

Developing an Evaluation Plan for MedlinePlus Connect

NN/LM MAR
Regional Advisory Committee
March 24, 2011

Diane Hauser, MPA
Institute for Family Health

Maxine L. Rockoff, PhD
Department of Biomedical Informatics
Columbia University

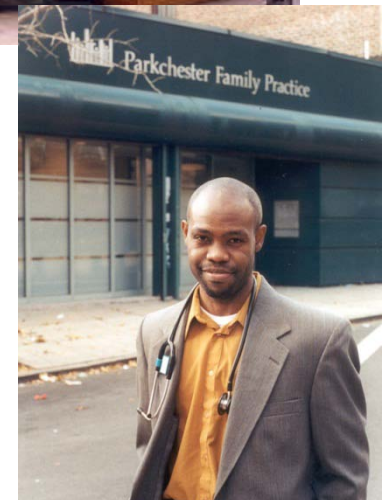


Overview

- Background on The Institute for Family Health
- *MyChart MyHealth* Patient Portal
- *MyChart MyHealth* Research Program
- Why MedlinePlus Connect?
- Plans for MedlinePlus Connect Evaluation

The Institute for Family Health

- 17 full-time Federally Qualified Health Center (FQHC) Sites
 - 2 School based health programs
 - 4 Dental centers
 - 2 Mental health centers
 - 2 Free clinics
- 8 Homeless healthcare sites
- 2 Family Medicine Residency Programs
- >300,000 patient visits
- 90,000 unique patients
- ₃ 14% uninsured, 44% publicly insured



Implemented Epic EHR and practice management system in September 2002



MyChart-MyHealth Patient Portal



Technical Assistance
mychart@institute2000.org
800.444.6107 • Hablamos Español



THE INSTITUTE FOR FAMILY HEALTH

NEW  **MyChart MyHealth Mobile App Now Available!**  **NEW**
[Learn More](#)

Welcome to...
MyChart MyHealth

- Communicate with your doctor
- Access your test results
- Request prescription renewals
- View your recent clinic visits

NUEVO [Mi Record Mi Salud En Español!](#)

Your secure, online health connection

Your health is important to you around the clock—not just during office hours. That's why The Institute for Family Health offers MyChart, MyHealth. With this Internet connection to your doctor's office, you can schedule appointments, request prescription refills, review your health history and more—online, any time!

Urgent Medical Matters

Please do not use MyChart, MyHealth to send any messages requiring urgent attention. For urgent medical matters, call 911 right away.

[En Español](#) [Change Size](#) **+**

MyChartMyHealth ID

[Forgot MyChartMyHealth ID?](#)

Password

[Forgot Password?](#)

Sign In

MyChart © Epic Systems Corporation

New User?
[Sign Up Now](#)

Learn More...

- [FAQ*](#)
- [Privacy Policy](#)
- [Terms and Conditions](#)

*Frequently Asked Questions

MyChart® licensed from Epic Systems Corporation, © 1999-2009. Patents pending.


English 2008

Spanish 2011

With *MyChart MyHealth* Patients Can:

- See recommended preventive care procedures
- Review and print health record information
 - Problems, lab test results, meds, allergies, past visits...
- Request prescription refills
- Send & receive messages to/from their health center
- Schedule appointments
- Review bills and insurance
- Update demographic information
- Link to health information resources

With *MyChart MyHealth* Patients Can:

- See recommended preventive care procedures
- Review and print health record information
 - Problems, lab test results, meds, allergies, past visits...
- Request prescription refills
- Send & receive messages to/from their health center
- Schedule appointments
- Review bills and insurance
- Update demographic information
- **Link to health information resources** 

MyChart Research Program

Pre Implementation – Find & Fix Barriers

- Focus Groups
- Health IT Readiness Survey
- Usability Studies


Post Implementation – Improve

- Survey of Providers & Staff
- Statistical Analyses
- Survey of “Users” and “Non-users”

Some Focus Group Findings

- Enthusiasm
- Excited about MyChart's convenience
- Concerns about self-efficacy
- Don't want MyChart to be a communication barrier
- Less than expected concerns about privacy and confidentiality
- Concern if test results released w/o discussion
- Current Internet users for health information - but:
 - Overwhelmed by amount available
 - Want information approved by their doctor

Some Focus Group Findings

- Enthusiasm
 - Excited about MyChart's convenience
 - Concerns about self-efficacy
 - Don't want MyChart to be a communication barrier
 - Less than expected concerns about privacy and confidentiality
 - Concern if test results released w/o discussion
 - **Current Internet users for health information - but:**
 - Overwhelmed by amount available
 - Want information approved by their doctor
- 


Usability Testing

- Patients are confused by test results



MEASLES ANTIBODIES, IGG



 [About This Test](#)

Comments from the Doctor's Office

The positive antibody test result means that you are immune to XXX.

