HEALTH INFORMATION TECHNOLOGY

Quarterly Legislative Report (July-September 2011)
Session Law 2011 – 145, SECTION 10.24

The Senate Appropriations Committee on Health and Human Services
and
The House of Representatives Appropriations Subcommittee on Health and Human Services
and
The Fiscal Research Division

Prepared by:
North Carolina Department of Health and Human Services
Health Information Technology
October 1, 2011
Legislative Quarterly Report

The purpose of this report is to fulfill the legislative requirement, as set forth in SL 2011 – 145, SECTION 10.24, that DHHS make quarterly reports on the status of Health Information Technology (HIT) activities occurring as a result of the American Recovery & Reinvestment Act (ARRA). In conformance with the statute, this report is being provided to: The Senate Appropriations Committee on Health and Human Services, the House of Representatives Appropriations Subcommittee on Health and Human Services and the Fiscal Research Division of the General Assembly.

NOTE: The format of the Quarterly HIT Report has been revised to include only the updated summary information in the body of the report. Selected background information on specific HIT initiatives and organizations can be found in the Appendix.

(1) CURRENT STATUS OF FEDERAL HIT INITIATIVES

- **Regional Extension Center, Section 3012 Funding** –

  At this time, the NC Area Health Education Center’s Regional Extension Center has enrolled over 3400 providers in their target group of 3465 priority primary care providers working in almost 940 priority primary care practices across the state. Currently, the services provided by the Regional Extension Center through the regional AHECs are free of charge which is made possible by the funding of the federal grant, however, in the future, the NC AHEC program may need to require a fee for these services to enable sustainability of the program. These services include on-site consulting to help practices to prepare for, select and implement certified EHR vendor products, upgrade existing software and use all EHR software in a meaningful way to improve care delivery to over 3 million patients across the state.

The table below displays the number of practices/providers currently enrolled in each of the nine AHEC regions across the state.

<table>
<thead>
<tr>
<th>AHEC Region</th>
<th>Practices</th>
<th>Providers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area L</td>
<td>56</td>
<td>230</td>
</tr>
<tr>
<td>Charlotte</td>
<td>109</td>
<td>325</td>
</tr>
<tr>
<td>Eastern</td>
<td>165</td>
<td>576</td>
</tr>
<tr>
<td>Greensboro</td>
<td>122</td>
<td>517</td>
</tr>
<tr>
<td>Mountain</td>
<td>98</td>
<td>485</td>
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<tr>
<td>Northwest</td>
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<td>400</td>
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<tr>
<td>Southeast</td>
<td>108</td>
<td>314</td>
</tr>
<tr>
<td>Southern</td>
<td>115</td>
<td>277</td>
</tr>
<tr>
<td>Wake</td>
<td>68</td>
<td>276</td>
</tr>
</tbody>
</table>
NC AHEC has several practices that have completed this work and have successfully attested to the Medicare and Medicaid Meaningful Use Incentive Payment programs. Other practices with EHRs are awaiting software upgrades from their technology vendors and will begin to move towards meaningful use once their systems contain the appropriate functionality. The remaining practices/providers working with NC AHEC are preparing their practices to select and implement electronic health records and should move to meaningful use fairly quickly after the implementation process.

ONC requires NC AHEC to monitor this activity via milestones achieved. A definition of those milestones is below.

**Milestone 1:** The provider has signed an agreement to work with the NC AHEC Regional Extension Center.

**Milestone 2:** The provider is live on an EHR and can produce eRx and quality data reports.

**Milestone 3:** The provider has successfully attested to meaningfully using an EHR and can be validated with the data pulled from the certified EHR system. (Note: the first year of Medicaid’s A/I/U does not count towards milestone 3)

The chart below displays NC AHEC’s current status for providers meeting the ONC milestones.

- **Health Information Exchange, Section 3013 Funding** –
  The NCHIE has entered the Implementation Phase of the Cooperative Agreement from the Office of the National Coordinator (ONC) for HIT.

NCHIE and **Capgemini/Orion Healthcare** consortium executed a Master Development Services Agreement and related Statement of Work in August, 2011
with an effective date of August 2, 2011. NC HIE and the Capgemini consortium are working together to deploy the health information exchange and on-board two beta participants prior to the end of 2011. The software has been installed and is currently ready for testing.

The Governance Workgroup’s primary tasks now include: (1) who will participate in the Statewide HIE; (2) rules and policies for participation; and (3) enforcement and oversight. The Finance Workgroup is being reorganized into a subcommittee of the Board of Directors. The Clinical and Technical Operations Workgroup focused their efforts on these tasks: (1) refining the requirements for value-added services; and (2) helping facilitate deployment and integration of HIE services into the health system.

NC HIE filed its application for tax exempt status on July 27, 2011. The IRS has notified NC HIE that it will act on the application within ninety days. NC HIE is planning to launch its website, www.nchie.org, within thirty days. NC HIE will also publish the initial version of the approved policies and procedures manual on its website.

NC HIE has begun the process of expanding its staff in order to facilitate the building 1) the health information exchange and 2) a sustainable business model. The following positions are currently posted as open:

1. Business Development Director
2. Marketing, Communications and Training Manager
3. Solutions Architect
4. Interface and Testing Engineer
5. Policy Analyst

Senate Bill 375 – Facilitate Statewide Health Information Exchange passed both the House and Senate. It was signed into law by the Governor on June 27, 2011. The bill is designed to facilitate and regulate the disclosure of protected health information through the voluntary, NC Health Information Exchange (NCHIE) network.

http://www.ncga.state.nc.us/Sessions/2011/Bills/Senate/PDF/S375v0.pdf

The $1.7 million Challenge Grant awarded to the Health and Wellness Trust Fund Commission has been transferred to the NCHIE. NCHIE continues to partner with the North Carolina Community Care Network in developing and deploying the medication management service funded through the Challenge Grant. Regular updates including meeting dates and materials for workgroup activities can be found on http://healthIT.nc.gov.
• **State Medicaid HIT Plan, Section 3201 Funding** —

As of September 16, 2011, there are 1166 unique providers registered in the NC Medicaid Incentive Payment System (NC-MIPS). There are 1128 Eligible Professionals (EP) and 38 Eligible Hospitals (EH).

The Division of Medical Assistance (DMA) continues to make incentive payments to Eligible Professionals (EP) for Adopting, Implementing or Upgrading (AIU) Electronic Health Records (EHR) and has made 55 incentive payments to EPs since the program began in March 2011 totaling $1,168,750. Incentive payments to EHs began in September 2011 and one payment has been made in the amount of $275,226.39. The total incentive payments for both EPs and EH is $1,443,976.39.

The NC Medicaid Incentive Payment System (NC-MIPS) has completed the initial development and testing phases for year one and is currently the vehicle through which payments are initiated. Attestation guides were developed to assist EPs and EHs with the online process.

Two members of the Medicaid HIT Team have been hired and are assigned to the focus areas of communication and budget. Due to challenges with the State budget hiring restrictions, additional team members are not yet in place.

DMA participated in an onsite visit from CMS’s HITECH team on September 14, 2011. The visit included an overview of the NC-MIPS Operations and a demonstration of the NC MIPS portal, an overview and discussions regarding NC HIE, and meetings with representatives of providers. Additional discussions with the director of NC Medicaid and the State Coordinator for HIT also took place.

Please visit the following HIT websites for the most current information about the HIT program:


**NC-MIPS Statistics (as of September 16, 2011)**

| Eligible Professional Registrations | 1128 |
| Eligible Hospital Registrations     | 38   |
| Eligible Professional Attestations Received | 333 |
| Eligible Hospital Attestations Received | 6   |
| Eligible Professional Incentive Payments Sent | 55 |
| Eligible Hospital Incentive Payments Sent | 1   |
Broadband Internet Access—
Microelectronics Center of North Carolina (MCNC) continues to make significant progress on the $144 million expansion of the North Carolina Research and Education Network with efforts expected to be complete by July, 2013. This effort is part of the federal National Telecommunications and Infrastructure Administration’s (NTIA) Broadband Technologies Opportunity Program (BTOP) award. The NTIA divided the awarding of its BTOP funding into two rounds and staged a highly competitive application process in each round. In Round 1, awarded in January 2010, MCNC applied and received funding for a $39.9 million project (including $28.2 million in Federal BTOP Funds and $11.7 million in privately raised match- including $7.7M from the MCNC Endowment) to build 41280 miles of newly constructed fiber optic broadband infrastructure in 37 counties in southeastern and western N.C. For Round 2, MCNC, in concert with the Frank Hawkins Kenan Institute for Entrepreneurship and the School of Government at UNC-Chapel Hill, crafted an application called the Golden LEAF Rural Broadband Initiative (GLRBI). The GLRBI application proposed to build more than 1,200 miles of new middle-mile fiber in the northeast, north central, northwest and south central portions of the state. The proposed project is valued at $104 million with $75.75 million coming from BTOP, $24 million from the Golden LEAF Foundation, and $4.25 million in other cash and in-kind donations from private sources.

To date, approximately 372 miles of fiber conduit now has been constructed as part of the round 1 build, with over 178 miles of fiber installed within that conduit. MCNC is pleased to announce that the first segment of fiber built from the ground up has been placed into service as of August 26, 2011. This provides production service between Rocky Mount and Greenville with more than 50 miles of new construction. MCNC contractors and staff did a fantastic job of getting this path constructed and implemented so it could be in place and active to support the start of the fall school semester for our education constituents. MCNC expects to be lighting the segments to Asheville and the western part of the state in the month of September.

On August 12, 2011, MCNC hosted a statewide virtual groundbreaking in four locations across North Carolina to celebrate the start of construction of the second round BTOP award. This second phase includes the construction of 1,200 miles of broadband infrastructure through northeastern, north-central, northwestern, central and south-central North Carolina. During the event, Asheville-Buncombe Technical Community College, Elizabeth City State University, the North Carolina Research Campus in Kannapolis and UNC Pembroke hosted simultaneous events linked over NCREN in high definition video and in real-time. To view archived video of the groundbreaking event please visit this link on the MCNC web site: (http://elvis.mediasite.mcnc.org/mcnc/SilverlightPlayer/Default.aspx?peid=b08536c5335f4b8d8cb8564de6c5798c1d)
With construction on round two of the BTOP award commencing in August, MCNC contractor crews working out of Charlotte have made good progress in a congested area and have more than 20 miles of conduit now in place as well as the first mile of fiber. MCNC continues to work on securing additional permits to initiate more segments of the construction. MCNC is excited to have begun the second phase of building North Carolina’s Highway to the Future this summer and greatly appreciates the continued support and interest in this investment in North Carolina's future. Please visit the MCNC BTOP home page (https://www.mcnc.org/btop ) to learn more about the project, including regular progress updates and interactive online maps.

**North Carolina Telehealth Network** - MCNC, in collaboration with other organizations including the N.C. Office of Information Technology Services (ITS), is proud to be a partner to provide the North Carolina TeleHealth Network (NCTN). The NCTN provides broadband services to health programs and sites across the state including free clinics, community health centers and public health agencies. To date, 54 NCTN sites are fully operational with another three in the final stages of provisioning. Approximately 40 non-profit hospitals will be added in the second phase of the project with site provisioning activities currently underway. Connecting these healthcare institutions to the statewide network backbones will provide the high availability, low latency broadband service that facilitates implementation of Health Information Exchange and Telehealth applications that will benefit all North Carolina citizens. With this in mind, ITS and MCNC will work closely with the North Carolina HIE team to ensure that the existing backbone networks and the existing connections they provide to public health facilities, free clinics, hospitals and existing DHHS data repositories are utilized to their maximum extent in the HIE implementation process.

MCNC also completed upgrading infrastructure to support a robust suite of videoconferencing services to include interoperability between standards-based IP video (H.323), High Definition (HD), Cisco Telepresence and desktop videoconferencing. Health organizations state and nationwide will be able to access and leverage these services as a value add to the enhanced broadband connectivity.

