

Connecting Americans to Their Health Care: *Empowered Consumers, Personal Health Records and Emerging Technologies*



**NATIONAL CONFERENCE
DECEMBER 7-8, 2006
WASHINGTON, D.C.**

Connecting Americans to Their Health Care:
*Empowered Consumers, Personal Health Records
and Emerging Technologies*

2006

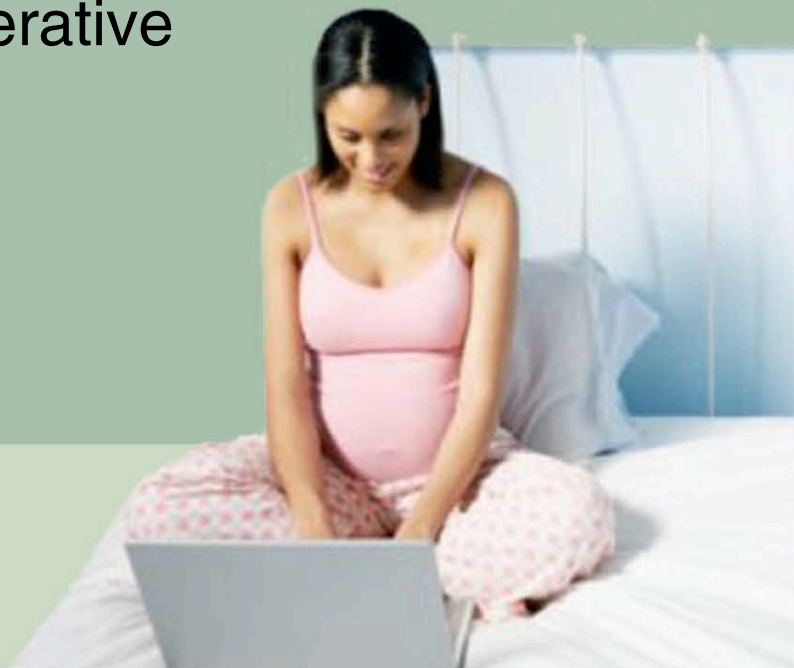
A Networked PHR

David Lansky - Markle Foundation

James Ralston - Group Health Cooperative

Paul Sheils - eHealth, Aetna, Inc.

Omid Moghadam - Intel Corporation



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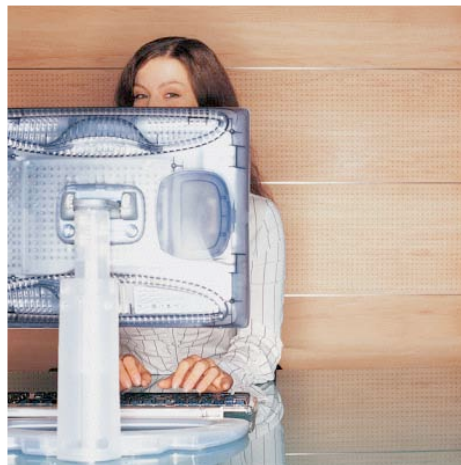
2006

A Networked PHR

James D. Ralston

Group Health Cooperative





MyGroupHealth

Connecting Patients and Providers

James D Ralston, MD MPH
Group Health Center for Health Studies
Seattle, Washington



