

PANDEMIC FLU VACCINATION PLAN

NC Department of Health and Human Services, Division of Public Health

Introduction

Vaccination is the primary control measure to prevent influenza. The pharmaceutical industry is actively preparing for the production of a pandemic vaccine. A ‘Pre-pandemic’ vaccine to the H5N1 strain has already been developed and will be distributed to states by US DHHS. The purpose of this plan is to outline the key steps in the process of vaccine acquisition and delivery during an influenza pandemic.

The Advisory Committee on Immunization Practices (ACIP) and the National Vaccine Advisory Committee (NVAC) have drafted vaccine priority group recommendation, which are outlined in the U.S. Department of Health and Human Services (HHS) Pandemic Influenza Plan that was released in November 2005. Priority groups recommended in the HHS plan include personnel essential to the pandemic response (e.g., healthcare workers, first responders, public safety officers, etc) as well as those individuals at high-risk for influenza complications as defined by the ACIP. The rank order of these priority groups is subject to change. Project areas will have some flexibility in defining priority groups and sub prioritizing within them.

The North Carolina Division of Public Health (NC DPH) will rely on expertise from the Immunization Branch and the NC Strategic National Stockpile program in Preparedness and Response (PHP&R) to receive, allocate, distribute, and provide guidance for implementing this plan. Local health departments and counties will implement the vaccination plan.

Assumptions

- It is impossible to predict an accurate impact. Using the 1918 pandemic as a model with a 35% attack rate, the result in North Carolina could be:
 - 1.6 million doctor visits
 - 290,000 hospitalizations
 - 65,300 deaths
- The NC Strategic National Stockpile (SNS) Plan will be used at the time vaccine and other supplies are brought into NC. This plan is already in place and vetted within state and local agencies. The following plan for vaccine receipt, distribution and administration represents additional information that will be needed in the event of a pandemic.
 - There will be a single ship to site for vaccine delivery to the state.
 - Hospital Workers will be vaccinated at the place of employment.
- A vaccine against a pandemic strain of influenza will not be available for four to six months after the start of a pandemic. When available it will be at a rate of 5-10 million doses per month for the entire U.S.
- As the vaccine becomes available, the demand will exceed the supply for some time.

- If pre-pandemic vaccine is available it will be purchased by the federal government. Pandemic vaccine will be purchased by the federal government through the first year.
- Most pre-pandemic vaccine will be allocated in proportion to population, though exceptions will be made for critical infrastructure personnel who are not evenly distributed across the nation.
- Pandemic vaccine will be allocated to project areas in proportion to their total population. It is anticipated that, based on population for the state, North Carolina will receive 3% of the vaccine (approximately 150-300,000 doses per month).
- The ACIP- NVAC Recommended Pandemic Influenza Vaccine Priority Groups will be followed until vaccine availability matches demand and/or the evaluation of the pandemic determines that a change in the priority groups is recommended.
- All states will be in need of vaccine and a formal request process, similar to that of requesting SNS assets will not be required.
- The North Carolina State Emergency Operations Plan will be followed during the event as outlined in NCGS 166A.
- NC will continue to operate as a decentralized system and as such, all activities are overseen by the state, but are implemented in the counties.

