Mandated Bioterrorism Management Plans For
North Carolina’s Federally Qualified Community Health Centers

by

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Abstract

This paper outlines a rationale for mandating Bioterrorism Management Plans (BMPs) for North Carolina’s federally qualified Community Health Centers (CHCs), as part of their overall emergency preparedness plans. Federally qualified Community Health Centers (CHCs) play a vital role in the delivery of health care services in our country, impacting millions of underserved citizens annually. North Carolina’s CHCs receive federal and state funding to serve these vulnerable members of our state. The September 11, 2001 terrorist attacks and subsequent anthrax exposures created a need for examination of current readiness plans of all health care providers nationwide, including CHCs as part of the overall public health system. Various resource organizations for CHCs have recommended inclusion of Bioterrorism Management Plans (BMPs) as part of overall emergency preparedness plans for CHCs.

Funding sources for CHCs currently provide guidelines for delivery of primary and preventive health services by individual centers, consistent with the mission of the nation’s CHC network. This paper suggests federal or state funding sources should mandate BMPs as part of overall readiness planning for CHCs, as part of fulfillment of the mission of the nation’s CHC network, as defined by the Bureau of Primary Health Care and other advisory organizations for CHCs. Receipt of federal or state funds by CHCs should be contingent upon fulfilling this mandate.
Federally qualified Community Health Centers (CHCs) play a vital role in the delivery of health care services in our country, impacting millions of under-served citizens annually. North Carolina's CHCs receive federal and state funding to serve these vulnerable members of our state. The September 11, 2001 terrorist attacks and subsequent anthrax exposures created a need for examination of current readiness plans of all health care providers nationwide, including CHCs as part of the overall public health system. Various resource organizations for CHCs have recommended inclusion of Bioterrorism Management Plans (BMPs) as part of overall emergency preparedness plans for CHCs.

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**Mission and Scope of Community Health Centers**

Section 330 of the Public Health Service Act, amended by the Health Centers Consolidation Act of 1996, established grant funding for a national network of CHCs. The Bureau of Primary Health Care (BPHC), a division of the Health Resources and Services Administration (HRSA) in the Department of Health and Human Services (DHHS) funds the nation's CHCs. The mission of the BPHC is to "increase access to comprehensive primary and preventive health care and to improve the health care status of under-served and vulnerable populations" (1). The Bureau's overall goal is 100% access to health care by all Americans, with
0% disparities. The BPHC Health Center Program, which administers the funding for CHCs, is a vital component that supports the mission of the Bureau.

The BPHC acknowledges "there is no 'model' health center" (1); it instead lists attributes shared among health centers as follows:

- They have a mission to provide primary and preventive health services to under-served populations.
- They work with limited resources.
- They adapt in a changing health care environment in order to survive.
- They deliver high quality clinical services to demonstrate positive health outcomes for recipients of these services.

The National Association of Community Health Centers (NACHC) defines the mission of CHCs as providing high quality, comprehensive health care that is accessible, coordinated, culturally and linguistically competent, and community directed for all under-served populations (2). CHCs aim to support this mission by providing both preventive and primary health care services.

The national network of CHCs plays a vital role in the delivery of health care in our country, functioning as a safety net for under-served citizens for more than 30 years. The BPHC, in outlining the mission of CHCs, defines the “under-served” as those citizens facing barriers to accessing health services. These barriers may be difficulty or inability to pay for services (secondary to language or cultural differences) or insufficient quantity of health providers or resources in their communities. Citizens with disparities in health status are also defined as “under-served” by the BPHC (1).
**Scope of CHC Services Nationally**

All federally qualified CHCs are expected to provide a minimum level of basic health services. Services may be provided directly, through contract agreements, or through cooperative arrangements. These services include:

- Primary care services
- Laboratory and radiology services
- Preventive services, including prenatal and perinatal services
- Disease screening, including cancer screening
- Well child services
- Immunizations
- Cholesterol, elevated blood lead level, and communicable disease screening
- Eye, ear, and dental screening for children
- Family planning services
- Preventive dental services
- Emergency medical and dental services

CHCs are further required to “facilitate access to comprehensive health and social services”, including case management services, outreach services, substance abuse and mental health services, and services to assist with financial support. CHCs serving a specific population group, such as migrant workers, are also required to provide services specific to the special population (1).

To provide these services to America’s most needy citizens, the BPHC Health Center Program supports, through grant funding, over 750 organizations nationwide with health centers located in 3,400 rural and urban communities. These organizations serve approximately 10
million Americans who might otherwise not receive primary or preventive health care services (3). Vulnerable citizens served by the national health center network include 5 million uninsured Americans, 4.6 million low-income children, 5.4 million rural citizens, more than 750,000 farm workers, and 600,000 homeless Americans (4).

