

Case Study: Giving Patients Online Access to Their Health Records

Mark Leavitt, MD, PhD - CEO, MedicaLogic

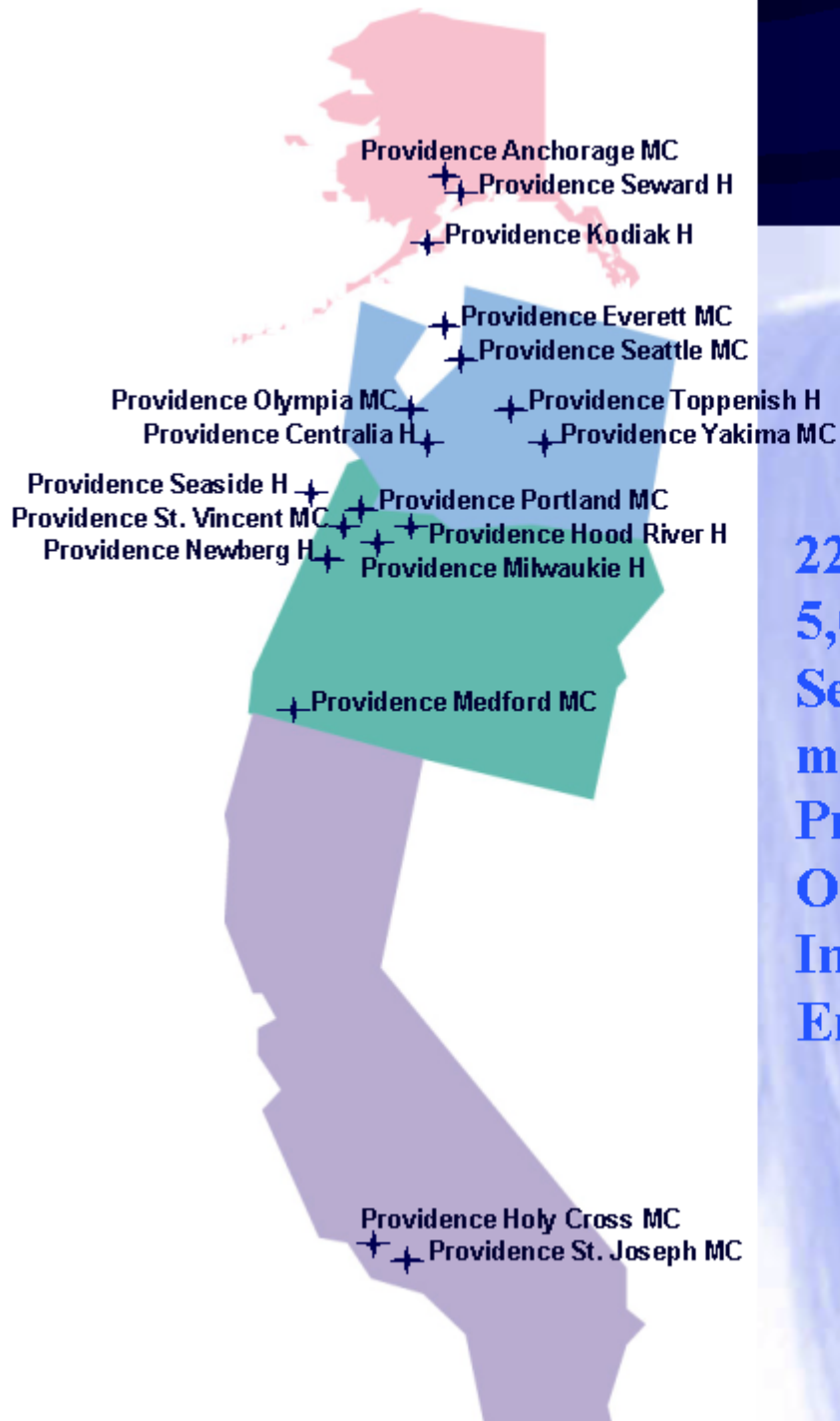
Richard Skinner - CIO, Providence Health System

**Dick Gibson, MD, PhD - Medical Director of Information
Systems, Providence Health System**

Panel Presentation

The Symposium on eHealthcare Strategies

Phoenix, Arizona - February 2000



22 hospitals

5,000+ acute and long-term licensed beds

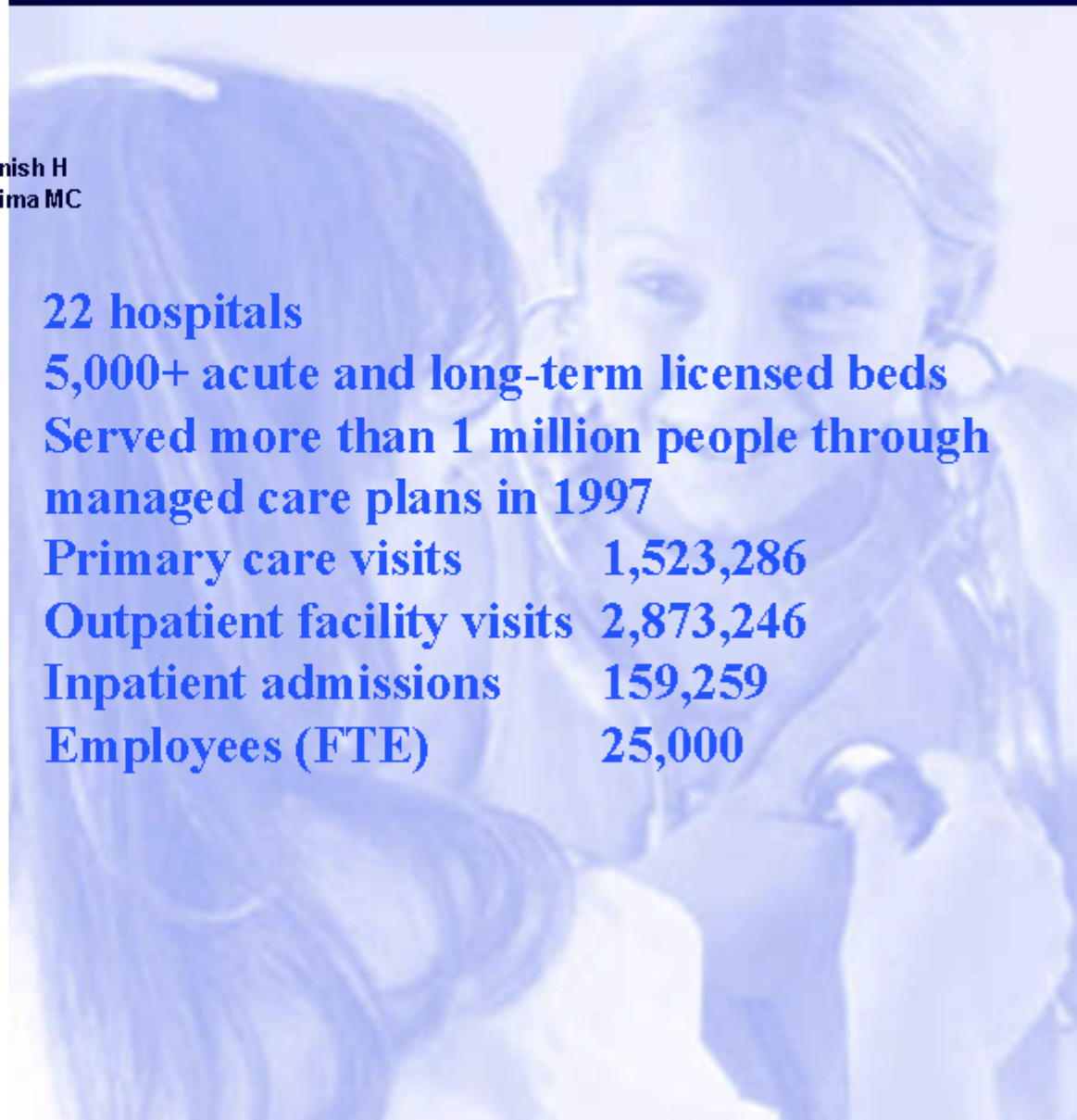
Served more than 1 million people through managed care plans in 1997

