Transforming Healthcare:

Building Statewide Strategies for Successful Health Information Exchange (HIE) Implementation

Session 2.04

13th National HIPAA Summit

September 25, 2006

Washington, DC

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

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Principles for Statewide Strategies

- Utilize Recognized Change Drivers as Unifiers and Motivators
- Encourage local initiatives to adopt national standards by facilitating statewide discussions and convergence of approaches
- Provide information about ONC and AHRQ initiatives to elevate the vision of the possible
- Keep a transparent and open environment that welcomes collaboration and sharing of solutions and approaches
- Associations and Societies are wonderful partners who can communicate broadly
- Encourage the involvement of consumers

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Utilize Change Drivers to Unify and Motivate

Change Drivers

- **Cost of healthcare**
  - New procedures and drugs
  - Defensive nature of practice of medicine = increasing numbers of tests, additional medications
- **Greater awareness of medical errors**
- **Frequent inability to provide complete information where and when required**
- **Standards Issues**
- **Recognition that Paper is inefficient**

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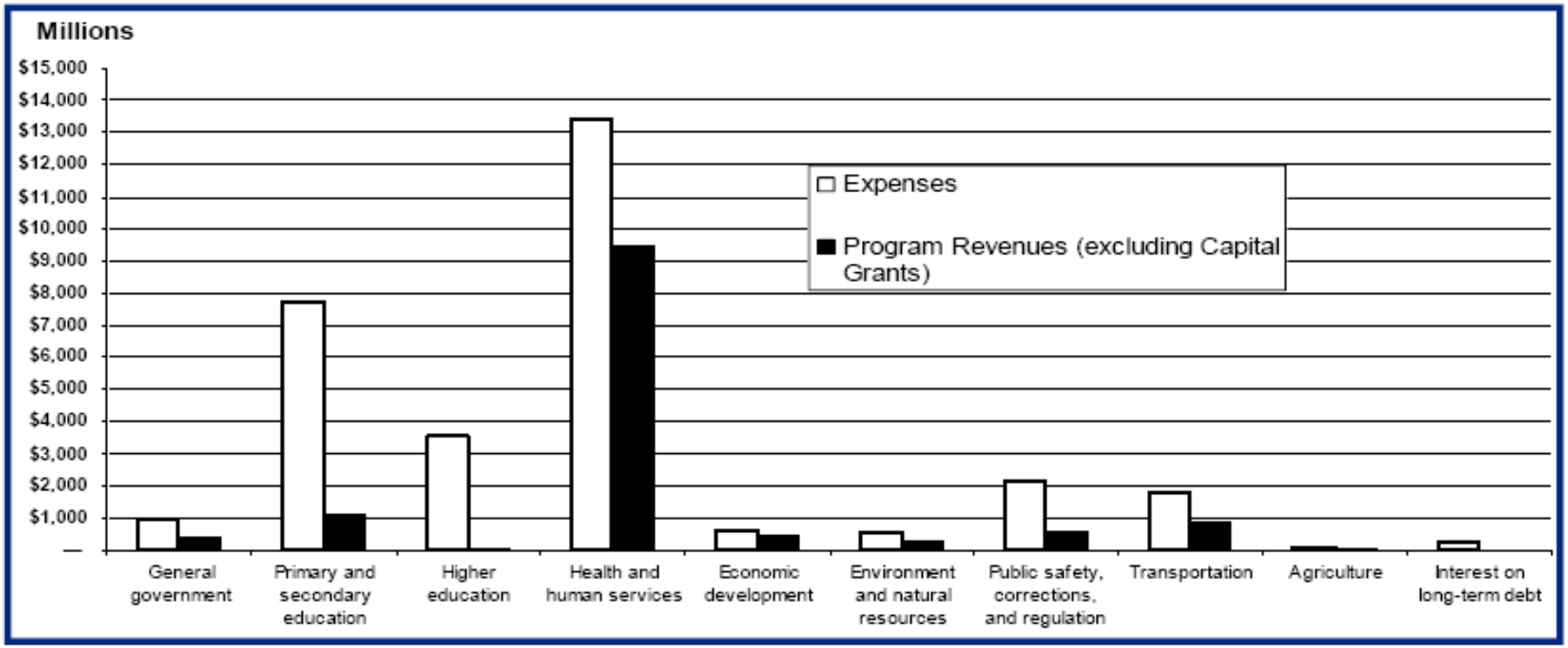
North Carolina Budget