The nation’s community health centers currently serve this large number of under-served Americans in all 50 states, Puerto Rico, Guam, and the US Virgin Islands. The scope of services provided by CHCs, however, will dramatically increase over the next five years. A Presidential Initiative will create an additional 630 new health centers and expand the capacity of approximately 630 existing health centers in fiscal years 2003 through 2006. The impact of this five-year initiative will be to provide primary health care access to an additional 6 million Americans by 2006 (3). It will be imperative that CHCs remain true to their mission during this growth phase.

**Scope of CHC Services in North Carolina**

North Carolina’s CHCs provide access to high quality and affordable health care to the state’s most vulnerable citizens. These not-for-profit providers of health care serve poor and medically under-served residents. These services impact uninsured patients and the working poor. High-risk and vulnerable populations are also targeted in the state’s neediest and most isolated communities where CHCs are located.

North Carolina’s CHCs follow federal guidelines established by the BPHC, their source of federal grant funding. The state’s CHCs also accept Medicare, Medicaid and commercial insurance. CHCs apply discount fee schedules based on family size and Federal Poverty Guidelines for patients without health insurance or additional means of payment for services (5).
The North Carolina Primary Health Care Association (NCPHCA) 2001 report defines the scope of service provided by CHCs in the state. Twenty CHCs combined to offer 63 clinical delivery sites in 60 North Carolina counties during fiscal year 2001. Nineteen of twenty centers reported a total of 1088 full time employees, with over $74 million in total operating revenues. Medical and dental services were provided to over 224,000 active registered patients in over 724,000 patient encounters throughout North Carolina (6). The Association currently supports 22 entities that are community/migrant health centers. These centers operate 59 health care delivery sites. The centers' patients come from over 60 counties in the state with 224,669 total patients enrolled (5). This volume of contact with the citizens of North Carolina highlights the integral part CHCs play in the state’s health care delivery system.

CHCs also serve the most vulnerable populations in North Carolina, in terms of income, race, and age. The NCPHCA 2001 report indicates approximately 47% of CHC adult patients served and approximately 34% of CHC child patients served were uninsured. For all insured CHC patients (adults and children) served in 2001, approximately 59 percent received Medicare or Medicaid benefits. CHCs in North Carolina also reported 50.07% of their patients sustained themselves with income at 100% Federal Poverty Level or below in 2001 (6). Members of these populations often will not seek assistance from other local healthcare resources, secondary to unavailability of providers accepting their insurance in their communities (if insured) or secondary to their inability to pay (whether insured or uninsured). North Carolina’s CHCs serve a vital role in providing access to health resources for these financially vulnerable citizens.

The North Carolina CHC network also serves vulnerable populations relative to race. The NCPHCA 2001 report indicates approximately 44 percent of recipients of CHC care services in North Carolina in 2001 were African American. Approximately 18 percent of service
recipients were Hispanic or Latino (6). These population groups experience health care disparities and thus represent the “under-served”, as defined by the Bureau of Primary Health Care. African American and Hispanic Americans often fail to receive care secondary to financial limitations as well as perceived barriers related to both race and language. In complying with BPHC expectations and delivering culturally and linguistically competent services, North Carolina’s CHCs serve these populations who might not otherwise be served.

Community health centers nationwide and in North Carolina will likely provide services to more Hispanic Americans in the future. The United States Census Bureau estimated the national Hispanic population to be 37 million in July 2002, up 4.7% from April 2000. This growth has allowed Hispanics nationwide to surpass African Americans as the nation’s largest minority group (7). The Hispanic population in North Carolina has experienced similar growth, secondary to longer growing seasons attracting migrant Hispanic workers to the state. The CHC network in North Carolina will likely continue to play a large role in assuring the health of the state’s Hispanic population.

Two additional vulnerable population groups served by North Carolina’s CHC network are children and the elderly. In 2001, North Carolina CHCs provided care to approximately 75,000 children in the state and to approximately 34,000 elderly patients (ages 65 or older). Combined, these two age groups comprised approximately 48 percent of all North Carolina residents served by CHCs in 2001 (6). Access to private health care for the elderly has become increasingly difficult, with fewer private health care providers opting to accept assignment for Medicare benefits, secondary to reduced reimbursement rates. Access for the state’s children from low-income homes is also limited, secondary to difficulty in locating providers to accept
Medicaid reimbursement. CHCs, therefore, provide alternative access points for health and
dental care for both age groups in North Carolina.

Community health centers in North Carolina, therefore, provide primary and preventive
health services to citizens who might not otherwise receive health care in the state. This network
of CHCs attempts to satisfy the 100% Access and 0% Disparity goals of the Bureau of Primary
Health Care, its grant funding source, in reaching the under-served and vulnerable population
groups in North Carolina.