Primary care visits 1,523,286

Outpatient facility visits 2,873,246

Inpatient admissions 159,259

Employees (FTE) 25,000



Strategic Initiatives

Six **ACTIONS**

Actively live out the mission and values, in balance with fiscal stewardship

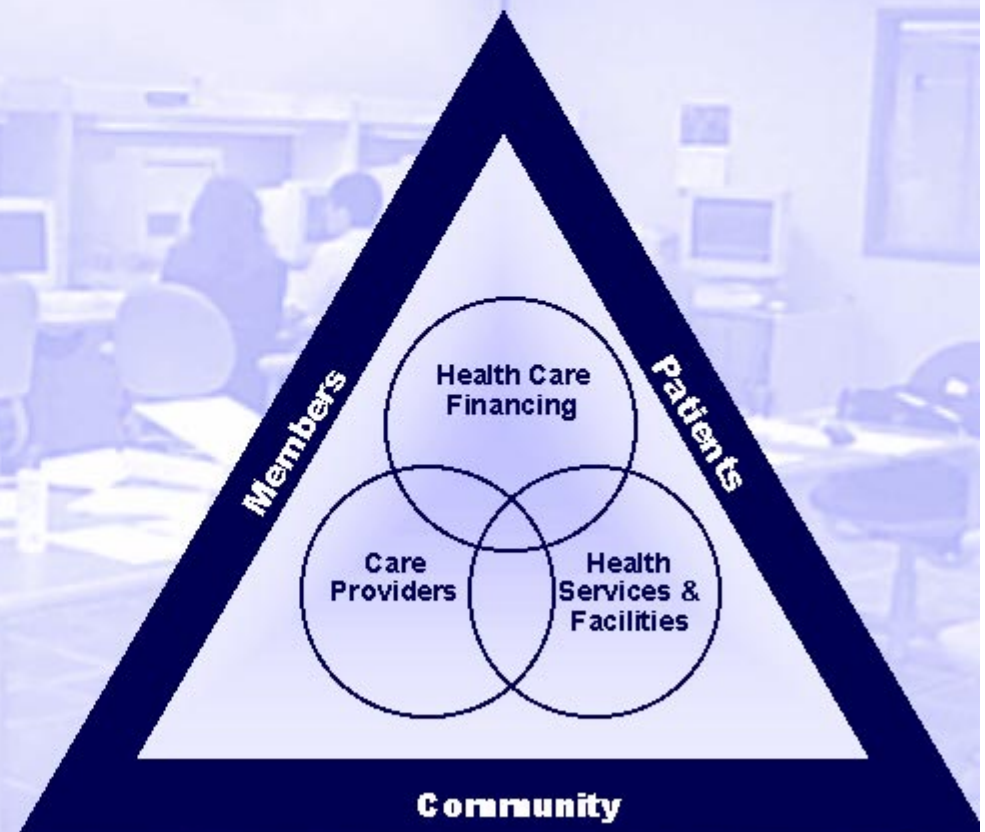
Customers come first

Total quality in all health care experiences

Information for **breakthrough performance**

Opportunities for physician leadership and involvement

Nurture internal and external relationships



Oregon Management Council

February 2, 1999

Agenda

Financial Report

New Acquisitions Strategy

Internet based Access to Medical Records

*Mark Leavitt
Medicalogic*

Connecting Patients and Physicians via the Web: The *AboutMyHealth* concept

Presentation for Oregon Management Council,
Providence Health System
February 1999

Mark Leavitt, MD, PhD - CEO, MedicaLogic

Here's the Pitch...

- Internet usage is growing explosively
- Health information is the #2 most frequent search topic among Internet users
- Your doctors could be disintermediated
- You already have >100 physicians using electronic medical records
- You have >150,000 electronic patient records
- Put those records online and let patients access them
- We'll figure out the security, privacy, and other issues somehow - trust me

Here's What It Might Look Like

MyHealth - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://mk1-dell366/AboutMyHealth/Main.htm> Go Links



Carl S. Callaway
7445 SW Nyberg
Tigard, OR 97223
Home: 503 620-9134
Work: 503 624-2099

AboutMyHealth

A demonstration for:
Providence Health System

Welcome to AboutMyHealth!

AboutMyHealth is an experimental website that gives you the opportunity to take a more active role in your health care. It gives you direct access to your computerized medical record information, such as medical problems, medications, allergies, vital sign measurements (weight, height, blood pressure), laboratory results, and more. It offers you a chance to communicate with your doctor's office other than by phone. Finally, it allows you to access the myriad of resources available on the internet for learning more about your health.

My medical records...

Learn more about...

Send a message...

Exit...

Using AboutMyHealth is easy. At the left of the screen you'll see a list of topics. The major topic areas include "My Medical Records," "Learn More About," and "Send a Message." When you click on any of these major topic areas, it expands to reveal particular topics underneath. Just click on any of these particular topics to view or enter information on it. That's all there is to it!


When you're finished, click the Exit topic on the lower left. Thanks for trying AboutMyHealth!

Done Local intranet

MyHealth - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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My medical records...
[Address, insurance, etc...](#)
[Health problems...](#)
[Current medications...](#)
[Allergies to medicines...](#)
[Weight | height | BP](#)
[Cholesterol | Other tests...](#)
[Preventive care due...](#)
[Next appointment date...](#)
[Print a wallet card...](#)
[Who has seen my record...](#)

Learn more about...
Send a message...
Exit...

AboutMyHealth

A demonstration for:



Name, address, phone, and insurance information that we currently have on file for you:


First Name...	<input type="text" value="Carl"/>
Last Name...	<input type="text" value="Callaway"/>
Middle Initial.	<input type="text" value="S"/>
Address.....	<input type="text" value="7443 SW Nyberg Road"/>
Address2.....	<input type="text"/>
City.....	<input type="text" value="Tualatin"/>
State.....	<input type="text" value="OR"/>
Zip.....	<input type="text" value="97223"/>
Home phone..	<input type="text" value="503 620-9134"/>
Day phone....	<input type="text" value="503 624-2099"/>
Primary Ins...	<input type="text" value="CHC (Gold Plan)"/>

Done Local intranet

MyHealth - Microsoft Internet Explorer

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My medical records...

- [Address, insurance, etc...](#)
- [Health problems...](#)
- [Current medications...](#)
- [Allergies to medicines...](#)
- [Weight | height | BP](#)
- [Cholesterol | Other tests...](#)
- [Preventive care due...](#)
- [Next appointment date...](#)
- [Print a wallet card...](#)
- [Who has seen my record...](#)


Learn more about...

Send a message...

Exit...

AboutMyHealth

A demonstration for:



Health Problems currently shown in your record:


Coronary Artery Disease
---Infarction, Myocardial
---S/P Implantation of Defibrillator
Hypertension
Bronchitis

Local intranet

MyHealth - Microsoft Internet Explorer

File Edit View Favorites Tools Help


Address http://mkI-dell366/AboutMyHealth/Main.htm



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AboutMyHealth

A demonstration for:



Medications currently shown in your record:

Prinivil tabs 20 mg	1 po qd
Aspirin tabs 81 mg	1 po qd
Isosorbide dinitrate tabs 20 mg	1 po bid
Zoloft tabs 50 mg	1 po qd

Common abbreviations:

qd=once daily | bid=twice daily | tid=three times daily | qid=four times daily
 qam=every morning | qpm=every evening | qhs=every bedtime
 q4h=every 4 hours | q6h=every 6 hours | q8h=every 8 hours

My medical records...

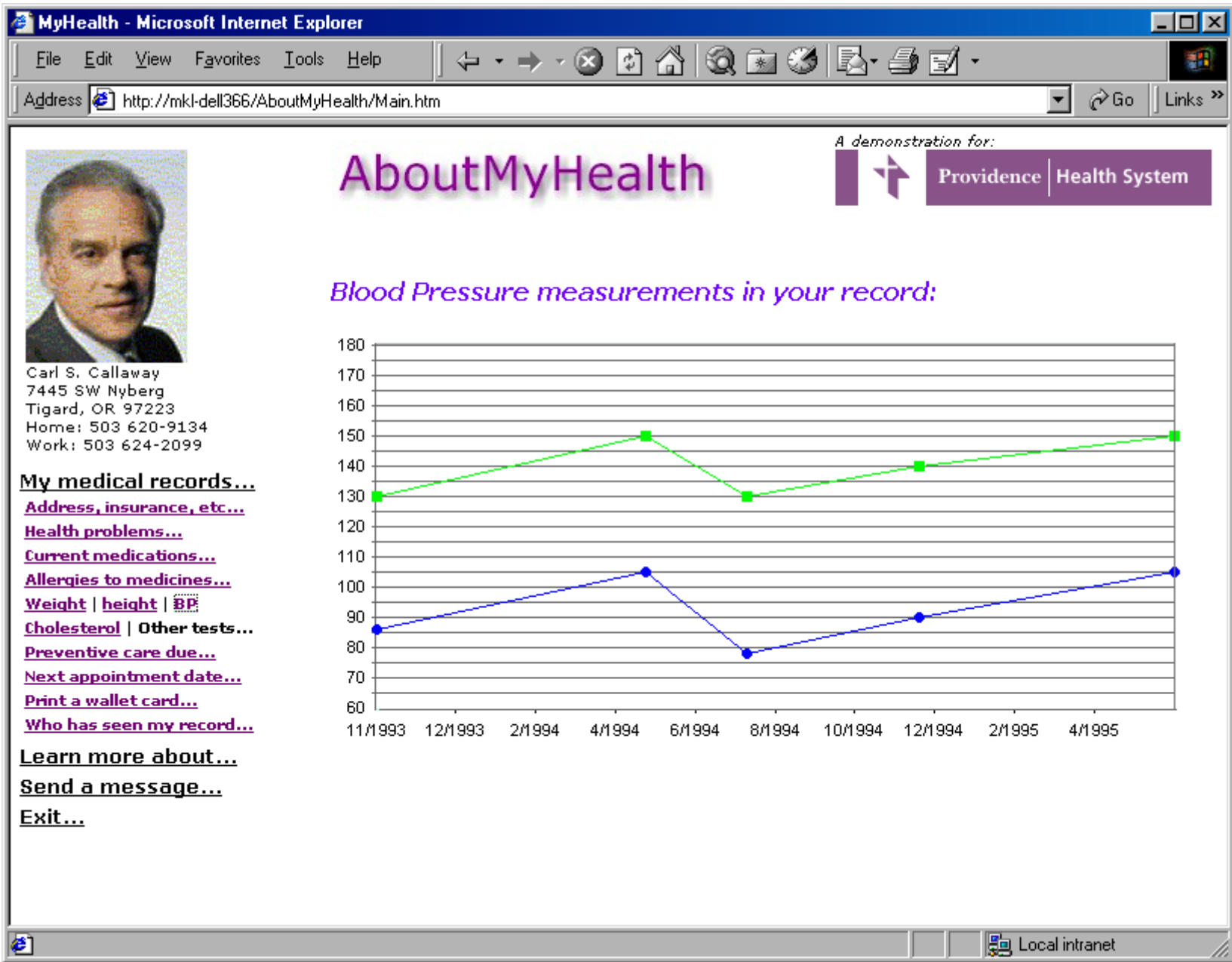
- [Address, insurance, etc...](#)
- [Health problems...](#)
- [Current medications...](#)
- [Allergies to medicines...](#)
- [Weight | height | BP](#)
- [Cholesterol | Other tests...](#)
- [Preventive care due...](#)
- [Next appointment date...](#)
- [Print a wallet card...](#)
- [Who has seen my record...](#)

Learn more about...

