Defragmenting Individual’s Health Data:
It’s Time for Health Record Banking

MedInfo 2013 - Panel Discussion
23 August 2013, Copenhagen

Panel Moderator:
Amnon Shabo (Shvo), PhD
Co-Chair, Medical Informatics Community, IBM Research
IBM Haifa Research Lab (HRL)
Panelists Introduction

IBM Labs in Haifa

Ted Shortliffe

Amnon Shabo

Marion Ball

Reinhold Haux & Markus Wagner

Business Models

Legislation Change

HRB
Health Record Banking

Individual Empowerment

Provider Systems

The IHRB Vision
Agenda

- 10:30 – 10:35  Amnon: Introduction
- 10:35 – 10:50  Amnon: Legislation Change
- 10:50 – 11:05  Ted:  Business considerations
- 11:05 – 11:20  Reinhold & Markus: HCP provider systems
- 11:20 – 11:35  Marion: Individual’s Empowerment
- 11:35 – 12:00  All: Discussion
KNOWLEDGE
We don't know much more than we know

Machines

CASE-BASED (TACIT) KNOWLEDGE

Humans

DATA
Individual’s Data Fragmentation

Health Record Banking

Sustainability

The case is the lifetime EHR

Operational IT Systems

Healthcare Provider

Independent Health Records Bank

Standard-based Communications

IBM Labs in Haifa

HRB Argumentation-Semantics and Sustainability
**Medical record**
Every authenticated recording of medical care (e.g., clinical documents, patient chart, lab results, medical imaging, personal genetics, etc.)

**Longitudinal (possibly lifetime) EHR**
A single computerized entity that continuously aggregates and summarizes the medical and health records of individuals throughout their lifetime

**Health record**
Any data items related to the individual's health (including data such as genetic, self-documentation, preferences, occupational, environmental, life style, nutrition, exercise, risk assessment data, physiologic and biochemical parameter tracking, etc.)
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EHR – temporal and summative layers

Temporal Data

Summative Info

Evidence

Disease | Problem | Event | Plan | Goal | etc.

Sensitivities | Diagnoses | Medications | etc.

Medical records: charts, documents, lab results, imaging, etc.

Ongoing extraction and summarization

Topical summary

Non-redundant lists

Genetic-based disorders

Personal genetic variations

The IHRB Vision
Challenges of Data Integration in Healthcare

- When data is federated (discovered?) on the fly:
  - Data sources might not be available (CIS is down or source is out-of-business)
  - Hard to know in advance what are the formats the incoming data

- Is it really possible to create the EHR summative layer in a data federation setting?
  - Redundant data
  - Contradictory data
  - Partial data
  - Non-reliable data

- Alternative approach to data federation is aggregation:
  - Bring data relating to the same individual into the same logical place
EHR Sustainability and IHRB Assertions

- Longitudinal EHRs should not be virtual / federated
  - Rationale*: sources might not be available or be semantically different; true summarization cannot be done “on the fly”

- Given the need for aggregated EHR, the challenge is – EHR sustainability!

- Main assertion*: None of the existing players in the healthcare arena can, or should, sustain lifetime EHRs

  - Rationale:
    - Involves intensive IT computing tasks (archiving / preservation in particular) which are not the main focus nor expertise of existing players
    - If an existing player sustains EHRs, it might lead to ethical conflicts

* These assertions and the IHRB vision are not necessarily the view of IBM; they are research hypotheses.
EHR Sustainability Constellations

- **Government Centric**: e.g., UK
- **Provider Centric**: e.g., Canada
- **Regional Centric**: e.g., USA
- **Consumer Centric**: e.g., Google Health

**Non-Centric**: Independent EHR Banks (IHRBs)

- **Risk**: Big brother
- **Limited**: Non-reliable Data
An Alternative Solution: IHRBs

- A new player: Independent Health Records Banks (IHRB), whose main duty is to sustain individual EHRs for their lifetime

