Blue Button Use to Access and Share Health Record Information

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Background

• Institute of Medicine identified care coordination as one of 20 national priorities to improve the quality of healthcare.
  – Priority Areas for National Action; Transforming Health Care Quality  2003

• Sharing of health information between providers and health care systems is a core component of care coordination
2005 Commonwealth Fund International Health Policy Survey - Schoen et al. Health Affairs 2005

Percent Reporting Care Coordination Problem

Information Not Received or Duplicate Tests Ordered

Australia
Canada
United Kingdom
Germany
New Zealand
United States
Poor Communication for Primary Care/Specialist Referral

- O’Malley et al. Archives of Internal Medicine 2011

Primary Care/Specialist Consultation

69% PCPs Send Referral Information
35% Specialists Receive Referral Information
80% Specialists Send Consultation Results
62% PCPs Received Consultation Results
“View online, download, and transmit their health information...”

- Promotes EHRs to address gaps in communication and care coordination
- Stage 2 promotes PATIENT meaningful use
The Blue Button?

I wonder what on earth the Blue Button is!
The Blue Button

• Registered service mark of the US Department of Health and Human Services
• Clickable blue circle on online patient portal page
• Provides patient access to view, download, or print their information to share with trusted others
• Will soon allow patients to transmit electronically their health summary
Blue Button Pledge

• VA, Department of Defense, Medicare offer the Blue Button

• Hundreds of other organizations, including hospitals, providers, and medical application providers, and pharmacies have adopted the Blue Button.

• Blue Button Pledge
  – We pledge to make it easier for individuals and their caregivers to have secure, timely, and electronic access to their health information. We further encourage individuals to use this information to improve their health and their care.

  – http://www.healthit.gov/patients-families/pledge-members
What is My HealtheVet?

VA’s combined personal health record and patient portal

Launched in November 2003

VA Blue Button deployed in August 2010
• My HealthVet
  – Allows viewing of medical record, online prescription refill, secure messaging, appointment viewing.
  – As of May 31st 2014 there were 2,826,395 registered users

• Blue Button Feature
  – Provides a quick executive summary of veterans VA health care and information
  – As of May 31st 2014, there were 1,037,273 unique users of the Blue Button
  – As of May 31st 2014, 7,044,171 files have been downloaded
METHODS
VA Health Services Research and Development- eHealth Quality Enhancement Research Initiative

Online American Customer Satisfaction Index (ACSI) Survey
- 22,756 MHV Users
- Fielded March through May 2012

Qualitative Interviews
- Boston and Iowa key stakeholders
- Conducted July 2012-January 2013
Unified Theory of Acceptance and Use of Technology-
Venkatesh et al. MIS Quarterly 2003

Use of Blue Button

- Performance Expectancy
- Effort Expectancy
- Social Influence
- Facilitating Conditions

- Perceived Usefulness
- Relative Advantage
- Perceived Ease of Use
- Complexity
- Subjective Norm
- Perceived Behavioral Control
Key Research Questions

- What proportion of My HealtheVet Users are using the Blue Button?
- For those who aren’t using the Blue Button- Why not?
  - Low Knowledge
  - Perceived Ease of Use
  - Relative Advantage
- What user characteristics predict use of the Blue Button?
- How are Blue Button users using the Blue Button?
- What do Blue Button users value in the Blue Button?
  - Perceived Value
- Are Blue Button users using it for information sharing?
- What value do Blue Button users perceive in using it for information sharing with non-VA providers?
- What predicts use of the Blue Button for information sharing with non-VA providers?
American Customer Satisfaction Index

**Sampling conditions**
- Loyalty Factor: 4 pages
- Sampling Percentage: 4%

**Acceptance rate**
- about 38%

**Time period**
- March 12, 2012 - May 21, 2012

**Number of completed surveys**
- 18,398
What Proportion of My HealtheVet Users Use the Blue Button?

- Current Users: 33
- Never Used: 63
- Tried Only Once or Twice: 4
Why My HealtheVet Users did not Use the Blue Button?

• 61% Did not know what the Blue Button is

• Of those who were aware of the Blue Button:
  – 34% did not know how to use it
  – 26% said they only use portal for prescription renewal
  – 11% said they prefer other methods to keep track of health information
User Characteristics and Their Association with Blue Button Use

• Self-rated computer ability, having a system for organizing one’s health information, and male gender were associated with Blue Button use.

• Age and self-rated health WERE NOT associated with Blue Button use.
What information were you interested in?

