

RHIOs - The Primary Vehicle for Achieving the National Health Information Network (NHIN)

*Adopting and Adapting National Standards to Meet the
Needs of the Local and Regional Health Communities*



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(NCHICA)



Presentation Outline

- **The Objective – The NHIN**
- **Emerging Models for Connected Communities**
- **Key Factors in Building Your Local Health Information Network**
- **NC Activities & Lessons Learned**
- **The Drawing Board for North Carolina:**
 - NC Healthcare Quality Initiative
- **The National Drawing Board**
- **Q & A**

The National Health Information Network (NHIN)



**The Decade of Health Information Technology:
Delivering Consumer-centric
and Information-rich Health Care**

Framework for Strategic Action

July 21, 2004

Tommy G. Thompson
Secretary of Health and Human Services

David J. Brailer, MD, PhD
National Coordinator for Health Information Technology

Framework for Strategic Action

- Inform clinical practice with use of EHRs
- Interconnect clinicians
- Personalize care with consumer-based health records and better information for consumers
- Improve public health through advanced biosurveillance methods and streamlined collection of data for quality measurement and research

Emerging Models for Connected Communities

“Connected Communities”

- Connected Community (RHIO or RHIN)
 - A collaborative, consumer-centric collaboration or organization focused on facilitating the coordination of existing and proposed e-health initiatives within a region, state, or other designated local area.
 - Goal is for Connected Communities to adopt and implement standards-based solutions that eventually will link into the envisioned National Health Information Network (**NHIN**).

Quiz

Q. What happens when one crosses a **RHIO** (Regional Health Information Organization) with a **RHIN** (Regional Health Information Network)?

A.

PICTURE

Types of Connected Communities

- Federations

- Includes large, “self-sufficient” enterprises
- Agreement to network, share, allow access to information they maintain on peer to peer basis
- May develop system of indexing and/or locating data (e.g., state or region-wide MPI)
- In NC (Triangle, Triad, Charlotte Metro)

Types of Connected Communities (cont.)

- Co-ops

- Includes mostly smaller enterprises
- Agreement to pool resources and create a combined, common data repository
- May share technology and administrative overhead
- In NC (Western NC, Eastern NC, other)

Types of Connected Communities (cont.)

- Hybrids

- Includes combinations of Federations and Co-ops
- Agreement to network, share, allow access to information they maintain on peer to peer basis
- Allows aggregation across large areas (statewide or regional)
- In NC (Hybrid probably necessary for Statewide initiatives)

Organizational Structure

- **501(c)(3) Nonprofit**
 - Eligible for Federal and State Grants
 - Contributions may be tax deductible as charitable
- **Issues:**
 - Limit of ~20% - 40% on income from “unrelated business” activities (i.e. not charitable and educational)
 - May need to subcontract or otherwise handoff operational aspects of activities

Management of Connected Communities

VIDEO CLIP

Key Factors in Building Our NC Local Health Information Network

Challenges to Broader Exchange of Information

- **Business / Policy Issues**

- Competition
- Internal policies
- Consumer privacy concerns / transparency
- Uncertainties regarding liability
- Difficulty in reaching multi-enterprise agreements for exchanging information
- Economic factors and incentives

- **Technical / Security Issues**

- interoperability among multiple parties
- Authentication
- Auditability

Security Challenges

- **The anticipated:**

- Authentication
 - Maintenance of List of Authorized Individuals
- Secure Communications
 - Method of encryption / decryption
- Risk Assessment / Analysis for Community
 - Coordinating Investigation, Response, Mitigation
- Vendor Interpretation of Standards

- **The unanticipated:**

- Changes in Technology
- Changes in Membership of Community Effort

Security Case - Wireless

Alleged Holly Springs Hacker Wanted To Show Flaws In Security *Clayton Dillard Accused Of Unlawfully Accessing Hospital Computer System*

POSTED: 11:06 a.m. EDT September 9, 2003

RALEIGH, N.C. -- A Holly Springs man is in trouble after being accused of hacking into a medical office's wireless computer network.



Clayton Dillard is accused of hacking into a hospital computer system and accessing information of hundreds of patients.