- Stems from socio-ethical considerations

- Enabled by information technologies and data standards

- New legislation needed to establish IHRBs

Call for public discussion
Main principles of the IHRB legislation

- The medico-legal copy of a medical record resides solely in an IHRB.
- An IHRB must be independent of healthcare providers, health insurers, government agencies, or any entity that may present a conflict of interests.
  - An IHRB must function as an objective entity, serving all stakeholders.
  - An IHRB is the custodian of its customers’ EHRs, thus avoiding the need for the sensitive definition of EHR ownership.
- Allow for multiple independent IHRBs, regulated by national (or international) regulators.
- A consumer’s EHR is identified by its IHRB account number, so there is no need for unique IDs at any level (regional, national or international).
- Authorized access to all parties; only ethical committees can limit patient access.
- A consumer can move from one IHRB to another.
- Holding multiple accounts is not recommended, however:
  - any attested medical record must reside in only one IHRB account.
The Conceptual Transition

Current constellation → New Legislation → New constellation

Provider
- Operational IT Systems
- Archive-Medical Records

Provider
- Operational IT Systems
- Archive-Medical Records

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- Operational IT Systems
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Provider
- Operational IT Systems
- Archive-Medical Records

Provider
- Operational IT Systems
- Archive-Medical Records

Provider
- Operational IT Systems
- Archive-Medical Records

Patient

Individual

Standard-based Communications

Independent Health Records Bank

Operational IT Systems Provider

Medical Records Archive

Operational IT Systems Provider

Medical Records Archive

Operational IT Systems Provider

Medical Records Archive

Operational IT Systems Provider

Medical Records Archive

Operational IT Systems Provider

Medical Records Archive
1. Healthcare Provider receives the current EHR from the patient’s IHRB

2. Provides care to the patient

3. Sends medical records back to the patient’s IHRB

4. EHR is updated
The EHR “Production Cycle” with Pharma / Research

1. Clinical Trials Sponsor receives the current EHR from the patient’s IHRB

2. Select, enroll & engage patient in a clinical trial

3. Sends trial records back to the patient’s IHRB account

4. EHR is updated
IHRB Main Benefits

- Healthcare providers cut costs of long-term archiving for medical records
- Healthcare providers have a complete medical history of any patient requesting care
- Healthcare providers have EHR summative information that facilitates the intake of new patients
- The EHR might also include moderated self documentation and other sources of health data
- Multiple competing IHRBs will provide better services to all parties
- No need for unique IDs that might harm individual privacy
- Privacy is better protected as it is in the core of the IHRB activity; mitigates the unavoidable tension of privacy versus availability
- Based on proper patient consent, truly anonymized data could be made available to public health agencies, clinical research institutes, and the pharma
IHRB Bills were introduced in the US Congress

Brownback (R-KS): Independent Health Record Bank Act of 2006:

- IHRB goals are to save money and lives in the health care system
- Only non-profit entities are permitted to establish IHRBs
- IHRBs function as cooperative entities that operate for the benefit and interests of the membership of the bank as a whole
- Revenue:
  - IHRB’s may generate revenue by
  - charging health care entities account holders account fees for use of the bank
  - the sale of non-identifiable and partially identifiable health information contained in the bank for research purposes
  - Revenue will be shared with account holders and may be shared with providers and payers as an incentive to contribute data
  - Revenue generated by an IHRB and received by an account holder, healthcare entity or health care payer will not be considered taxable income
More details can be found in my IHRB papers, e.g. in the Journal “Methods of Information in Medicine”

My IHRB History:
1998: Amnon Shabo raises the idea and founds the Bankomed initiative, set out to establish a first experimental IHRB
1999: IHRB is the core of the Bankomed business plan, submitted to major venture capitalists in Israel
2003: IHRB is the core of the mEHR proposal made to the EC FP6 by 19 European partners (including IBM Research Lab in Haifa)
2004: HRB (Health Records Banks) is a core part of IBM Research Strategy in Healthcare
2005: IHRB is published in IP.com
2006: IHRB Bills were introduced in the USA Congress and Senate
What are the major benefits of HRB?

What are the main obstacles in the healthcare sector to moving towards HRB? Does HRB require legislation change necessarily?

What is your view on the issues of privacy concerns, record ownership and unique identification?

What are the best means by which we could promote the HRB approach (what are the short term goals that could eventually pave the road to HRB)?
Thanks for your attention!

Comments: shabo@il.ibm.com
The Lower Saxony Bank of Health

23th of August, 2013

Prof. Reinhold Haux
Dr. Markus Wagner
The eHealth.Braunschweig project

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**Patient-oriented regional health care network**
Funded by the European Union
Duration: 2009-2012
Follow-up funding: 2013-2014

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**Transinstitutional information system**
The Lower Saxony Bank of Health (LSBH) was founded in 2011 basing on results of the eHealth.Braunschweig project.