Expenses—Governmental Activities
Fiscal Year Ended June 30, 2005



Statistics

- Each year missed healthcare opportunities cost the nation more than $1B in avoidable hospital bills
- Inadequate availability of patient information, such as laboratory test results, is directly related to 18% of adverse drug events
- About a third of the $1.6 trillion spent on healthcare in the United States goes to duplicative care that fails to improve patient health
- More than 2 million adverse drug events and 190,000 hospitalizations each year could be prevented using information technology, saving up to $44B annually in medication, radiology, laboratory and hospitalization expenditures.

"Achieving Electronic Connectivity in Healthcare" published by Markle and Robert Wood Johnson foundations

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Statistics (cont.)

- **Patient experiences:**
  - 57% of patients had to tell the same story to multiple health professionals
  - 26% received conflicting information from providers
  - 22% had duplicative tests ordered by different caregivers, and
  - 25% of tests didn't reach the office in time for the patient's appointment

"Achieving Electronic Connectivity in Healthcare" published by Markle and Robert Wood Johnson foundations

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Quality, Safety and Cost

- Medicare Population *
  - 20% have **5 or more chronic conditions**
  - Chronic Care accounts for **70%-80% of expenditures**
  - Average **40 office** visits per year
  - 20% see on average **14 different physicians** per year
    - **Potential for prescribing errors, duplication of orders, tests, etc.**

* 2003 Urban Institute Study for CMS

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One Model for Statewide Collaboration