GroupHealth

Patient Web Sites



GroupHealth

Walled online gardens

Secure and confidential

Connect patients and providers

Electronic messaging

Medical records

Shifts the focus of care away from the physician's office

Some Patient Web Sites



Palo Alto Medical Foundation

Beth Israel Deaconess

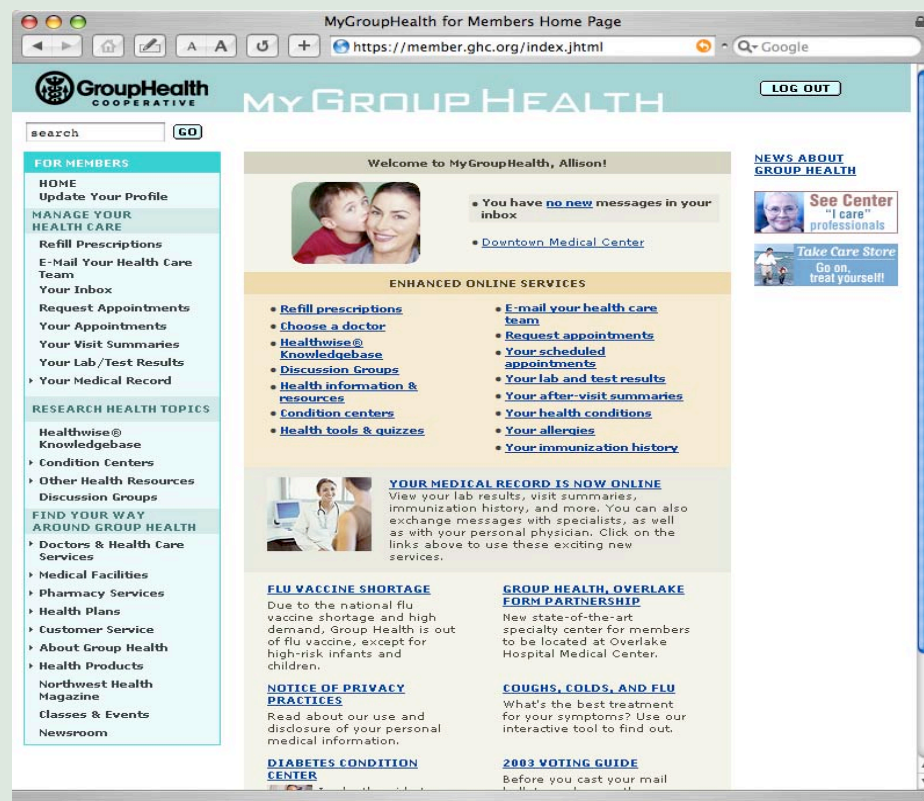
Partners Healthcare

Geisinger

Kaiser Permanente

Dartmouth-Hitchcock

Group Health Cooperative



About Group Health



Member-governed, not-for-profit,
integrated financing and care
delivery system

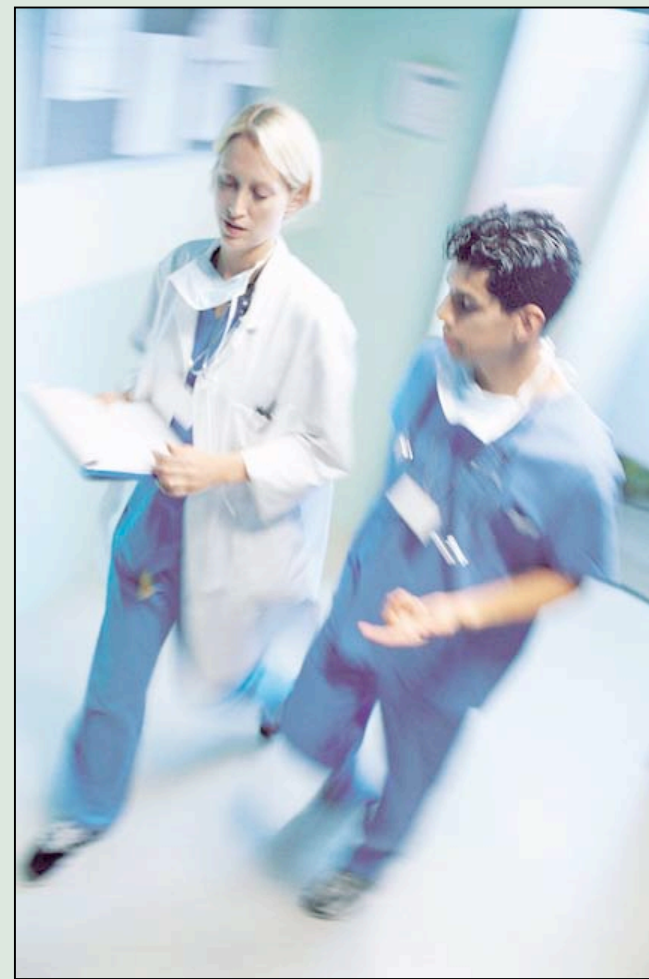
560,000 patients

860 medical staff

25 medical offices, 2 hospitals

Washington and Idaho

Contracts with 6,130 physicians
in Washington





SIPRESS

*"Your appointment with the doctor is at eleven-fifteen,
but his appointment with you is at twelve-fifteen."*

MyGroupHealth Web Services



- Refill Prescriptions
- Secure Messaging
- After Visit Summaries
- Record Access
- Appointment Scheduling

The screenshot shows a web browser window titled "MyGroupHealth for Members Home Page" with the URL "https://member.ghc.org/index.jhtml". The page features the GroupHealth Cooperative logo and a search bar. A navigation menu on the left includes sections for "FOR MEMBERS" (Home, Update Your Profile), "MANAGE YOUR HEALTH CARE" (Refill Prescriptions, E-Mail Your Health Care Team, Your Inbox, Request Appointments, Your Appointments, Your Visit Summaries, Your Lab/Test Results, Your Medical Record), "RESEARCH HEALTH TOPICS" (Healthwise@ Knowledgebase, Condition Centers, Other Health Resources, Discussion Groups), and "FIND YOUR WAY AROUND GROUP HEALTH" (Doctors & Health Care Services, Medical Facilities). The main content area displays a personalized welcome message for Allison, a notification of no new messages in her inbox, and a link to Downtown Medical Center. Below this is a section for "ENHANCED ONLINE SERVICES" with links for Refill prescriptions, Choose a doctor, Healthwise@ Knowledgebase, Discussion Groups, Health information & resources, Condition centers, Health tools & quizzes, E-mail your health care team, Request appointments, Your scheduled appointments, Your lab and test results, Your after-visit summaries, Your health conditions, Your allergies, and Your immunization history. A "NEWS ABOUT GROUP HEALTH" section includes "See Center 'I care' professionals" and "Take Care Store Go on, treat yourself!". A final section titled "YOUR MEDICAL RECORD IS NOW ONLINE" encourages users to view lab results, visit summaries, and immunization history, and to exchange messages with specialists or their personal physician.

Secure E-mail Access



Patients can send secure e-mail to providers they have seen at Group Health.