- My Laboratory Results: 70%
- My Current VA Medications: 60%
- My VA Medication History: 40%
- A list of my Providers: 10%
Veteran-Reported Impact of the Blue Button

<table>
<thead>
<tr>
<th>The Blue Button Feature</th>
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<tbody>
<tr>
<td>Helps me understand my health history better because all the information is in one place</td>
<td>73%</td>
</tr>
<tr>
<td>Makes it easier to monitor lab results</td>
<td>72%</td>
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<tr>
<td>Makes it easier for me to give others, such as healthcare providers or family members, important medical information</td>
<td>68%</td>
</tr>
<tr>
<td>Helped me better manage my health in general</td>
<td>65%</td>
</tr>
<tr>
<td>Helped me to go to my medical appointments at the appropriate time</td>
<td>56%</td>
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<tr>
<td>Understand better which medications I need to be taking</td>
<td>54%</td>
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Care outside the VA - 44% of Blue Button Users have Providers who are not Affiliated with the VA

How do your Providers Communicate?

- I Share Information: 52%
- I Don't Know: 15%
- They Don't: 15%
- M.D.s Mail or Fax: 13%
- M.D.s Phone: 2%
21% of Blue Button Users Shared their Blue Button print out with a Non-VA provider.

How helpful do you think your care provider found the Blue Button information in making decisions about your care?
What did your provider do with the Blue Button print out?

- 50% Review recent laboratory results
- 37% Filed it in my medical record
- 37% Reviewed my complete medication list
- 9% Did not look at it
What predicted use of Blue Button for Care Coordination with non-VA providers?

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<tr>
<th>Predictor</th>
<th>Odds Ration (95% C.I.)</th>
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<tr>
<td>Self-Rated Internet Ability</td>
<td>1.5 (1.2-1.9)</td>
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<tr>
<td>Values having their own copy of their medical record</td>
<td>1.1 (1.0-1.3)</td>
</tr>
<tr>
<td>Has a system to organize their health information</td>
<td>1.6 (1.3-2.0)</td>
</tr>
<tr>
<td>Diabetes</td>
<td>1.4 (1.1-1.7)</td>
</tr>
<tr>
<td>Lung Disease</td>
<td>1.5 (1.2-1.9)</td>
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Qualitative Interviews  Non-VA Providers

• Communication with VA providers is unsystematic, highly variable, and relies primarily on the patient.

• “With VA, we get nothing. With we need something we have to call the VA or have the patient acquire it. We have nothing is ever sent automatically from the VA. And most of the time I don’t even know that they see the VA. . . . .I don’t know they’re a VA patient.”
Non-VA providers Review of the Blue Button Print Out

• “It’s not that the information is not useful, it’s just that it’s, it’s displayed over too many pages.”

• Would like to receive the information electronically before the clinic visit with the veteran.

• Desired content features: medication, lab results, problem list, allergies, immunizations.
  – Would like most recent clinic note.
  – Laboratory and vital information presented in trending format.
Conclusions

• Approximately 1 in 3 My HealtheVet Users use the Blue Button.

• Biggest barrier to use of the Blue Button was low awareness, not low perceived value.

• Usability was still a barrier for those who tried the Blue Button.
  – Self-Rated Computer Ability was one of the strongest predictors of full Blue Button use.
Conclusions

• Most valued feature for Blue Button was having all of one’s health information in one place.

• Viewing laboratory information and medication history was also highly valued.
Conclusions

• 1 in 5 Blue Button users who had non-VA providers used it to share health information.

• Most providers found this information helpful.
Next Steps: Veteran Initiated Electronic Care Coordination

- Veterans Health System (VHA) Office of Rural Health (ORH)
  - Gina Capra, M.P.A.
  - Director, VHA Office of Rural Health

- Health and Human Services (HHS) Office of the National Coordinator for Health Information Technology (ONC)
  - Leila Samy, MPH

- Department of Veterans Affairs (VA) My HealtheVet Program Office
  - Kim Nazi, Ph.D., FACHE
• Within the Blue Button, Veterans can now choose to create a custom data report or Continuity of Care Document (CCD)

  – The Continuity of Care Document summarizes information taken directly from the VA medical record.

  – The CCD is available in PDF or XML format.
Step One: Training

- 10-Minute Training video - step-by-step how to generate a Continuity of Care Document (CCD) and importance of sharing with non-VA providers

  - http://www.ruralhealth.va.gov/media/bluebutton/story.swf

- Written Training Materials
Step Two: Veteran Initiated Health Information Exchange

- Paper-based or electronic transfer of CCD to critical access hospital and/or non-VA points of care

- Eventually, most transfers will be electronic
  - Veterans can choose how to transfer

- Planned outpatient visit with non-VA rural community provider
  - Provider survey of impact of information on visit
  - Veteran satisfaction survey
  - Complete medical records
Step Three: Evaluation of Patient Outcomes

- Medication Reconciliation
- Duplicate Laboratories
- Therapeutic Duplication
- Cost Impact
Who said I wanted to be the center of things?

Questions?