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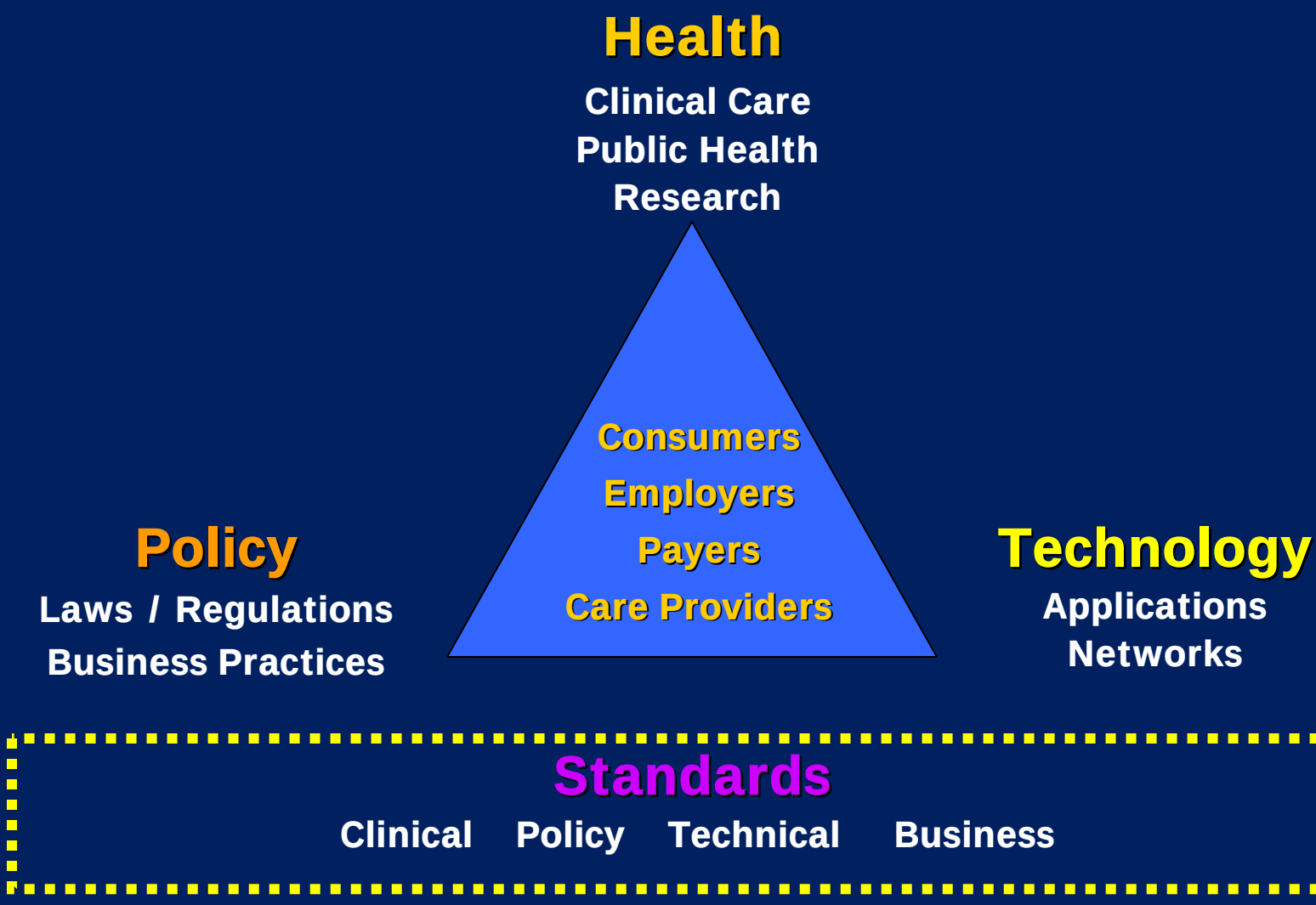
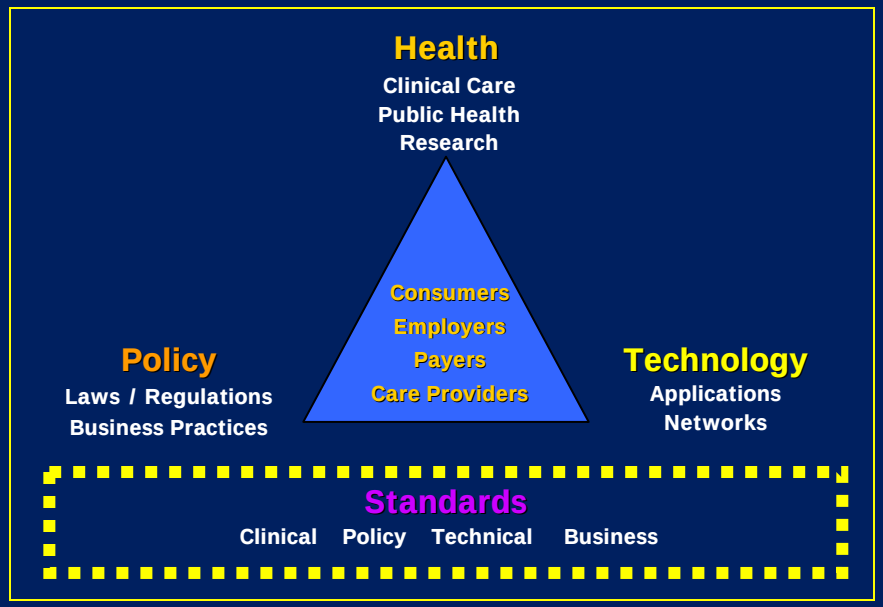
NCHICA Background

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

NCHICA Foundation for Collaboration



Building on the Strong 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"*

Initiatives Include:

- **Statewide Patient Information Locator (MPI) – 1994-1995**
- **NC Model Privacy Legislation – 1995-1999**
- **HIPAA – 1996-Present**
- **Secure Internet access to statewide, aggregated immunization database – 1998-2005** (PAiRS)
- **Y2K Remediation – 1998-2000**
- **Standards-based, electronic emergency dept. clinical data for public health surveillance –**

  1999-Present (NCEDD > NC DETECT)

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Initiatives Include (cont.):

- NC Healthcare Quality Strategy – 2003
- Use of Technology in Local Health Departments Study – 2005-2007
- Disease Registries in Primary Care Conference - 2006
- ONC Nationwide Health Information Network Architecture - 2005-2006
- AHRQ / ONC Health Information Security and Privacy Collaboration – 2006-2007
- eRx Workshop and Strategy - Current
- NC Consumer Advisory Council on HIT – Current
- NC Informatics Workgroup - Current