A screenshot of a web browser displaying the "MyGroupHealth - Medical Advice" page. The browser's address bar shows the URL "https://member2.ghc.org/mychart/inside.asp?mo". The page header includes the GroupHealth logo, the text "MY GROUP HEALTH", and a "LOG OUT" button. Below the header is a search bar and navigation links like "Home > Enhanced Services" and "PRINT-FRIENDLY VERSION". The main content area is titled "Your Messages" and contains a table with columns for "E-mail Health Care Team", "Message Inbox", and "Sent Messages". Below this table is a message form with a "From:" field set to "Number N Testmvs (00123456)", a "Send to the office of" dropdown menu, and a "Subject:" field. A dropdown menu is open, listing various healthcare providers such as "P DOUGHTEN, MD -PCP-", "DEBBIE BRUNNER, MD", "EILEEN MILLER, THER", "JOHN LEWICKI, PA", "JOSEPH KNIGHT, MD", "KARIN MADWED, MD", "KIMBERLY LE MAIRE, THER", "Kelly Daniels, THER", "LANCE MATSUDA, OD", "MARIVIC BORROMEIO, MD", "MARK SUGIMOTO, MD", "MATTHEW HANDLEY, MD", "NANCY CARTER, MD", "PAMELA THIEME, THER", "RONALD LOUIE, MD", "SARA(SALLIE) DACEY, MD", "WAYNE DODGE, MD", and "CONSULTING NURSE SERVICE". The "Question:" field is labeled "(Maximum...)" and has a text input area. At the bottom of the page, there is a note: "Your message will be answered by the end of the next business day. If you have an urgent health concern, please call your physician's office or the Consulting Nurse Service." The browser's address bar also shows "Google" as the search engine.

Test Results with Charting



MyGroupHealth - Lab Result Charting and Graphing - Microsoft Internet Explorer provided by Group Health Cooperative

FOR MEMBERS

HOME Update Your Profile

MANAGE YOUR HEALTH CARE

Refill Prescriptions

E-Mail Your Health Care Team

Your Inbox

Request Appointments

Your Appointments

Your Visit Summaries

Your Lab/Test Results

Your Medical Record

Your Health Coverage

RESEARCH HEALTH TOPICS

Healthwise® Knowledgebase

Condition Centers

Other Health Resources

Discussion Groups

FIND YOUR WAY AROUND GROUP HEALTH

Doctors & Health Care Services

Medical Facilities

Pharmacy Services

Health Plans

Customer Service

About Group Health

Health Products

Northwest Health Magazine

Classes & Events

Newsroom

Your Medical Record

After-Visit Summaries | Lab & Test Results | Current Health Conditions | Allergies | Immunization History

ABOUT THIS SERVICE

Here are the test components you selected. You may change this display to:

- Show different components from this test result. Click on [select lab test results components to view](#).
- Show components from earlier tests. Type in the number of test results or a date range. Click View.
- Switch type of display. Choose Table, Line Graph, or Bar Graph.

Show components from earlier tests: most recent tests

C from 6/22/2003 to 6/21/2004 View

Table | Line Graph | Bar Graph

MyGroupHealth - Lab Result Charting and Graphing - Microsoft Internet Explorer provided by Group Health Cooperative

FOR MEMBERS

HOME Update Your Profile

MANAGE YOUR HEALTH CARE

Refill Prescriptions

E-Mail Your Health Care Team

Your Inbox

Request Appointments

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Your Visit Summaries

Your Lab/Test Results

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Your Medical Record

After-Visit Summaries | Lab & Test Results | Current Health Conditions | Allergies | Immunization History

ABOUT THIS SERVICE

Here are the test components you selected. You may change this display to:

- Show different components from this test result. Click on [select lab test results components to view](#) or [add](#).
- Show components from earlier tests. Type in the number of test results or a date range. Click View.
- Switch type of display. Choose Table, Line Graph, or Bar Graph.

Show components from earlier tests: most recent tests

C from 6/22/2003 to 6/21/2004 View

Table | Line Graph | Bar Graph

MyGroupHealth - Lab Details - Microsoft Internet Explorer provided by Group Health Cooperative

File Edit View Favorites Tools Help

Address <https://epchartqa.ghc.org/mychart/inside.asp?mode=labdetail&orderid=6>

FOR MEMBERS

HOME Update Your Profile

MANAGE YOUR HEALTH CARE

Refill Prescriptions

E-Mail Your Health Care Team

Your Inbox

Request Appointments

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Your Visit Summaries

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ABOUT THIS SERVICE

New feature! If you see these buttons at the page bottom -- View Line Graph and View Table -- you may choose how to view your test result components. Only certain results will be displayed in graphs.

Test: ELECTROLYTES [80004.001]