Send a message...

Exit...


Local intranet



MyHealth - Microsoft Internet Explorer

File Edit View Favorites Tools Help


Address <http://mk1-dell366/AboutMyHealth/Main.htm> Go Links >>



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AboutMyHealth

A demonstration for:



Preventive care due, according to your record:

Test or Procedure	Interval	Last Done
Flu vax	every 12 months	5/23/1997
Urinalysis	every 12 months	not known
Rectal exam	every 12 months	5/23/1997

My medical records...

- [Address, insurance, etc...](#)
- [Health problems...](#)
- [Current medications...](#)
- [Allergies to medicines...](#)
- [Weight | height | BP](#)
- [Cholesterol | Other tests...](#)
- [Preventive care due...](#)
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- [Print a wallet card...](#)
- [Who has seen my record...](#)

Learn more about...

Send a message...


Exit...

Local intranet

MyHealth - Microsoft Internet Explorer

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Address http://mkl-dell366/AboutMyHealth/Main.htm



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AboutMyHealth

A demonstration for:



A wallet card with your medical information:

<p>Problems: Coronary Artery Disease ---Infarction, Myocardial ---S/P Implantation of Defibrillator Hypertension Bronchitis</p>	<p>Medications: Prinivil tabs 20 mg 1 po qd Aspirin tabs 81 mg 1 po qd Isosorbide dinitrate tabs 20 mg 1 po bid Zoloft tabs 50 mg 1 po qd</p>
<p>Allergies: Nitro-Dur</p> <p>Patient: Carl S. Callaway 7445 SW Nyberg Tigard, OR 97223 Home: 503 620-9134 Work: 503 624-2099</p>	<p>Physician: Harry S Winston, MD Southside Clinic 1231 Medical Drive Portland, OR 97112 503 555-9099</p>

My medical records...

- [Address, insurance, etc...](#)
- [Health problems...](#)
- [Current medications...](#)
- [Allergies to medicines...](#)
- [Weight | height | BP](#)
- [Cholesterol | Other tests...](#)
- [Preventive care due...](#)
- [Next appointment date...](#)
- [Print a wallet card...](#)
- [Who has seen my record...](#)

Learn more about...

Send a message...

Exit...


Print the card by pressing the PRINT button or selecting File>Print Frame on your browser. Cut out the card along the outline. Fold it first along the horizontal line, then along the vertical line so your name and your physician's name shows on the outside, and the medical information is hidden within. Slide the card into your wallet or purse.

Local intranet

MyHealth - Microsoft Internet Explorer

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AboutMyHealth

A demonstration for:



Who has recently seen your record:

Date	User	Department
12/22/1998	Harry Winston MD	Internal Medicine
12/19/1998	Harry Winston MD	Internal Medicine
12/01/1998	Jennifer Aniston	Internal Medicine
10/12/1998	Harry Winston MD	Internal Medicine
08/01/1998	Harry Winston MD	Internal Medicine

My medical records...

- [Address, insurance, etc...](#)
- [Health problems...](#)
- [Current medications...](#)
- [Allergies to medicines...](#)
- [Weight | height | BP](#)
- [Cholesterol | Other tests...](#)
- [Preventive care due...](#)
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Learn more about...

Send a message...


Exit...

Local intranet

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[My medical records...](#)
[Learn more about...](#)
[Send a message...](#)
[Request an appointment...](#)
[Request a refill...](#)
[Ask a question...](#)
[Add information to my record...](#)
[Exit...](#)

AboutMyHealth

A demonstration for:



To request an appointment, please mark the days and time periods that suit your needs:

<input type="checkbox"/> Monday mornings	<input type="checkbox"/> Monday afternoons
<input type="checkbox"/> Tuesday mornings	<input type="checkbox"/> Tuesday afternoons
<input type="checkbox"/> Wednesday mornings	<input type="checkbox"/> Wednesday afternoons
<input type="checkbox"/> Thursday mornings	<input type="checkbox"/> Thursday afternoons
<input type="checkbox"/> Friday mornings	<input type="checkbox"/> Friday afternoons


Note: Appointment requests by e-mail take four business days. If you need an urgent appointment, please call the office immediately instead.

Local intranet

MyHealth - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://mkl-dell366/AboutMyHealth/Main.htm




Carl S. Callaway
7445 SW Nyberg
Tigard, OR 97223
Home: 503 620-9134
Work: 503 624-2099

[My medical records...](#)
[Learn more about...](#)
[Send a message...](#)
[Request an appointment...](#)
[Request a refill...](#)
[Ask a question...](#)
[Add information to my record...](#)
[Exit...](#)

AboutMyHealth

A demonstration for:



Please mark the medications you need refilled:

Prinivil tabs 20 mg	1 po qd	<input type="checkbox"/> Need refill
Aspirin tabs 81 mg	1 po qd	<input type="checkbox"/> Need refill
Isosorbide dinitrate tabs 20 mg	1 po bid	<input type="checkbox"/> Need refill
Zoloft tabs 50 mg	1 po qd	<input type="checkbox"/> Need refill

Note: Refills by e-mail take two business days. If you are completely out of your medication, please call the office instead.

Local intranet

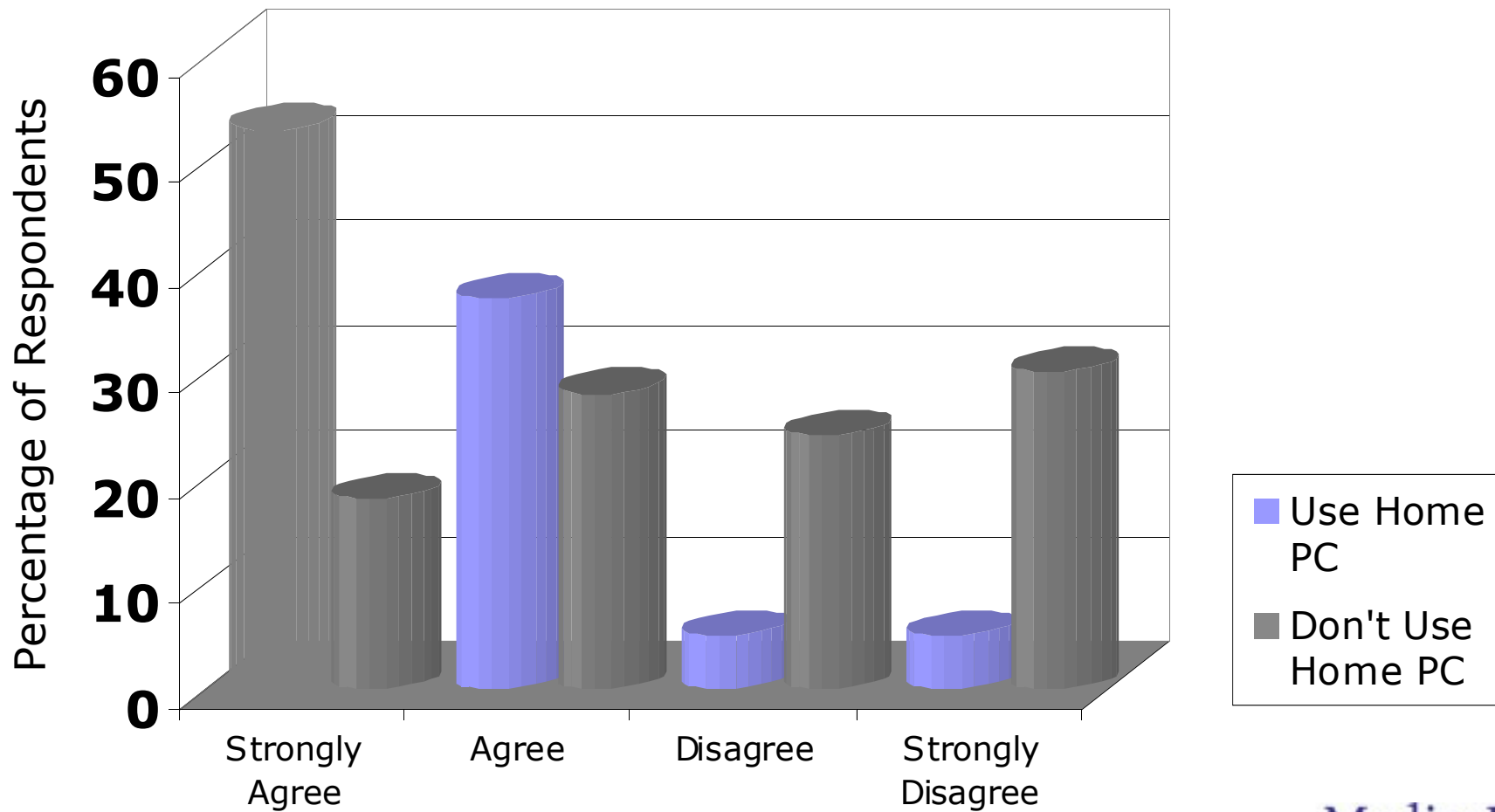
Discussion

Survey of patient attitudes: AboutMyHealth.net concept

- Offline (mailed) survey to 9500 nonselected patients of three EMR-equipped primary care practices
- Besides Providence, includes data from two other large healthcare delivery systems in Western and Eastern Virginia
- Results tabulated from 480 responses
 - Approximately even distribution of ages from 21-75 years old
 - 70% are female
 - 67% use a computer at home