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- **Standards-based, electronic emergency dept. clinical data for public health surveillance – 1999-Present** (NCEDD > NC DETECT)
- **Y2K Remediation Efforts - 1999**
- **NC Healthcare Quality Strategy – 2003**
- **Use of Technology in Local Health Departments Study**
- **Disease Registries in Primary Care Conference - 2006**
- **Nationwide Health Information Network Architecture (NHIN) - 2005-2006**
- **Health Information Security and Privacy Collaboration (HISPC) – 2006-2007**
- **E-Prescribing Workshop and Implementation Strategy – 2006**
- **Formation of NC Consumer Advisory Council on Health Information Technology - 2006**

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Emerging Regional Initiatives

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“Connected Communities”

- 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.
- May be called:
  - RHIOs (Regional Health Information Organizations)
  - RHINs (Regional Health Information Networks)
  - SNOs (Sub-Network Organizations)

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Models for Connected Communities

- **Federation** – multiple independent / strong enterprises in same region
- **Co-op** – multiple enterprises agree to share resources and create central utility
- **Hybrid** – region containing both Federation and Co-op organizations
- Other **???**

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, Western NC)

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 (Rural NC, Eastern NC, other)

Types of Connected Communities (cont.)

- **Hybrids**
  - Combination 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 may be required for Statewide initiatives

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Models for Organizational Structure

- **“Utility” Provides Functions Such As:**
  - Centralized database
  - Patient information exchange
  - Clearinghouse
  - Patient information locator service
- **Neutral, Convener, Facilitator**
  - Builds Consensus Policies
  - Brings together competitive enterprises
  - Bridges multiple RHIOs in geographic location
  - Seeks Open-standards approach – non vendor specific

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Models for Organizational Structure (cont.)

- **"Utility" Operator**
  - Quicker to implement
  - Fewer initial participants
  - Build involvement over time
  - Forces early technology selection
- **Neutral, Convener, Facilitator**
  - Slower to implement
  - Building consensus difficult and may frustrate participants who want to get started
  - Open standards approach leaves opportunities for more organizations and vendors to participate
  - Perhaps only way to bridge multiple RHIO efforts

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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

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Organizational Structure

- **501(c)(3) Nonprofit**
  - Eligible for Federal and State Grants
  - Contributions may be tax deductible as charitable
- **Considerations for Nonprofit:**
  - 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

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Regional Activities in North Carolina

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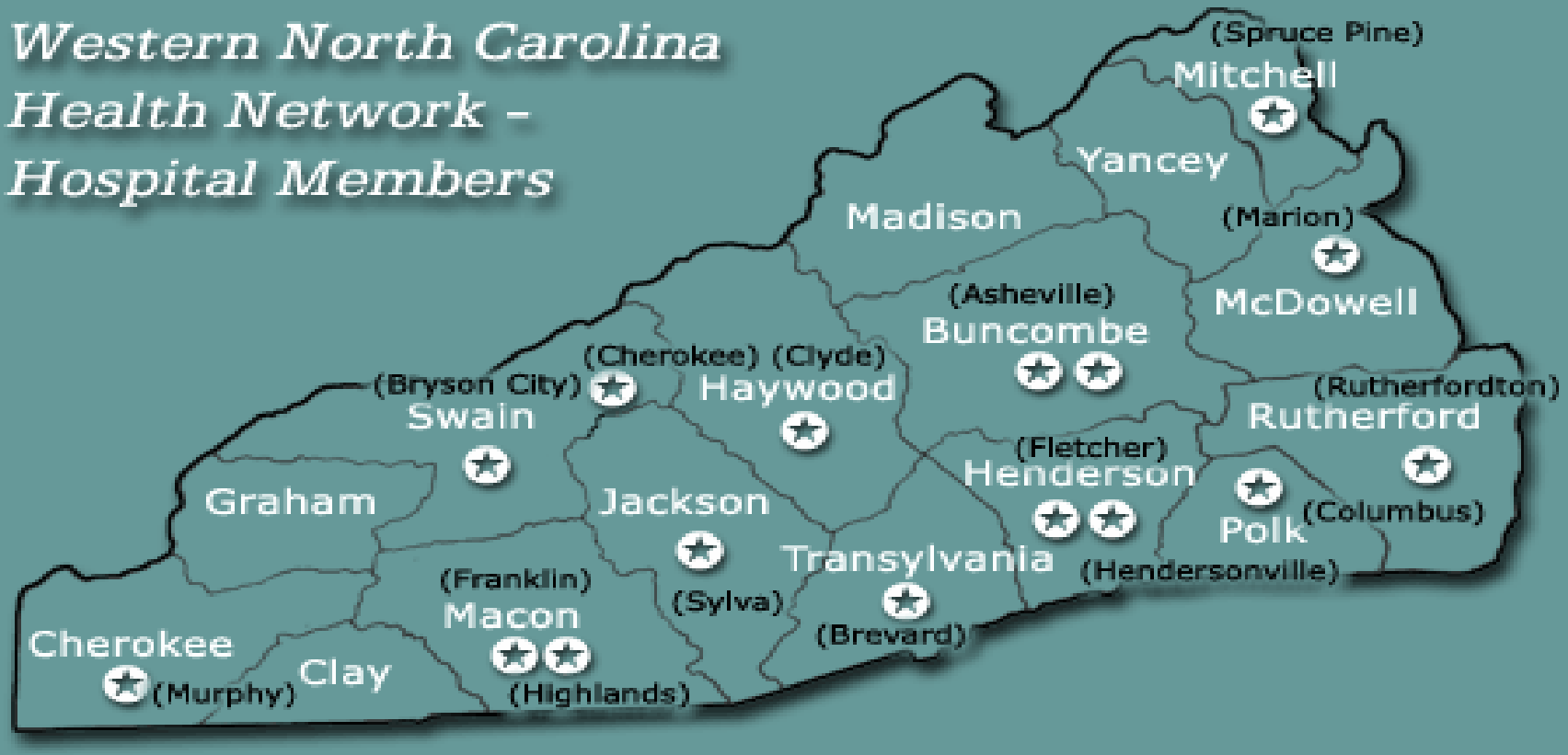
Opportunities of Statewide Interoperability: WNC Data Link