This is a good result because it means that you have had the vaccine in the past and can no longer get the infection.

Do I have Measles?

Component Results

Component	Your Value	Standard Range	Units
MEASLES (RUBEOLA), IGG	2.12	0.00 - 0.91	

Usability Testing

- Patients want to understand

The screenshot shows a patient portal interface. At the top, there is a green header with the 'MyChart MyHealth' logo, technical assistance contact information (mychart@institute2000.org, 212.206.5260), and 'THE INSTITUTE FOR FAMILY HEALTH' logo. Below the header, there are navigation buttons for '- Change Size +', 'Home', and 'Log Out'. On the left, a sidebar menu lists various medical record options. The main content area is titled 'Medications' with a pill icon. It contains instructions to click on 'About This Medication' and a link to request a refill. Two medication entries are shown: 'HYDROCHLOROTHIAZIDE 25 MG TAB' and 'LISINOPRIL 10 MG TAB'. A red speech bubble points to the 'About This Medication' link for the first medication, containing the text 'Why am I taking this medication?'.

MyChart MyHealth
Technical Assistance
mychart@institute2000.org
212.206.5260 • Hablamos Español
THE INSTITUTE FOR FAMILY HEALTH

- Change Size + Home Log Out

Welcome, Mercedes Patient!

Medications

Click on **About This Medication** to see more about the medication.

If you have no refills left for a prescription, you may want to [request a renewal](#).

R_x HYDROCHLOROTHIAZIDE 25 MG TAB
[About This Medication](#)
Instructions: One tab daily
Prescribed by [RUTH LESNEWSKI, MD](#) on 9/5/2010
[Request a refill](#)

R_x LISINOPRIL 10 MG TAB
[About This Medication](#)

Why am I taking this medication?

▼ My Medical Record
Health summary
Test results
Medications
Allergies
Vaccines
Preventive care
Medical history
Current health issues
Health trends
Track my health
Wallet card

Original link-out result for Metformin



Health Reference Library

Search Results for *METFORMIN HCL 500 MG OR TABS*

[BUPIVACAINE HYDROCHLORIDE, INJECTION](#)

[BUPIVACAINE HYDROCHLORIDE/EPINEPHRINE, INJECTION](#)

[DEXTROMETHORPHAN/CHLORPHENIRAMINE/PSEUDOEPHEDRINE, ORAL](#)

[DOXYCYCLINE, ORAL](#)

[EPINEPHRINE/LIDOCAINE, INJECTION](#)

[GLIPIZIDE/METFORMIN, ORAL](#)

[GLYBURIDE/METFORMIN HYDROCHLORIDE, ORAL](#)

[GUAIFENESIN/DEXTROMETHORPHAN, ORAL](#)

[GUAIFENESIN/EPHEDRINE, ORAL](#)

[METFORMIN HYDROCHLORIDE, ORAL](#)

[METHENAMINE, ORAL](#)

[PIOGLITAZONE/METFORMIN, ORAL](#)

[PRENATAL VITAMINS, ORAL](#)

[ROSIGLITAZONE/METFORMIN, ORAL](#)

[SULFASALAZINE, ORAL](#)

[VANCOMYCIN, ORAL](#)

[VARDENAFIL HCL, ORAL](#)

[VERAPAMIL, ORAL/INJECTION](#)

[Back to the Previous Page](#)

Why MedlinePlus Connect?