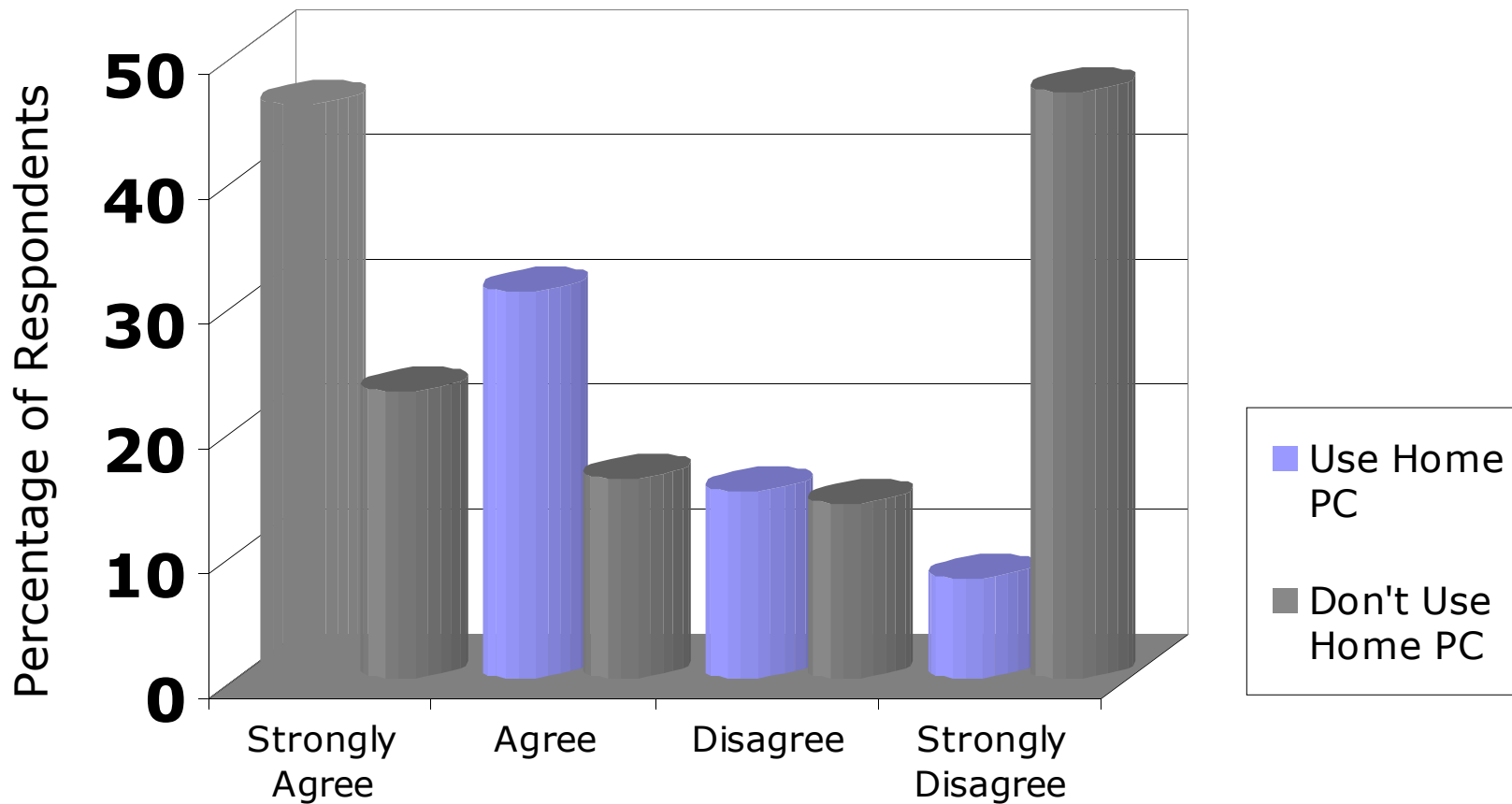
Accessibility

"I think this would make my doctor's office more accessible."



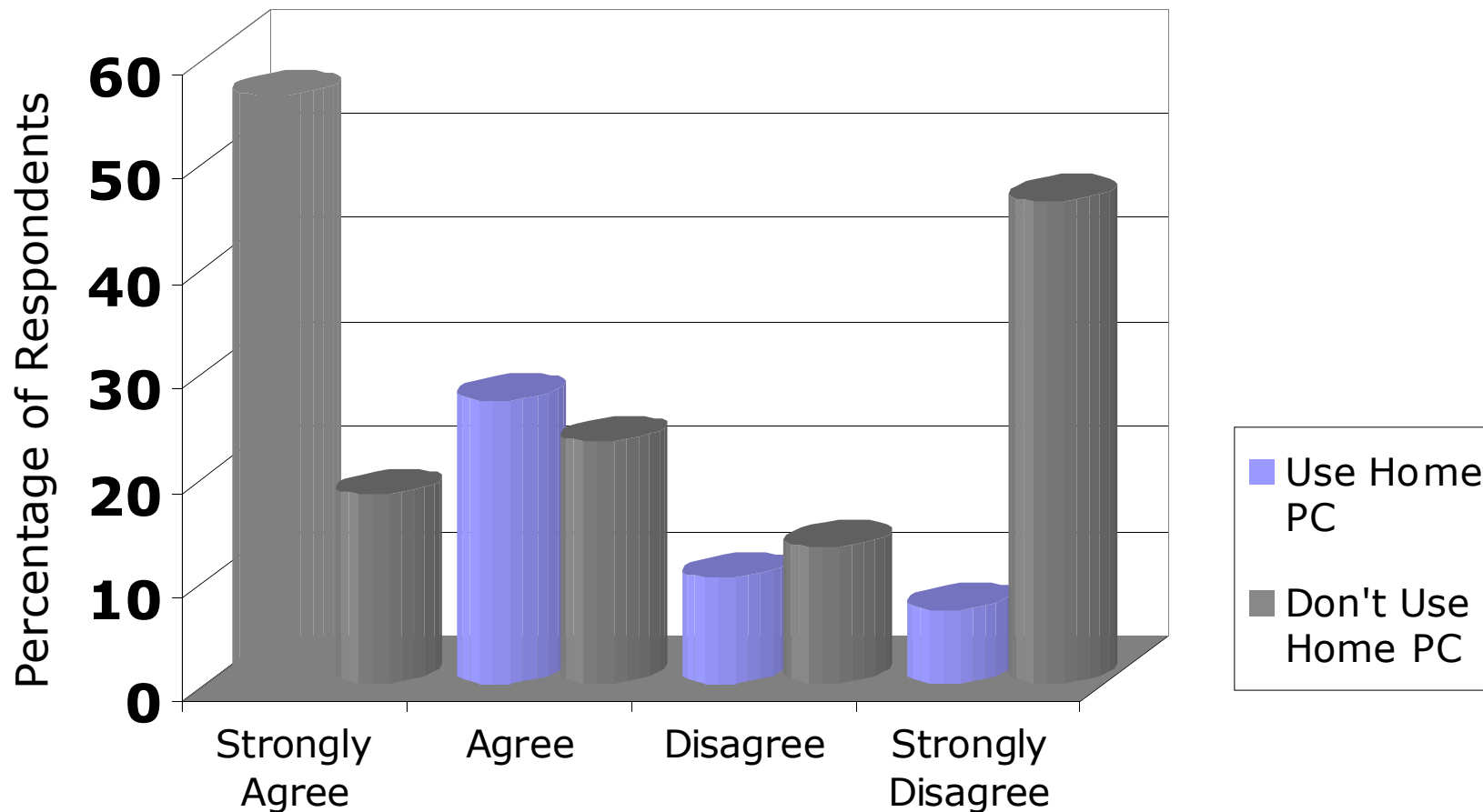
Communication

“With sufficient security and privacy, I would use this private web site to send a non-urgent question to my doctor’s office”.