**Rationale for Development of Bioterrorism Management Plans**

Events of September 11, 2001 in New York City and Washington, DC have prompted
health care providers nationwide to examine their existing emergency preparedness plans. The
subsequent anthrax exposures in the United States further affected public perception of the
readiness of providers and the public health system to respond to a more specific attack, a
bioterrorist event. Development of BMPs by North Carolina’s CHCs is crucial secondary to:

- Various regulatory bodies for CHCs recommend formulation of BMPs.
- Current readiness capacity of CHCs is diminished.
- Integrated community responses during a bioterrorist event are necessary to best serve
  populations in the communities served by CHCs.
- Factors inherent in CHC service delivery limit CHC response in a bioterrorist event. Without
  appropriate BMPs in place, response is further limited.
Recommendations of Regulatory Bodies

Rather than simply examining emergency preparedness plans, governing bodies of providers often insist that a bioterrorism management plan (BMP) be formulated as part of an overall preparedness plan.

The Bureau of Primary Health Care suggested to CHCs, in October 2001, that federally funded health centers be integrated into community preparedness plans, including those for biological threats. In an October 15, 2001 letter to CHCs, Marilyn Hughes Gaston, MD, BPHC Associate Administrator for Primary Health Care, stressed the need for CHCs to be “fully integrated” into these community readiness plans, in order to properly respond to future incidences of terrorism. Dr. Hughes pointed out the positive responses to the terrorist events by health centers in the New York City and Washington, DC area as examples of CHC capacity to respond in such crises and to assist local health providers in delivery of emergency services. Dr. Gaston encouraged CHCs to investigate local emergency preparedness plans and to “give serious consideration to becoming directly involved.” Dr. Gaston also made specific suggestions regarding content of these plans, including providing CHCs with resources for development of their BMPs. The BPHC did not mandate written BMPs for its grant funded CHCs, even as it strongly suggested that CHCs comply with Dr. Gaston’s suggestion (8).

The Bureau, through Dr. Gaston’s letter to CHCs, further reminded CHCs that a requirement for accreditation by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) is development of emergency preparedness plans. CHCs are not required to seek or to maintain JCAHO accreditation. JCAHO standards, however, are considered “sound management” for facilities providing clinical services (8).
The Joint Commission has also highlighted the role of local providers, including CHCs, in overall emergency management, including management of bioterrorist events. In his testimony to Congress, JCAHO President, Dennis O’Leary, MD, remarked “It is said that all health care is local.” Dr. O’Leary made these remarks in stressing the need for preparedness to include community medical facilities and delivery sites in analysis of preparedness and in planning for response to bioterrorist events (9). CHCs, by virtue of their mission and scope, form an integral part of this community network upon which Americans will rely in any future bioterrorist incidents.

The Joint Commission revised its standards for disaster preparedness in 2001 to include community and local involvement. Specifically, the focus of the standards has shifted from emergency preparedness to overall emergency management. JCAHO requires accredited organizations to address four areas of disaster planning: mitigation, preparedness, response, and recovery. JCAHO also requires accredited organizations to participate annually in a community-based practice drill to address these four areas (10). As previously noted, federally qualified CHCs are not required to seek or to maintain JCAHO accreditation. These CHCs, however, are an important part of any community-based response. To satisfy “best practices” as defined by JCAHO, CHCs should evaluate their level of readiness (relative to other community-based resources) and should participate in annual drills to evaluate the effectiveness of the resulting integrated community response.

The Joint Commission completed a 2001 survey of hospitals to determine the effectiveness of their “community linkages” in responding to a bioterrorist incident, relative to these new JCAHO standards. Hospitals which reported ineffective community linkages frequently reported lack of community awareness of the issue of bioterrorism in general and,
consequently, lack of interest in planning for response, as an obstacle to their own community-based efforts at emergency management (11). Through examination of existing BMPs and subsequent improvement in BMPs, CHCs can play a key role in improving local awareness of bioterrorist threats and in participating in an integrated response in the communities they serve.

The National Association of Community Health Centers (NACHC) has also supported advanced disaster preparedness by the nation’s CHCs. NACHC Vice President of Federal and State Affairs, Daniel R. Hawkins, Jr., encouraged the U.S. Department of Health and Human Services to “deny approval for any state’s proposed bioterrorism and disaster preparedness plan that does not include adequate support and involvement of local community health centers” (12). NACHC’s request was made in regards to proposed DHHS bioterrorism funding to states, pending approval of individual states’ bioterrorism and disaster preparedness plans.