Order Number: 127112 Quantity: 1

Sample: Date Collected: 4/12/2004 1:35 PM

Result Status: Edited Resulted Date: 4/13/2004 9:16 AM

Provider Status: Ordered

Component Results

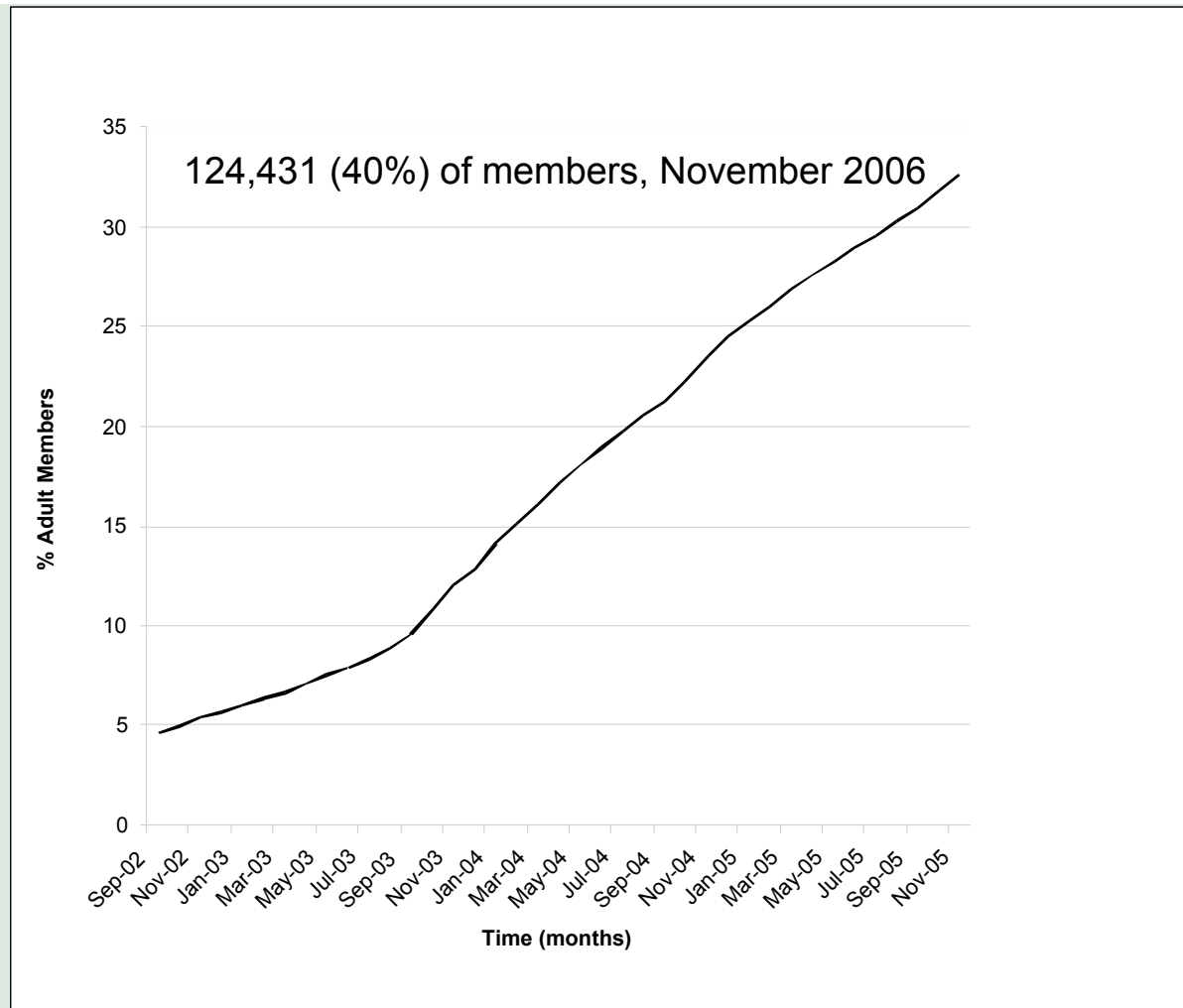
Select	Component	Value	Flag	Low	High
<input checked="" type="checkbox"/>	SODIUM	140		135	145
<input checked="" type="checkbox"/>	POTASSIUM	5.5	H	3.5	5.2
<input checked="" type="checkbox"/>	CHLORIDE	100		97	108
<input checked="" type="checkbox"/>	CARBON DIOXIDE	30		22	30