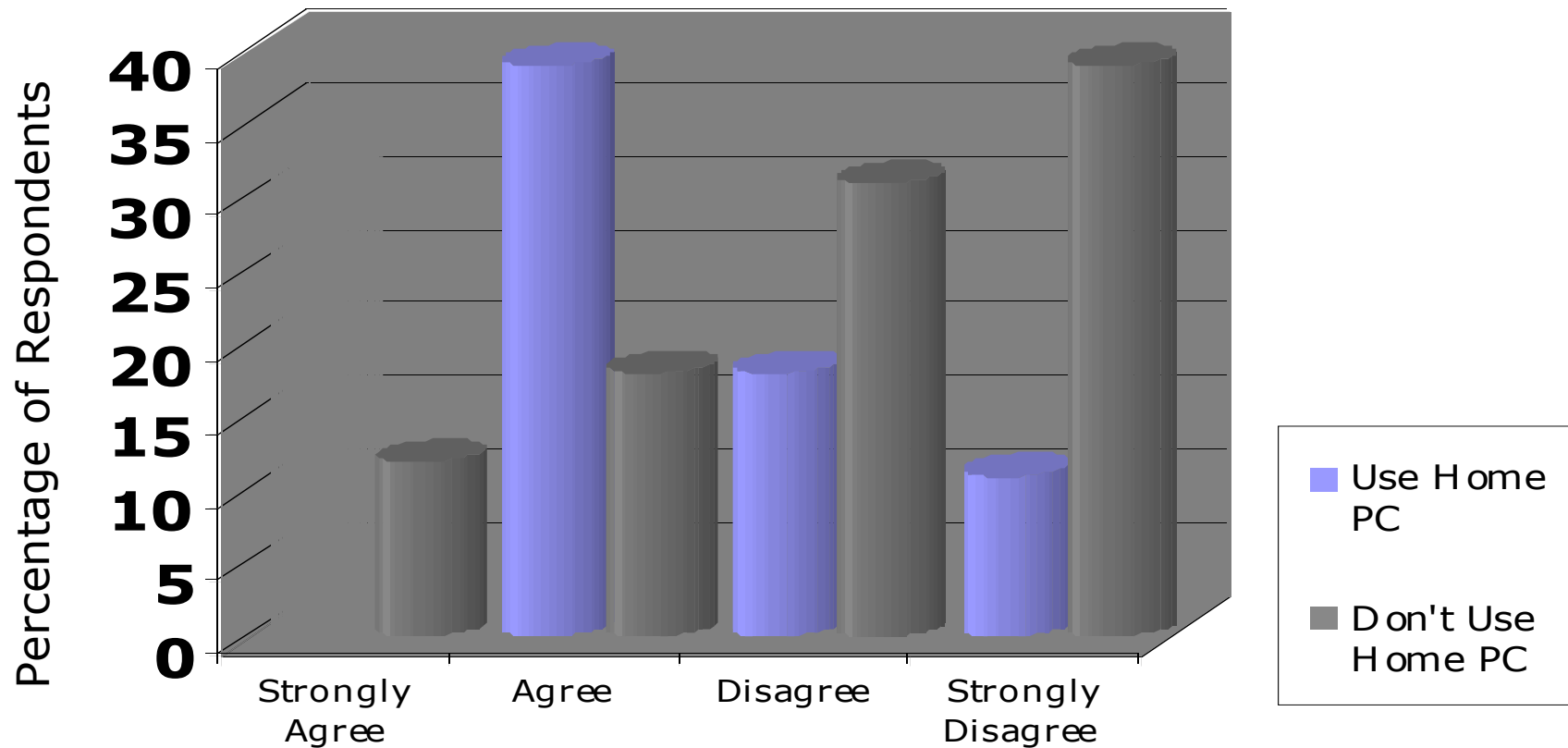
Prescriptions

“With sufficient security and privacy, I would use this private web site to request regular prescription refills”.



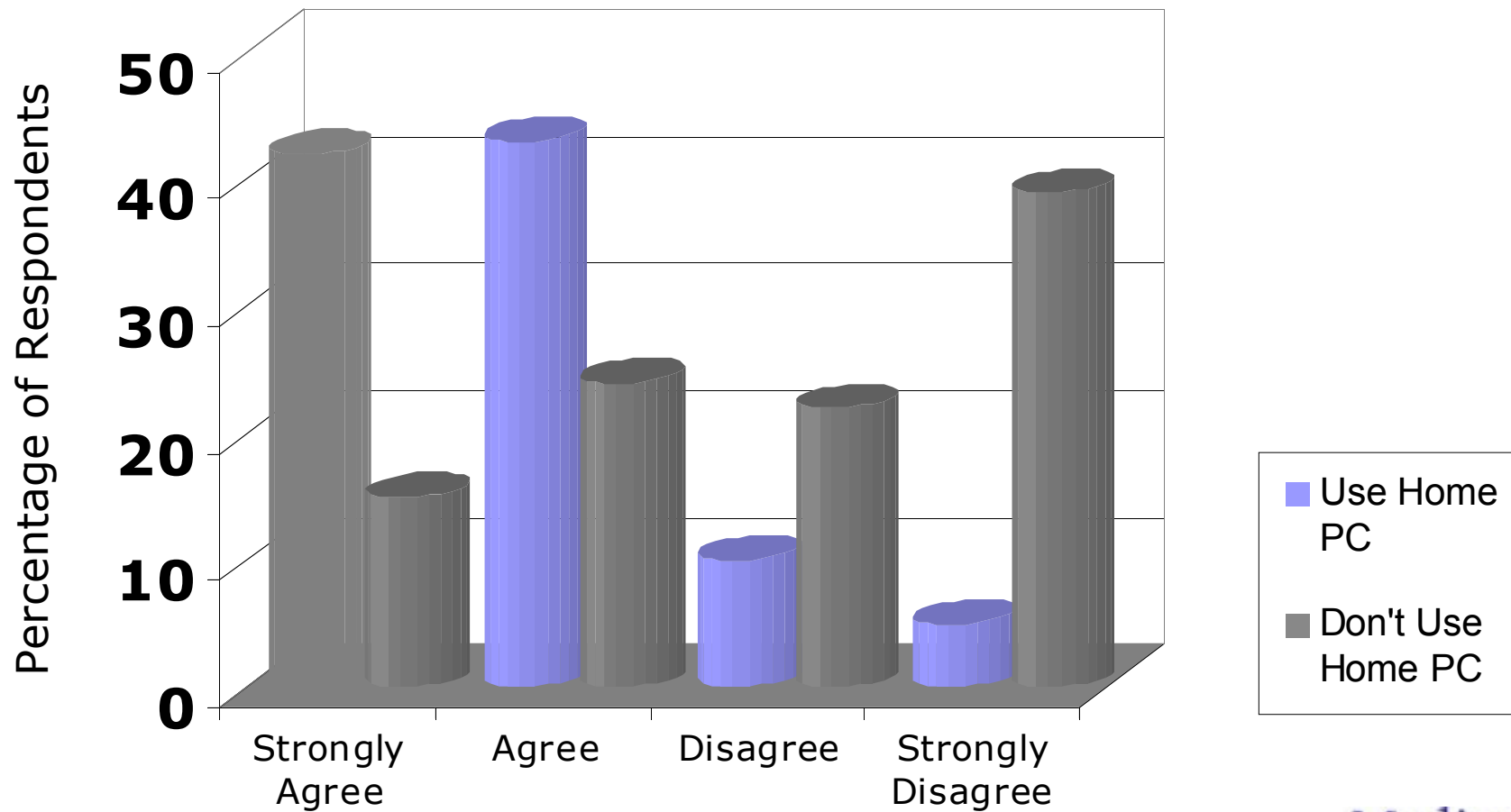
Privacy

“I would be comfortable with the privacy and confidentiality of my medical information”.



Managing Health

“A service like this would help me manage my health”.



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Oregon Management Council

November 2, 1999

Agenda

Financial Report

New Acquisitions Strategy

About My Health Status Report

*Mark Leavitt
Medicallogic*

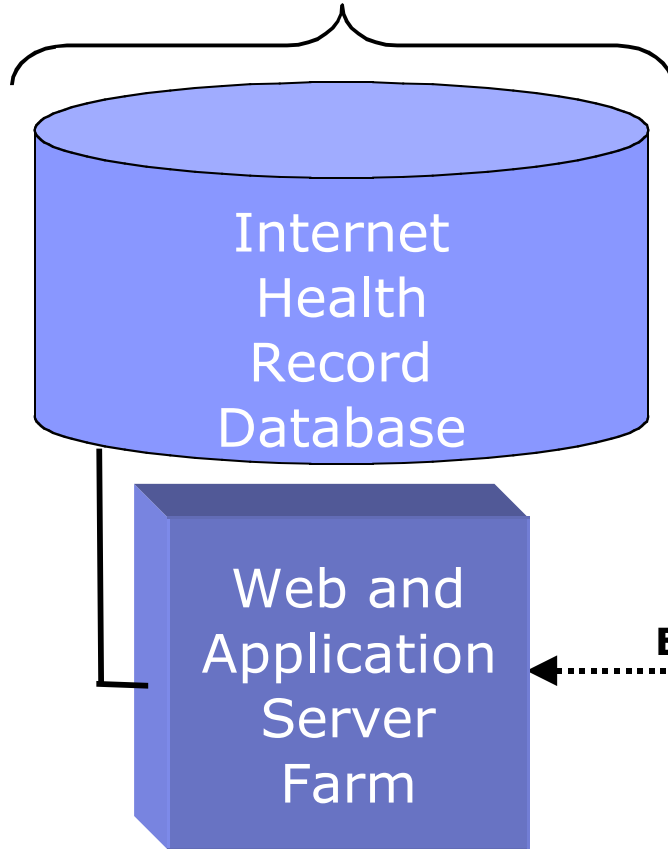
AboutMyHealth **Progress Report**

Presentation for Oregon Management Council,
Providence Health System
November 1999