The North Carolina Primary Health Care Association (NCPHCA) has also formally included community-based emergency response planning and coordination as one of its proposals to enhance the state’s CHCs readiness for bioterrorist events. NCPHCA proposed comprehensive planning, at both the state and local level, which “clearly identifies the role of North Carolina’s CHCs in the event of a terrorist incident involving biological, chemical or other weapons of mass destruction” (13). The Association further identified the objective that each CHC in North Carolina develop an approved response plan to include “disease management protocols; surveillance procedures; and communication and other coordination with local, county and State response plans” (13).

Advisory bodies, therefore, have strongly suggested CHC evaluation of current emergency readiness plans, including BMPs, with follow up drafting of BMPs in situations where they do not exist. These bodies include, but are not limited to, the Bureau of Primary
Health Care, the Joint Commission on Accreditation of Healthcare Organizations, the National Association of Community Health Centers, and, more specific to North Carolina, the North Carolina Primary Health Care Association. None of these groups, however, has actually mandated that CHCs comply with these suggestions.

**Diminished Readiness Capacity**

The National Association of Community Health Centers solicited responses to a health center preparedness survey from its members during the week of October 22, 2001. The NACHC used a 14-question survey tool, which was faxed to all health center executive directors, to assess the level of preparedness of CHCs and to prioritize needs for the national CHC network. 137 completed surveys were received. The survey results revealed the following specific needs of the nation’s CHCs (14):

- 18% of all health centers reported having no Internet access for clinical staff. 40% of health centers were not familiar with public health information networks such as the Health Alert Network, the National Electronic Disease Surveillance System, or the Laboratory Response Network. 90% of all centers did not participate in these networks. In the event of a suspected bioterrorist event, communication with local, state and federal agencies is considered essential to promote proper response by CHCs.

- 40% of health centers did not maintain disaster plans; 91% did not feel appropriately prepared for a biological or chemical bioterrorist event. In the event of a suspected bioterrorist event, prior planning will be essential to CHCs’ responses in their communities.

- Only 50% of health centers were part of a coordinated emergency response plan with local health departments, Emergency Medical Services or hospitals in their communities. Only 20% of these centers reported having received training as a part of these designated response
plans. In the event of a suspected bioterrorist event, CHCs will need to be a part of a community-wide effort of response.

- 85% of health centers reported a need for additional staff training resources to improve preparedness; 60% reported needs for additional drug and supply resources; 42% reported needs for financial resources to improve communication systems. In the event of a suspected bioterrorist event, CHC staff will require prior training, proper treatment resources, and previously-established communication systems to respond to the needs of their patients and the communities they serve.

- A small percentage of health center staff will likely be mobilized during a public health crisis, as they are members of National Guard/Reserves or the Public Health Service Commission Corps. Such a mobilization is expected to result in shortages of trained staff in health centers. In the event of a suspected bioterrorist event, CHCs will need trained staff present to respond to the needs of their patients and the communities they serve.

In short, the NACHC survey indicated deficiencies in preparedness of the nations health centers, potentially negatively impacting their ability to respond to bioterrorist events in their communities. Specific responses of North Carolina’s CHCs were not available. North Carolina’s CHCs, however, should examine themselves relative to the NACHC survey and include deficient areas in development of their own BMPs.

NACHC has made efforts to improve this CHC readiness capacity, including active solicitation of inclusion of CHCs in state response planning. NACHC has not completed a follow up survey to assess improvements in this readiness capacity since the baseline survey in October 2001.
The National Association of County and City Health Officials (NACCHO), however, has completed a series of surveys to assess local changes in overall disaster readiness capacity since the fall of 2001. The results of surveys of local public health agencies (LPHAs) reveal steady, but slow, improvements in local response capacity. The NACCHO December 2001 and January 2002 surveys indicated the following (15):

- Only 26% of LPHA respondents had completed comprehensive emergency response plans which described the roles, functions, and responsibilities of “community partners” such as law enforcement, fire departments, health care providers, and the local and state public health agencies. 55% of respondents indicated 80% completeness of such comprehensive plans. 5% had not initiated drafts of such plans.

- Of respondents who indicated they had initiated development of comprehensive response plans, only 12% indicated a completed Bioterrorism Management Plan (BMP) was part of this overall planning. Approximately 30% indicated 80% completeness of a BMP. 11% had not initiated drafts of BMPs.

- Respondents indicated their greatest need in overall disaster preparedness was improvement in communications capacity. This was followed by the need for overall system readiness (such as developing partnerships and improving training), workforce training and competency demonstration, and improved information systems.

NACCHO completed a follow up survey in August 2002, seeking information from the same LPHAs regarding improvement in their readiness capacity and regarding challenges which remain in their preparedness efforts. The results of this follow up survey revealed the following (16):
• Approximately two-thirds of respondents reported they had made progress in bioterrorism planning within the last year. Almost one-third of respondents indicated they had completed response plans.