Select All View Line Graph View Table

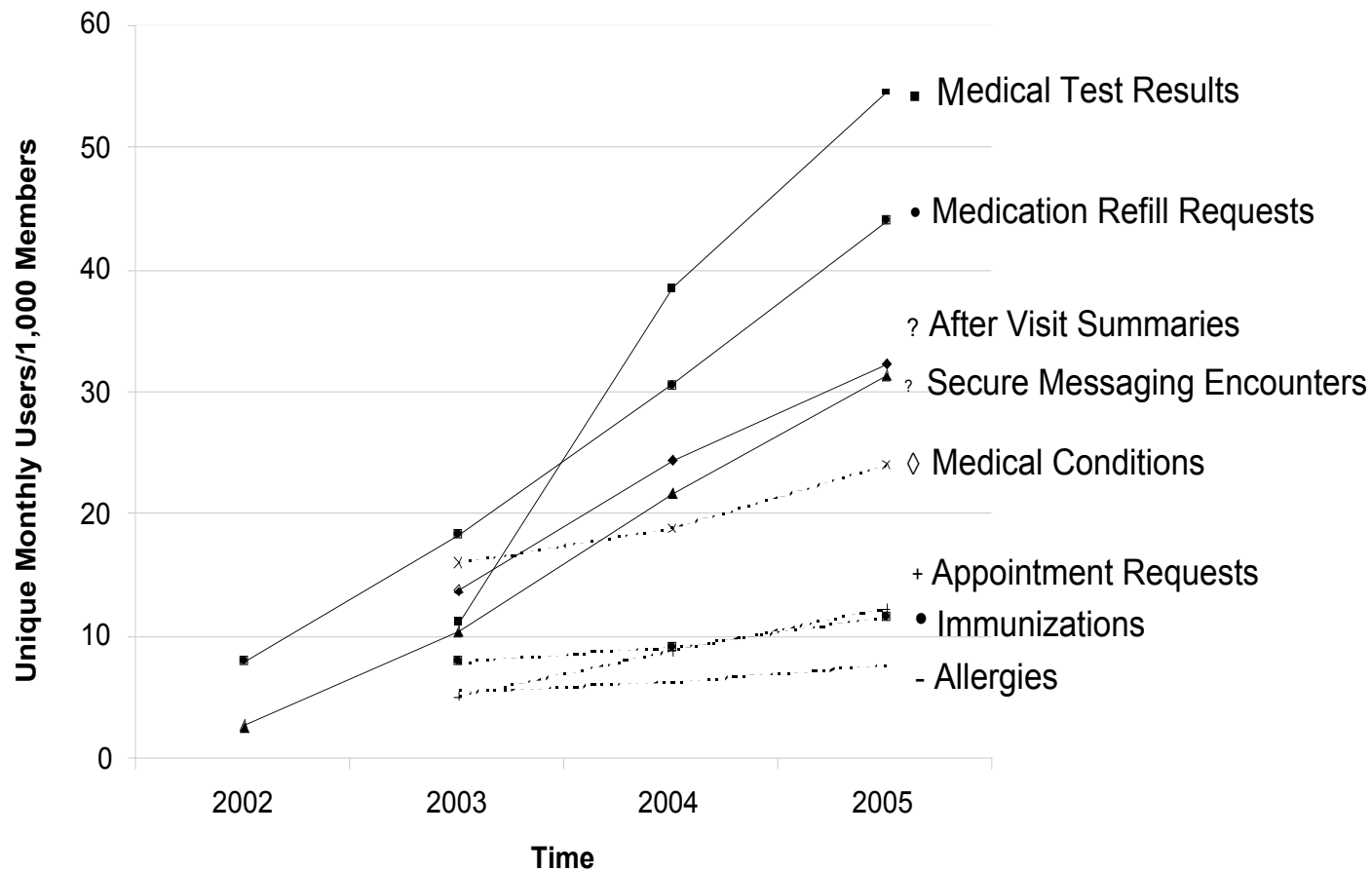
Result Comments

Component	Comment
POTASSIUM	ICORRECTION: K incorrectly reported as 5.0 on 04-12-04 14:49.

Registration for Shared Electronic Record Services on MyGroupHealth



Use of Shared Electronic Record Services on MyGroupHealth





“O.K., step away from the laptop and hold up your end of the conversation.”

Typical Online Patient in 2004



51-year old woman
managing multiple chronic
conditions

Has a PCP with $\geq 20\%$ all
patient encounters through
electronic messaging

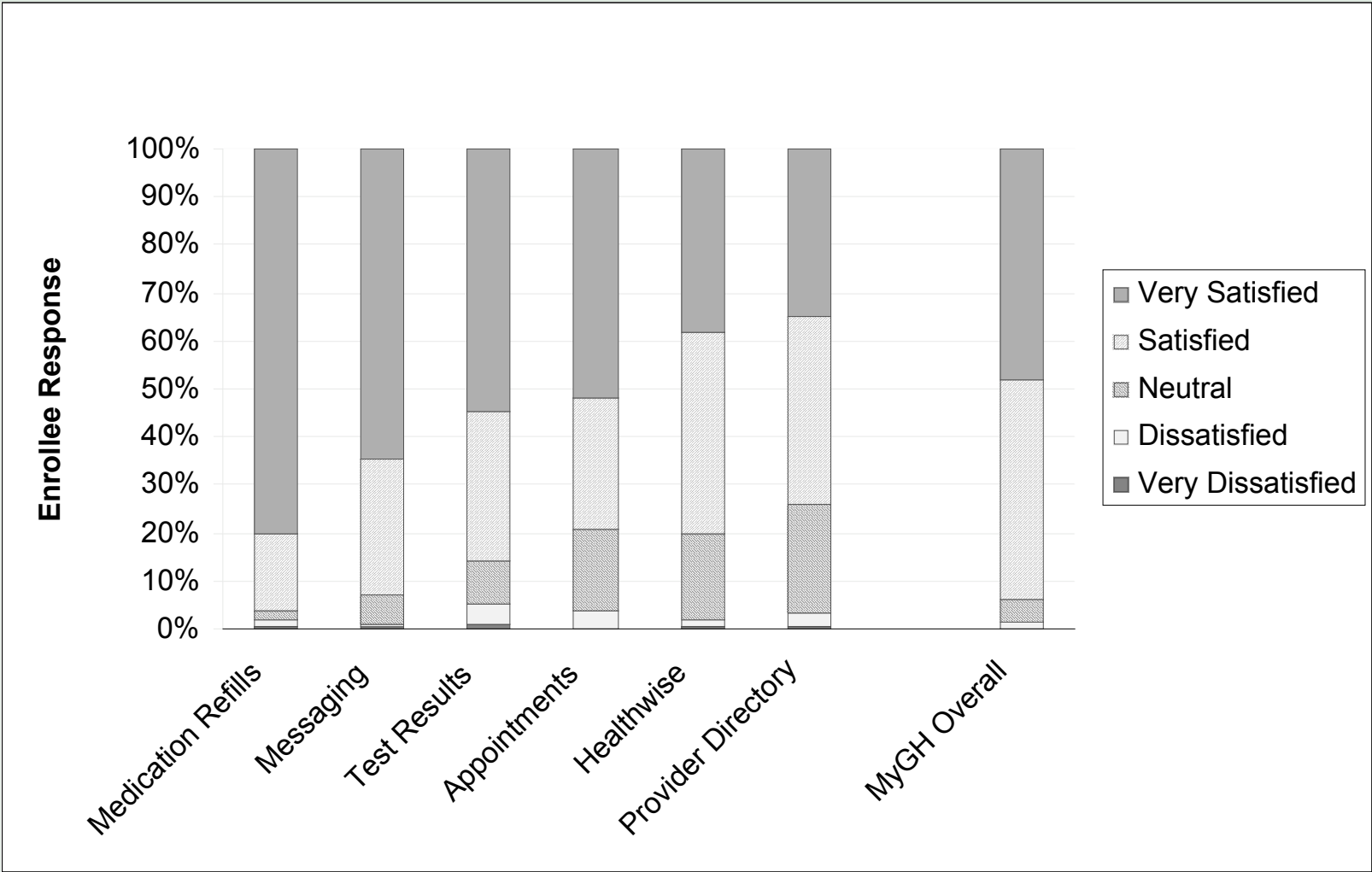
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- FOR MEMBERS:** Includes links for HOME (Update Your Profile), MANAGE YOUR HEALTH CARE (Refill Prescriptions, E-Mail Your Health Care Team, Your Inbox, Request Appointments, Your Appointments, Your Visit Summaries, Your Lab/Test Results, Your Medical Record), RESEARCH HEALTH TOPICS (Healthwise@ Knowledgebase, Condition Centers, Other Health Resources, Discussion Groups), and FIND YOUR WAY AROUND GROUP HEALTH (Doctors & Health Care Services, Medical Facilities).
- Welcome to MyGroupHealth, Allison!**: A personalized greeting with a photo of a woman and a child. It indicates "no new messages in your inbox" and provides a link to "Downtown Medical Center".
- NEWS ABOUT GROUP HEALTH:** Includes a "See Center 'I care' professionals" advertisement and a "Take Care Store" advertisement with the slogan "Go on, treat yourself!!".
- ENHANCED ONLINE SERVICES:** A list of services including Refill prescriptions, Choose a doctor, Healthwise@ Knowledgebase, Discussion Groups, Health information & resources, Condition centers, Health tools & quizzes, E-mail your health care team, Request appointments, Your scheduled appointments, Your lab and test results, Your after-visit summaries, Your health conditions, Your allergies, and Your immunization history.
- YOUR MEDICAL RECORD IS NOW ONLINE:** A section with a photo of a doctor and patient, stating that users can view lab results, visit summaries, immunization history, and more, and can also exchange messages with specialists.