Vaccine Request

State Request

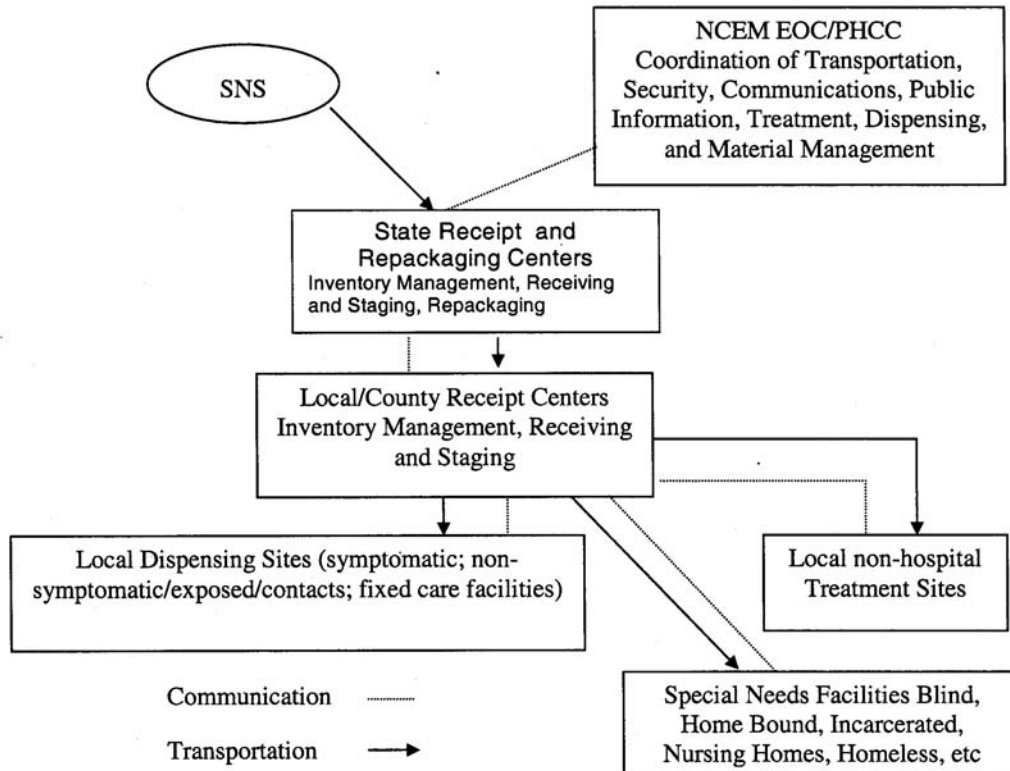
North Carolina will follow the vaccine request procedures as presented by CDC at the time of availability and need. All states will be in need of vaccine and it will be shipped as it becomes available to the states based on the percentage of the total US population that resides within that state.

County Request

Each county or district health department will be allocated vaccine as outlined in the Apportionment section of this plan. Counties will identify the location to which vaccine should be shipped. This notification will come from Local Emergency Management to State Emergency Management and will be passed on to the SNS Coordinator.

Health Emergency Coordination

NC Emergency Management will serve as the coordinating agency for the multiple state and local agencies. The diagram below illustrates how vaccine assets and information flow throughout the system as a whole. The loop of assets and information will be continuous throughout the event.



Material Management

Receipt

Material will be received at one of the established NC Receipt, Stage and Store (RSS) locations as identified in the SNS Plan. Material will be received at the RSS in accordance with the NC SNS Standard Operating Procedures. The RSS staff is trained in the operations procedures. A full staff of 30 workers per 12 hour shift is available if needed. Because vaccine is not likely to require full RSS operation, the staff can be scaled to support the level of activity. Immunization Branch personnel who have been trained in vaccine distribution, storage and shipment procedures will serve as technical consultant to the RSS Manager.

Storage

Local health departments are obligated, by written agreement with the North Carolina Immunization Branch, to follow all vaccine storage and handling guidelines established by the Immunization Branch and the CDC. These guidelines may be found at: <http://www.immunizenc.com/ManagVaccines.htm#storage>. These same guidelines will be used for vaccine storage at the RSS.

Stage

Vaccine is likely to flow in and out of the RSS rapidly. Immunization Branch staff who are trained in packing and shipping procedures will assist with training warehouse staff in pandemic influenza vaccine packing and shipping at RSS. Job action sheets to be utilized as just-in-time-training have been developed for the RSS.

Shipping

Vaccine will be shipped using climate controlled containers from the RSS to the county health department or local receiving site. Confirmation of the receiving location will be made prior to vaccine leaving the RSS. Given the relatively small space needs and specific storage requirements of vaccine, it is anticipated that many local health departments will opt to have the vaccine delivered to a location other than the usual local receiving site.

Chain of Custody

A chain of custody form (see Appendix A: Forms) shall be completed and included with every shipment. A copy of the signed Chain of Custody Form will be returned to the RSS.

Vaccine Apportionment

A vaccine apportionment formula will be applied that is in compliance with the ACIP-NVAC Recommended Pandemic Influenza Vaccine Priority Groups. The apportionment is by county with delivery from the RSS to the Local Receiving Site and re-distribution to the hospital(s) in that county. It is assumed (1) that hospital workers will be vaccinated at their place of employment (2) all other pandemic vaccinations will be performed through plans developed and implemented at the Local Health Department and (3) the proportion of the population in high risk groups is roughly the same throughout the state. Changes in

this apportionment will be made as priority groups are vaccinated, reporting reveals the need to alter the formula, priority groups are altered based on the investigation of the pandemic, etc.