• Many respondents indicated their bioterrorism plans required review and approval by partners at the local, state and federal level. They indicated this approval process was time consuming.

• Approximately half of respondents indicated increased community collaboration over the prior year. This included collaboration with local fire, police, and emergency personnel.

• Almost one-half of respondents noted they had completed some employee training relative to response in a bioterrorist event or would be completing such training in the near future.

• Almost one-third of respondents had planned or completed emergency response drills or exercises.

• One-quarter of respondents described improvement in their technology and equipment over the course of one year since September 11, 2001.

• Community collaboration and establishing communication among community partners to facilitate proper responses were the most frequently reported challenges facing LPHAs in the upcoming year. Training, staffing, and funding were also frequently reported concerns by LPHAs regarding bioterrorism planning.

NACCHO also tracked local involvement of LPHAs in statewide bioterrorism preparedness planning in 2002. The Centers for Disease Control and Prevention (CDC) awarded $918 million to states in February 2002. This funding is designed to improve state and local public health provider preparedness for responding to bioterrorism and other public health threats and emergencies. The Health Resources and Services Administration (HRSA) also provided
state funding to create regional hospital plans for responding to bioterrorist attacks. NACCHO assessed LPHA involvement in these processes to determine whether LPHAs believed state leaders were being inclusive of local providers during the process. NACCHO also wished to determine if LPHAs believed that an appropriate amount of funding would be distributed to or benefit providers at the local level. The results of this survey revealed (17):

- When asked in March 2002 if LPHA officials’ viewpoints were considered in the state planning process, the fifteen respondents presented different perspectives. Several sites noted active involvement, but several indicated they were not even in regular contact with state officials. Other sites reported no involvement by LPHAs, inadequate level of involvement, or uncertainty as to whether or not their input was being utilized.
- Approximately one month later, respondents were questioned regarding the degree of meaning of their collaboration with state level officials. Nine out of 12 respondents indicated they felt meaningful collaboration had occurred.
- LPHAs reported barriers to BMP planning. The most frequently reported barriers included not enough time to adequately participate with state planners; tensions regarding amounts of funding for counties; keeping the “process focused on defining responsibilities and accountabilities of state and local public health agencies rather than specific pathways for accomplishing this work”; and staffing.

Neither national nor North Carolina CHCs were assessed in these NACCHO surveys. The NACCHO surveys, however, reveal concerns about current readiness of local providers in the event of a bioterrorist event, in spite of gains made over the course of the first year after September 11, 2001. CHCs, as local providers, likely experience the same concerns and
challenges as LPHAs. Additional planning by CHCs can improve this readiness capacity, and BMPs should be part of this planning.

**Integrated Community Response**

Integrated community responses during a bioterrorist event are necessary to best serve populations in the communities served by CHCs. CHCs are frequently the only source of medical care for the citizens they serve. A patient with early symptoms of a disease resulting from bioterrorism will likely first present with complaints to a primary care provider. CHCs serve a vital role in early recognition of disease signs and symptoms, in decontamination and containment, in referral to appropriate care, and in notification of authorities of the possibility of bioterrorist activities. CHCs are thus key components in an integrated response system for diagnosis, treatment, and prevention of spread of diseases with bioterrorist sources.

Thomas J. Van Coverden, President and CEO, National Association of Community Health Centers, has noted this unique position of CHCs in an integrated response plan. In a letter appealing to legislators to include CHCs in federal funding to upgrade bioterrorist responses, Mr. Coverden noted that CHCs are likely the first, and sometimes only, place people will seek assistance in public health emergencies, including bioterrorist attacks. Mr. Coverden noted that this relationship between CHCs and the citizens they serve places CHCs in a unique position to “actively participate in regional and local response systems to terrorism and other public health needs” (4).

The North Carolina Primary Health Care Association (NCPHCA) has described early detection as “one of the keys to an effective public health response to a bioterrorist event.” The Association acknowledged that North Carolina’s CHCs would likely treat early victims of a biological attack, secondary to the volume of patients this network treats annually. CHC
providers would be vital in early diagnosis and referral of their patients with biological diseases (13).

The NCPHCA further emphasized the role the state’s CHCs could play in a possible bioterrorist attack as one of provision of “surge capacity assistance and personnel” if mass casualties overwhelmed the abilities of major care providers in the state. The Association has also described the role of North Carolina’s CHCs, in a bioterrorism situation, as critical in the delivery of mass medications (such as antibiotics) or in mass immunization campaigns (13).

Considering these factors of early detection, surge capacity, and mass immunizations, the NCPHCA concluded that all North Carolina CHCs should be integrated into community-based response plans. The Association established an objective of development of approved response plans for all North Carolina centers. Such plans would include “disease management protocols; surveillance procedures; and communication and other coordination with local, county, and state response plans” (13).