How Satisfied Are You With the Following Services?



GroupHealth



Take Home Points



GroupHealth

Patient Web sites connect patients and providers over the Web.

Same patients use MyGroupHealth as use other health care services.

Use and satisfaction of MyGroupHealth is greatest for services actively part of care.

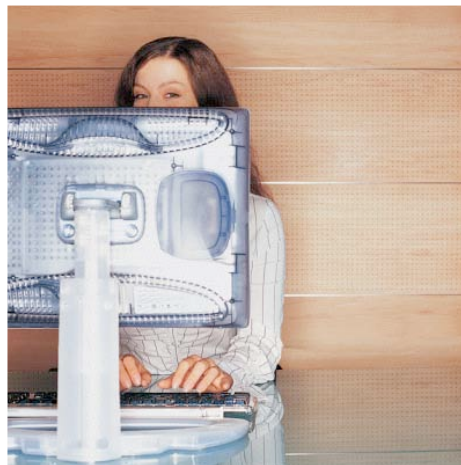
Implications for a Networked PHR



GroupHealth

PHR value appears to depend on

- Connecting patients and providers
- Integrating care for patients



Thank you

James D Ralston, MD MPH
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Paul T. Sheils

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MARKLE FOUNDATION


Robert Wood Johnson Foundation

How Health Plans Are Helping to Digitize the US Healthcare System:

The Claims-Based Digital Personal Health Record

A New Tool to Engage & Empower Consumers

Paul T. Sheils
eHealth, Aetna, Inc.

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We want you to know™



The Digital Health Records Landscape

- **Federal, State & Local Electronic Health Record (EHR) Initiatives**
 - 2004 - President Bush places EHRs on the national health care policy agenda, calls for every American to have an EHR in 10 Years
 - *2004 Dr. David Brailer appointed as National Coordinator of Health Information Technology*
 - *Regional Health Information Organizations*
 - 2006 – AHIC established; EHR standards under development; Executive Order on Quality and Transparency



“By computerizing health records, we can avoid dangerous medical mistakes, reduce costs and improve care.”

President George W. Bush, January 2004, State of the Union Address

“The use of electronic health records and other information technology will transform our health care system by reducing medical errors, minimizing paperwork hassles, lowering costs and improving quality of care.”

Secretary of Health & Human Services Michael Leavitt, June 6, 2005

EHRs vs. PHRs

“EHR”

- **EHRs** – the complete health record - clinician-populated and controlled, “institution-centric” application; derivatives of practice management systems (Cerner, Epic, IDX, etc.).
-

“Patient-Populated PHR”

- **Patient-Populated PHRs** – software applications that permit patients to record results of healthcare encounters, often have health diaries, reminders.
-

“Claims-Based PHR”

- **Claims-Based PHRs** – patient-controlled, populated initially with claims-based data (may be supplemented patient-populated data, e.g., HRAs).