- **Comparative Effectiveness Research** –
  North Carolina universities and research organizations continue to engage in both the education of future Comparative Effectiveness Research (CER) researchers as well as the conduct of timely and policy-relevant initiatives. The University of North Carolina at Chapel Hill and Duke University are continuing to educate post-doctoral fellows and junior faculty in CER. A second class of post-doctoral fellows has been admitted to both universities’ training programs this summer. To date, the programs have been highly successful, with more applicants than positions, and a good job market for those who will be graduating. Faculty are collaborating with colleagues nationally to develop shared core curricula in CER.
Faculty are also engaged in providing input to the federal Department of Health and Human Services on revisions to the ‘common rule’ which governs human subjects regulations. Revisions under consideration will decrease the current level of regulation imposed on low-risk CER research. The Duke and UNC NIH-sponsored Clinical Translation Science (CTSA) programs are collaborating with each other on CER educational issues, with some faculty jointly mentored across the institutions.

Research is ongoing in a number of areas. Research Triangle International (RTI) and UNC jointly host a federally sponsored Evidence-based Practice Center (EPC), focused on mental health disorders. Multiple new projects have been initiated in the past 6 months, including reviews of research on different care programs for individuals with dementia, and examination of research needs for serious psychiatric disorders in children. Duke University also hosts an EPC, focused on the diagnosis and treatment of cardiovascular disease. Duke and UNC also are federal centers of excellence in pharmacoepidemiology, with funded projects in CER across a range of conditions ranging from cardiac disease to cancer to renal failure. The Duke and UNC CTSA affiliates are meeting on a regular basis to discuss matters of mutual interest in the area of CER and health informatics applications. Pilot projects are underway to evaluate each institution’s electronic medical record data warehouse for potential cross-institutional research.

Over the next year we anticipate the Patient Centered Outcome Research Institute (PCORI) will become much more active. PCORI in a non-federal institution funded through the Affordable Care Act, and will eventually fund about $500M per year in CER research and educational activities. Initial requests for applications (RFA’s) will be coming out in the fall of 2011, and we anticipate NC organizations will respond. These initiatives will be especially important given the current budgetary constraints on federal grant funding. The scope of these RFA’s is not clear at present, and will likely evolve over the next several years.

- **Electronic Health Record Loan Program** –
  Since the timeline for ONC’s competitive grants to create electronic health record (EHR) loan funds is still unknown, the NC Health and Wellness Trust Fund Commission (HWTF) decided to use its own funds to develop a program that provides low interest EHR loans specifically focusing on small rural practices in Tier I counties serving primarily patients with Medicaid, Medicare and providing indigent care. As a result of Session Law 2011-145 House Bill 200, the NC Health and Wellness Trust Fund Commission (HWTFC) was abolished on June 30, 2011. Effective July 1, 2011 funding to continue the loan fund program was transferred to the NC DHHS Office of Health Information Technology (OHIT).
This program continues to allow practices access to the capital required to purchase an EHR prior to the onset of the ARRA-funded federal incentive program under Medicaid and Medicare. The advantage of establishing the loan fund was that North Carolina would have a competitive advantage in applying for the ONC grant and would be able to use this investment as the State’s match. The original intent of the program was focused in Tier 1 counties, but in September, 2011 the program was opened up to small rural/underserved and urban primary care practices in all counties that are traditionally underserved by conventional lenders. Specifically, the program provides loans ($40,000 to $60,000) to:

- Facilitate the purchase of a certified EHR technology or upgrade existing EHR technology to meet certification criteria;
- Train personnel in the use of such technology; and/or
- Improve the secure electronic exchange of health information.

Practices will also be required to participate in the State’s Health Information Exchange in order to be eligible for loans.

The following agencies assist OHIT to facilitate operation of the loan program:

1. North Carolina Medical Society Foundation (NCMSF) - In order to ensure that practices are ready to implement an EHR, a pre-application process will be used to make this determination. The pre-application process will be managed by NCMSF including direct assistance to practices to assist them in completion of the pre-application as well as suggested strategies to enhance their readiness. NCMSF staff will also provide an evaluation of the effectiveness of the loan program on EHR implementation within the selected practices.

2. The Center for Community Self Help (Self Help) will underwrite, originate and service loans made in the fund. Self Help is a community development lender that provides financing to low-income, minority and rural individuals, businesses and non profit organizations, assisting those borrowers and strengthening their communities. Self Help will use commercially reasonable efforts to fully collateralize the loans and obtain third party guarantees when available. Self help has two loan officers solely dedicated to this loan fund in Greenville (handling eastern NC) and Asheville (handling western NC)

3. The Regional Extension Centers (REC) created from HITECH funding from ONC will provide technical assistance to health care providers to adopt or enhance EHRs. The North Carolina Area Health Education Center (AHEC), the agency receiving funding from North Carolina, will partner with HWTF to ensure that loan recipient practices receive technical assistance to successfully implement EHRs so they can qualify and receive the Medicaid/Medicare incentive payment and repay the loan fund. The loan fund will be a critical asset to foster early adoption of EHRs throughout North Carolina and will integrate well with ongoing health information technology efforts in the state.
To date, the EHR Loan Fund has received 13 pre-applications with 1 application completed and sent to Self-Help for loan terms. The practice that was approved for funding was able to qualify for alternate funding due to its strong financial standing.

The North Carolina Medical Society Foundation (NCMSF) continues to work onsite with the AHEC offices throughout the state to provide training and information on the EHR Loan program. NCMSF is also working with the Community Practitioner Program to assist these practices with EHR loan funding as needed.

- **Community College Consortia to Educate HIT Professionals Program – Region D HITECH Workforce Training Program** - As we approach September 30, 2011, the one year anniversary of this training program, Region D (13 southeastern states) led by Pitt Community College, Greenville, NC is pleased to share impressive data (collected through July 2011):

  1. Of 82 community colleges throughout the country offering this training, Region D has four in the top ten according to the number of students having *ever been enrolled* in this program and there are nine of our colleges in the top 20 in this category. Of the five regions throughout the US, Region D has the highest number of students *ever enrolled* with 3791 (28% of national total).

  2. Ten of the top twenty colleges in the nation having the highest *current* enrollment are from Region D. Because this program is focused on students who enter with experience or education in either IT or health care, it is not surprising to realize that most of the students enrolled are in their 40’s or early 50’s giving stability to the workforce and new opportunities for those displaced or seeking alternative careers.

Because of the cost effectiveness of distance education and with careful planning the intent of Region D is to seek approval for a third year of training through a no-cost extension which would allow this training to continue through March 2013 to better serve the needs of the healthcare community in meeting their goals of implementing the Electronic Health Record and meeting meaningful use requirements.
Total Active Students in North Carolina - September 2011

<table>
<thead>
<tr>
<th>Workforce Role</th>
<th>Catawba Valley</th>
<th>Central Piedmont</th>
<th>Pitt Community</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practice Workflow</td>
<td>13</td>
<td>37</td>
<td>24</td>
</tr>
<tr>
<td>Clinical Practitioner</td>
<td>-</td>
<td>19</td>
<td>36</td>
</tr>
<tr>
<td>Implementation Support Specialist</td>
<td>-</td>
<td>30</td>
<td>12</td>
</tr>
<tr>
<td>Implementation Manager</td>
<td>-</td>
<td>26</td>
<td>32</td>
</tr>
<tr>
<td>Technical Support Specialist</td>
<td>49</td>
<td>-</td>
<td>16</td>
</tr>
<tr>
<td>Trainer</td>
<td>55</td>
<td>-</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>117</td>
<td>112</td>
<td>140</td>
</tr>
</tbody>
</table>

*Class numbers may be higher than notated due to students enrolled in or having completed dual classes. Per ONC guidelines, they are counted as one enrollment.

- **Curriculum Development Centers Program – Duke University Curriculum Development Centers Grant:** The Duke Center for Health Informatics (DCHI) in conjunction with our community college partners, Durham Technical, Rowan Cabarrus, and Pitt Community Colleges have developed these components under the Curriculum Development Centers Grant:

  1. Health Management Information Systems
  2. Networking and Health Information Exchange
  3. Fundamentals of Health Workflow Process Analysis & Redesign
  4. Installation and Maintenance of Health IT Systems

These components are four of 20 components being developed by 5 universities – Curriculum Development Centers (CDCs) in the US to provide health IT training.

Since the July 2011 Legislative Report, version 2.0 curricular materials were released by the office of the National Coordinator (ONC) through the Oregon Health and Science University (OHSU) National Training and Dissemination Center (NTDC). The version 2.0 materials are much improved over version 1.0 and have been very well received by educators. The Office of the National Coordinator has requested revisions to version 2.0 to make the content equally accessible to people with disabilities. While the version 2.0 materials are more accessible than the version 1.0 materials the goal is to increase the level of accessibility in version 2.0 and further increase accessibility for version 3.0. To achieve this, the CDCs have enlisted the services of a contractor with expertise in making electronic materials accessible to the disabled.

American Medical Informatics Association (AMIA) has completed a very extensive gap analysis of all 20 components developed by the DCDs under this grant. The results of this analysis are being used to inform version 3.0.
On August 1-2 Duke University hosted a retreat with the ONC and the CDCs to review the results of the AMIA analysis, define the timeline and scope for version 3.0, sketch out plans for continued support of the curricular materials past the current funding period which ends April 2012, and to determine the level of remediation that will be required to make versions 2.0 and versions 3.0 more assessable to the disabled. The retreat was the start of this process, discussions surrounding increased accessibility, scope and timelines for revised version 2.0 and version 3.0 are on-going.

**University-Based Training Grant (UBT):** Duke University and the University of North Carolina at Chapel Hill (UNC-CH) are offering training and research programs designed to produce highly specialized health information technology professionals. At the conclusion of their studies, graduates of the Duke and UNC informatics programs are expected to possess a firm grasp of concepts and skills needed to succeed in the following roles:

- Clinician/Public Health Leader
- Health Information Exchange Specialist
- Research and Development Scientist
- Programmer and Software Engineer
- Health IT Sub-specialist

Since the last report Duke has revised 2 of their informatics programs: The Graduate Certificate in Health Informatics and the Master of Management Program in Clinical Informatics (MMCI). The eligibility requirement for the Graduate Certificate in Health Informatics has changed. Many students without a clinical background expressed interest in informatics training. To meet this need, the clinical background requirement for this program has been dropped. This revised program will be offered in the spring of 2012. The format for the MMCI program has changed and is now offered in a weekend format to accommodate working professionals. This change in format increased the number of enrolled students from 23 students enrolled in the fall of 2010 to 35 students enrolled fall of 2012. The Master of Science in Nursing (MSN) – Informatics Specialty Program remains unchanged.

The Duke Fuqua School of Business has created a recruitment web site for graduates and Current MMCI students. The purpose of this website is to connect partners and industry leaders with MMCI graduates. This website provides comprehensive information about the MMCI students and makes employment opportunities readily available to students.  
http://www.recruitdukemmcigrads.com/candidate-profiles/

The University of North Carolina at Chapel Hill (UNC-CH) will offer a new Public Health Certificate Program spring 2012. The UNC Graduate Certificate in Clinical Information Science (CIS) and the *Certificate in Health Care Systems – Informatics* remains unchanged.
Current enrollment and program completion metrics for the Duke and UNC-CH informatics masters and certificate programs are provided in the table below.

<table>
<thead>
<tr>
<th>Program Description</th>
<th>Enrollment and Completion Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuqua School of Business Master of Management in Clinical Informatics</td>
<td>58 enrolled/ 22 graduated May 15, 2011</td>
</tr>
<tr>
<td>Duke School of Nursing Masters of Science in Nursing, Informatics Specialty</td>
<td>27 enrolled/ 1 completed the program August 2011</td>
</tr>
<tr>
<td>Duke School of Nursing Graduate Certificate in Health Informatics</td>
<td>10 enrolled/ expected completion date for these students is December 2012</td>
</tr>
<tr>
<td>UNC Graduate Certificate in Clinical Information Science</td>
<td>18 enrolled/ 3 completed the program August 2011</td>
</tr>
</tbody>
</table>

**Outreach**

On November 7, 2011, DCHI in collaboration with the North Carolina Healthcare Information and Communications Alliance (NCHICA), and the Community College System of North Carolina will host a meeting of the North Carolina Community College Health Information Technology (HIT) Directors. The purpose of this meeting is to increase awareness of the ONC workforce training programs and other HIT programs available across the state. This meeting will also provide a networking opportunity for attendees.