Raleigh police said Clayton Taylor Dillard, a 29-year-old information security consultant, is charged with one felony count of computer trespass, one felony count of unlawful computer access and one misdemeanor count of computer trespass. They said the charges against Dillard resulted from an intrusion that occurred to a wireless computer network at Wake Internal Medicine Consultants Inc. After Dillard accessed the information, he contacted patients and insurance companies. He also wrote WRAL a letter, stating, "These guys are a bunch of bozos." **He also mailed WRAL copies of checks and insurance forms with patient names and procedures.**

<http://www.wral.com/news>

HIPAA as Enabler

HIPAA Privacy and Security Regulations provide a baseline of standards that permit the diffusion of electronic health records capabilities and the appropriate exchange of information.

PICTURE

Examples of Collaborative Activities and Challenges Incurred

NCHICA Background

- Established in 1994 by Executive Order of Governor
- 501(c)(3) nonprofit - research & education
- Mission: *Improve healthcare in NC by accelerating the adoption of information technology*
- 240 members including:
 - Providers
 - Health Plans
 - Clearinghouses
 - State & Federal Government Agencies
 - Professional Associations and Societies
 - Research Organizations
 - Vendors and Consultants

Successes and Challenges Raised in NCHICA Projects

Statewide Master Person Index

- **1994 Goal:**
 - Develop Voluntary Patient Information Locator (VPIL) so that records could be accessed for care
- **Business / Policy:**
 - Shared “customer lists”
- **Legal:**
 - Privacy & Liability
 - No State or Federal Laws covering electronic health info
- **Consumer:**
 - Privacy
- **Technical:**
 - Availability of standardized MPIs from all providers and sectors
 - Synchronizing databases
 - Standards for data

Statewide Master Person Index

- **Lessons Learned:**
 - Technology is the easy part
 - Business and Policy Considerations are much harder and “Show Stoppers”
 - Develop clinical leadership for project with technologists in support role

HIPAA Efforts

- **1995-1999 Privacy & Confidentiality Focus Group**
 - Model Privacy Legislation
- **1998-2003 HIPAA Implementation Planning Task Force**
- **1998-Present**
 - Privacy Work Group
 - Security Work Group
 - Transactions, Code Sets and Identifiers Work Group
 - Privacy & Security Officials Work Group
- **Deliverables: Compliance tools, model documents, education and training programs**
 - and, method of **building community consensus**

Statewide Immunization Registry

- **1998 Goal:**
 - Combined registry of public and private children's immunization records from multiple sources available via secure Internet
- **Business / Policy:**
 - Internet access to public health database
- **Legal:**
 - Privacy and Security
 - Non-stigmatizing data
- **Consumer:**
 - Well understood need
- **Technical:**
 - Move from mainframe to server with SSL Web technology and authentication
 - Data quality and matching entries from different sources
 - User Identification and Authentication



Statewide Immunization Registry Status

- **Combined Database**
 - Public Health
 - BCBSNC
 - Kaiser Permanente (historical)
- **~ 2M Children**
- **~ 20M doses**
- **425 sites; 2250 authenticated users**
 - 90 Local Public Health Departments
 - 335 Private Providers, Schools, State of TN

New Statewide Immunization Registry

North Carolina Immunization Registry .. [View Client Schedule] - M

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Print

Address <https://207.192.49.171/uat-ir/viewClientSchedule.do?pClientId=4155946&pEditMode=1> Go Links



UAT Region 5.1.0

System Monitoring

- manage exceptions
- check report status
- show users

Organizations

- manage roles
- switch organizations
- manage organizations

Data Exchange

- exchange data
- check status
- manage data exchange
- vital data exchange
- job monitor
- view tdglite log
- view tdg log
- submit hmo data
- submit hmo query
- copy exchange data
- copy hmo data
- copy vital data

Maintenance

- manage users
- manage schools

Client Information

Client Name (First - MI - Last)	DOB	Gender	Mother's Maiden	Tracking Schedule	Chart #
THOMAS COLDWELL	12/23/2003	U		ACIP	

Address

Comments

History

Add Immunization

Edit Client

Reports

Print

Print Confidential

Vaccine Group	Date Administered	Series	Trade Name	Dose	Owned?	Reaction	Hist?	Edit
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This client has no immunizations associated with it.