- Patients are confused by what they see in their records and want to understand
- Patients want information vetted by their doctor
- Licenses with commercial health information providers cost thousands of dollars
- 1,250 Federally Qualified Health Centers (FQHCs) provide care to 20 million low-income people

Therefore:

- Reached out to NLM in February 2008
- MedlinePlus Connect launched in November 2010

Demonstration:

MyChart MyHealth

MiRecord MiSalud

MedlinePlus Connect

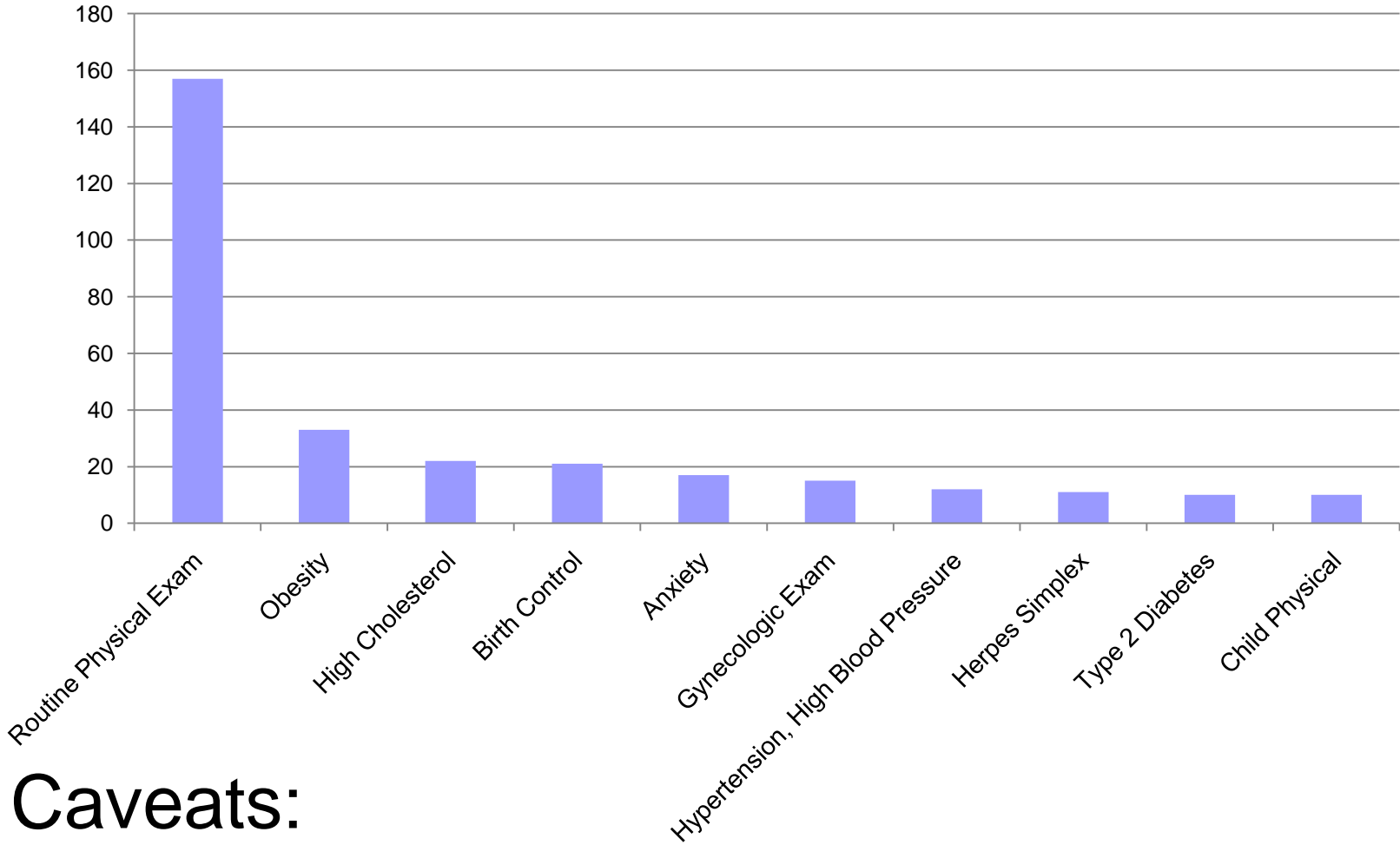
Statistical Analyses with Demographic Data