The DCHI continues to host weekly Joint Health Informatics Research Seminars during the spring and fall semesters. Presentations from local, national, and international informatics experts are streamed live for public viewing and archived on the DCHI website for public access. A list of the presenters for the fall 2011 semester and archived videos of past presentations can be viewed at:

https://www.dchi.duke.edu/education/informatics-seminars

On August 31, 2011, Duke and UNC-CH held the 3rd Duke/UNC Joint Faculty Meeting. The purpose of these meeting is to foster collaboration between the two institutions. The topics covered during this meeting included:

1. Requirements for a Central Biobank System
2. Secure Medical Workspace

The next joint faculty meeting will be scheduled for January 2012.
• **Beacon Community Program –**
  **Southern Piedmont Beacon Community Program** - The Beacon Community Program (encompassing Cabarrus, Rowan, and Stanly counties) has continued to make significant strides toward its goals. The overall goal of the program is to leverage Community Care of North Carolina’s (CCNC’s) patient-centered medical home model, health information technology and innovative interventions to improve care coordination, encourage patient involvement in their medical care, and improve health outcomes in a high quality, cost-effective manner.

We are working toward this goal by specifically:

1. Increasing health information exchange between providers, hospitals, and other appropriate stakeholders;
2. Decreasing inappropriate emergency department (ED) utilization;
3. Decreasing preventable hospital readmissions;
4. Improving chronic care disease management for those with congestive heart failure (CHF), diabetes and asthma;
5. Improving public health.

We are proud to announce that we have been named a “Vanguard Beacon” (one of the best!) in Care Transition and Primary Care Transitions. This recognition is the result of utilizing Community Care of North Carolina’s (CCNC’s) highly successful “Boots on the ground” care management model. In this model, the care managers are primarily responsible for helping identify patients with high risk conditions or needs, assisting the providers in disease management education, and/or follow-up, helping patients coordinate their care or access needed services, and collecting data on process and outcome measures. The care managers are actively involved in helping patients successfully transition from hospital to home to follow-up appointments with their primary care provider.

**Visit by the Office of the National Coordinator (ONC)** - We have been fortunate to have two visits by the Office of the National Coordinator (ONC) so that they hear “live” versions of our successes and obstacles. During a recent visit in Raleigh, members of the ONC met with members of the Beacon Project Team, the State Health Information Exchange (HIE), Medicaid, and the Regional Extension Centers to gather information on collaboration occurring in the state. We shared how we are implementing and coordinating the funding we have received, our goals, milestones, and barriers. The meeting was extremely useful to all attendees and it was great to put a name with a face.

**Visit by Lanier Cansler (Secretary NC DHHS), Steve Cline, DDS, MPH, (Assistant Secretary for HIT) and Michael Watson (Deputy Secretary NC DHHS)** - We had the pleasure of hosting Secretary Lanier Cansler, Deputy Secretary Michael Watson, and Dr. Steve Cline on Wednesday, August 24th. The intent of their visit was to get an update on Beacon activities and prepare for a national level discussion, facilitated by the ONC, between all of the State Health Secretaries who have a Beacon Community within their state. They provided accolades for our successes, gained a better understanding of our obstacles, and
praised the hard work that the Beacon Project team has been engaging in over the last 18 months.

**Beacon Funding Allocation Strategy** - In order to implement solutions that align with each health systems’ goals and priorities, funding has been allocated to the three hospital systems in the catchment based on the population in each county. The hospital systems in the Beacon catchment are CMC-NE, Rowan Regional Medical Center, and Stanly Regional Medical Center. Each hospital named a leadership team to decide how to allocate the funds and they were charged with choosing projects that would help Beacon objectives. Here are the projects and focus areas of each hospital system and public health departments/systems:


**Rowan Regional Medical Center** - Transitional Care Project – additional care managers and coordination of care Project Red/Louise – will complement current discharge processes Bedside availability of computer and EMR

**Stanly Regional Medical Center** - Transitional Care- additional care managers and coordination of care; Clinical Alerts- customized alerts utilizing Stanly Clinical data and the N3CN Informatics Center. The projects and focus areas for each Public Health Department/System are:

1. **Cabarrus Health Alliance (CHA)** - The scanning and equipment purchases are complete. EMR customization is in progress. They implemented a child health module, and incorporated a new evidence-based program “Bright Futures” into the EMR. Also included in the customization were training and business process enhancements.
2. **Rowan County Health Department (RCHD)** - The Rowan County Health Department is continuing to scan medical record documents and is actively using its electronic medical record. They will be implementing electronic signatures and upgrading EMR software to the newest version, which is certified for meaningful use.
3. **Stanly County Health Department (SCHD)** - The Stanly County Health Department is completing the scanning of medical records in preparation for future EMR.

The next phase after EMR implementation at each of the health departments/systems will be a Public Health Portal that will enable authorized users to view demographic and community health data. One other project being considered is “Louise”. “Louise” is a computer avatar and she will be piloted in one of the health departments’ Women/Infants/Children section as a health educator.
Collaboration with Federally Qualified Health Center (FQHC)- The Beacon Project team, Charlotte NW AHEC’s Regional Extension Center, the Cabarrus Health Alliance, and Community Care of Southern Piedmont also worked closely with the local Federally Qualified Health Center (McGill Family Medicine) on applying for a $100,000 HRSA grant to align their goals with the Beacon goals. The grant application was successful and will run from September 2011 to September 2012.

Community Care of North Carolina’s Informatics Center (IC)- The ONC approved the budget items for the IC and over the next couple of months, the necessary infrastructure will be put in place in order to receive data into a clinical data repository. This capability will drive more efficient workflow to many stakeholders in the Southern Piedmont Community and sets the stage for scaling to other networks over time. Currently, Medicaid and dually eligible claims data, SureScripts, and Lab Corp data reside there. In the near future, Medicare, BCBS, State Employees Health Plan, and other data will be uploaded to the IC. These rich and robust data sources will allow better data and reporting mechanisms to come of the IC and thus better care can be rendered to an increased number of patients in North Carolina.

In addition to project funding, we are collaborating with various stakeholders in the state:
1. Collaboration with the Area Health Education Center Regional Extension Centers (REC’s) - Members of the Beacon Project Team have joined members of the NW AHEC and Charlotte AHEC in visiting practices in the catchment that would like to adopt, implement, and meaningfully use an electronic medical record.
2. Linking with Coastal Connect HIE

Coastal Connect HIE (http://coastalconect.org/) hosted an introductory meeting with the Beacon team on August 18th in Wilmington, NC. Coastal Connect Health Information Exchange was created as a way to securely connect health care providers in and around Southeastern North Carolina by way of electronic medical information sharing. The area served by the Coastal Connect initiative is geographically and demographically diverse, and
includes thirty-nine rural and urban counties in Eastern North Carolina. The total population of this area is approximately 2.4 million (NC DHHS data), with a significant portion of these people under-insured, or lacking insurance altogether. Beacon and Coastal Connect initiated this conversation to determine how and where we can partner together. One aspect of this partnership will involve learning from each other’s experiences, and another will be to leverage this knowledge in an effort to drive momentum toward North Carolina’s and the ONC’s shared objective of scale and spread.

We are continuing to investigate other interesting projects:

- **Asthmapolis** - Founder, David Van Sickle, PhD, visited various stakeholders in the Beacon catchment and helped us develop a possible plan for a quality initiative (QI) to be completed in one of the pediatric practices in the Beacon community. Asthmapolis offers a new kind of device tracking service that uses a blue tooth enabled device to monitor the time and location where someone uses his/her inhaler. The goal is to capture data about asthma from daily life to help people better manage the disease, while aggregating data from everyone to improve public health. For additional information, please visit [www.asthmapolis.com](http://www.asthmapolis.com)

Lastly, we are continuing to develop a Communication Plan for Beacon:

- **Sharepoint Website** - We have started a new Beacon team website. It currently includes the project dashboard, project templates, past BLT wraps, and an events calendar. Check it out at [http://sharepoint.ccofsp.com/SitePages/Home.aspx](http://sharepoint.ccofsp.com/SitePages/Home.aspx)

We have also been emailing a weekly update in the form of a “BLT” Wrap. The “Wrap” provides a wrap up for the week and we currently have over 125 recipients.

**Potential Beacon Headlines in 2013:**

- A *Beacon Community* has safer hospitals
- A *Beacon Patient* is a better informed patient
- A *Beacon Physician* has the information they need to direct patient care
- A *Beacon Community* keeps patients and families from falling through the cracks
- A *Beacon Community* is a community that has bent the cost curve

**Cabarrus Health Center Gets Grant** - U. S. Senator Kay R. Hagan announced Cabarrus Community Health Centers Inc. in Concord will receive $99,941 for the adoption of health information technology (HIT) to support long-term improvements in quality of care, health outcomes and cost efficiencies.

“North Carolina’s community health centers ensure that our most vulnerable populations can access affordable health care services,” said Hagan, who serves on the Senate Health, Education, Labor and Pensions (HELP) Committee.
“Health information technology is instrumental in reaching and treating members of the community. This grant will help Cabarrus Community Health Centers strengthen their HIT infrastructure to provide higher quality care and make health care more accessible for the community.”

The grant, funded through the Health Resources and Services Administration (HRSA), will enable Cabarrus Community Health Centers to participate in network-wide health care improvement initiatives that include a strong information technology component.

(2) CURRENT STATUS OF STATE HIT EFFORTS, BOTH PUBLIC AND PRIVATE

- North Carolina Community Care Networks, Inc.—
  The Community Care of North Carolina Informatics Center continues to expand ITS services and users. Updated usage statistics are below. Over 1,400 care managers and 1,500 providers are actively using CCNC Informatics Center web-based applications. Access to patient information and a shared, coordinated patient record through the Provider Portal and Care Management Information System are influencing care delivered to over 100,000 Medicaid recipients statewide every month.

Informatics Center Usage Statistics Update

<table>
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<tr>
<th>CARE MANAGEMENT INFORMATION SYSTEM (CMIS)</th>
<th>September 2010</th>
<th>January 2011</th>
<th>August 2011</th>
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<tr>
<td>Number of unique user log-ins</td>
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<td>Total successful log-ins</td>
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<td>Number of unique patients accessed</td>
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<table>
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<th>PROVIDER PORTAL</th>
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<th>January 2011</th>
<th>August 2011</th>
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<td>185,923</td>
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</table>
Informatics Center Project Updates since Last Report

**CMIS Access for Public Health Personnel:** A major expansion of our Care Management Information System is underway, to incorporate new CMIS functionalities and open CMIS access to public health case managers involved in care management for pregnant women and children with special healthcare needs. To date, we have trained 580 new CMIS users in local health departments, who will now have a shared, secure, web-based patient record for case management documentation and coordination of care management activities for children with special health care needs (CC4C initiative) and women with high-risk pregnancies (Pregnancy Home initiative). New screening tools and documentation screens to monitor processes and outcomes have been developed in CMIS to support these programs.

**Real-time Hospital Admission, Discharge, Transfer Data Project:** Through the joint efforts of CCNC, NC DHHS, and the NC Hospital Association, we are now receiving twice daily notification of Medicaid patient inpatient and ED visits from 40 NC hospitals, with additional hospitals in development. This real-time notification greatly facilitates the identification of patients in need of care management support as they transition from hospital to home, including pharmacist review of medications and follow-up in the primary care medical home.

**Enhanced Analytic and Reporting Capacity for Risk Stratification and Identification of Savings Opportunities:** NCCCN is now able to apply Clinical Risk Group (CRG)-risk adjusted analytics to improve the accuracy of monitoring cost and utilization metrics over time, and to improve efficiencies in identifying patients most appropriate for care management services. We are applying 3M-developed (industry standard) methodologies to identify potentially preventable hospital admissions, readmissions, ED use, and ancillary services, to more accurately identify patients and areas where costs and utilization are higher than expected, accounting for patient acuity. Key indicators of cost and utilization performance can now be tracked and reported in a risk-adjusted manner.

- **The North Carolina CHIPRA Demonstration Grant -**

  North Carolina is one of 2 (NC and PA) grantee states participating in this Category of the CHIPRA Quality Demonstration Grant. The goal is to develop a model EHR Format for children, demonstrate that it can be readily used, and package it in a way that facilitates broad incorporation into EHR systems.”

  In December of 2010, NC received a draft of the Model Children’s Electronic Health Record Format Environmental Scan and Gap Analysis from Intermountain Healthcare. NC was also given guest access to ACCOMPA, a website developed in order to view the draft format. The CHIPRA Team has reviewed the gap analysis as well as the ACCOMPA website and provided feedback to Westat.
We have also shared this information with the NC REC and have included them in conference calls with Westat.