Inclusion of bioterrorism components to CHC emergency preparedness plans will therefore allow North Carolina’s CHCs to better detect and respond to bioterrorist threats in the communities they serve. By identifying, treating, and referring cases to appropriate resources, CHCs can prevent epidemics related to potential bioterrorist events in their communities. Coordination of these BMPs with local authorities will further assist CHCs in positively impacting the health of their communities and in promoting a broader response to the larger community of the state of North Carolina.

Factors Inhibiting CHC Response

Factors inherent in CHC service delivery limit CHC response in a bioterrorist event, even under the most favorable circumstances. Failure to plan for such events will further hamper
CHC response. Several factors limit CHCs’ ability to respond to events impacting an entire community. These factors are related to the geographical distribution of CHCs, technology concerns, and the specific populations served by CHCs.

Community health centers are often located in remote or rural communities where access to similar health services is either absent or limited. Thomas J. Van Coverden, President and CEO, National Association of Community Health Centers, highlighted this unique characteristic of CHCs in an appeal to legislators considering federal funding to improve the public health system’s response to bioterrorist attacks. Mr. Coverden noted that CHCs are often the only provider for citizens to receive care, with the “next nearest providers located dozens of miles away”. He also indicated that CHCs often perform local public health functions, in the absence of public health departments in the communities they serve (4).

This geographical distribution of the national CHC network is consistent with the CHC mission of providing high quality health services to the nation’s under-served and vulnerable populations. This geographical distribution, however, may limit CHC response in a bioterrorist event. Routine communication with other health providers and emergency response personnel is limited. CHC provider access to consultation with other professionals concerning disease recognition and treatment is also limited. Ease of referral of patients with potential biological diseases may be compromised by this geographical isolation of CHCs.

Most of North Carolina’s CHCs are located in remote areas of the state. Appendix 1, a list of North Carolina’s Federally Qualified Community Health Centers, highlights the rural distribution of this network. The state’s CHC network consists of twenty centers with 63 clinical delivery sites in sixty different North Carolina counties, ranging from the mountains to the coast.
The majority of these centers are located in predominantly rural counties where primary health care access is limited (5,6).

Since geographical distribution limits North Carolina CHCs’ responses, it is even more critical that CHCs participate in advance planning by formulating BMPs and educating staff about their responsibilities in a bioterrorist event. These BMPs should also be formulated with an emphasis on coordinated responses with emergency preparedness plans of other local providers to minimize the problems associated with geographical isolation.

Barriers associated with CHCs’ rural distribution are further enhanced by technology limitations inherent in this geography. The NCPHCA has noted that “communication and information technology capabilities are absolutely critical to the ability to effectively respond to a bioterror event” (13). These capabilities should include secure transmission of disease surveillance information, maintenance of electronic records of patient conditions and care, and the ability to receive current information recommendations from public health sources (13).

Most North Carolina CHCs, however, do not possess these technology capabilities. The “communications infrastructure necessary to quickly share suspicious diagnosis information with other entities in the community and public health sector”, according to the NCPHCA, is lacking (13). Helen Burstin, MD, MPH, has also described challenges facing rural providers, including CHCs. She noted that “lack of electronic connectivity and decision support tools for diagnosis and disease management of rare diseases” (18) seriously hampers rural providers in a potential bioterrorist event.

Even in the best circumstances, North Carolina CHCs’ geographical isolation and lack of technology can limit provider ability to diagnose, treat, and refer. In a bioterrorist event, access to public health infrastructure support (epidemiologists, labs, and consultation) is crucial (18).
Planned responses, in the form of written BMPs, are vital for CHCs to fulfill their mission to the communities they serve.

Populations served by North Carolina CHCs also potentially limit CHC response to a bioterrorist event. Citizens served by the CHC network are members of the state’s most vulnerable populations. As previously noted, the NCPHCA 2001 report indicates approximately 47% of CHC adult patients served and approximately 34% of CHC child patients served were uninsured. CHCs in North Carolina also reported 50.07% of their patients sustained themselves with income at 100% Federal Poverty Level or below in 2001 (6). Such populations often will not seek assistance from other local healthcare resources; some may not seek care at all.

Concern has been expressed about such populations spreading bioterrorism agents. Dr. Matthew Wynia, American Medical Association, and Lawrence Gostin, a health law professor at Georgetown University, have expressed concern about spread of contagious illnesses by uninsured citizens who do not seek care. Such spread could be catastrophic in a bioterrorist attack, where diagnosis and containment are critical elements to ensure disease outbreaks do not magnify to catastrophic levels (19).