**Motivation:** Establishment of a standard compliant solution for intersectoral communication in health care

As **independent and neutral organization (act as trustee)** the LSBH will undertake legal and organizational tasks and provide central technical services, with which actors of the health care are able to network in a better way.

**LSBH is first initiative of this kind in Germany.**
Organizational structure of the LSBH

*Academic:*  
- Peter L. Reichertz Institute for Medical Informatics  
- Institute for law, TU Braunschweig

*Participants:*  
- Braunschweig Medical Center  
- Association of Statutory Health Insurance Physicians Lower Saxony

*Governmental:*  
- Ministry of Economy  
- Braunschweig City Council

*Other:*  
- OFFIS e.V.  
- LINEAS Systeme GmbH

Participants of the network form the groups of:  
- Customers  
- Health Care and Technical Experts Committee
Basic principles of the LSBH (excerpt)
Data storage

- **Medical data of individuals should still remain stored at HCPs**
  → different to central data storage idea of IHRB. Why?

**Reasons for decision (patients & HCP):**

- Achieve high acceptance and trust from patients (→ permits data provision for and by LSBH)

  - **Minimize patient’s fear of data misuse** → Concerns of illegal data analysis or transfer to unknown third parties higher for central storage

  - **Keep doctor-patient confidentiality** → Legal privacy protection for medical documents expires in Germany if they are stored by a “non-HCP”/ IHRB
• Medical data of individuals should still remain stored at HCPs

Reasons for decision (patients & HCP):

• Achieve good commitment from HCPs (→ provide many documents)
  ▶ Voluntary provision of electronic documents
    ▶ Patient has the right to get insight in the original EMR of a HCP
    ▶ Patient has the right to get a (paper based) copy of the original EMR (but has to pay the efforts)
    ▶ No explicit legal regulation for electronic copies yet
  ▶ Many HCPs want to keep “their” documents in their range of influence → different opinions of data ownership
Basic principles of the LSBH (excerpt)

Data storage

Chosen Architecture – IHE XDS Affinity Domain

Benefit from already successful routine installations (e.g. Austria) and progress in standardization.

→ Personal EHR
→ Directed communication

Regional node (LSBH)
• On independent regional level
• Master Patient Index (MPI) and Document Registry

Local node (HCP):
• Encapsulation of IHE acteurs

Advantage using IHE: base for future national network solutions and cross-border communication of medical data (e.g. the epSOS project in Europe)
Basic principles of the LSBH (excerpt)

Data storage

Central storage as separate hosting service for HCP
Complete central data storage technically possible but not intended
Basic principles of the LSBH (excerpt)

Patient control

- Only individuals respectively by his/her authorized HCPs should be able to access their medical data.
- The will of the individual has to be taken into account.

According to German data protection law undirected communication of medical data requires an *informed consent* of the patient (Opt-In).

Two-stage consent procedure chosen for communication platform:

1. **Registration consent**: Patient allows his/her current HCP the registration of documents of the actual treatment context.
2. **Retrieval consent**: Patient allows his/her current HCP the retrieval of already registered documents.
• All services of the LSBH are known to the respective individuals and HCPs.

• As a rule the data is used by a HCP for the health care of an affected individual.

→ The LSBH will not offer or allow a usage of the data by third parties, which is not known by the affected individual or the affected HCP.

→ In first phase of the LSBH no data is provided for clinical research.
Perspective: Services of the LSBH

**Functional**
- Referral / Discharge documents
- Transition care
- Transition MRSA
- Lab communication
- Image communication TNW

**Administrative**
- MPI patient identification
- HP identification / authentication
- XDS referencing
- Clearing
- ATNA logging
- XCA gateway to other domains

**Technical**
- Long-term archiving, backups
- Monitoring, support and maintenance etc.

Source: PhD thesis Dr. Nathalie Gusew, 30.01.2012
Current status

Stage 1: Setup of central components of the communication infrastructure

Stage 2: Connecting *Braunschweig Medical Center* and migrate existing directed communication to IHE infrastructure

Stage 3: "Prototyp 1.0" Connecting further hospitals and resident doctors

Stage 4: further extension
Further information:
www.gd-bank.de (in German)
The Health Record Banking Alliance: Business Considerations