Rich Clinical Data Derived from Claims

Claims forms contain valuable electronic health information that is available to be shared

HCFA 1500 (Doctor's Claim Form):

The HCFA 1500 form is a detailed medical claim form. It includes sections for patient demographic information (1-10), patient and provider information (11-13), diagnosis and procedure codes (21-23), and charges (24-30). It also contains fields for signatures and dates of the patient and provider.

UB 92 (Hospital's Claim Form):

The UB 92 form is a hospital claim form. It includes sections for patient name and address (1-2), patient status (3-4), diagnosis and procedure codes (40-49), charges (50-59), and provider information (60-69). It also contains fields for signatures and dates of the patient and provider.

- Patient Demographic Info
- Date of Treatment
- Diagnosis
- Procedures
- Identities of Treating and Referring Providers and Contact Information
- (Medications)
- (Lab Values)

AHIP and BCBSA Join Forces to Develop PHRs & PHR Standards

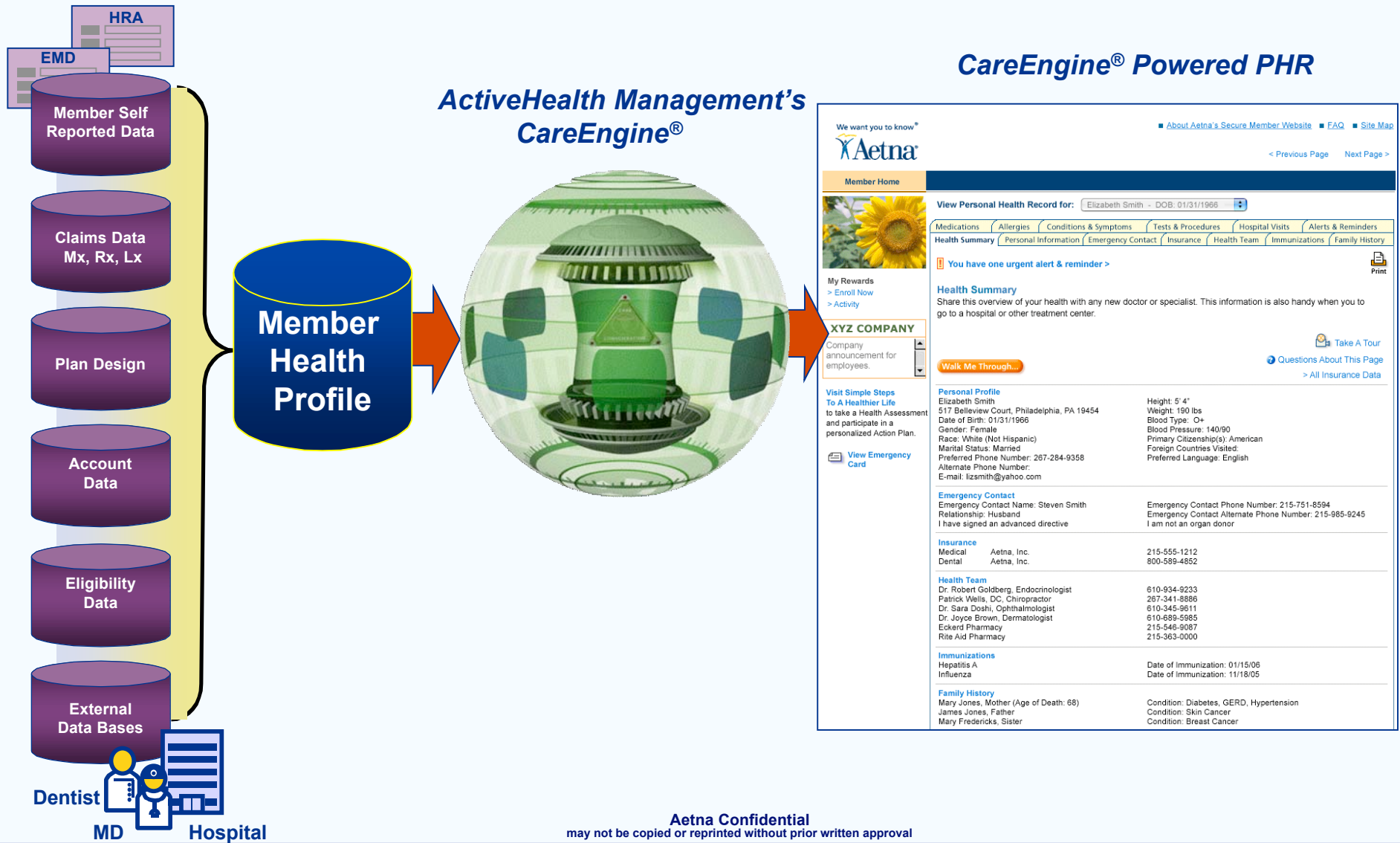


**BlueCross BlueShield
Association**

- **2005 - AHIP & BCBSA Collaborate to Develop PHR Standards**
- **Goals of PHR Collaboration**
 - Encourage members to offer PHRs
 - Conduct market research with providers and consumers on PHR value
 - Jointly develop PHR standards
 - Common PHR data elements
 - Plan-to-Plan Portability Standards
 - Pilot Test
 - PHR Awareness and Education Campaign
 - Future: Interoperability with EHR and provider settings