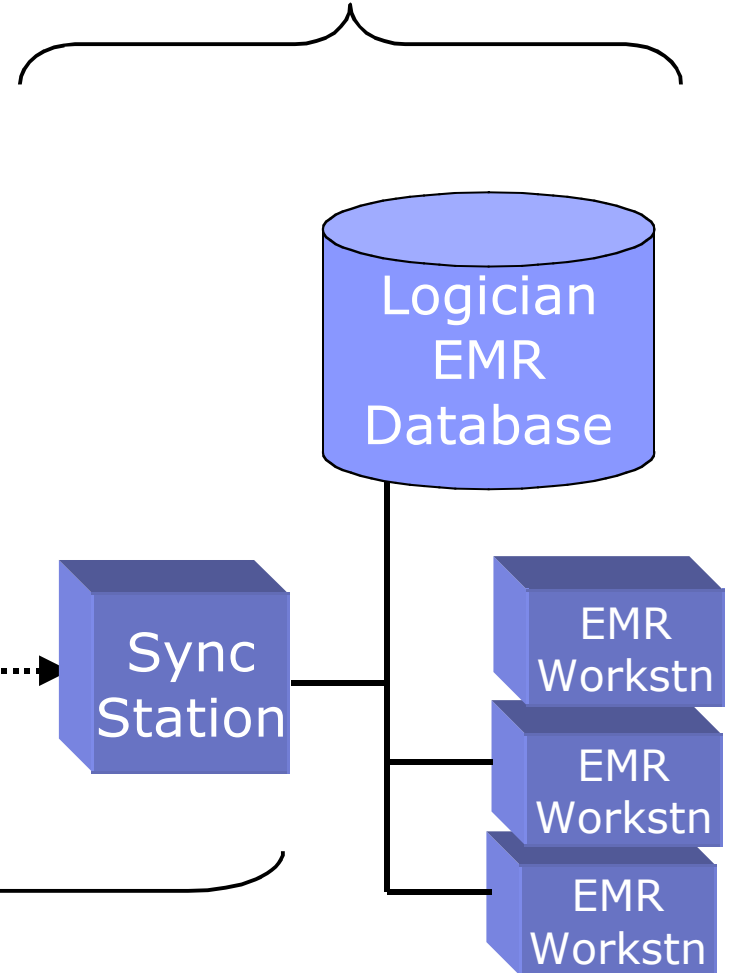
Mark Leavitt, MD, PhD - CEO, MedicaLogic

Architecture

San Francisco Data Center, MedicaLogic



Providence Health System, Portland



Encrypted VPN



Responsibility of MedicaLogic

Security

- **Patients must authorize on-line access in person at the office, with photo ID**
- **Only authorized records are transferred to our data center**
- **Access requires password and digital certificate**
- **Roving access (temporary certificate) via multiple-challenge questions**
- **128-bit encryption used throughout**
- **External audit and testing of security procedures**

Message Center

The screenshot shows a Netscape browser window with the address bar containing <http://www.aboutmyhealth.net>. The page title is "About My Health.net" and the user is logged in as "Judy S. Pullman" on "May 25, 1999". The page features a navigation bar with "Message Center", "Doctors & Charts", "Health News", and "Search". The "Message Center" section is active, displaying "Incoming messages:" with three entries:

Date	Message	Location	Actions
5/18/99	Appointment Confirmed	Southside Clinic	View Delete
5/15/99	Refill Request Confirmed	Southside Clinic	View Delete
5/18/99	Immunization Due	Southside Clinic	View Delete

Below the messages, there are sections for "Request an appointment with:" and "Request a refill for:". The appointment section lists three doctors: Harry S. Winston M.D. (Southside Clinic), Frederick P. Smith M.D. (Eastside Clinic), and Kelly Pitts M.D. (Southside Cardiology). The refill section lists medications: Proventil AERS 90 MCG/ACT (Dr. Winston, Southside Clinic), Beclovent AER 42MCG (Dr. Winston, Southside Clinic), Septra DS TABS 800-160 MG (Dr. Smith, Eastside Clinic), and Prednisone TAB 10MG (Dr. Pitts, Southside Cardiology). Each entry includes a "Request appointment" or "Request refill" link. At the bottom, there is a "Send a message to your doctor's office:" section with links for each of the three doctors.

Navigation links at the bottom include: [Message Center](#), [Doctors & Charts](#), [Health News](#), [Search](#), [Log in page](#), [Log out](#), [Preferences](#), [Help](#), [Feedback](#), and [Privacy Policy](#).

Chart Summary

The screenshot shows a Netscape browser window with the address bar at <http://www.aboutmyhealth.net>. The page title is "AboutMyHealth.net" and the user is identified as "Judy S. Pullman" on "May 25, 1999". The page features a navigation bar with "Message Center", "Doctors & Charts", "Health News", and "Search". Below this, the patient's name "Harry S. Winston M.D." and the clinic "Southside Clinic" are displayed, along with a "select a different chart" button.

Health Info

- My Medical Summary
- [Health Problems](#)
- [Medications List](#)
- [Allergies](#)
- [Height & Weight](#)
- [Blood Pressure](#)
- [Cholesterol](#)

Registration Info

- [Address & Phone](#)
- [Personal Contacts](#)
- [Pharmacy](#)
- [Employer](#)
- [Insurance](#)
- [Directives](#)
- [Who's Seen My Chart](#)
- [Future Appointments](#)
- [Printable Wallet Card](#)

My Medical Summary

Personal information
Judy S. Pullman
40 Magnolia Rd, Apt 125
Salem, WA 97007
Home phone : 503-299-7222
Day phone: 503-531-7568

Physician information
Harry S. Winston MD
10288 SW 43rd Ave
Portland, OR 97202
503-233-2233

Problems

- [Asthma](#)
- [Cervical Atypism](#), minor diagnosis
- [Acute Upper Respiratory Infection](#), minor diagnosis
- [Acute Sinusitis](#)

Medications

- [Proventil AERS 90 MCG/ACT](#)
2 puffs four times daily for shortness of breath
- [Beclovent AER 42MCG](#)
4 puffs twice daily
- [Prednisone TAB 10MG](#)
2 po twice daily 3d, 2 po once daily 4d, 1 po once daily 5d

Allergies
Aspirin
Erythromycin

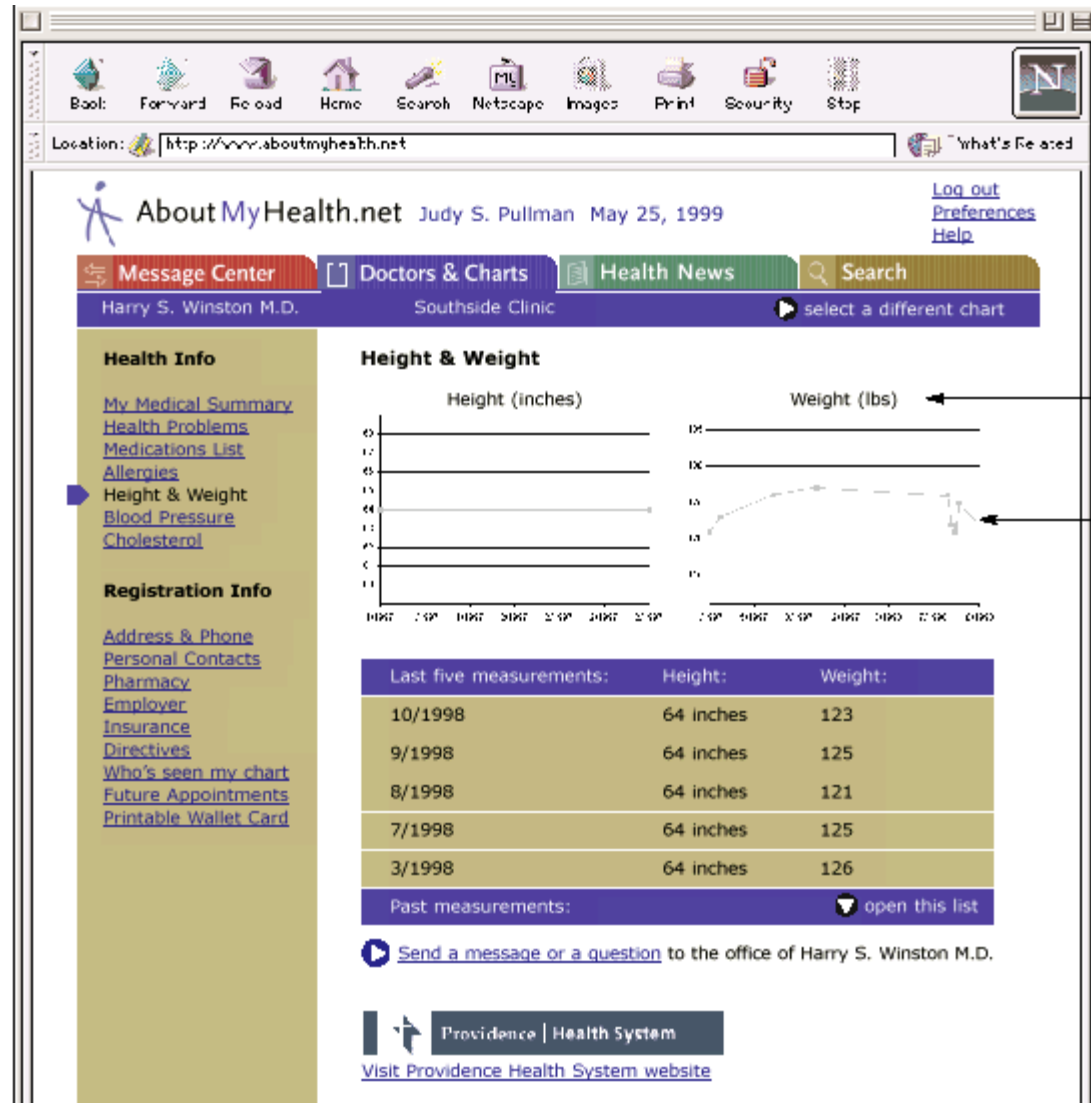
[Send a message or a question](#) to the office of Harry S. Winston M.D.