Edward H. Shortliffe, MD, PhD
Chairman, Advisory Board
Health Record Banking Alliance (HRBA)
www.healthbanking.org

Panel on Privacy - III
Defragmenting Individual’s Health Data: It’s Time for Health Record Banking
Medinfo2013, Copenhagen, Denmark
August 23, 2013

With thanks to William A. Yasnoff, MD, PhD – President, HRBA
Health Information Infrastructure (HII)

• Goal: “Comprehensive Electronic Patient Information When and Where Needed”
  • Individual (patient care)
  • Aggregate (public health, research)
• Reduce errors, improve care, decrease costs – for both individuals and the population
• Components
  • EHRs – all information electronic
  • Health Information Exchange (HIE) – mechanism for finding, aggregating, and delivering comprehensive records for each person
Health Record Banking Alliance™

- HRBA:
  - Non-profit organization comprising leading healthcare information technology professionals and organizations who are dedicated to promoting and supporting the development of health record banks
- HRBA Goals
  - Promote community repositories as an effective and sustainable solution for electronic health information
  - Provide assistance to communities building health record banks
  - Promote necessary legislation and regulation consistent with community health record banks
Putting Health IT on the Path to Success

William A. Yasnoff, MD, PhD
Latanya Sweeney, PhD
Edward H. Shortliffe, MD, PhD

One consequence of these failings is that HIT has yet to decrease health care costs; in fact, costs are increasing be-
Disadvantages of the Distributed Model for Health Information Exchange

- Complex and expensive
- Prone to error and insecurity
- Increased liability
- Not financially sustainable
- Unable to protect privacy effectively
- Unable to ensure stakeholder cooperation
- Unable to facilitate robust data searching

Advancing Interoperability and Health Information Exchange

- CMS Request for Information
- Notice document issued by the Centers for Medicare Medicaid Services (CMS) on March 7, 2013 (p. 5 of Federal Register)

“[Our current efforts] alone will not be enough to achieve the widespread interoperability and electronic exchange of information necessary for delivery reform where information will routinely follow the patient regardless of where they receive care.”
HRBs Overcome Key Challenges

• Making Information Electronic
  • Business model provides free EHRs for physicians

• Stakeholder Cooperation
  • Patients request data → all stakeholders must provide them (by law)
  • HRB profit allocations to data partners

• Privacy
  • Patient control → all individuals set their own privacy policy

• Financial Sustainability
  • New compelling value for patients → $20+/person/year recurring revenue
HII Business Model Problem

• How Can HII be Sustained?
  • Why build if it cannot be sustained?
  • Critical early question for any IT system
• Persistent Unsolved Problem
  • Involves both cost and value
• Three Business Model Categories (not mutually exclusive)
  • Taxation
  • Leverage Health Care Savings
  • Leverage New Value Created
HII Business Model: Option 1 - Taxation

- Rationale: HII is public good, all should pay
- Possible mechanisms
  - Excise tax on health insurance claims (VT)
  - Excise tax on hospital charges (MD)
- Essentially “universalizes” HII component of healthcare
- Politically unpopular & difficult
  - Especially when amount is non-trivial
  - Early $50B/yr estimated cost for HIEs → $166/person/year [$55/mo for family of 4]
HII Business Model: Option 2 – Leverage Savings

• HII expected to reduce health care costs by 3-13% [8% is a good working estimate]
  • 8% x $2.6T = $208 billion/year

• Problems
  • Savings not proven
  • Allocation and timing of savings?
  • “Savings” = “Lost Revenue”

• Has consistently failed in communities
  • No responsible CFO will pay now for unproven future savings
HII Business Model:
Option 3 – Leverage New Value

• Rationale: Stakeholders should be willing to pay for new value created by HII

• Examples of new value
  • Replace paper delivery of lab results (75¢) with electronic delivery [Indianapolis]
  • Reminders and alerts
    – “Peace of Mind” – ER notification
    – Prevention Advisor
    – Medication refill reminders
  • Research queries (require searching)
  • Advertising (to consumers)
HRB Implementation Strategy