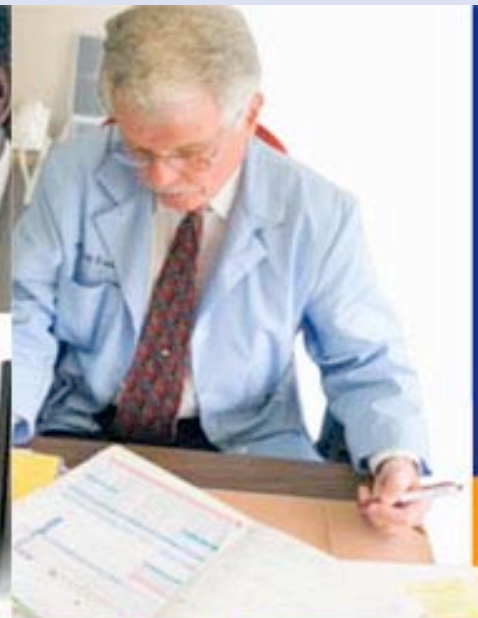
Aetna's Approach: Data + Decision Support

The CareEngine[®] Powered PHR



The Aetna PHR Video Tour

- Video Tour of Aetna's CareEngine-Powered Personal Health Record



View Personal Health Record for: [Name] [DOB]

! Triptan Drug. History of Coronary Artery Disease.

You have been prescribed a drug from a class called triptans to help relieve migraine headache pain. You also have a history of coronary artery disease. Because of how they work to the heart and blood vessels, triptans should not be taken by people with coronary artery disease. Please share this alert with your doctor.

Close Window

5/4/2006 Dangerous Drug Interaction [Select All Known]

Urgent Alerts/Reminders

Walk Me Through

Welcome George Vincent

You can easily create a record of your health, called a Personal Health Record. Your health record can help you:

- Store and update information about your health
- Stay organized by keeping your health information in one place
- Share information with your doctors
- Avoid errors in treatment and unnecessary tests
- Help you better understand your health and better plan for the future

Information in your Personal Health Record is your health record offers many benefits. You can print out information to share with your doctor. If your personal health record is online back up.

Creating a Personal Health Record is easy. Simply go to your health. The more information you enter, the more your record will be.

Personal Information
Emergency Contact
Insurance
Health Team
Immunizations
Family History
Medications
Allergies
Conditions & Symptoms
Tests & Procedures
Hospital Visits

A man in a light blue shirt and red tie is sitting at a desk, using a laptop. He is looking at the screen, which displays the 'Walk Me Through' section of the PHR interface.

Aetna's CareEngine® - Powered PHR

Immunizations	
Hepatitis A	Date of Immunization: 01/15/06
Influenza	Date of Immunization: 11/18/05
Family History	
Mary Jones, Mother (Age of Death: 68)	Condition: Diabetes, GERD, Hypertension
James Jones, Father	Condition: Skin Cancer
Mary Fredericks, Sister	Condition: Breast Cancer
Medications	
Doxycycline	Purchase Date: 06/06/2006
Diprolene	Purchase Date: 04/25/2006
Glucophage	Purchase Date: 03/15/2006
Lisinopril	Purchase Date: 03/15/2006
Advil	Purchase Date: 11/15/2005
Multivitamin	Purchase Date: 10/10/2005
Allergies	
Food	Allergen: Peanut
Food	Allergen: Soy
Environmental	Allergen: Poison Ivy
Environmental	Allergen: Bee Stings
Medicine	Allergen: Codeine
Conditions & Symptoms (Self-Reported)	
Back Pain	
Rosacea	
Conditions (Based on Analyzed Insurance Data)	
Diabetes	
High Blood Pressure	
Tests & Procedures	
Glucose	Date of Test/Procedure: 06/20/2006
Hemoglobin A1c	Date of Test/Procedure: 04/07/2006
Creatinine and Creatinine Clearance	Date of Test/Procedure: 04/07/2006
Foot Examination	Date of Test/Procedure: 02/23/2006
Retinal Eye Examination	Date of Test/Procedure: 02/04/2006
Hospital Visits	
Abington Memorial	Date of Admission: 12/15/2005
Jefferson Hospital	Date of Admission: 11/06/2005



Personalized messages and alerts

Direct access to Simple Steps To A Healthier Life Health Assessment and Action Plan

Guided approach called "Walk Me Through" encourages employees to self-report health information

Printable Emergency Card

Print and take to next office visit

Multimedia tour of PHR

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CareEngine® Powered

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Benefits of a Health Plan, Claims-based Personal Health Record

- **Member-Controlled**
 - Strict Authentication and Authorization
- **HIPAA and State Law Compliant**
- **Portable – Two Types of Portability**
 - Place PHR data in secure, portable storage devices (smart cards, flash drives, etc.)
 - Plan to Plan (improves the longitudinal view and value of the PHR)
- **Interoperable with the EHR**
 - Common data fields, protocols, clinical vocabularies
 - PHR = downstream recipient and/or upstream supplier
- **Enhancing the Physician Encounter**
 - One-Page Summary; “Print this page”
- **Member View & Provider View of the PHR**
 - Member View Can be Customized; Provider View Should be Standard
- **Informatics-Informed – The real power of PHRs**
 - Advanced analytics, algorithms and rules engines delivering customized content, alerts, recommendations, guidance, hints

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