On December 31, 2010, NC submitted an updated work plan of how we will recruit and identify practices. We are currently surveying CCNC practices to identify the vendors now used by primary care practices that care for children. The survey also asks about gaps in EHRs and initiates conversations regarding interest in implementing the Format.

NC is currently collaborating with the Regional Extension Center on this project and has hired a full time EHR consultant to head this initiative.

We are following up with practices who have expressed interest in implementing the Format as they are vital to the development of our evaluation design. We are approaching practices in coordination with their network and other CHIPRA quality improvement personnel. Vendors who have been solicited to participate are scheduling in-depth demonstrations of their products to identify specific gaps, provide input for the evaluation design, and begin application of the model to those areas. Key stakeholders such as the NCAFP, REC, and NCPS will be represented to provide input, get answers, and better understand challenges and opportunities. Formal participation commitments from providers and vendors will be obtained as soon as we have defined the requirements, roles, and scope of the evaluation process.

By December 31, 2011, NC must provide a more detailed evaluation design for assessing the impact of use of the EHR Format.

AHRQ and Westat are beginning the assessment of existing vendors on a national level. This conformance testing is projected to be completed by November 2011. NC will have developed an evaluation design for this project by December 31, 2011. The prototype is scheduled to be ready in March 2012, at which point NC will begin assessing the impact of the use of the format.

**State Agency HIT Updates**

- **Division of Medical Assistance / State Medicaid HIT Plan (SMHP)**—
  See page 2 of this report for the Medicaid update.

- **NC Office of Medicaid Management Information System (MMIS)**—
  OMMISS is the DHHS agency leading the development of the Replacement MMIS for NC Medicaid, with Computer Sciences Corporation (CSC) as the prime vendor.
CSC’s contract was amended in July 2011 to accommodate a tremendous volume of change that has, and will continue to, affect the design, implementation, and testing of the Replacement MMIS system. A portion of the change is attributable to HIT/HIE support activities, which include leveraging the provider database maintained by CSC to support Medicaid Incentive Payments to eligible providers. $5,751,667 in expenditures has been approved to date, leaving a capacity of $9,526,093 for needs identified in the future. The amended schedule calls for the Replacement MMIS system to begin operations on July 1, 2013.

- **Office of Long Term Services and Support (OLTS)** - OLTS completed its work with a contractor (Mercer) to conduct an analysis of Business Processes and Requirements to Support Systems Change for Long-Term Service and Support (LTS) and Integration of the Division of Aging and Adult Services Aging Resource Management System (ARMS) with Common Name Data Service (CNDS) and Client Services Data Warehouse (CSDW)

  The report focused on two broad goals:
  
  Goal 1: Improved access to Long Term Support Services  
  Goal 2: Increased Choice and Control

  A complete copy of the final report is available at:  

- **Department of Corrections** –  
  No Report This Quarter.

- **State and Local Public Health - Public Health Information Technology Steering Committee** –  
  The North Carolina Association of Local Health Directors (NCALHD) Health Information Exchange Subcommittee met on July 20th and August 17th to continue discussions on how local health departments can obtain a certified electronic health record and options for connecting to the NC HIE. On August 17th, the group participated in a demonstration from Orion Health on an EMR-lite solution. The next meeting is scheduled for September 20th to discuss the role of HIS and its potential EHR modules. Once the group has made some decisions a recommendation will go to the Technology Committee for consideration.

- **Division of Public Health - Health Information System (HIS) and NC Immunization Registry (NCIR)**—  
  The NCIR currently has 95% of immunization providers across the state entering immunization information into the system on a daily basis. NCIR currently has
over 6.3 million patients and over 65 million immunizations recorded as of August.

On September 1st, it was announced that the Immunization Program within DPH won two competitive Affordable Care Act (ACA) grants. The first grant will help expand the interoperability of the North Carolina Immunization Registry (NCIR). After completion this will allow electronic health records (EHR) to send immunization data to the NCIR and to receive immunization data missing in their HER via HL7 transactions. The second grant will allow the NCIR to interface with the Center for Disease Controls (CDC) vaccine ordering system called VTraks. Work for these two new enhancements will begin in the next NCIR contract.

The HIS-NCIR Interface is one-way, from NCIR to HIS. Local health departments will link to NCIR and enter immunization information there (since that system requires information, such as lot number); then the data necessary for clinical documentation of the immunization and for billing will come via the Interface into HIS.

As of September 6th, DPH has a new HIS contract with the existing vendor, Netsmart. Netsmart has applied all patches that other customers got during the no contract period and those previously developed for HIS before contract ended. HIS staff is testing those changes in a UAT environment. Once testing is complete they will promote Avatar 2008 to the test environment so staff can begin testing HIPAA 5010 transactions.

• **Office of Emergency Medical Services** –
  The North Carolina Office of EMS continues to maintain and enhance all data systems pertaining to medical record collection and regulatory data. This includes, but is not limited to, inspection reports and EMS certification records through the PreMIS, CIS, and SMARTT applications. Additionally, the office is rolling out a new vehicle inspection application based on the Apple iPad platform that will significantly improve the efficiency of collecting vehicle inspection data in the field. Also, through the Lead the Wave project funded by The Duke Endowment, the Office of EMS will be providing $1.7 million towards the purchase of capnography and 12-lead electrocardiogram (ECG) devices. By providing over 500 new and replacement devices, the Office of EMS is closing the gap on ambulances and response vehicles that are currently not properly equipped.

• **Department of Public Instruction** –
  No Report This Quarter

• **State Health Plan** –
The State Health Plan continues to increase our internal capacity for storing and reporting member utilization and eligibility data. Our plan is to integrate more data sources and increase functionality for our internal reporting database which currently houses medical, pharmacy and eligibility data. We are also working on a 2 year project with the Office of Medicaid Management Information Systems and Thomson Reuters to develop a data repository that merges Plan data with Medicaid data for reporting and evaluation purposes. In addition, the Plan is participating in the Multi-payer Primary Care Practice Demonstration in 7 rural North Carolina counties and will be providing member claim and eligibility data for the evaluation to NC Community Care, Inc. through Blue Cross Blue Shield of North Carolina. The Plan is expanding the transition to the patient-centered medical home model of care delivery to the majority of members through an arrangement with ActiveHealth Management and partnership with NC Community Care, Inc., which is scheduled to be in place by January 1, 2012. There will be additional data available to NC Community Care, Inc. through ActiveHealth Management for care management support.

- **Department of Insurance (DOI)** -
  In March 2010, the Patient Protection and Affordable Care Act (ACA) was enacted by Congress and signed by the President. This Health Care Reform law mandates the creation of Health Benefits Exchanges (HBE) that will allow consumers to access and evaluate health insurance plans online from commercial insurers and to apply to health subsidy programs such as Medicaid, CHIP, and subsidized commercial plans. The HBE must be operational by the fall of 2013 in order to process applications for coverage that will take effect on January 1, 2014.
  (Excerpts from the report “State of NC, Department of Health and Human Services, Information Technology Gap Analysis” by Public Consulting Group, June 23, 2011.)

DOI was awarded a Planning grant to plan for a state operated HBE in North Carolina under the provisions of the ACA. The NC HBE will require modifications to at least two key IT systems currently being built, 1) the replacement Medicaid Management Information System (MMIS) called North Carolina Transparent Reporting, Accounting, Collaboration, and Knowledge Management System (NCTracks) and 2) the new integrated eligibility and enrollment system called NC FAST (North Carolina Families Accessing Services through Technology). The estimated costs to modify these state systems to satisfy the functional requirements of ACA are $2.0 million for NC FAST and $400,000 for NCTracks, not including DHHS staff costs. Federal funds under ACA are available to support the development of the state HBE.

Pursuant to legislative authorization and direction (Session Law 2011-391, Sec. 49), on June 29, 2011, DOI submitted an Exchange Establishment grant proposal for Level 1 funding to begin the necessary IT systems design and modifications. On August 12, 2011, DOI was awarded roughly $12.4 million of Level 1 funding.
for Exchange planning and development activities. Proposed activities under the Level 1 grant include working with DHHS to expand NC FAST for HBE eligibility functions, and gathering preliminary requirements for non-eligibility functions of the HBE. Funding for Level 1 lasts for one year. Level 2 Establishment grants for the state HBE offer funding through 2014. As a part of the application, states are required to develop a complete operational budget, sustainability plan and comprehensive work plan through 2014. States may apply for Level 2 funding up until June 29, 2012.

- **State Information Technology Services (ITS) / State Chief Information Officer** –

The Office of the State CIO and Information Technology Services (ITS) remain fully engaged in the Health Information Technology planning and policy establishment processes for the State of North Carolina. ITS will also become involved operationally if requested.

State CIO Jerry Fralick is an active member of the North Carolina Health Information Exchange (NCHIE) Board of Directors. He brings his technical knowledge and experience in working with vendors to each meeting. In addition, several ITS staff members have been working with three of the NC HIE Work Groups: Technical and Clinical; Legal and Policy; and Governance. Staff provided technical information for inclusion in the recent RFP to select a vendor to build and operate core services of the Statewide Health Information Exchange.

In keeping with his Open Door policy, Mr. Fralick has met with key HIT vendors who are interested in working with the State of North Carolina in future HIE initiatives. ITS is also actively involved with the work of the National Association of State CIO’s which has been facilitating the exchange of innovative ideas in health IT.

- **Division of Mental Health/Developmental Disabilities/Substance Abuse Services (DMH/DD/SAS) and the Division of State Operated Healthcare Facilities (DSO HF)—**

Creation of an integrated database to enhance infrastructure of comparative effectiveness research: Last year, North Carolina Community Care Networks, Inc. (NCCCN) received a funding award from the Agency for Healthcare Research and Quality (AHRQ) for expansion of research capability to study comparative effectiveness in complex patients with mental and physical co-morbidities. The AHRQ initiative was endorsed by Secretary Cansler and the Division of Mental Health, Developmental Disabilities and Substance Abuse Services (MH/DD/SAS), the Division of State Operated Healthcare Facilities, and the Division of Medical Assistance. Since March of this year, NCCCN and these agencies have been collaborating to create an integrated data infrastructure to enable future research and analysis of health care needs and healthcare utilization of medically indigent and uninsured beneficiaries with complex medical and
psychiatric co-morbidities. Since August, the Division of MH/DD/SAS has been releasing monthly extracts of administrative claims data for state-funded outpatient mental health facilities; the Division of State Operated Healthcare Facilities has nearly completed its testing and development ground work and will soon be in the production stage of releasing data on patients admitted to the four North Carolina state psychiatric hospitals; and the Division of Medical Assistance is releasing reimbursement claims data. As the initiative proceeds, NCCCN will link the data collected for SFYs 2008-2010 to create a mental health integrated data base of consisting solely of de-identified data. The mental health data is being made available to NCCCN in accordance with all applicable federal and State laws, regulations, policies and standards. The integrated database will not include any identifiable data and under no circumstances will identifiable data be made available to the public.

Unraveling the complexities of applicable laws governing the use and disclosure of patient information concerning of DHHS beneficiaries: Because of the high prevalence of behavioral health clients with co-occurring mental health and substance abuse disorders, efforts are underway to clarify when client records are protected by the HIPAA Privacy Rule and when the records are protected by the more stringent federal substance abuse confidentiality protections (42 CFR Part 2).

- **North Carolina Healthcare Information and Communications Alliance, Inc. (NCHICA)** – The Department of Veterans Affairs Asheville VA Medical Center has recently ramped up their recruitment of the 30,000 Veterans in Western NC that they are responsible for caring for to have them Opt-in or consent to the sharing of their health information with the 16 hospitals in the Western NC Health Network for treatment purposes. Currently, there are over 500 Veterans who have consented with a projection of thousands agreeing over the next few months.

  In addition, NCHICA has negotiated a perpetual license for the CONNECT Gateway software so that the long-term cost of the operation of the connection to the Nationwide Health Information Network is reduced.