Current Age: 1 year, 1 month, 11 days

Vaccines Recommended by Selected Tracking Schedule

Add Selected

Select	Vaccine Group	Earliest Date	Recommended Date	Overdue Date	Latest Date
<input checked="" type="checkbox"/>	DTP/aP	02/03/2004	02/23/2004	03/23/2004	12/22/2010
<input checked="" type="checkbox"/>	HepB	12/23/2003	12/23/2003	03/23/2004	
<input checked="" type="checkbox"/>	Hib	02/03/2004	02/23/2004	03/23/2004	12/22/2008
<input checked="" type="checkbox"/>	MMR	12/23/2004	12/23/2004	04/23/2005	
<input checked="" type="checkbox"/>	Pneumococcal	02/03/2004	02/23/2004	03/23/2004	12/22/2008
<input checked="" type="checkbox"/>	Polio	02/03/2004	02/23/2004	03/23/2004	
<input checked="" type="checkbox"/>	Varicella	12/23/2004	12/23/2004	07/23/2005	12/22/2016

Statewide Immunization Registry

- **Lessons Learned:**

- Choose project with clear benefits
- Enlist Clinical and CEO-level champions
- Share the load
- Celebrate success
- Probabilistic matching can provide reasonable identification of individuals
- PKI is not like falling off a log
- Proof is in the utility of the project and user demand for sustaining it past pilot stage

Statewide Emergency Dept. Database

- **1999 Goal:**
 - Standardize and electronically collect clinical data from emergency departments for:
 - Best Practice Development & Community Assessments
 - Public Health Surveillance (2001)
- **Business / Policy:**
 - Participation Agreement covering access and use of data
- **Legal:**
 - Privacy and Security
 - No state mandate for collection of certain data elements with identifiers (Limited Data Set and Data Use Agreement)
- **Consumer:**
 - Collected and transmitted to aggregation point as deidentified data
- **Technical**
 - Standards for data elements (CDC's DEEDS Standard)
 - Mapping of systems so extracts could be transformed into DEEDS
 - No standards for coding of Chief Complaint and First Report of Injury



Statewide Emergency Dept. Database

- **Lessons Learned:**

- Provide neutral table for collaboration
- Make it easy for IT Departments to provide data
- Keep it simple and cheap
- Expect new opportunities for data use
- Professional associations are better at policy issues than technology implementation
- While HIPAA is permissive, providing information voluntarily (e.g. without safe harbor) makes legal counsel very uncomfortable

North Carolina Healthcare Quality Initiative

Medications Management Project

Improving Healthcare in North Carolina by Accelerating the Adoption of Information Technology

NC Healthcare Quality Initiative

- **Phase I**

- Medication history compiled from multiple sources
- Automate refills
- Access to formularies
- e-Rx

- **Phase II**

- Electronic Laboratory orders and results
- Electronic Radiology orders and results

- **Phase III**

- Broad deployment of EHRs

NC Healthcare Quality Initiative

- **Business / Policy:**

- Access to data from health plans, PBMs, pharmacies and other providers
- Cost of operation; Sustainability

- **Legal:**

- Privacy and Security (limit use to Treatment)
- Rights to data
- Liability

- **Consumer:**

- Who has been looking for and at my information?
- Drugs for behavioral health, communicable diseases, etc.

