Delivering on the NHIN & HISPC Initiatives:  
NC’s Involvement and Lessons Learned

Presented to:  
4th National HIT Summit  
March 29, 2007

“Improving Healthcare in North Carolina by Accelerating the Adoption of Information Technology”
Presentation Elements

- NCHICA View of Transformation Drivers
- NCHICA Background
- NHIN Contract
- HISPC Contract
- What is next?
- Q & A
Medicaid Trends

Figure 14
ACTUAL AND PROJECTED TOTAL MEDICAID SPENDING,
1975 TO 2006 (IN BILLIONS)

Figure 15
ACTUAL AND PROJECTED STATE MEDICAID SPENDING,
1975 TO 2006 (IN BILLIONS)

Source: Congressional Budget Office and Federal Funds Information for States
Medicaid Trends

Figure 16
STATE EXPENDITURES FOR MEDICAID BY FUND SOURCE, FISCAL 2005

- Federal Funds: 56.7%
- Other State Funds: 9.1%
- General Funds: 34.2%

22.9% of State Expenditures
North Carolina Budget

Expenses—Governmental Activities
Fiscal Year Ended June 30, 2005

- General government
- Primary and secondary education
- Higher education
- Health and human services
- Economic development
- Environment and natural resources
- Public safety, corrections, and regulation
- Transportation
- Agriculture
- Interest on long-term debt

Expenses
Program Revenues (excluding Capital Grants)
HHS Initiatives

Value-Driven Health Care

Value-Driven Health Care Home

Consumers deserve to know the quality and cost of their health care. Health care transparency provides consumers with the information necessary, and the incentive, to choose health care providers based on value.

Providing reliable cost and quality information empowers consumer choice. Consumer choice creates incentives at all levels, and motivates the entire system to provide better care for less money. Improvements will come as providers can see how their practice compares to others.

"Every American should have access to a full range of information about the quality and cost of their health care options."

- HHS Secretary Mike Leavitt

http://www.hhs.gov/transparency/
Four Cornerstones

• **Connecting the System:** Every medical provider has some system for health records. Increasingly, those systems are electronic. Standards need to be identified so all health information systems can quickly and securely communicate and exchange data.

• **Measure and Publish Quality:** Every case, every procedure, has an outcome. Some are better than others. To measure quality, we must work with doctors and hospitals to define benchmarks for what constitutes quality care.

[www.hhs.gov/transparency](http://www.hhs.gov/transparency)
Four Cornerstones

- **Measure and Publish Price:** Price information is useless unless cost is calculated for identical services. Agreement is needed on what procedures and services are covered in each “episode of care.”

- **Create Positive Incentives:** All parties—providers, patients, insurance plans, and payers—should participate in arrangements that reward both those who offer and those who purchase high-quality, competitively-priced health care.

www.hhs.gov/transparency
State-level Health Information Exchange

Building Blocks for State-Level HIE Initiatives

- Technical assistance to local HIE efforts
- Bridge to NHIN and other states
- Set statewide HIE policy & standards
- Alignment with state govt
- Solutions for all citizens of state
- Funder
- Remove barriers to HIE
- Technology Operations

Convener, Educator, Facilitator

The state-level HIE initiative may choose some or all of those “blocks” or roles for its scope, or may identify others. In addition, more “blocks” may be added over time.

www.staterhio.org
NCHICA – the Organization

• Established in 1994 by Executive Order of the Governor
  • Improve healthcare in NC by accelerating the adoption of information technology
  • Created as a self-funded organization

• Organized as:
  • Neutral convener / facilitator
  • Marketplace enabler via demonstration projects
  • Leader of clinical initiatives

  Developer of effective policies and procedures by consensus
NCHICA Provider Members
NCHICA’s Health Plan Members

North Carolina State Health Plan

North Carolina Medicaid

Cigna

BlueCross BlueShield of North Carolina

Centers for Medicare & Medicaid Services
Corporate Vendor and Consultant Members
Major National Initiatives Include:

- HIPAA Regulations – 1996-Present

- Nationwide Health Information Network Architecture (NHIN) - 2005-2007


- NC response(s) to FCC Rural Healthcare Connectivity RFA – Due May 7th

- NC response to NHIN Phase 2 RFP - Future
Major State Initiatives Include:

- **Statewide Patient Information Locator (MPI)** — 1994-1995
- **NC Model Privacy Legislation** — 1995-1999
- **NC Immunization Database** — 1998-2005
- **Emergency Dept. data for public health surveillance** — 1999-Present
- **Technology in Local Health Departments Study** — 2005-2007
- **NC Consumer Advisory Council on Health Information Technology** — 2006-Present
### Participants
- Providers
- Health Plans
- Pharmaceutical
- Clinical Labs
- Government
- Prof. Associations
- Health IT/Consultants

### A History of Success

<table>
<thead>
<tr>
<th>Year Initiated</th>
<th>Many</th>
<th>Several</th>
<th>Some</th>
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<td>1994</td>
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**Participants Impact:**
- **Providers**
- **Health Plans**
- **Pharmaceutical**
- **Clinical Labs**
- **Government**
- **Prof. Associations**
- **Health IT/Consultants**

**Year Initiated**:
- 1994

**Participants**:
- MODEL Privacy Legislation
- HIPAA
- NC DETECT
- PAIRS
- NC Healthcare Quality Strategy
- REHIT
- NC Healthcare Informatics
- HISPC Contract
- e-RX Initiative
- NHIN Architecture
- NC Consumer Advisory Council
- Disease Registry Conference
- Technology / Local Health Dept Study NCHWFTFC
- TV Medicine
- Y2K Strategies
- Statewide MPI

**Participants Impact by Number:**
- **Many**
- **Several**
- **Some**
Building on the NCHICA Foundation

Activities in Collaboration with our Members:

- Education / Training
- Policy Development
- Proposal Development
- Demonstration Projects
- Facilitation

Desired Outcomes:

- Improved health of all North Carolinians
- A safer and more efficient and effective healthcare system
- Focused and integrated solutions across all systems
- North Carolina known for being “First in Health”
NHIN Phase 1
[Architecture Prototype]
Health Information Technology Deployment Coordination

“Health Care Industry” – American Health Information Community

Breakthroughs

- Biosurveillance
- Consumer Empowerment
- Chronic Care
- Electronic Health Records

Technology Industry

Infrastructure

- Standards Harmonization
- Compliance Certification
- Nationwide Health Information Network
- Privacy / Security
- Health IT Adoption

Consumer Value

Industry Transformation
NHIN Phase 1 Overview

**Vision:** A nationwide, standards-based network that will allow connectivity of existing and future systems for providers and affiliated stakeholders

**Goal:** Develop and evaluate prototypes of an NHIN architecture that maximize use of existing resources to achieve interoperability among healthcare applications – particularly EHRs

**NHIN Criteria:** Architect a standards-based, scalable, reliable, secure, self-sustaining “network of networks”

**NHIN Critical Success Factors:**
- Industry adoption of clinical information technologies
- Development of a health information exchange market
NHIN Phase 1 Contracts

- Awards to Four Consortia
  - Accenture
  - CSC
  - IBM
  - Northrop Grumman

- Approach - cooperative and collaborative
  - Between Four Awarded Consortia
  - With Other HHS Partners & Contract Awardees
    - Health Information Technology Standards Panel (established by ANSI)
    - Certification Commission for Health Information Technology (CCHIT)
    - Health Information Security and Privacy Collaboration (established by RTI and National Governor’s Assoc)
    - American Health Information Community (AHIC)
NHIN Phase 1 Deliverables

- A standards-based network prototype
- Demonstrate in 3 healthcare marketplaces
- Demonstrate via 3 use cases
- Develop and deliver 3 models:
  - Deployment
  - Operations
  - Cost and Revenue
NHIN Architecture Prototype Project Overview IBM Healthcare Marketplace Partners

Rockingham, Guilford / Danville Community Hub

Morehead Memorial

Pulmonary Clinic of Danville

Eden Internal

Family Tree OB/GYN

Moses Cone Outpatient Clinic

Moses Cone

THINC Community Hub

SureScripts Medication History

LaborCorp

Research Triangle / Pinehurst Community Hub

FirstHealth

Spectrum Labs

Kingston Hospital St. Francis Hospital Vassar Brothers Medical Ctr

DUAP - Durham Medical Center

ThINC Community Hub

DUAP - Durham Medical Center

Pinehurst Surgical

Pinehurst Medical

Southern Pines Women’s Ctr.