Angel Medical Center
Cherokee Indian Hospital
Community CarePartners/Thoms
Harris Regional Hospital (WestCare)
Haywood Regional Medical Center
Highlands-Cashiers Hospital
Mission St. Joseph's
Murphy Medical Center
Pardee Hospital
Park Ridge Hospital
Rutherford Hospital
St. Luke's Hospital
Spruce Pine Community Hospital
Swain County Hospital (WestCare)
The McDowell Hospital
Transylvania Community Hospital

WNC Data Link

- **Long range goal**
  - Longitudinal electronic medical record that can be accessed and updated real time by authorized health care providers in WNC.
- **Short term goal**
  - Transmit and access electronic patient information between WNC hospitals
- **Parameters**
  - No central data repository
  - Technology neutral

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WNC RHIO - Architectural Solution

Physician
B

AccessPt Software

IBM Hosting
Center

Hospital A

Hospital B

Other
Health
Care
Providers

- Provides Virtual EMR
- Standardized view of data
- Real time view of data
- Accessible to users via the Web
- Records reside at each facility

Recommendations for Success

Statewide interoperability is important, but:

- Interoperability with bordering states may be more important for a RHIO like WNC:

University Health Systems of Eastern Carolina

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Opportunities of Statewide Interoperability

- **Technology is the "enabler"**
  - Patient Safety
    - All necessary/relevant information available to clinicians at the point and time of need
    - Clinical decision support to help clinicians process vast amounts of data
    - Resolves legibility issues
  - Quality
    - Standardization of care/benchmarking
  - Efficiency
    - Saves time
    - Eliminates redundant procedures (costs)

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Recommendations for Success

- State leadership and leaders of healthcare organizations must continue to support dialogue/education on the issue
- Funding assistance for rural providers
- Leverage the efforts of the larger health systems – collaboration not competition when it comes to Information Technology
- Eliminate some of the barriers posed by various state and federal regulations (HIPAA)
- Adopt a common terminology (SNOMED?)