- **Technical**

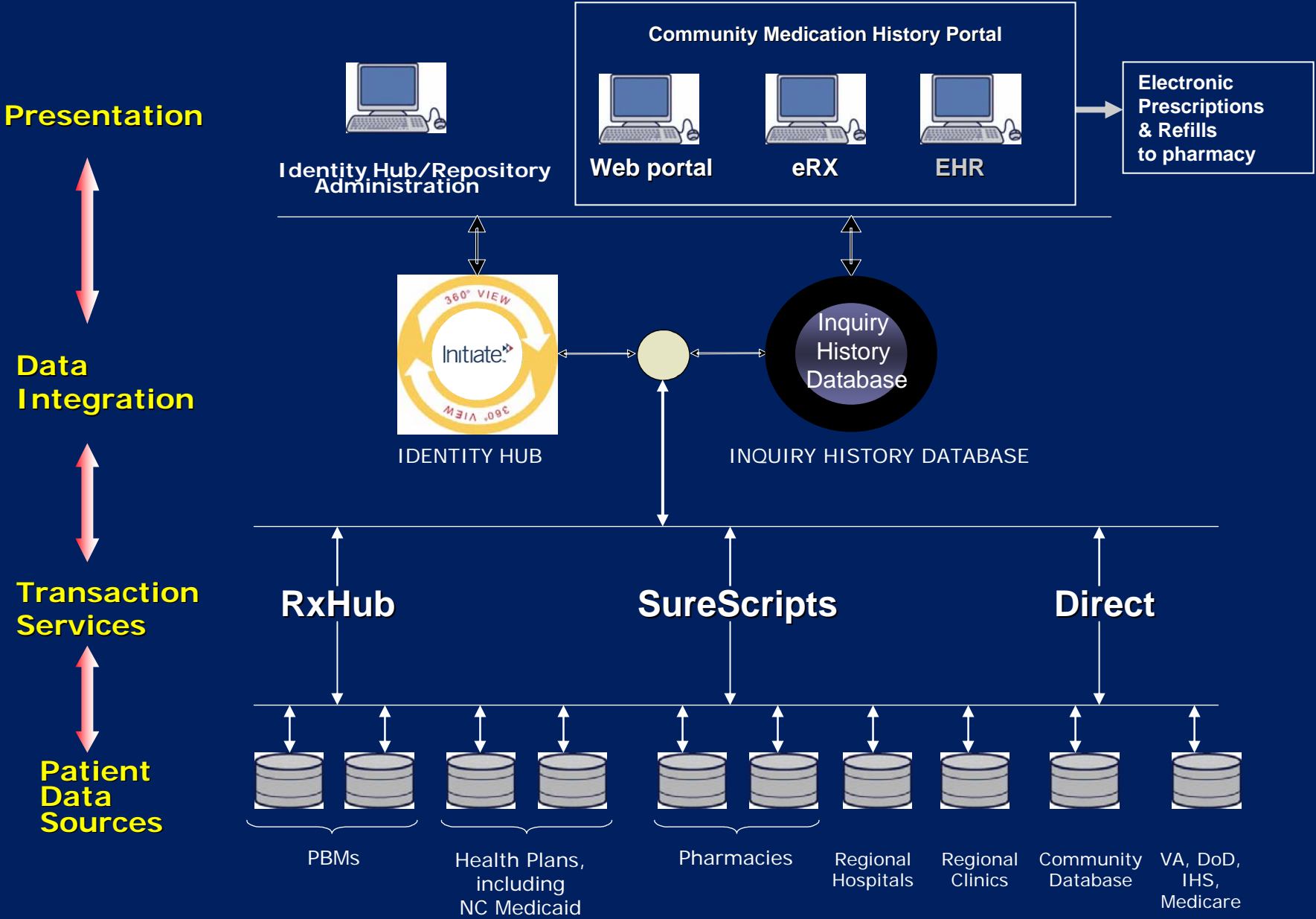
- Accessing records from multiple sources and linking same patient data