Wynia and Gostin also expressed concerns about illegal aliens delaying care, secondary to fear of deportation (19). North Carolina’s growing Hispanic population presents a particular challenge. The CHC network is often serving this expanding Hispanic population. North Carolina CHCs, as a point of contact for Hispanic citizens, are crucial to reduce fear of potential deportation in order to evaluate, diagnose and refer patients with potential bioterrorist diseases.

The geographical distribution of CHCs, technology concerns, and the specific populations served by CHCs inherently limit the ability of CHC providers to respond in emergency situations that might be encountered in a bioterrorist attack. Even in the best
circumstances, CHC response is limited. Prior planning is critical to ensure appropriate response on the part of North Carolina’s CHCs. CHCs are urged to develop their own BMPs in an effort to serve the medical, mental and emotional needs of their patients, in the event of a bioterrorist event in their communities.

**Rationale for Mandating Bioterrorism Management Plans for Community Health Centers**

Funding sources should mandate that federally qualified CHCs formulate and follow written BMPs as part of their overall emergency preparedness procedures. These funding sources should mandate BMPs for the centers, secondary to:

- Precedents have been established for receipt of federal bioterrorism funds, to include benchmarks for CHC participation in statewide response planning.
- Receipt of federal funds for routine operations of CHCs is already contingent upon benchmarks referencing care delivery to vulnerable populations served by CHCs.
- Vulnerable populations served by CHCs are entitled to early diagnosis and response to possible bioterrorism events, in the same manner as they are entitled to care delivery consistent with CHC mission.

**Benchmarks for Federal Bioterrorism Funding**

Following the September 11, 2001 terrorist attacks and subsequent anthrax attacks, two separate federal agencies established $1.1 billion in funding for states to improve the nation’s public health infrastructure at the state and local levels. The Centers for Disease Control and Prevention (CDC) allocated each state a $5 million base award, to be supplemented by additional funding based on population. CDC funding is designed to improve bioterrorism, infectious disease, and public health emergency preparedness in each state. The Health Resources and
Services Administration (HRSA) funding is designed to promote development of regional hospital response plans for use in the event of a bioterrorist attack. States were initially provided with twenty percent of their allotments, with the remaining eighty percent to be released upon approval of completed state plans. States were directed to describe their coordinated planned response to bioterrorism and other infectious disease outbreaks and to show how they plan to improve their overall public health capacity (20). North Carolina’s total award under the CDC funding is $22,919,940. Its total award under the HRSA funding is $3,368,351 (21).

CHC participation in planning and implementation of response to bioterrorist events was included in initial benchmarks for response planning by states to qualify for federal bioterrorism funds. The CDC directed states to establish advisory committees for planning, to include representatives from various agencies. The CDC specifically listed CHC representatives in outlining membership of these committees (20). Department of Health and Human Services Secretary Tommy G. Thompson emphatically stated “I want the community health centers to be a part of those plans”, in referencing the process for developing state response plans (12).

CHC participation in local and regional bioterrorism response planning is therefore mandated for states to receive federal bioterrorism funds. Requiring individual CHCs to include BMPs in their overall emergency response plans is a logical step to ensure that CHC participation is included at the state level. Such a mandate would prompt CHCs to be proactive in insisting upon inclusion in state plans.

**Benchmarks for Routine CHC Operations**

Federal funding for routine operations of CHCs is also contingent upon fulfillment of benchmarks referencing care delivery to the populations served by the nation’s CHCs. As previously noted, the Bureau of Primary Health Care (BPHC) funds the national CHC network.
North Carolina's CHCs follow federal guidelines established by the BPHC in order to receive this funding. CHCs also receive federal funding from Medicare reimbursement and state and federal funding from Medicaid reimbursement. Commercial insurance and sliding fee schedules complete the funding sources for North Carolina CHCs (5).

CHCs must fulfill specific requirements, as outlined in BPHC directives to CHCs, to receive federal funding under the BPHC Health Center Program. The BPHC routinely updates its directives to CHCs for fulfillment of requirements for receipt of funding. Similarly, receipt of federal Medicare reimbursement and state and federal Medicaid reimbursement is contingent upon completion of required elements.

The additional requirement of formulation and practice of BMPs as part of CHC emergency preparedness planning is a logical addition to required elements for receipt of federal or state funding, or both. BMPs as part of overall preparedness will ensure that CHCs are capable of delivering the highest quality of care to the citizens they serve, in the event of a bioterrorism outbreak.

**Fulfillment of CHC Mission**

Lastly, CHCs should include BMPs as part of their overall disaster preparedness in order to fulfill their mission. Various words and phrases contained in the mission statements for CHCs, as defined by the Bureau of Primary Health Care (BPHC) and by the National Association of Community Health Centers (NACHC), support this. These words and phrases include:

- **Provide primary and preventive health services to under-served populations.** Under-served populations deserve the same services as other populations. Hospitals and other
providers outside the CHC network are including BMPs as part of their preparedness efforts. CHCs should do the same.