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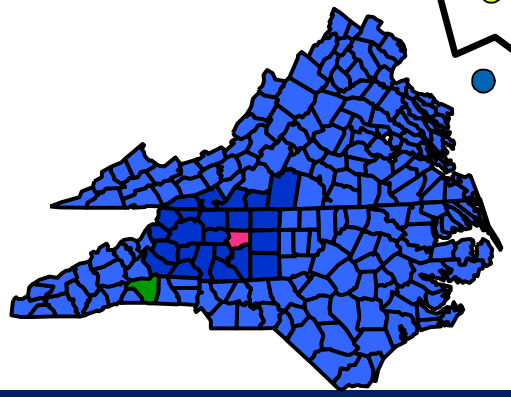
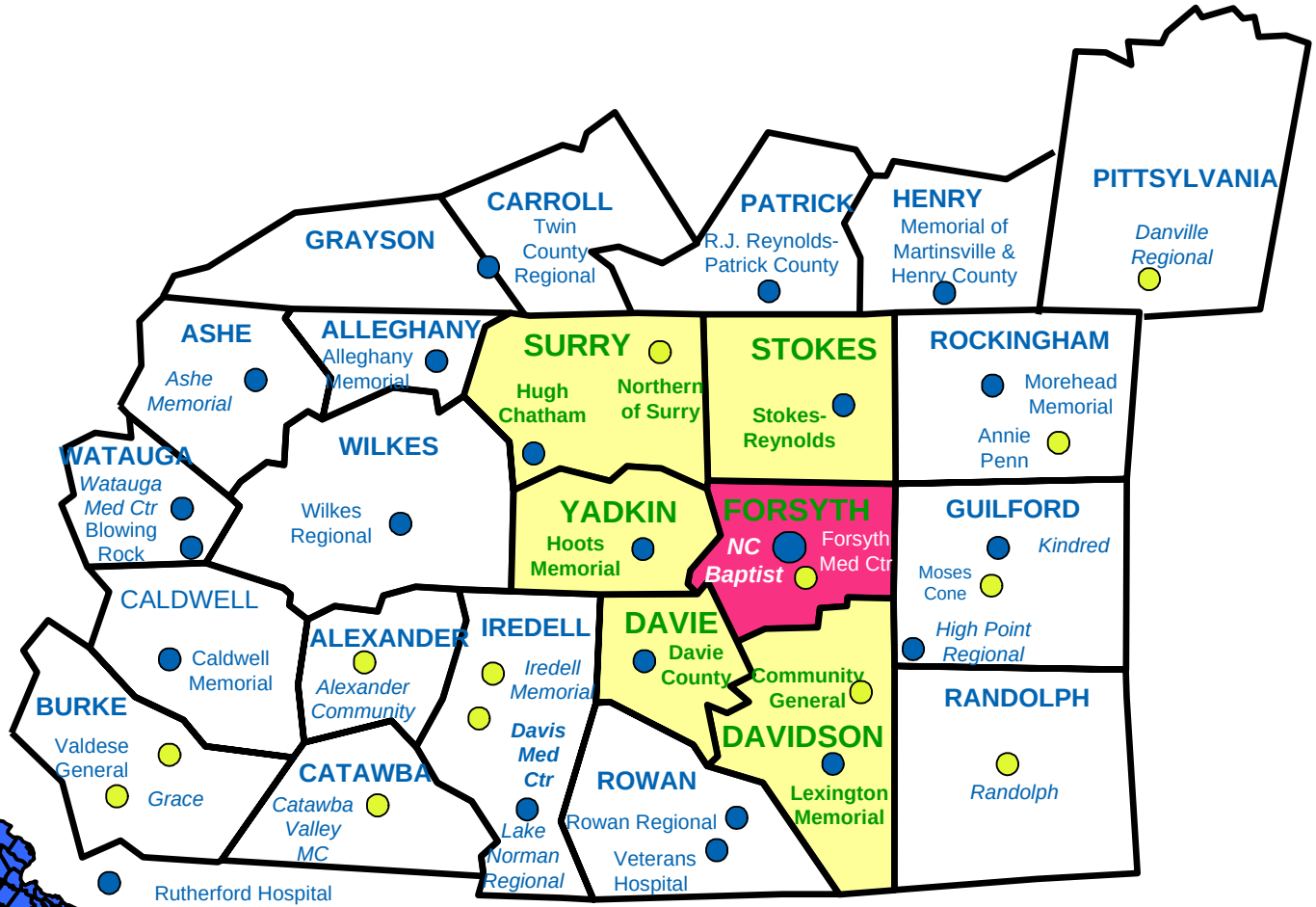
WFUBMC Referral Area Hospitals

- Affiliates
- Other Hospitals





Counties of Origin For Approximately 90% of Medical Center's Inpatients and Outpatients

11/05

Alliance for Health Mission Statement

- The Alliance for Health (AFH) is Wake Forest University Baptist Medical Center's network of:
  - affiliated physicians
  - hospitals, and
  - health service providers
- dedicated to improving the health status and access to quality, cost-effective community based services in collaboration with citizens, employers, and payors in North Carolina and southern Virginia.