Moore Free Care Clinic

Rockingham, Guilford / Danville Community Hub

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Moore Free Care Clinic
IBM’s NHIN Architecture – A “Network of Networks” linking Patients, Providers and Population Health

NHIN

Patients

Medical Records

PHR

3rd Party Vendors

Reference Labs

Labs

Lab Results

Significant Clinical Events

Resource Utilization

Population Health

Medical Records

Physicians

Hospitals

Care Providers

EMR

EMR

EMR

EMR

PHR

Patients
IBM’s NHIN Prototype Architecture Guiding Principles

- **Community-Centric**
  - Document repositories normalize and store clinical data within a community
  - Hosted by individual hospitals/practices and/or shared within the community
  - Community Hub for MPI, document locator, security and support services
  - Community Hub is the gateway to other communities

- **Drive and conform to standards**
  - Instantiation of IHE interoperability framework
  - Clinical events stored as HL7 CDA(r2)-compliant documents
  - Cross-community search & retrieval

- **Provide security & privacy w/o sacrificing usability or research value**
  - Anonymous/pseudonymous data that can be re-identified as needed/permitted
  - Supports other data aggregates (registries, biosurveillance, outcomes analysis, quality of care)

- **Practical**
  - Scalable and cost-effective at every level of practice
  - Point-of-care performance is critical to adoption
Providers and Vendors
Working Together to Deliver
Interoperable Health Information Systems
in the Enterprise
and Across Care Settings

http://www.ihe.net
NHIN Phase I - Lessons Learned

• Physician and hospital participants are excited about and able to conceptualize the value of the NHIN in terms of improving patient care and enhancing the clinician’s business and care processes.

• Most all the participants view this prototype as a stepping stone to broader community and cross-community data sharing.

• Participants would like to be able to ‘continue on’ with NHIN capabilities after Phase I is complete (regardless of what follow-on phases may include).
• Uniform community HIE data sharing/BAA agreements need to be developed at the institution, practice and patient level to minimize bi-lateral negotiations

• Each community has differing objectives and environments around which to develop a community hub (which suggests a more strategic / consulting assessment of what services the community hub needs to include)

• Each enterprise, participating institution, and practice will have differing requirements with health care vendors (e.g. EMR vendors) participation

• The technical aspects of the prototype were designed to test the underlying infrastructure and capabilities of interoperability (core vs. edge systems)
• HIE services, access capabilities support tools and processes would still need to become hardened (e.g. how additional patients are enrolled)

• Fostering adoption deliverables will suggest options for deployment, operations and cost/revenue sustainability – again issues that may vary across how each community or participant defines their community HIE

• How other stakeholders – whether they are other institutions or physician practices, or other stakeholders, such as payors, pharma, research are brought in
NHIN Phase 2

[State & Regional Initiatives]
**NHIN Phase 2 - Trial Implementations**

- **State and Regional Focus**
  - RFP: April 2007
  - Awards to 10-12 States/Regions: June/July 2007

- **Incorporate:**
  - 2006 “Products” and lessons learned
  - Technical expertise and accomplishments of the consortia
  - State and regional health information exchanges
  - Focus on interfaces:
    - Between health information service providers
    - Linking health information service providers and provider organizations/systems
    - Include specialty networks and systems
    - Include government health systems
  - A collaboration of awardees
Health Information Technology Deployment Coordination

“Health Care Industry” – American Health Information Community

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Industry Transformation

Consumer Value
Subcontracts
HISPC Project Objectives

- Assess variations in organization-level business policies and state laws.
- Articulate potential solutions.
- Develop implementation plans.
Project Process

VWG provides core set of business practices for each scenario

Business practices are provided to stakeholder community for evaluation

Work Groups fill in gaps

VWG classifies BPs as barriers/not barriers to exchange

LWG maps barriers to relevant law

RTI/NGA/TAP review initial input to ensure quality

Stakeholder Work Groups validate: is list exhaustive?