- **Adapt in a changing health care environment in order to survive.** The CHC network, both nationally and in North Carolina, was clearly established to be responsive in an ever-changing environment. To fulfill their mission, CHCs must adapt to the growing possibility of bioterrorist attacks and must be prepared to respond appropriately. Establishing BMPs as part of emergency preparedness is an adaptation necessary in the current health care environment.

- **Demonstrate positive health outcomes for recipients of services.** Early diagnosis and rapid response to possible bioterrorism events are rapidly becoming standards of measurement of other health care organizations. Such diagnosis and response, supported by proper planning, should be the gold standard for care delivery by CHCs, as a demonstration of positive health outcomes.

- **Provide health care that is accessible, coordinated, and community directed.** The national and state CHC network was also clearly established to be community oriented and to be integrated with other state and local services. BMPs, by their nature, require such coordinated and community directed approaches for response in bioterrorist events.

In summary, funding sources for community health centers in the United States, and specifically in North Carolina, should mandate that CHCs include bioterrorism management plans in their emergency preparedness plans. These plans should be mandated because they will ensure the ability of health centers to fulfill their mission. Mandates will also ensure fulfillment of benchmarks for federal bioterrorism funding, which will be necessary for CHCs to serve their populations during a bioterrorist event.
APPENDIX 1
NORTH CAROLINA FEDERALLY QUALIFIED COMMUNITY HEALTH CENTERS

Anson Regional Medical Services
Wadesboro, NC
Clinic Sites: Morven, Wadesboro

Bertie County Rural Health Association
Windsor, NC
Clinic Sites: Windsor, Lewiston/Woodville

Blue Ridge Community Health Services
Hendersonville, NC
Clinic Sites: Hendersonville (4), Bat Cave

Caswell Family Medical Center
Yanceyville, NC
Clinic Site: Yanceyville

Gaston Family Health Services
Gastonia, NC
Clinic Sites: Gastonia, Bessemer City

Goshen Medical Center
Faison, NC
Clinic Sites: Faison, Rose Hill, Mt. Olive

Greene County Health Care
Snow Hill, NC
Clinic Sites: Snow Hill (2)

Kinston Community Health Center
Kinston, NC
Clinic Site: Kinston

Lincoln Community Health Center
Durham, NC
Clinic Site: Durham

Metrolina Comprehensive Health Center
Charlotte, NC
Clinic Sites: Charlotte (2)

New Hanover Community Health Center
Wilmington, NC
Clinic Site: Wilmington
Person Family Medical Center  
Roxboro, NC  
Clinic Site: Roxboro

Piedmont Health Services  
Chapel Hill, NC  
Clinic Sites: Carrboro, Moncure, Prospect Hill, Burlington (2), Chapel Hill, Siler City

Robeson Health Care Corporation  
Fairmont, NC  
Clinic Sites: Maxton, Fairmont, Lumberton, Pembroke

Rural Health Group  
Jackson, NC  
Clinic Sites: Holister, Jackson, Littleton, Rich Square, Weldon (2)

Stedman-Wade Health Services  
Wade, NC  
Clinic Sites: Stedman, Wade

Tri-County Community Health Center  
Newton Grove, NC  
Clinic Site: Newton Grove/Dunn, Salemburg

Vance-Warren Comprehensive Health Services  
Manson, NC  
Clinic Sites: Soul City, Warrenton

Wake Health Services  
Raleigh, NC  
Sites: Apex, Raleigh (4), Fuquay-Varina

Western Medical Group  
Mamers, NC  
Clinic Sites: Ben Haven, Boone Trail, Anderson Creek, Angier

Western North Carolina Community Health Services  
Asheville, NC  
Sites: Asheville (2)

Wilson Community Health Center, Inc.  
Wilson, NC  
Clinic Sites: Wilson, Nashville

Source: North Carolina Primary Health Care Association website, www.ncphca.org
References


2. Website, National Association of Community Health Centers, [www.nachc.com](http://www.nachc.com)

3. Website, Health Resources and Services Administration, [www.hrsa.gov](http://www.hrsa.gov)


5. Website, North Carolina Primary Health Care Association, [www.ncphca.org](http://www.ncphca.org)


8. Letter to Community Health Centers, Marilyn Hughes Gaston, MD, Associate Administrator for Primary Health Care, Bureau of Primary Health Care, Health Resources and Services Administration, Department of Health and Human Services, October 15, 2001.


10. Joint Commission on Accreditation of Healthcare Organizations, 2001 Hospital Standards.

11. Website, Joint Commission on Accreditation of Healthcare Organizations, [www.jcaho.org](http://www.jcaho.org)