Providence | Health System
[Visit Providence Health System website](#)

Problems List

The screenshot shows a Netscape browser window displaying a patient's health record on the AboutMyHealth.net website. The browser's address bar shows the URL <http://www.aboutmyhealth.net>. The website header includes the site name, user name (Judy S. Pullman), and date (May 25, 1999). Navigation tabs for Message Center, Doctors & Charts, Health News, and Search are visible. The patient's name, Harry S. Winston M.D., and clinic, Southside Clinic, are displayed. A sidebar on the left contains links for Health Info (My Medical Summary, Health Problems, Medications List, Allergies, Height & Weight, Blood Pressure, Cholesterol) and Registration Info (Address & Phone, Personal Contacts, Pharmacy, Employer, Insurance, Directives, Who's Seen My Chart, Future Appointments, Printable Wallet Card). The main content area is titled 'Health Problems' and lists current health problems diagnosed at Southside Clinic: Asthma (diagnosis, recorded 4/25/1970), Cervical Atypism (minor diagnosis, recorded 1/12/1998), Acute Upper Respiratory Infection (minor diagnosis, recorded 11/15/1998), and Acute Sinusitis (diagnosis, recorded 12/15/1998). There is also a section for 'Past Health Problems on record' with an 'open this list' link. A button for 'Send a message or a question' is present. At the bottom, there is a link to the 'Providence | Health System' website. The footer contains additional navigation links: Message Center, Doctors & Charts, Health News, Search, Log in page, Log out, Preferences, Help, Feedback, and Privacy Policy.

Graphs



Wallet Card

Location: <http://www.aboutmyhealth.net>

About MyHealth.net Judy S. Pullman May 25, 1999 [Log out](#) [Preferences](#) [Help](#)

Message Center Doctors & Charts Health News Search

Harry S. Winston M.D. Southside Clinic select a different chart

Health Info

- [My Medical Summary](#)
- [Health Problems](#)
- [Medications List](#)
- [Allergies](#)
- [Height & Weight](#)
- [Blood Pressure](#)
- [Cholesterol](#)

Registration Info

- [Address & Phone](#)
- [Personal Contacts](#)
- [Pharmacy](#)
- [Employer](#)
- [Insurance](#)
- [Directives](#)
- [Who's Seen My Chart](#)
- [Future Appointments](#)
- [Printable Wallet Card](#)

Printable Wallet Card

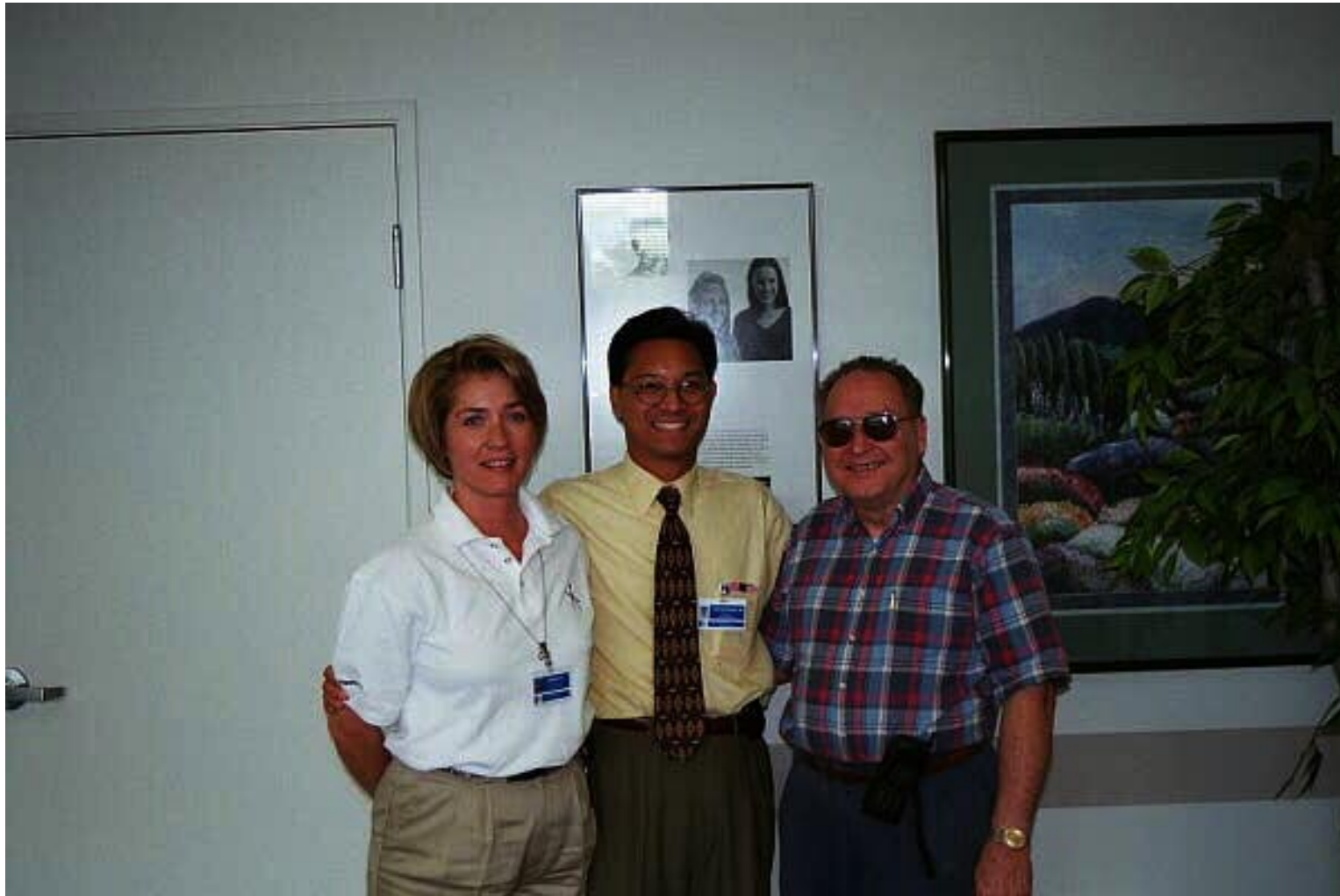
Print this card by pressing the PRINT button or selecting File>Print from your browser. Cut out the card along the outline. Fold it first along the horizontal line, then along the vertical line so your name and your physician's name shows on the outside, and the medical information is hidden within.

<p>Health Problems Asthma Cervical Atypism, minor diagnosis Acute Upper Respiratory Infection, minor diagnosis Acute Sinusitis</p> <p>Medications PROVENTIL AERS 90 MCG/ACT BECLOVENT AER 42MCG SEPTRA DS TABS 800-160 MG PREDNISONE TAB 10MG</p> <p>Allergies ASPIRIN ERYTHROMYCIN</p>	<p>Primary insurance coverage Providence Health Plan Contact: Betty Hill 825 NE Roosevelt, Portland, OR 97213 Primary phone: 503-239-5800 Fax: 503-239-5801 Group #: U014725836 Member #: 771424805 Plan: ZV Benefit code: 15DOV, R0115/50, HSP750ADM</p>
<p>About MyHealth.net</p> <p>Judy S. Pullman 40 Magnolia Rd, Salem, WA 97007 Home: 503-299-7222 Work: 503-531-7548</p> <p>www.aboutmyhealth.net</p>	<p>Physician Henry S. Winston MD Providence Southside Clinic 10288 SW 43rd Ave, Portland, OR 97202 503-233-2233</p> <p>Emergency Contact</p> <p>_____</p> <p>_____</p> <p>_____</p>

[Send a message or a question](#) to the office of Harry S. Winston M.D.