No

Yes

No Barrier

IPWG develops implementation Plan

SWG analyzes all BPs for (1) assessment of impact of BPs considered as barriers and (2) identification of possible good practices in development of Solutions
NC HISPC Steering Committee

- Phil Telfer, Co-chair, NC Governor’s Office
- Holt Anderson, Co-chair, NCHICA, Executive Director
- Linda Attarian, NC DHHS Div. of Medical Assistance
- Fred Eckel, NC Assoc. of Pharmacists
- Jean Foster, NC Health Information Mgmt. Assoc.
- Don E. Horton, Jr., LabCorp
- Mark Holmes, NC Institute of Medicine
- Eileen Kohlenberg, NC Nurses Association
- Linwood Jones, NC Hospital Association
- Patricia MacTaggart, Health Management Associates
- Doc Muhlbaier, Duke University Health System
- David Potenziani, UNC School of Public Health
- Melanie Phelps, NC Medical Society
- N. King Prather, BCBSNC
- Morgan Tackett, BCBSNC

Work Group Co-Chairs, Various Organizations
Top Barriers

1. **Misinterpretation** of laws or regulations
2. Lack of business **incentives** to exchange information
3. Lack of policy **standardization**
4. Lack of security **standardization**
5. Lack of **workable technology**
6. Conflicting or outdated Federal or State **Laws / Regulations**
Next Steps

• Engage legislators and executive level government
• Engage NCHICA members
• Ramp up awareness efforts
• Nurture the Consumer Advisory Council
• Participate in NGA State Alliance for e-Health
State Alliance for e-Health Structure

State Alliance for e-Health

Advisory Committee

Input

Health Information Confidentiality (HIC) Task Force

Practice of Medicine (POM) Task Force

State-level Health Information Organization (SHIO) Task Force
Web Site and Listserv

- State Alliance for e-Health Web Site
  - [http://www.nga.org/center/ehealth](http://www.nga.org/center/ehealth)

- To subscribe to the State Alliance listserv send a blank e-mail to:
  - [subscribe-state-alliance@talk.nga.org](mailto:subscribe-state-alliance@talk.nga.org)
Overall Conclusions
Beginning the journey …

- **Focus on clear drivers:**
  - Quality of care and affect on cost
  - Complex and costly chronic conditions
  - Physician work flow – save time and improve job satisfaction (meds history, allergies, problem lists)
  - Build on quick wins (low-hanging fruit) with obvious benefits to the public (e.g. immunizations, meds)
  - Leverage statewide payers: Medicaid, State Health Plan, BCBSGA, other
  - Include major employers with self-funded plans
  - Use Bridges-to-Excellence and Leapfrog
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 enterprises
  - Authentication (Federated ID Management)
  - Auditability
NCHICA Toolkit for State-Level HIE

NCHICA has received many requests for documents from communities, regions and states who wish to develop a nonprofit organization similar to that established in 1994 by Executive Order of the Governor of NC and this site has been created to assist in locating key corporate documents and work products that might provide a jump start to such efforts. We are pleased to respond to these requests and will assist to the extent that our time and resources make it possible. Membership in NCHICA by those effort is encouraged as is attendance at NCHICA meetings that may be found on our Web site home page.

NCHICA Corporate Documents

- Executive Order of the Governor
- Articles of Incorporation
- Bylaws
- Intellectual Property Policy
- 501(c)(3) IRS Letter
- Membership Application including Terms of Membership

Compliance and Model Documents

- Sample Documents for Privacy and Security Compliance (Reviewed) – Disclaimer Acknowledgement Required
- Sample Documents for Privacy and Security Compliance (Not Reviewed)
- Tools for Privacy and Security Gap Analysis
- Other Helpful Links for Regulations and Compliance
Improving Healthcare in North Carolina by Accelerating the Adoption of Information Technology

Thank You

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