- **NC Hospital Association (NCHA)**– The North Carolina Hospital Association has a diverse strategy to help hospitals achieve meaningful use of electronic health records (EHR) and health information technology (HIT) to create significant clinical improvements and lower the cost of healthcare delivery. Member hospitals stand to gain as much as $540 million in Medicare and Medicaid incentive payments through the Health Information Technology for Economic and Clinical Health (HITECH) portion of the American Recovery and Reinvestment Act (ARRA). The main goals of HITECH are quality improvement and cost reduction by moving from a transactional basis to process-
driven delivery of healthcare. NCHA's goals are aligned with HITECH and the State of North Carolina in the three areas of focus that will help hospitals become "meaningful users" of electronic health record (EHR) technology:

- implementation of certified electronic health record systems
- reporting of quality measures to the Centers for Medicare and Medicaid Services and/or states
- exchanging of clinical data with other providers

NCHA is also focused on helping hospitals and hospital-owned physician practices acquire broadband Internet access and education opportunities regarding HITECH and meaningful use, and we are especially concerned that small and rural hospitals and safety net providers not be left behind in the rapid period of HIT adoption. A wave of healthcare reform-related grant opportunities will likely bring additional projects to the attention of hospitals in the near future, and ongoing projects such as ICD-10 conversion will continue to be important and require action on the part of NCHA and member hospitals.

Create Low-Cost Health Information Exchange Using Existing Technology

NCHA is partnering with the North Carolina Medical Society (NCMS) to provide the North Carolina Healthcare Exchange (NCHEX), a voluntary, not-for-profit HIE that leverages existing technology installed as part of the North Carolina Hospital Emergency Surveillance System (NCHESS) project, a state-mandated ED data program to benefit the state's syndromic surveillance and epidemiological research efforts. NCHESS hospitals also provide 25% of the data used by the Centers for Disease Control for their BioSense program. In June 2011, the North Carolina Division of Public Health (NCDPH) announced that the North Carolina Hospital Emergency Surveillance System (NCHESS) is the designated pathway for eligible hospitals to meet the meaningful use syndromic surveillance objective as part of the Medicare and Medicaid EHR Incentive Programs.

NCHEX leverages an existing relationship between Thomson Reuters and CareEvolution, whose HIE platform provides the majority of the technical infrastructure of the statewide exchanges for the South Carolina Health Information Exchange (SCHIEx), West Virginia Health Information Network (WVHIN), Alabama OneHealthRecord, as well as private exchanges. NCHEX will provide HIE services to hospitals as well as affiliated and unaffiliated physician practices using the Thomson Reuters HIE Advantage platform, which will be certified for up to 12 meaningful use objectives by the Certification Commission for Health Information Technology (CCHIT) in 2011. All participating clinicians will have a virtual Single Patient Record (vSPR) within their existing EHR; non-participating providers will have access to the same information using a secure Web browser.

NCHEX is standards-based and provides numerous features to all participants,
including:

- Patient summary (demographics, allergies, problems, providers, procedures)
- Inpatient summary (36-most recent hours of hospitalization data)
- Reports (CCD, discharge summary, pathology, radiology, etc.)
- Lab Viewer (all available labs)
- Messaging (patient, provider)
- Real-time quality surveillance (disease and condition reporting)
- Eligibility reporting
- Uploading of external documents
- EMRLite and ePrescribing (MU certified, SureScripts certified)
- Personal health record
- Logging and auditing

In addition to these features, the platform is also capable of:
- Public health reporting
- Immunization registry reporting
- CCD generation for use with external providers and HIEs
- NHIN connectivity
- Patient inquiry through the Continuity of Care Viewer by community physicians
- Medication reconciliation
- Clinical alerts
- Never-event management

NCHEX is in a pilot phase with the Cone Health and WakeMed health systems, which consists of 7 hospitals, 8 emergency departments and 57 hospital-owned physician practices. NCHEX has 961,000 unique patients in the system at present, and the pilot is expanding to include the following groups:
- CapitalCare Collaborative
- Cornerstone Health Care
- Eagle Physicians & Associates
- NC Division of Public Health
- North Carolina Community Care Networks (CCNC)
- Raleigh Medical Group
- Raleigh Orthopedic Clinic
- Wake Radiology

There is no cost to pilot participants through 2011, and the goals of the pilot include providing standards-based access and data interchange capabilities for public health reporting, disease management for Medicaid and case management for safety net providers, and to build local collaboratives among providers using NCHEX to facilitate achievement of specific clinical goals.

**Medicaid Admission / Discharge Data Initiative** - NCHA, the North Carolina
Department of Health and Human Services, and North Carolina Community Care Networks are collaborating on the Medicaid Admission / Discharge Data Initiative to enhance the coordination of care for Medicaid beneficiaries. The initiative builds on existing care management efforts already underway between hospitals and local community care networks and utilizes technology already in place in hospitals. NCHA, NCCCN, and DHHS are working with Thomson Reuters Healthcare to provide a twice-daily electronic data for Medicaid patients to NCCCN's Informatics Center. The data feed will work off of technology already installed in hospital/system and there is no additional cost to hospitals to participate. The technology is known under several names including Care Focus, Clinical Xpert Navigator, and Mercury MD MData. The technology was widely installed in many North Carolina hospitals/systems with funding from NC Division of Public Health under the name North Carolina Hospital Emergency Surveillance System-Investigative Monitoring System (NCHESS-IMC). Local Community Care agencies will be able to access the Medicaid patient data directly from the Informatics Center pursuant to network system access agreements they have in place with NCCCN.

Improve Patient Safety through Quality Reporting and Collaboration-
The North Carolina Center for Hospital Quality and Patient Safety, a federally-designated patient safety organization (PSO), is leading our hospital quality improvement activities and will assist hospitals to understand and report the 15 quality measures required under sections 4101(a) and 4102(a)(1) of the HITECH Act. These Stage 1 measures are thought to be extractable directly from a HITECH-certified EHR and should not require manual extraction or chart abstraction. Additional quality reporting measures and procedures are likely to be required in 2011 and 2013.

Support Small and Rural Hospitals in Health IT Adoption- To assist hospitals with HIT education and EHR adoption, NCHA and the North Carolina Rural Health Center are coordinating with private funders and federal programs from ONC to become meaningful users of EHR. The Duke Endowment has funded comprehensive HIT strategic planning for 19 rural hospitals using the services of the Computer Sciences Corporation (CSC), and additional private grants are under consideration. We are also working with rural and Critical Access hospitals to leverage education opportunities through the Regional Educational Center (REC) federal funding program from ONC, which is being managed by the NC Area Health Education Centers (AHEC). It was announced at the first post-funding meeting of the REC that hospitals will not receive assistance from the REC grant during the first two years of the initial four-year program. NCHA and the Rural Health Center will continue to work with the REC staff to attempt to deliver comparable resources using grant opportunities and relationships with qualified vendors through NCHA Strategic Partners and other stakeholders.

Develop Strategic Partnerships with Qualified Health IT and EHR Vendors-
NCHA Strategic Partners is evaluating qualified vendors to provide value-based purchasing of HIT education, strategic planning, EHR selection and implementation services and health information exchange (HIE) to hospitals. We are communicating with potential vendors on a weekly basis to evaluate products and services to meet the needs of hospitals and physician practices.

**Promote Better Connectivity Among Providers** - Hospitals and providers will require fast and stable Internet connections to be able to share clinical data and become meaningful users of EHR. NCHA has partnered with the North Carolina TeleHealth Network (NCTN) to create a private statewide broadband network of healthcare providers to help meet the growing bandwidth needs that will result from EHR adoption and HIE activities. The hospital phase of the project is known as NCTN-H and will provide an 85% discount for public and not-for-profit hospitals; other hospitals will be able to leverage a volume discount and join the network as well. Currently, 85% of NC licensed hospitals and 76% of all NC hospitals are registered and eligible to participate in the NCTN offering. As a sponsor of the NCTN-H, we are reviewing a recent notice of proposed rulemaking (NPRM) from the Federal Communication Commission (FCC) entitled "Rural Health Care Support Mechanism" to create a permanent discount program for broadband for public non-profit healthcare providers, modeled on the 5-year funding mechanism of the NCTN program. We are also supporting a new Broadband Technology Opportunities Program (BTOP) grant with the Microelectronics Center of North Carolina (MCNC) and their North Carolina Research and Education Network (NCREN) program to bring high performance broadband to healthcare providers.

**ICD-10 Collaborative** - NCHA and NCMS collaborating to help hospitals and providers tackle the issue of converting from ICD-9 to ICD-10. We recently cosponsored an ICD-10 education session and have been engaged in the efforts of the North Carolina Healthcare Information & Communications Alliance (NCHICA), and the collaboration with NCMS will seek to build on these types of activities. ICD-10 conversion will require massive changes to health information systems, business practices and provider workflows, and the goals of the collaborative will be to identify educational opportunities, network with existing resources, identify qualified vendors to assist hospitals and physician practices with all aspects of conversion, and help track the progress of compliance.

**Improve Public Health Surveillance** - The North Carolina Bio-Preparedness Collaborative (NCB-Prepared) is a $5M federal grant from Homeland Security to enhance the state's current surveillance and threat-detection capabilities and serve as a model for the nation. NCHESS hospitals currently provide 93% of the data consumed by the state's bio-surveillance system and NCHA is participating in the Collaborative to offer strategies on how to provide more, and better, data into the NCHESS system that could be of benefit to NCB-Prepared as well as the state's Medicaid analytics capabilities.

- **NC Medical Society and Foundation** –
**Regional Extension Centers:** The North Carolina Medical Society Foundation (NCMSF) is working with the Regional Extension Centers (REC’s) throughout the state to assure the long-term financial sustainability of medical practices as they move through the EHR selection and implementation phases to ensure long-term sustainability. NCMSF provides medical practices with the following services: business and strategic planning, budgeting, financial analysis, managed care contracting, human resource planning, marketing and business development, and provider recruitment assistance. Presently the NCMSF is providing these services to medical practices in the following counties: Bertie, Carteret, Craven, Dare, Pamlico, Pitt, Rockingham, Wake, Wayne and Yancey and New Hanover counties.

**EHR Loan Fund:** The EHR Loan Fund Web site ([www.ncehrloanfund.org](http://www.ncehrloanfund.org)) is managed by the N.C. Department of Health and Human Services Office of Health Information Technology as of July 2011. The Health and Wellness Trust Fund, who originally managed these funds was abolished on June 30, 2011. The Web site includes everything the practice needs to complete a loan application for the EHR Loan Fund Program.

The EHR Loan Fund is now open to all 100 counties throughout North Carolina (previously only open to Tier 1 counties) and focuses on small rural/underserved and urban primary care practices. Loans are structured for practices who traditionally have been underserved by conventional lenders, as well as practices who serve a disproportionate number of Medicaid/Medicare and indigent patients. The size of the loans vary based on need but will typically range from $40,000 to $60,000. The practices are required to provide collateral for the loans.

Loans can be used for:

- Facilitating the purchase of a certified EHR technology or upgrading an existing EHR technology to meet Meaningful Use certification criteria.
- To Train personnel in the use of such technology
- To improve the secure electronic exchange of health information through the N.C. Health Information Exchange.

The North Carolina Medical Society Foundation continues to work onsite with Regional Extension Center AHEC offices and their associated practices throughout the state to provide training and information on the EHR Loan program. NCSMF is also working with the Community Practitioner Program to assist these practices with EHR loan funding as needed.

The EHR Loan Fund has received 13 pre-applications from various counties throughout the state (i.e. Halifax, Alleghany, Edgecomb, Montgomery, Robeson, Columbus, Rockingham, Cherokee, Clay, Pitt, Gaston and Wake Clay Counties) with one application from Robeson County completed and approved by Self-
Help. The approved loan site decided to use traditional lending to secure the funding for their EHR purchase. To date, all loan applicants employ less than 5 providers and are in the process of selecting EHR systems. Program guidelines have been modified to ensure that each practice reviews at least three EHR systems to ensure their selection of a system that truly meets their needs.

**Community Practitioners Program:** NCMSF is continuing our work with the Community Practitioner participants to ensure they are all engaging in implementing technology into their practices. The North Carolina Medical Society Foundation continuously monitors the Community Practitioners progress through the cooperation of the AHEC Regional Extension Center offices. The NCMSF provides assistance to the CPP participant practices, including but not limited to, *EHR Loan program*, technical assistance, Patient-Centered Medical Home and meaningful use. NCMSF will provide individual assistance to practices within the CPP program on PCMH workflow and implementation of best practices to manage the care of their patients.