Providence | Health System
[Visit Providence Health System website](#)

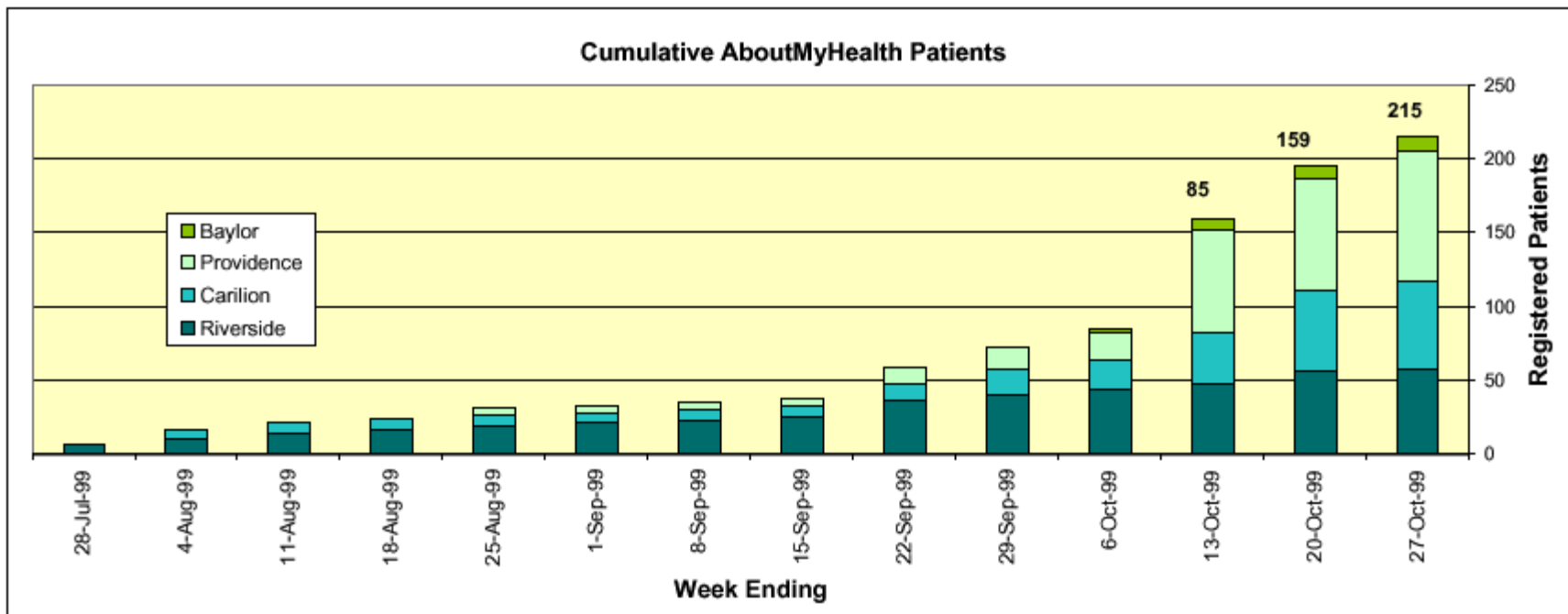
First Sign-Up



It's in your court now...

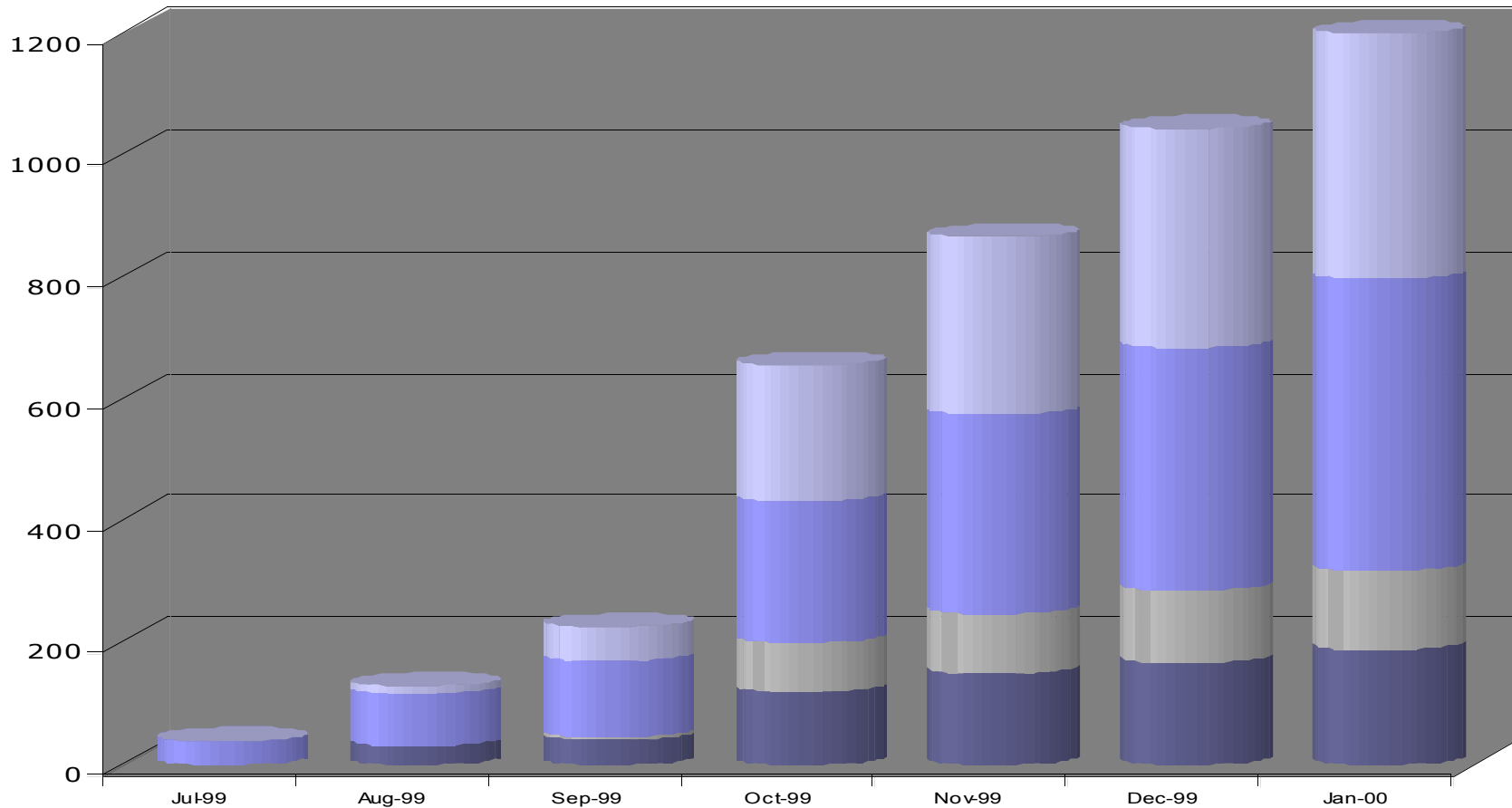
Sign-Up Trend

7/99-10/99



Cumulative Logins by Month

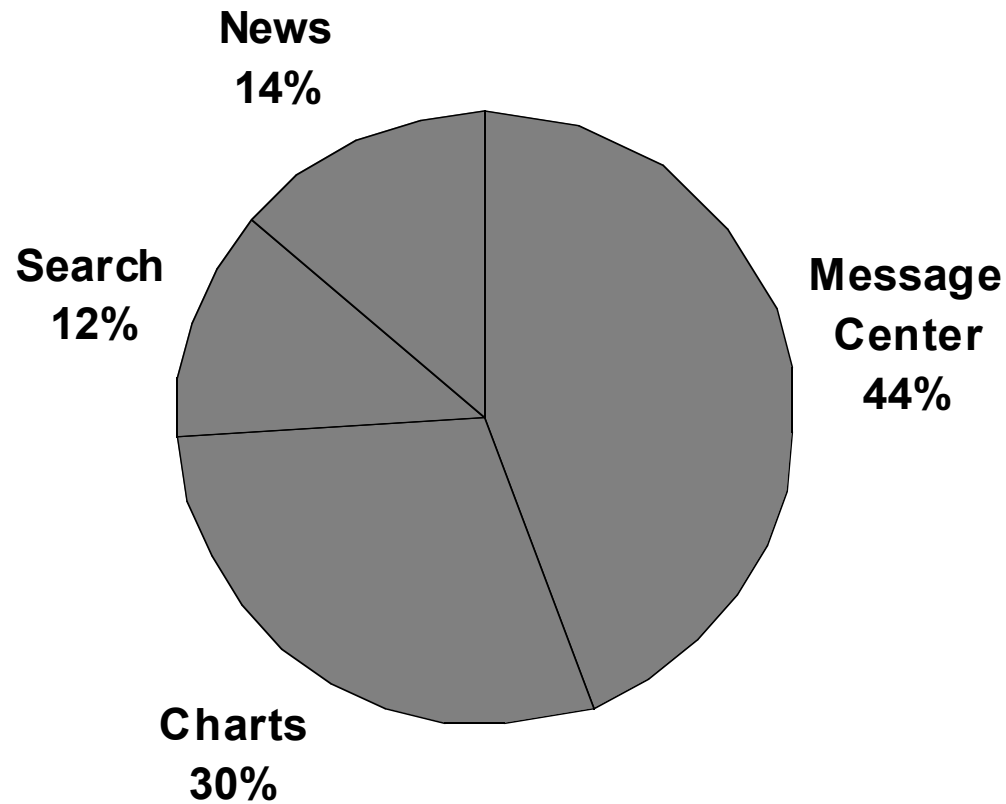
7/99-1/00



Legend

- Providence Family Practice - Wilsonville
- Riverside Hilton Family Practice
- Christianburg Family Practice Clinic
- Baylor Family Practice Center

Distribution of Page Views



Message Distribution

7/99-1/00