Risks/Concerns/Challenges

- **Internal to the Institution / Network**
  - Dilution of Effort: Project competing against other pressing needs
  - Preservation of investment
  - Increased costs of IT (perceived or real)
  - Lack of Accountability of Resources – IT & Other
- **External to the Institution / Network**
  - Security – Data & Physical Resources
  - Rights in Data – who “owns’ the data and who can make changes (tracking changes)
  - Reliability of Data – potential mismatching of patients & data corruption
  - Linking Outside: Standards, reliability, controls
  - Business Continuity: Destruction/Recoverability of critical resources
  - Lack of Accountability & Control (perceived or real)

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Risks/Concerns/Challenges

- **General Concerns**
  - Competition for resources
    - ROI Model for RHIOs
  - Governance
  - Loss of Differentiation & Branding
  - Perceived long term loss of a franchise in critical business lines
  - Helping the "competition"
  - Liability – General & Medical
- **Common Challenges**
  - Need interoperability standards
  - Money, money, money
    - Start-up funds
    - Sustainable funding model
    - Payers will not pick up the full tab
  - Blueprint for a technology architecture
    - Distributed versus centralized data structure
    - Low technology user interface
  - Politics
    - Finding, or creating, a neutral entity to sponsor RHIO – i.e., a "Switzerland"
  - Competitive differences
    - Lack of trust among parties
    - Fear of lost advantage
    - Pride of ownership

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Risks/Concerns/Challenges

Business Opportunities & Challenges

- \+ Potential increase in referral base
- \+ Improved ease of inter-institution partnering
- \+ Enhanced Pay for Performance opportunities (non full risk)
- \+ Ease of practice for physicians
- ± Reimbursement – Payers: *Rewards or Punishment*
  - ✓ Non participation in Pharmacy / Med Records
  - ✓ Loss of revenue due to denial of charges for duplicate tests, etc.
  - ✓ Long term reimbursement shift for non participation (quality view):
    - Medicare, Medicaid, Other Payers
    - Leap Frog, et al
- Potential Stark Issues
- NCGS.8-53 Physician Patient Privilege–Patient authorization needed
- Referrals – loss of out of network referrals from RHIO members
- Medical errors – understanding of patient's current Meds or History

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Recommendations for Success

- **Involve major players in planning – CEOs, COOs CMOs, CIOs, Legal, Corporate Compliance, etc ~ avoid "one champion" or pure tech view**
- **Develop Trust & Communicate**
- **Money, Money, Money – Where is the money coming from? Remember the CHINs?**
- **Address Governance & Accountability Concerns**
- **Understand their business issues and concerns and be prepared to address them early in the cycle**
- **The major IDNs will need to feel they will not be:**
  - Subsidizing the smaller providers
  - Giving away their hard earned franchise or market share
- **Focus on some quick wins (Utility model) while actively moving toward the Neutral, Convener, Facilitator model**
- **Approach the Reluctant with demonstrated success and compelling documented benefits**
- **Enterprise at Risk – address adjudication of liability**

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Conclusions and Recommendations

Striving for Cooperation

- Transparency and Trust
- Ground rules for maintaining a safe atmosphere
- Balance of power and influence
- Shared goals and interests
- Inclusive governance
- Shared responsibility and input
- Shared ownership and commitment
- Ongoing management and support
- Clear roles and responsibilities.
- Active participation

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Stakeholder Inclusion

- Physician groups (primary and specialty care)
- Hospitals
- Public health agencies
- Payers (including employers)
- Clinicians
- Federal health Facilities (DoD, VA, IHS, SSA)
- Community clinics and health centers
- Laboratories
- Pharmacies
- Vendors and Consultants

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Stakeholders (cont.)

- Consumers
- Professional associations and societies
- State government (Medicaid, State Health Plan, Public Health, DOI, DOJ, etc.)
- Long term care facilities and nursing homes
- Homecare and hospice
- Correctional facilities
- Medical and public health schools that undertake research
- Quality improvement organizations

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If we were to start over …

- **Focus on clear drivers:**
  - Quality of care and affect on cost
  - 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)
  - Focus on complex and most costly healthcare cases (chronic conditions)

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Managing Statewide Initiatives

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

Thank You

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