Medications Management Project

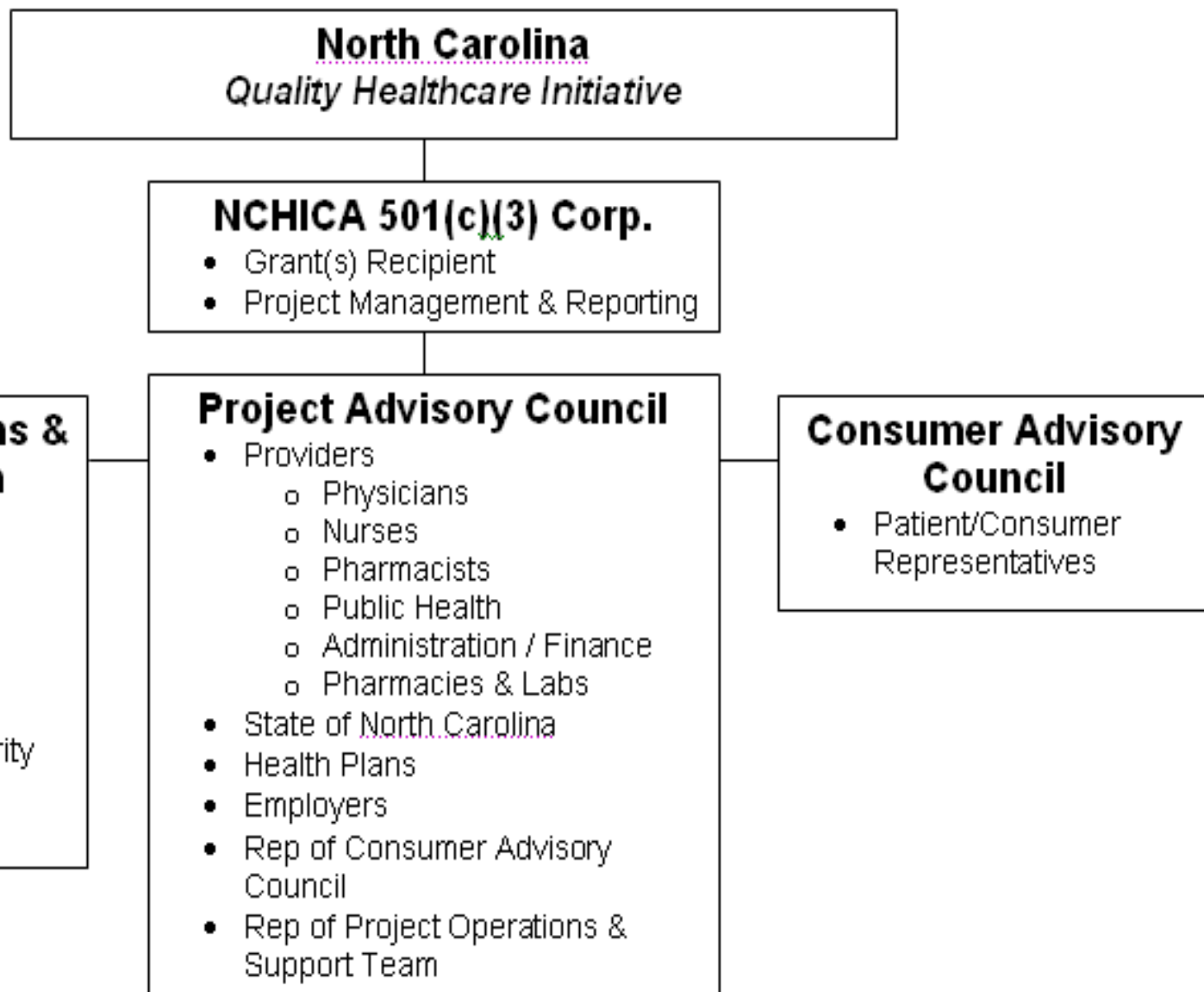
- Key attributes:
 - Saves clinician's time (10%-40% of encounter)
 - Improves patient safety
 - Leads to automating medication refills
 - Leads to e-Prescribing
- Example: Medicare Population *
 - 20% have 5 or more chronic conditions
 - Those 20% see on average 13.5 different physicians per year with average 40 office visits
 - **Potential for prescribing errors, duplication of orders, tests, etc.**
 - Chronic Care accounts for 70%-80% of expenditures

* 2003 Urban Institute Study for CMS

Medications Management Project



Medications Management Project - Governance



Potential Benefits to Employers and Payers Include:

- 1. Greater generic dispensing**
- 2. Fewer outbound calls to physicians**
- 3. Lower customer service call volume**
- 4. Better compliance with preferred formularies**
- 5. Increased volume of mail order prescriptions**
- 6. Lower dispensing fees**
- 7. Automated refills**

Sample Provider Business Case (IPA)

	# of Practices	% of Practices	# of Physicians	% of Physicians	Avg. # of Physicians
Already There:	11	25.6%	54	38.6%	4.9
Going There:	8	18.6%	27	19.3%	3.4
Tough Sell:	22	51.2%	57	40.7%	2.6
Long Haul:	2	4.7%	2	1.4%	1.0

- Already There - practices already using Electronic Medical Records (EMRs)
- Going There - practices with solid Practice Management Systems (PMS) infrastructure, and in some cases lower-level EMR systems, who are looking for an upgrade to more capable EMR
- Tough Sell - practices principally with solid PMS infrastructure but not looking to implement EMR any time soon
- Long Haul - practices with limited or no PMS infrastructure, and no interest in an EMR

Potential Benefits to Providers Include:

- 1. Decreased call volume**
- 2. Automated refills**
- 3. Electronic script & signature**
- 4. Pay for performance incentives**
- 5. Fewer errors and improved quality**

What else is on the Drawing Board ?

National Provider ID

UB04 Implementation

CMS 1500 Implementation

COB Clearinghouse

277/275 Attachments

100% Electronic w/Medicare

5010 Transactions

ICD 10 Codes

835 (4050 version)

Health Plan ID

Other +

Other Timeline Items

- **Social Security Number Replacement**
- **Electronic Health/Medical Records**
- **Acknowledgement Transactions**
- **EDS to ACS Transition**
- **Electronic Prescription**
- **Privacy Annual Review**
- **Security Annual Review**

Research & Health Information Technology



Re-HIT Workgroup Draft Proposal

September 19, 2005

Research & Health Information Technology

The Race Goes to the Swift

VIDEO CLIP

Thank You

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