NCMF attends various seminars and educational sessions to stay current with federal, state and local programs that support and aid our providers

- **Coastal Connect Health Information Exchange** -
  Coastal Connect Health Information Exchange (CCHIE) is a group of hospitals and health care providers centered among New Hanover Regional Medical Center in Wilmington, North Carolina. CCHIE was organized as a regional effort to share patient information between participating hospitals and providers. CCHIE announced in mid-September during the initial phase of implementation, they had successfully linked the information systems between ten unaffiliated physician practices to enable health information exchange. More providers and hospitals are expected to be connected in the near future.

- **e-North Carolina –**
  No Report This Quarter

- **NC B-Prepared –**
  No Report This Quarter
Note: This report does not include initiatives of private HIT vendors or individual health systems such as Novant or Duke.

(3) CURRENT PUBLIC AND PRIVATE FUNDING SOURCES

North Carolina is applying for funding under ARRA in all eligible categories. Approximately $19 billion is authorized under ARRA for HIT nationally.

(4) STATUS OF DHHS HIT COORDINATION

Secretary Lanier Cansler announced the North Carolina Department of Health and Human Services has established the Office of Health Information Technology and the new position of Assistant Secretary for Health Information Technology. Dr. Steve Cline accepted the position to lead the Office of Health Information Technology effective June 1, 2010.

The goal of the North Carolina Health Information Technology (HIT) Program is to facilitate the development of statewide interoperable health information systems that will ultimately improve health and healthcare in North Carolina. Better use of HIT is critical to the success of those in need of health care. Dr. Cline is charged with coordinating HIT efforts across state government and other key stakeholders statewide as well as ensuring consistency with federal policy and initiatives. The Office of HIT is funded primarily through funds made available in the American Recovery and Reinvestment Act of 2009 (ARRA). As a condition of funding, each state is required to establish a state HIT coordinator position. (www.healthIT.nc.gov)

In addition, the Secretary of DHHS formed the DHHS Integrated HIT Steering Committee to coordinate the Department’s work around HIT and to collaborate with the HWTF HIE Workgroups. The DHHS HIT Workgroup includes:

Members:
Cline, Steve Dr., Office of the Secretary (DHHS), Chair
Attarian, Linda, Office of the Secretary (DHHS)
Blalock, Patrick, Office of the Secretary (DHHS)
Davies, Megan Dr., Division of Public Health (DPH)
DuBard, Annette Dr., Community Care of North Carolina (N3CN)
duPont, Lammot, Manatt Health Solutions
Farris, Clay, Thomson Reuters
Feezor, Allen, Office of the Secretary (DHHS)
Gerald, Laura, Office of the Secretary (DHHS)
Gray, Craigan Dr., Director, Division of Medical Assistance (DMA)
Holoman, David, Division of Information Resource Management (DIRM)
Jarrard, Jim, Division of Mental Health, Developmental Disabilities and Substance Abuse Services (DMH/DD/SAS)
Jones, Monica, Office of Medicaid Management Information System (OMMIS)
Landman, Lori, Division of Medical Assistance (DMA)
Larson, Tara, Division of Medical Assistance (DMA)
Saik, Susan, Division of State Operated Healthcare Facilities (DSOHF)
Scarboro, Chris, NC Community Care Networks (N3CN)
Sidner, Patina, Division of Medical Assistance (DMA)
Sligh, Angeline, Office of Medicaid Management Information System (OMMIS)
Staley, Danny, Division of Public Health (DPH)
Stewart, Dan, Office of the Secretary (DHHS)
Terrell, Sandra, Division of Medical Assistance (DMA)
Vellucci, Anthony, NC FAST (DHHS)
Watson, Michael, Office of the Secretary (DHHS)
Welsh, Luckey, Division of State Operated Healthcare Facilities (DSOHF)
Wilson, Walker, Office of the Secretary (DHHS)
Womble, Matt, Office of Rural Health and Community Care (ORHCC)

Affiliated:
Massey, Anita, NC Health Information Exchange (NCHIE)
Miller, Jeff, NC Health Information Exchange (NCHIE)

Ex Officio:
Cansler, Lanier, Secretary, DHHS

(5) STATUS OF CURRENT HIT RESEARCH

The ARRA Bill of 2009 invested billions of dollars for HIT technology. The intention of this research is to enable the interactive transmission and sharing of health information among health care providers in order to ensure the timely sharing of accurate patient information among those providers treating the patient for primary and specialist care. This technology allows for the rapid dissemination of test results, pharmaceutical prescription, medical images and other information about the patient. This reduces the chances of there being a medical error due to lack of information for the right patient at the right time. It also reduces the costs of multiple unnecessary tests since the test results can be quickly known about and seen by the health care provider.

(6) STAKEHOLDER INVOLVEMENT

All meetings of the HIE Board and Workgroups are open meetings and stakeholder participation is actively encouraged. In addition, the DHHS Office of HIT Coordinator has established a website to inform the public and invite input.
(7) IMPLEMENTATION

The HWTF HIE Board submitted the NC HIE Strategic Plan with the application for funding on October 16, 2009. ARRA funding for HIE planning and implementation began in February 2010.

The HWTF HIE Board submitted the revised HIT Strategic Plan and NC HIE Operational Plan on August 31, 2010. Both plans were approved on November 29, 2010. A complete copy of both documents is available on the HIT website www.healthIT.nc.gov.

The State used these funds to develop the State Medicaid HIT Plan (SMHP), which CMS gave final approval on March 9, 2011.

The Implementation – Advanced Planning Document (I-APD) was approved on December 18, 2010. The Medicaid Incentive Payment System is in the early stages of operations and will be used to support implementation of the SMHP.
APPENDIX

1. NC Regional Extension Center (REC) ......................................................... 36
2. NC Health Information Exchange (NC HIE) ................................................. 37-38
3. NC Medicaid HIT Plan ............................................................................. 38-39
4. Broadband Technologies Opportunity Program (BTOP) ......................... 39-40
5. NC TeleHealth Network (NCTN) ............................................................... 40-42
6. Comparative Effectiveness Research (CER) ............................................. 42
7. Electronic Health Record Loan Program ................................................ 43
8. Community College Consortia to Educate HIT Professionals Program .... 43-44
9. HIT Curriculum Development Centers Program .................................... 44
10. Beacon Community Program ................................................................. 44-45
11. NC Child Health Insurance Program Reauthorization Act (CHIPRA) ...... 45
12. NC Hospital Association ......................................................................... 45-48
13. NC B-Prepared ....................................................................................... 48-49
APPENDIX

1. **NC Regional Extension Center (REC)**
   The NC Area Health Education Centers (AHEC) Program at the University of North Carolina, Chapel Hill received a notice of grant award dated February 8th, 2010 to perform the function of the North Carolina Regional Extension Center (NC REC) for health information technology. The award was for $13.6 million dollars over 2 years which will allow NC AHEC to reach at least 3,465 priority primary care physicians and assist with practice assessment, workflow redesign, selection and implementation of electronic health records (EHR) to achieve meaningful use of the technology and improve health outcomes throughout the state of North Carolina. NC AHEC will expand its consulting workforce throughout the nine regions of the state to help practices implement technology and/or use previously existing technology to meet the federal standards of meaningful use to achieve incentive payments from the Centers for Medicare & Medicaid Services between 2011 and 2015.
   www.ahecqualitysource.com

   Of the more than 850 practices working with NC AHEC, approximately 50% of them already have some type of electronic record system. AHEC’s staff are working with these practices to perform a gap analysis to evaluate how the practice is currently using their EHR and what changes may need to occur in their functionality and/or use of technology. NC AHEC has several practices that have completed this work and have successfully attested to the Medicare and Medicaid Meaningful Use Incentive programs. Other practices with EHRs are awaiting software upgrades from their technology vendors and will begin to move towards meaningful use once their systems contain the appropriate functionality. The remainder of the practices/providers working with NC AHEC are preparing their practices to select and implement electronic health records and should move to meaningful use fairly quickly after the implementation process.

   The NC AHEC Regional Extension Center is working with over 50 EHR software vendors to ensure that their products are meeting the new demands of the healthcare system. NC AHEC has developed an extensive information dissemination mechanism used by over 50 regional AHEC consulting staff to quickly communicate successes, struggles and information gained in over 850 practices throughout the state. This method of communication allows the AHEC staff to provide the most up to date information to the most rural of settings and promotes the best practices statewide.
2. **NC Health Information Exchange (NC HIE)**

**HIT Collaborative** -
Governor Perdue’s Executive Order #19 established the Health and Wellness Trust Fund Commission (HWTF) as the SDE under ARRA for coordinating the preparation of the HIT application(s), receiving federal funds, and coordinating implementation of the HIT Strategic and Operations Plans. The Executive Order also created the HIT Collaborative as the representative expert advisory board to guide the development of the plans. The HIT Collaborative worked to leverage existing investments and capabilities to build HIT capacity in NC.

The HIT Collaborative completed its work. A new governance body was formed as part of a non-profit organization. This organization is a public-private partnership and will be responsible for execution and oversight of the North Carolina HIE strategic operational plan for state level Health Information Exchange (HIE). The transition is scheduled for April, 2010. Mr. Alan Hirsch was appointed to lead the HIT efforts of the HWTF on a part time temporary basis to facilitate the formation of the new HIT focused non-profit organization. The new governance body is the North Carolina Health Information Exchange.

Governor Perdue previously designated the North Carolina Health and Wellness Trust Fund Commission (HWTF) as the State Designated Entity to receive funding under the Health Information Technology for Economic and Clinical Health Act (HITECH) of the American Recovery and Reinvestment Act (ARRA) to develop the health information exchange in the state. On February 8, 2010, HWTF was notified that North Carolina had been awarded $12.9 million for building health information exchange capacity. Subsequently, the Governor requested that health care leaders across the state form a non-profit organization, the NCHIE, to implement this work. Since May, 2010, the NCHIE has been working to facilitate implementation. Effective December 1, 2010, the Governor Perdue’s Executive Order 73 transferred all responsibilities for North Carolina’s exchange from HWTF to NCHIE. HWTF and NCHIE began working with ONC to transfer the grant to the NCHIE. The official transfer within ONC is still pending.

The Board of Directors of NCHIE consists of CEO level representatives of the key constituencies in North Carolinians concerned with improving the delivery of health care to our people.

The four workgroup committees formed to support the NC HIE are:
1) Governance Workgroup
2) Finance Workgroup
3) Clinical & Technical Operations Workgroup
4) Legal & Policy Workgroup

On August 31, 2010, the HWTF submitted the Strategic and Operational Plans to the Office of the National Coordinator (ONC) for Health Information Technology.
for approval. On October 25, 2010, an updated version of the Operational Plan incorporating a new effort to facilitate the electronic transportation of structured laboratory results was submitted to ONC. On November 29, 2010, ONC approved the Strategic Plan and Operational Plan, thereby moving the program into the Implementation Phase. North Carolina is the ninth state to have its plans approved. The approved plans are posted on the website: www.healthIT.nc.gov

NC HIE BOARD OF DIRECTORS

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
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<tbody>
<tr>
<td>Cansler, Lanier – Co-Chair</td>
<td>NC Department of Health and Human Services</td>
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<tr>
<td>Sanders, Charles – M.D. – Co-Chair</td>
<td>Various</td>
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<tr>
<td>Atkinson, Bill, Ph.D.</td>
<td>NC Hospital Association</td>
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<td>Bridges, Thomas &quot;Tom&quot; D</td>
<td>Local Health Directors</td>
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<tr>
<td>Callaway, Hadley, M.D.</td>
<td>NC Medical Society</td>
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<tr>
<td>Civello, Anthony</td>
<td>Pharmacy Interests</td>
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<td>Cykert, Samuel &quot;Sam&quot;, M.D.</td>
<td>Area Health Education Centers</td>
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<tr>
<td>Dobson, Alan, M.D.</td>
<td>Community Care of NC</td>
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<td>Frelix, Gloria, M.D.</td>
<td>Old North State Medical Society</td>
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<tr>
<td>King, David</td>
<td>Laboratory Interests</td>
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<tr>
<td>Kitzmiller, Rebecca &quot;Becky&quot;</td>
<td>Nurses Association</td>
</tr>
<tr>
<td>Money, Benjamin &quot;Ben&quot;</td>
<td>NC Community Health Center Association</td>
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<tr>
<td>Newton, Warren, M.D.</td>
<td>NC Health Quality Alliance</td>
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<tr>
<td>Richter, John</td>
<td>Nursing Home Industry</td>
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<tr>
<td>Roper, Bill, M.D.</td>
<td>Academic Medical Center</td>
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<td>Saunders, George, M.D.</td>
<td>NC Medical Board</td>
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<tr>
<td>Spicer, Sam, M.D.</td>
<td>NC Healthcare Information &amp; Communications Alliance, Inc. (NCHICA)</td>
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<tr>
<td>Stein, Josh (Senator)</td>
<td>Representative of Consumers</td>
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<tr>
<td>Taylor, Dave, M.D.</td>
<td>American Academy of Pediatrics</td>
</tr>
<tr>
<td>Tillis, Thom (Representative)</td>
<td>NC House of Representatives</td>
</tr>
<tr>
<td>Wilson, J. Bradley &quot;Brad&quot;</td>
<td>NC Blue Cross/Blue Shield</td>
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Ex Officio Members:

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<th>Name</th>
<th>Organization</th>
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<tr>
<td>Cline, Steve, DDS</td>
<td>NC Department of Health and Human Services</td>
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<tr>
<td>Fralick, Jerry</td>
<td>State Chief Information Office</td>
</tr>
<tr>
<td>Gray, Craigan, MD</td>
<td>State Medicaid Director</td>
</tr>
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</table>

3. **NC Medicaid HIT Plan**

The project team completed the first submission of the State Medicaid HIT Plan (SMHP) and the Implementation Advanced Planning Document (I-APD). These documents were submitted to the CMS Regional Office on November 10 and November 24, 2010, respectively, and the Department is awaiting CMS comment and approval. The NC Medicaid Incentive Payment System (NC-MIPS) National Level Repository (NLR) interfaces successfully passed Validation Testing on November 30, 2010. These accomplishments and milestones are important prerequisites for the State to begin the Electronic Health Record (EHR) Incentive Payment program on Jan. 1, 2011.

On December 18, 2010, NC DMA was notified that CMS had completed the review of the SMHP and the I-APD. Both plans were approved for additional funding in the amount of $30,118,150.
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<tr>
<th>Category</th>
<th>Total Funds Needed</th>
<th>Federal Share</th>
<th>State Share</th>
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<td>HITECH Funding Requested</td>
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<td>3,000,855</td>
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</table>

The SMHP and I-APD are posted on the website: www.healthIT.nc.gov

4. **Broadband Technologies Opportunity Program (BTOP)**

MCNC is a non-profit organization incubated by the State of North Carolina General Assembly in 1980. MCNC’s main activity is to operate the North Carolina Research and Education Network (NCREN). NCREN is a very high bandwidth, non-contended Intranet backbone for all of North Carolina’s 115 K-12 school districts, all North Carolina Community Colleges, all 17 University of North Carolina system institutions (including the University System’s affiliated hospital systems), 24 of 36 of North Carolina’s Private Colleges and Universities, 15 K-12 Charter Schools, several State and Federal Research Institutions and select libraries. NCREN also provides these institutions access to the commercial Internet and the private advanced research networks, Internet2 and National Lambda Rail.

**Broadband Technologies Opportunity Program** -
Through the American Recovery and Reinvestment Act (ARRA), $7.2 billion in funding was allocated to the US Department of Commerce and the US Department of Agriculture to promote the deployment and use of broadband technologies to underserved and unserved populations in the United States. The NTIA divided the awarding of its BTOP funding into two rounds and staged a highly competitive application process in each round. In Round 1 awarded in January 2010, MCNC applied and received funding for a $39.9 million project (including $28.2 million in BTOP Funds and $11.7M in privately raised match-including $7.7M from the MCNC Endowment) to build 480 miles of fiber in 37 counties in southeastern and western N.C. For Round 2, MCNC, in concert with the Frank Hawkins Kenan Institute for Entrepreneurship and the School of Government at UNC-Chapel Hill, crafted an application called the Golden LEAF.
Rural Broadband Initiative (GLRBI). The GLRBI application proposed to build more than 1,200 miles of new middle-mile fiber in the northeast, north central, northwest and south central portions of the state. The proposed project is valued at $106 million with $75.75 million coming from BTOP, $24 million from the Golden LEAF Foundation, and $6.25 million in other cash and in-kind donations from private sources.

**5. NC TeleHealth Network (NCTN)**

NC TeleHealth Network (NCTN - [http://nctelehealthnetwork.org](http://nctelehealthnetwork.org)) initiative is a collection of projects focused on developing broadband communication services (e.g. Internet access) in support of health and care in NC. The NCTN projects focus on developing broadband services for public health clinics, free clinics, community hospitals and medical practices. These services are designed to provide the physical network size, reliability, and security needed for day-to-day health data sharing among providers and patients. The services also support sharing health data in the wake of a disaster by key community institutions. The need for a new generation of broadband support for healthcare providers has increased since the ARRA was passed in 2009. The HITECH Act portion of the ARRA provides incentives for significant Medicaid and Medicare providers to make “Meaningful Use of EHRs”. This use includes health information exchange among providers and with patients and includes other needs for broadband services that are high bandwidth and highly-reliable. In addition, the recently passed health reform act includes many more direct and indirect drivers for the use of health IT – including broadband-based IT components. The NCTN is focused on supporting these emerging needs in NC.

Phase 1 of the NCTN (NCTN-PH) supports broadband services for public health clinics and free clinics. The FCC’s Rural Healthcare Pilot Program (RHCPP) provides $6 million for this phase for funding 85% of the costs. Subscriber sites
will pay the remaining 15% plus administrative costs. Planning support for this phase came from the state Division of Public Health. This phase is administered by the Cabarrus Health Alliance with developmental support from the e-NC Authority.

As of June 2011, phase 1 for public health sites and free clinics has virtually all sites operational. The few that remain to become operational are delayed by a mixture of customer requests and physical difficulty implementing. We expect all but the customer delayed group to be operational by August.

NCTN Phase 2 (NCTN-H) supports a similar project for NC’s public and non-profit hospitals. For-profit hospitals may also apply, but must pay the full costs. This phase leverages $6.1 million from the RHCPP and planning funds from the Golden Leaf Foundation plus approximately $2M in discounts from phase 1. The hospital project is administered by the NC Institute for Public Health – the outreach arm of the UNC Gillings School of Public Health - with consulting support from e-NC. The NC Hospital Association is a key partner in this project to assure that community hospitals have needed broadband facilities. This phase was made possible by merging funds and support from three RHCPP recipients in NC: Albemarle Health, the Southwestern Commission (supporting Western Carolina University), and University Health Systems of Eastern Carolina.

As of June 2011, phase 2 has completed a first round of recruiting sites and intends to go forward with implementing this set of sites while pursuing a second round of hospital sites. MCNC (with ITS as a major subcontractor) is the integrator/network provider for this phase. Services are expected to be operating in the summer and fall of 2011.

The FCC recently issued an extension to the time that successful RHCPP projects have to apply to obtain access to discount funds to June 2012. The FCC also extended the length of time for the discounts to be spent out from 5 years to 6 years. The NCTN is a successful RHCPP project according to the criteria used by the FCC. This has created an opportunity to have time to recruit more sites and to have subscription agreements extended from 3 years to 4 years. The NCTN project is taking advantage of this extra time to recruit more sites (notably the second round of the NCTN-H) and offer longer (i.e. 4–year) subscription agreements to existing sites.

Phase 3 is focused on assuring that North Carolina’s medical practices have the broadband services needed to work among themselves and to share data with the healthcare providers in public health clinics, free clinics, hospitals and patients. Organizing and funding support for this phase have just begun.

In July 2010, the FCC issued a Notice of Proposed Rulemaking (NPRM) that, in short, proposed to take the key elements of the RHCPP pilot program and integrate them into the permanent Rural Health Care (RHC) broadband support
program. Doing this would make $400M per year available from the Universal Service Fund for broadband needs of public and non-profit healthcare providers in the US. Proportionally, this offers a potential of $12M per year for NC in support of public and non-profit healthcare provider broadband needs. Key NCTN partners have provided formal comments on this NPRM in support of NC’s interests in participating in a well-formed RHC program. Once the final rule is out, we expect to analyze the opportunity and, if it is as we expect it to be, proceed to seek to participate in the reformed RHC – with the goal bringing several million dollars per year of Federal funds to bear on the task of sustaining and enhancing broadband services for NC’s public and non-profit healthcare providers. The NCTN project originally envisioned setting up an association of key constituents near the end of the pilot project. The prospect of this reformed RHC program makes doing so even more of an imperative and we are proceeding accordingly.

As of June 2011, the final rule for the FCC’s reformed program has not been issued. It is expected to be available by the end of the calendar year, though the FCC has made no commitment to a specific date.

6. **Comparative Effectiveness Research (CER)**

Multiple academic medical centers and researchers across the state are making individual applications for federal Comparative Effectiveness Research (CER) based on their specific expertise and area of interests. There is currently no centralized approach or listing for all NC applications.

The CER initiatives in North Carolina have become very active over the past several months, largely stimulated by the ARRA funds. Several initiatives also have significant potential to significantly build the state’s already substantial infrastructure in this area. Duke University, Research Triangle International, and UNC Chapel Hill have all substantially increased their activity. The educational awards and ongoing research center awards will provide opportunities to coordinate and collaborate across disciplines and institutions. These awards have already generated jobs in the state, but more importantly, the research generated will enable improvements to the quality and efficiency of care delivered to patients in North Carolina and the nation. NC is one of the top states in garnering grant (separate from contract) support in 2009. UNC Chapel Hill, Duke University and Carolinas Medical Center are represented. This can be viewed at: [http://effectivehealthcare.ahrq.gov/index.cfm/comparative-effectiveness-research-grant-andarra-awards/?pageaction=viewChart](http://effectivehealthcare.ahrq.gov/index.cfm/comparative-effectiveness-research-grant-andarra-awards/?pageaction=viewChart)

Educational awards starting in the summer of 2010:

7. **Electronic Health Record Loan Program**
The EHR Loan Fund Web site (www.ncehrloanfund.org) was launched in March, 2011. The Web site includes information and the complete application for the EHR Loan Fund Program. The Web site has received over 300 visitors.

To date, the EHR Loan Fund has received 12 pre-applications with 1 application completed and sent to Self-Help for loan terms. The practice that was approved for funding was able to qualify for alternate funding due to its strong financial standing. As a reminder, this program is for primary care providers in Tier 1 counties that may not have the resources to qualify for conventional loans. The North Carolina Medical Society Foundation (NCMSF) continues to work onsite with the AHEC offices throughout the state to provide training and information on the EHR Loan program. NCMSF is also working with the Community Practitioner Program to assist these practices with EHR loan funding as needed.

8. **Community College Consortia to Educate HIT Professionals Program**

The ONC released a funding opportunity for $80 million to build the capacity of training programs nationwide. A collaboration of educational institutions led by the NC Community Colleges System, NC Area Health Education, and the Governor’s Office have begun meeting to develop an application for NC workforce development. NC is being grouped with other southern states to submit one regional application.

In March 2010, Pitt Community College (PCC) was named one of the five institutions across the country to lead a regional consortium of community colleges to train thousands of new health information technology professionals. This consortium received $10.9 million in federal funds from the US Department of Health and Human Services (HHS) for the first year. Additional funding is available for a second year after successful completion of a mid-project evaluation. This funding provides assistance for the PCC consortia of 20 community colleges, including Central Piedmont Community College and Catawba Valley Community College across a 13-state region that stretches from North Carolina to New Mexico and includes almost one-third of the nation’s population. Each community college will provide a non-degree training program designed to be completed in six months or less.

This intensive, non-degree education is designed to provide a qualified pool of workers with both a medical body of knowledge and an IT body of knowledge to ensure the adoption of EHRs, information exchange across health care providers and public health authorities, and the redesign of workflows within health care settings to gain the quality and efficiency benefits of EHRs, while maintaining privacy and security of medical information. Students must have either medical or Information Technology background to enroll in the program.

Training will be broken into six Health IT priority workforce roles, including: practice workflow and information management redesign specialists;
clinician/practitioner consultants; implementation support specialist; implementation managers; and technical/software support staff and trainers.