PATIENT CONTROL
- Key Design Decisions
  - protects
  - ensures
  - results in

CENTRAL REPOSITORY
- Low Costs
  - allows
  - pays for

Financial Incentives
- reinforces
  - ensures
  - prevents

Stakeholder Cooperation
- provides
  - produces

Electronic Patient Data
- produces
  - benefits
  - enables

Benefits
1. Clinical: ↑Quality, ↓Costs
2. Reminders/Alerts
3. Research

Marketing:
1. Free/subsidized EHRs for physicians
2. Physicians recruit patients for free HRB accounts

Estimated Startup Costs: $5-8 million
How HRBs Create Value

**Health Record Bank including free/subsidized EHRs for physicians**

- **Patients sign up for HRB (recommended by physicians)**
- **Patients choose optional services with compelling value**
- **More complete electronic health record information**
- **Free benefits to physicians and patients**

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HRB Business Model

- **Costs (with 1,000,000 subscribers)**
  - Operations: $6/person/year
  - EHR incentives: $10/person/year

- **Revenue**
  - Advertising: ~$3/person/year (option to opt out for small fee)
  - Reminders & Alerts: >= $18/person/year
    - “Peace of mind” alerts
    - Preventive care reminders
    - Other reminders
  - Queries: >$3/person/year

- No need to assume/capture any healthcare cost savings (!!)
Pro Forma Example (Houston)

Initial Capital: $4.4 MM
Breakeven: 16 months
EBITDA Year 4: $41 MM+
Summary

- Goal of Health IT: Comprehensive electronic patient records when/where needed
- Current Efforts Not Working
  - EHR incentives not enough to ensure widespread adoption
  - HIEs cannot succeed on current path
- Solution: Health Record Banks
  - Right architecture: central repository
  - Patients request and control records
  - Addresses EHR adoption, privacy, stakeholder cooperation, and sustainability
- Investment opportunity
Thank You!

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Defragmenting Health Informatics
Health Record Banking

MEDINFO Panel
Copenhagen August 2013
Chaired by Amnon Shabo
Panelists:
Marion Ball, Reinhold Haux and Edward Shortliffe
Marion J. Ball, Ed.D

Senior Advisor, Healthcare Informatics, IBM Research,

- Professor Emerita, Johns Hopkins University
- Member, Institute of Medicine
- Member of the Board Of Regents of the National Library of Medicine
- Past President, International Medical Informatics Association (IMIA)

Fellow: American College of Medical Informatics (ACMI), Past Board member and Fellow of the Health Information Management and Systems Society (HIMSS), American Health Information Management Association (AHIMA) Medical Library Association (MLA) and the College of Health Information Management Executives (CHIME), American Academy of Nursing (FAAN)
Human Factors:

With special emphasis on the Personal Health Record (PHR)
Back in the Day…

“The obedience of a patient to the prescriptions of his physician should be prompt and implicit. [The patient] should never permit his own crude opinions as to their fitness to influence his attention to them.”

- AMA’s Code of Medical Ethics (1847)

Wellcome Images
“Patients share the responsibility for their own health care....”

- AMA’s Code of Medical Ethics (current)

“I believe that access to your medical record can save your life.”
- Regina Holliday

“I’m advocating coordinated care.”
Nikolai “Kolya” Kirienko
Crohn’s Disease Patient / Health IT Advocate

“Patients can help. We can be a second set of eyes on our medical records. I corrected the mistakes in my health record, but many patients don’t understand how important it will be to have correct medical information, until the crisis hits. Better to clean it up now, not when there’s time pressure.”

Dave deBronkart (ePatient Dave)
Consumers World Wide

“...use digital information technology to manage their finances, pay bills, book flights, and customize the music they listen to...”

“...now want to use health information technology to get the best care possible for themselves and be better able to manage their own health...”

Zoë Baird, President, the Markle Foundation
Engaging Consumers is Integral to the Federal Health IT Strategy

Goal V: Achieve Rapid Learning and Technological Advancement

Goal IV: Empower Individuals with Health IT to Improve their Health and the Health Care System

Goal III: Inspire Confidence and Trust in Health IT

Goal II: Improve Care, Improve Population Health, and Reduce Health Care Costs through the Use of Health IT

Goal I: Achieve Adoption and Information Exchange through Meaningful Use of Health IT
What Consumers Want

“Consumers are demanding that we capitalize on the use of CTT [Computers, Technology and Telecommunications] to service their healthcare needs.”