- Of patients who received access codes for *MyChart My Health*:
 - 51% white (40% overall)
 - 60% private insurance (38% overall)
- **Policy change: from “opt-in” to “opt-out”**

Most frequently used functions:

- 1) Test results: 228,000 hits, 9,100 unique users
- 2) Appt scheduling: 128,000 hits, 4,600 unique users
3,700 have "writes" (i.e., actually scheduled appts)
- 3) Medications: 47,000 hits, 6,600 unique users
- 4) Problem lists: 56,000 hits, 8,800 unique users
- 5) Immunizations: 58,500 hits, 8,900 unique users

Top MedlinePlus Connect Hits from *MyChart*



■ Caveats:

- Very preliminary data

- “Test Results” not yet implemented

Comparison of IFH Hits With All MedlinePlus Hits

Highlighted terms are on the MyChart “Top Ten”

Search Cloud

achondroplasia adderall adhd alt amlodipine amoxicillin anemia appendicitis
arthritis aspirin ast **asthma** autism bipolar blood pressure breast cancer bronchitis bun
calcium cancer celexa cellulitis **cholelithiasis** **cholesterol** citalopram colonoscopy
congestive heart failure copd coumadin craniosynostosis creatinine crestor cymbalta
cystic fibrosis dementia **depression** **diabetes** digoxin diverticulitis diverticulosis down syndrome
emphysema **fibromyalgia** folic acid gabapentin gerd **gout** hemoglobin hemorrhoids
hepatitis c **herpes** **high blood pressure** hiv **hypertension** hypothyroidism inr leukemia
lisinopril liver lorazepam lung cancer **lupus** lymphoma magnesium malaria
meningitis metformin metoprolol mrsa **multiple sclerosis**
myelomeningocele **myonecrosis** niacin **obesity** ocd omeprazole
osteoporosis pancreatitis **pneumonia** **potassium** potassium iodide
prednisone rheumatoid arthritis schizophrenia seroquel **shingles**
simvastatin sodium strep throat stroke thyroid tramadol trazodone triglycerides tuberculosis
vitamin c **vitamin d** vitamin e warfarin zinc

Four “IFH Top Hits” not “MedlinePlus Top Hits”:

- Routine Physical Exam
 - [Created based on IFH data!]
- Birth Control
- Gynecologic Exam
- Child Physical Exam
- Same caveats:
 - Preliminary data
 - “Test Results” not implemented yet

But note: all of these are “well” issues!

MedlinePlus Connect

Evaluation Plans

- Usability studies
- Analysis of usage
 - Demographics
 - Health issues
 - Etc.
- “User” and “Non-user” surveys
 - Impact on “self efficacy”
 - Changes in provider/patient relationships
 - Health outcomes
 - Etc.

Collaborators (non NLM, non Epic)

- **Jessica S. Ancker**, MPH, PhD, Weill Cornell Medical College
- **Geysil Arroyo**, MPH, Institute for Family Health & Columbia Univ.
- **Suzanne Bakken**, RN, DNSc, FAAN, Columbia Univ., DBMI
- **Yolanda Barron**, MS, Weill Cornell Medical College
- **Neil Calman**, MD, Institute for Family Health
- **Kathy Cresswell**, Institute for Family Health
- **Sara J. Czaja**, PhD, University of Miami
- **Hilary Frankel**, HealthCorps Volunteer, Institute for Family Health
- **Darcy Hamill**, HealthCorps Volunteer, Institute for Family Health
- **Diane Hauser**, MPA , Institute for Family Health
- **Ruth Lesnewski**, MD, Institute for Family Health
- **Joe Lurio**, MD, Institute for Family Health
- **Michelle Pichardo**, MPH, Institute for Family Health
- **Maxine L. Rockoff**, PhD, Columbia Univ., DBMI
- **Christian Sanchez**, Institute for Family Health
- **Adam Szerencsy**, DO, NYU Langone Medical Center
- **Christina Zarcadoolas**, PhD, Mt. Sinai School of Medicine
- **Funding:** HRSA, Altman Foundation; NN/LM MAR

Questions?

Diane Hauser dhauser@institute2000.org

Maxine.Rockoff@dbmi.columbia.edu

[P.S. IFH is working with Columbia University's Health Sciences Library on FQHC Literature Access –

See Brochure on 10 classes being given by webinar]