the electronic medical record and/or claims data</td>
</tr>
<tr>
<td>3</td>
<td>Interpret clinical information for the patient by translating clinical findings into lay language and delivering health information via a user-friendly interface</td>
</tr>
<tr>
<td>4</td>
<td>Provide individualized clinical recommendations to the patient, such as screening reminders, based on the patient’s risk profile and on evidence-based guidelines</td>
</tr>
<tr>
<td>5</td>
<td>Facilitate informed patient action integrated with primary and specialty care through the provision of vetted health information resources, decision aids, risk calculators, personalized motivational messages, and logistical support for appointments and follow-up</td>
</tr>
</tbody>
</table>

---

**My HealtheVet**

- February 2011
  - Over 48 Million visits
  - Over 1.2 Million registered users (75% are VA patients)
  - Over 291,000 users have an IPA account
  - Over 20.1 Million VA prescription refills
    - August 2005 to February 2011
  - Over 182,000 Blue Button* users
My HealtheVet

My HealtheVet

Download My Data
Prescription Refill
Emergency Contacts
Providers & Physicians
Vitals & Readings
Military Health History
Medical Library
VA Honors Veterans
The Potential of Personal Health Records

- Enhanced Patient Satisfaction
- Patient Activation
- Enabled Self-Management
- Enhanced Communication
- Efficiency and Cost
- Quality and Safety

eHealth Quality Enhancement Research Initiative

- Mission
  To work with VA program offices to implement into practice and evaluate eHealth as a model of care for augmenting efficient, safe, high-quality, continuous, coordinated delivery of evidence-based services to Veterans and families.

Tom Houston, MD MPH
QUERI Director, Bedford VA
Policy: Meaningful Use and Patient Technologies

AMERICAN JOURNAL OF
Preventive Medicine

Volume 40(5) Supplement 2 www.ajpm-online.net
MAY 2011

Supplement to American Journal of Preventive Medicine
Cyberinfrastructure for Consumer Health

Guest Editors
Abdul R. Shafi, Irene Prabhj Das, Cynthia A. Vinson, and Bonnie Spring

Policy: Patient Reported Outcomes

MAY 2, 2011
Identifying Core Behavioral and Psychosocial Data Elements for the Electronic Health Record

Natcher Conference Center, NIH Campus, Bethesda, MD
Overview

- Advances in Evidence
- Advances in Technology
- Advances in Implementation
- Advances in Policy

Thank you!
Behavioral Informatics SIG
Breakfast
Friday (7:30-8:30AM)
Columbia Hall 11