Editors’ Preface, Consumer Informatics, Nelson and Ball 2005
We ask consumers, “What kind of health care do you want?”

– They answer in terms of quality, access and cost.

• We should ask, “How would you like to interface with the healthcare system?”

– They would answer in terms of the kind of services and information they want, as they would for Web-based banking or shopping.

JS Parker, Consumer Expectations Demand Client-Focused Technology, in Consumer Informatics, 2005, p 77
Consumers: Who Do I Trust?

• What’s valid? What’s relevant?


  – Health On the Net (HON) at www.hon.ch/HONcode and through Worldwide online Reliable Advice to Patients and Individuals (WRAPIN) at www.wrapin.org
If health care were like banking...

It would give consumers

✓ A secure vault for storage
✓ Monthly updates of financial accounts
✓ Worldwide accessibility and a multitude of optional personal services

Ramsaroop and Ball, Banking on Good Healthcare, *Healthcare Informatics*, July 2000
If health care were like banking...

Health records would

- Go with the consumer
- Make the latest disease management guidelines available to chronically ill patients
- Forward patient-entered data directly to the physician
- Issue routine reminders to both patients and physicians

Ramsaroop and Ball, A Model for More Useful Patient Health Records, *MD Computing*, July/August 2000
AHIMA Testimony on Personal Health Records:

• Problems PHRs are trying to solve are well documented and real.
• AHIMA supports consumer empowerment principle that PHRs can be used effectively to:
  – Make informed health decisions
  – Facilitate patient-clinician interaction and communication
  – Exchange health information
  – Provide convenience (e.g., scheduling)
• Resulting in increases in quality care, reduced costs, better healthcare experience.
The VA Blue Button enables Veterans to view, print and download an electronic file (.txt, .PDF, or .bluebutton) that contains their available personal health information from My Health
eVet

- this data includes information self-entered into their My Health
eVet Personal Health Record and data from the VA EHR (Electronic Health Record Electronic Health Record)
- Veterans can easily customize their VA Blue Button output by selecting the date range and/or types of information they wish to include
The Blue Button

• is a simple idea that solves the critical problem of data liquidity. For decades, patient access to personal health and medical information has been constrained both culturally and technologically. The Blue Button places control of data and information in patient’s hands, enabling the idea of ‘consumer empowerment’ to take on real and practical meaning.
How Blue Button came about!

• The Blue Button idea crystallized at the Markle Consumer Engagement Workgroup meeting in New York City in January 2010.

• Key objective: giving patients direct access to their data.

• Add a big “Blue Button” and empower consumers to have easy access to their data, and to share that information as they choose, with those whom they trust.
What made it happen so fast?

• On August 2, 2010 President Obama announced the “Blue Button®” capability that allows Veterans to download their personal health information from their My HealtheVet (www.myhealth.va.gov), VA’s Personal Health Record (PHR) account.

• VA’s Blue Button became operational at the end of August 2010.
• In 2010, Department of Veterans Affairs used a Blue Button on their patient portal... and HHS is taking it nationwide
• Now over 88 million Americans can access their clinical or claims data (CMS, Dept. of Defense, Aetna, United, etc.)

Over 1.5 million people across the country have downloaded their health record
Consumer Blue Button Pledge Program
(www.healthit.gov/pledge)

Over 450 organizations have Pledged to provide access to personal health information for 1/3 of Americans...
Under development, a “one stop shop” to help consumers find and use their Blue Button data in apps and tools… “Blue Button Hub”
The most important issue facing the future of health and medicine is changing the paradigm to effectively engage and empower people as active participants in their health.

I thank
Kim M. Nazi, PhD, FACHE
Management Analyst
Veterans and Consumers Health Informatics Office
For providing this up to date information www.va.gov/bluebutton
U.S. Department of Veterans Affairs
kim.nazi@va.gov | 518.449.0621 | 518.441.4099
“The patient who knows the most lives longest.”

- Dr. Elliott P. Joslin (1869-1962)
Technology can become obsolete very fast. But caring for people will never be obsolete. Let's empower the consumer to have the tools to help themselves and those that need their care in sickness and in health.

Picture courtesy of Heimar Marin
“Yesterday is gone. Tomorrow has not yet come. We have only today. Let us begin.”

Agnès Gonxha Bojaxhiu (Mother Theresa) 
Albania 1910 - India 1997