9. **HIT Curriculum Development Centers Program**

Duke University’s Center for Health Informatics (DCHI) has awarded nearly $4 million in American Recovery and Reinvestment Act (ARRA) funds to advance the widespread adoption and meaningful use of health information technology (HIT) by expanding the workforce in this field.

Funding is provided through two competitive awards. These two awards, one a grant and the other a cooperative agreement, are part of The Workforce Development Program to train a workforce to support the broad adoption and use of health IT in the provider community.

10. **Beacon Community Program**

Through the American Recovery and Reinvestment Act of 2009, the Department of Health and Human Services has awarded grants totaling $220 million to organizations in 17 communities to serve as pilot sites for comprehensive use of health information technology (IT). These awards are part of a $2 billion Health Information Technology for Economic and Clinical Health Act (HITECH Act) to achieve wide-spread adoption of health IT and enable the use of electronic health records (EHRs) for each person in the United States by 2014.

The Beacon Community Cooperative Agreement Program provides communities with funding to build and strengthen their health IT infrastructure and exchange
capabilities. These communities demonstrate the vision of a future where hospitals, clinicians, and patients are meaningful users of health IT, and together, help the community achieve measurable improvements in health care quality, safety, efficiency, and population health. The Southern Piedmont Community Care Plan (SPCCP) is one of 17 organizations nationwide selected to be a Beacon Community after a rigorous grant application process. The award is in the amount of $15.9 million to be spent over three years.

11. **NC Child Health Insurance Program Reauthorization Act (CHIPRA)**

    **The North Carolina CHIPRA Demonstration Grant - CMS Purpose:** to evaluate a pediatric electronic health record (EHR) format developed by AHRQ to assess the impact of the EHR on the quality and cost of children’s health care across the care continuum. The elements of the EHR to be tested will be developed with grantees’ input during the planning and infrastructure development phases of this grant category.

    **North Carolina Proposal**

    NC will use its Community Care infrastructure and work closely with the AHRQ contractor to ensure the model EHR for children is implemented in a manner that ensures the ability to measure and evaluate its impact on child health care quality and health care costs. All 14 networks will work with providers / medical homes interested in implementing the model EHR and engage them in the planning and implementation phases.

12. **NC Hospital Association**

    The North Carolina Hospital Association has a diverse strategy to help hospitals achieve meaningful use of electronic health records (EHR) and health information technology (HIT) to create significant clinical improvements and lower the cost of healthcare delivery. Member hospitals stand to gain as much as $540 million in Medicare and Medicaid incentive payments through the Health Information Technology for Economic and Clinical Health (HITECH) portion of the American Recovery and Reinvestment Act (ARRA). The main goals of HITECH are quality improvement and cost reduction by moving from a transactional basis to process-driven delivery of healthcare. NCHA’s goals are aligned with HITECH and the State of North Carolina in the three areas of focus that will help hospitals become "meaningful users" of electronic health record (EHR) technology:

    - implementation of certified electronic health record systems
    - reporting of quality measures to the Centers for Medicare and Medicaid Services and/or states
    - exchanging of clinical data with other providers

    NCHA is also focused on helping hospitals and hospital-owned physician practices acquire broadband Internet access and education opportunities regarding
HITECH and meaningful use, and we are especially concerned that small and rural hospitals and safety net providers not be left behind in the rapid period of HIT adoption. A wave of healthcare reform-related grant opportunities will likely bring additional projects to the attention of hospitals in the near future, and ongoing projects such as ICD-10 conversion will continue to be important and require action on the part of NCHA and member hospitals.

Improve Patient Safety through Quality Reporting and Collaboration –
The North Carolina Center for Hospital Quality and Patient Safety, a federally-designated patient safety organization (PSO), is leading our hospital quality improvement activities and will assist hospitals to understand and report the 15 quality measures required under sections 4101(a) and 4102(a)(1) of the HITECH Act. These Stage 1 measures are thought to be extractable directly from a HITECH-certified EHR and should not require manual extraction or chart abstraction. Additional quality reporting measures and procedures are likely to be required in 2011 and 2013.

Support Small and Rural Hospitals in Health IT Adoption -
To assist hospitals with HIT education and EHR adoption, NCHA and the North Carolina Rural Health Center are coordinating with private funders and federal programs from ONC to become meaningful users of EHR. The Duke Endowment has funded comprehensive HIT strategic planning for 19 rural hospitals using the services of the Computer Sciences Corporation (CSC), and additional private grants are under consideration. We are also working with rural and Critical Access hospitals to leverage education opportunities through the Regional Educational Center (REC) federal funding program from ONC, which is being managed by the NC Area Health Education Centers (AHEC). It was announced at the first post-funding meeting of the REC that hospitals will not receive assistance from the REC grant during the first two years of the initial four-year program. NCHA and the Rural Health Center will continue to work with the REC staff to attempt to deliver comparable resources using grant opportunities and relationships with qualified vendors through NCHA Strategic Partners and other stakeholders.

Develop Strategic Partnerships with Qualified Health IT and EHR Vendors -
NCHA Strategic Partners is evaluating qualified vendors to provide value-based purchasing of HIT education, strategic planning, EHR selection and implementation services and health information exchange (HIE) to hospitals. We are currently working on several potential partnerships, including relationships with CSC, Cerner and HIMformatics, in addition to an existing relationship with Thomson Reuters. We are communicating with potential vendors on a weekly basis to evaluate products and services to meet the needs of hospitals and physician practices. We are also exploring offering Medsphere's OpenVista (open source version of VistA, used by more than 4 million veterans through Veterans Health Administration) through the North Carolina Hospital Exchange (NCHEX), and a shared hosted EHR through Cerner.
**Promote Better Connectivity among Providers** – Hospitals and providers will require fast and stable Internet connections to be able to share clinical data and become meaningful users of EHR. NCHA has partnered with the North Carolina TeleHealth Network (NCTN) to create a private statewide broadband network of healthcare providers to help meet the growing bandwidth needs that will result from EHR adoption and HIE activities. The hospital phase of the project is known as NCTN-H and will provide an 85% discount for public and not-for-profit hospitals; other hospitals will be able to leverage a volume discount and join the network as well. Currently, 85% of NC licensed hospitals and 76% of all NC hospitals are registered and eligible to participate in the NCTN offering. As a sponsor of the NCTN-H, we are reviewing a recent notice of proposed rulemaking (NPRM) from the Federal Communication Commission (FCC) entitled "Rural Health Care Support Mechanism" to create a permanent discount program for broadband for public non-profit healthcare providers, modeled on the 5-year funding mechanism of the NCTN program. We are also supporting a new Broadband Technology Opportunities Program (BTOP) grant with the Microelectronics Center of North Carolina (MCNC) and their North Carolina Research and Education Network (NCREN) program to bring high performance broadband to healthcare providers.

**Offer a Shared Hosted EHR for Hospitals and Physician Practices** – Eligible hospitals must have a certified complete EHR or EHR modules to receive Medicare and/or Medicaid incentive payments from CMS; eligible providers may apply for Medicare or Medicaid incentive payments, but not both. NCHA Strategic Partners is collaborating with Cerner to provide a complete shared hosted EHR for hospitals and physicians, which can save hospitals up to 50% on the cost of a complete certified EHR. Such a dramatic cost savings will enable small hospitals to afford the best EHR available with more uptime and at a lower total cost of ownership than would be possible if the EHR was purchased individually and installed locally. Rapid implementation of the Cerner solution will enable hospitals to meet the Stage 1 meaningful use criteria in 2011, and under the final rules of the EHR incentive program, Critical Access Hospitals (CAH) will receive 100% reimbursement of "reasonable" costs associated with acquiring a certified EHR, including the shared hosted solution.

The Cerner Millennium solution will be offered using the Software as a Service (SaaS) model for providing on-demand access to applications over secure and high-availability network connection to Cerner's Kansas City hosting facility. In the shared model, systems and application management will be centralized to reduce total cost of ownership and minimize service availability disruptions. Cerner will provide application delivery in a multi-tenant shared infrastructure domain where multiple non-affiliated hospital and physician practices will be hosted in a common hardware platform. Each provider's data will be secure and separated from the others, unless they choose to share access. The shared hosted EHR will also be available to the proposed NCHEX health information exchange.
The primary target market for the Cerner shared hosted solution is small community and critical access hospitals (fewer than 300 beds), but the platform is capable of incorporating hospitals and practices of any size and type.

**ICD-10 Collaborative**
NCHA and NCMS collaborating to help hospitals and providers tackle the issue of converting from ICD-9 to ICD-10. We recently cosponsored an ICD-10 education session and have been engaged in the efforts of the North Carolina Healthcare Information & Communications Alliance (NCHICA), and the collaboration with NCMS will seek to build on these types of activities. ICD-10 conversion will require massive changes to health information systems, business practices and provider workflows, and the goals of the collaborative will be to identify educational opportunities, network with existing resources, identify qualified vendors to assist hospitals and physician practices with all aspects of conversion, and help track the progress of compliance.

**NCHA Medicaid Admission/Discharge Data Initiative** –
The NCHA, the North Carolina Department of Health and Human Services, and North Carolina Community Care Networks (NCCCN) are collaborating in an initiative to enhance the coordination of care for Medicaid beneficiaries to help improve outcomes and reduce costs. The initiative builds on existing care management efforts already underway between hospitals and local community care networks and utilizes technology already in place in approximately 48 hospitals that participate in the NCHESS-IMC program.

**Improve Public Health Surveillance** -
The North Carolina Bio-Preparedness Collaborative (NC B-Prepared) is a new $5M federal grant from Homeland Security to enhance the state's current surveillance and threat-detection capabilities and serve as a model for the nation. NCHESS hospitals currently provide 93% of the data consumed by the state's biosurveillance system and NCHA is participating in the Collaborative to offer strategies on how to provide more, and better, data into the NCHESS system that could be of benefit to NCB-Prepared as well as the state's Medicaid analytics capabilities.

13. **NC B-Prepared**
The North Carolina Bio-Preparedness Collaborative (NC B-Prepared) is a public-private partnership to develop, test, and implement an advanced biosurveillance system beginning in one state and reaching across to all states within five years. It is a collaborative effort of academic, government, and industry leaders focused on developing a local, bottom-up approach to public health responsiveness and awareness. The initial partnership includes the University of North Carolina at Chapel Hill, North Carolina State University, SAS Institute, and the US Department of Homeland Security. The Collaborative has partnered with the NC Division of Public Health to build on and expand their nationally leading
syndromic surveillance system with diverse new data sources and advanced analytics running on a cloud computing platform. The Collaborative is creating a comprehensive statewide bio surveillance system for analyzing data from a variety of health, food, social, environmental, and animal sources to provide early outbreak detection and situational awareness of health events. It supports the health care community to better understand how the biosphere relates to disease activity and threats to human or animal health. It offers a clearer view of the day-to-day public health picture and support decisions and responses to protect and enhance lives.

With North Carolina as the laboratory, NCB-Prepared utilizes the state’s strength in data sources, analytics capabilities, and computing infrastructure to:

- **Enhance syndromic surveillance** by building on the NC DETECT surveillance system and working with local and statewide organizations to collect data from a variety of health, food, social, environmental, and animal sources. Advanced analysis of this data allows for improved understanding of health patterns and more rapid and effective detection of threats to health.

- **Improve situational awareness** by providing a clear view of disease, environmental and health-related threats. It allows public health experts to differentiate between normal health patterns, environmental changes, and natural or manmade bio-threats. Improved situational awareness enables decision-makers to respond quickly and effectively to emerging and potential hazards.

- **Better inform policymakers** with accurate information generated by advanced data analytics to give policymakers a broadly-based foundation of evidence critical to enacting measures that protect public health and safety.

- **Gain deeper insight into the quality of healthcare systems** built on a comprehensive, data-driven approach supporting bio-preparedness leading to innovations across the healthcare spectrum including improved patient care, streamlined day-to-day operations, and better management of health resources.

In the first year, the system uses a scalable cloud-computing platform that provides access to data and data visualization using a rules-based technology to support data quality and security. The system will go beyond North Carolina in the second year with a growing, scalable architecture, additional data resources, advanced analytics, and enhanced presentation technologies to empower public health and preparedness officials to protect the nation’s health. The ultimate goal of the project is to extend the use of the NCB-Prepared system to all states.