Vaccine will be apportioned according to the following formula:

- 1) Each of the 8 RAC hospitals, representing a cornerstone of the health care system in North Carolina, will receive 3% of the total vaccine delivered to the state until all of their health care workers are vaccinated. This represents a reduction of the total by 24%, leaving 76% of the vaccine for further allocation.
 - a. This is estimated at 4500 doses/ month/hospital, 36,000 doses/month total.
- 2) Each hospital will receive an allocation based on its size.
 - a. Emergency Department (ED) visits as reported in 2006 will act as a proxy for size.
 - b. Each hospital will receive an “H value”. This “H value” is an integer (1, 2, 3 or 4). The total of the ED visits for those hospitals with a single “H value” represents 25% of the total ED visits for all hospitals in 2006.
 - c. Vaccine will be allocated according to a formula based on this “H value”. (See Appendix B)
 - i. The vaccine allocation to all of the hospitals will be approximately 52% of the total vaccine (60% of the remaining 76% of the total after the reduction for the RAC hospitals)
 - d. When the majority of the health care workers are vaccinated, adjustments to the allocations will be made.
- 3) Each county will receive an allocation of vaccine based on the size of its population.
 - a. Census population for 2006 will be used.
 - b. Each county will receive a “C value”. This “C value” is an integer (1, 2, 3, or 4). The total of the population for those counties with a single “C value” represents 25% of the population.
 - c. Allocations will be made based on this “C value” using the assumption that the proportion of high priority persons is approximately the same across the state. (See Appendix C)
 - i. The vaccine allocation to all of the counties will be approximately 30% of the total vaccine (39% of the remaining 76% of the total after the reduction for the RAC hospitals)
 - d. As the pandemic evolves, additional priority groups will be vaccinated and adjustments to the allocations will be made.

Distribution

Distribution will occur in compliance with the NC SNS Distribution Plan.

State

PHP&R has an MOA in place with NC Emergency Management (NCEM) to provide transportation and security from the RSS to the designated location within the county.

The location in the county shall be either the health department or the local receiving site (LRS). The address of these locations is on file with PHP&R. Transportation may be provided through the NCEM private trucking contract or other available transportation including patrol cars.

Local

Upon the arrival of vaccine at the health department or LRS, the county will then distribute the vaccine to the priority groups. Field staff from the Immunization Branch will, upon request, assist with transfer of pandemic influenza vaccine between RAC Hospitals and local health departments.

Security

Security will be provided in compliance with the NC SNS Distribution Plan's Security Section(s).

State

Vaccine will be in high demand and shipping will require security to ensure the vaccine arrives at its final destination. Security for transportation from the RSS to the LRS is provided by NC State Highway Patrol through an MOA between NCEM and PHP&R.

Local

Security will also be required for transportation within the counties and at the POD where vaccinations are given. These arrangements are made with the local law enforcement agencies and can be supplemented through NC State Highway Patrol if the county makes such a request through NCEM.

Vaccination

Vaccine will be administered to NC residents through Points of Dispensing (PODs) operated by the health department as designated in the NC SNS Plan. Each county health department has a Mass Dispensing/Vaccination plan that is reviewed by the state for completeness. NC has three hundred and eleven PODs identified by the health departments. The location of PODs is approved and all are listed in the NC SNS Plan. Many models can be used but due to the nature of a pandemic, drive through clinics for vaccination are recommended and are developed or under development at all Health Departments. Approximately 30-50 staff would be needed to operate what will be initially small clinics. Operation of a small drive through clinic would require, at minimum, 18 non-medical staff (greeters, crowd control/security, form completion, and discharge) and 12 medical staff for vaccination. As more vaccine becomes available, larger numbers of staff may be needed to operate larger clinics open for longer periods of time. Staff who are employees of the Health Departments will be identified and credentialed according to the Health Department personnel procedures. All volunteers who supplement this staff will have been deployed from Medical Reserve Corps. Their credentials and ID are confirmed at least monthly and upon deployment by ServNC, the NC ESAR-VHP registry.

Priority Groups

The current recommendations for priority of vaccination are those developed by the ACIP and NVAC in 2005. These priority groups are designated to provide continuity of critical infrastructure and protect the most vulnerable. These recommendations are in Appendix A. In December 2007, open comments were solicited on revised priority groups. Upon review of these comments and further recommendations from US DHHS, this plan will be revised as necessary.

Record Keeping

Verification of inclusion in priority groups will be made at the time of registration for vaccine and will be verified by staff prior to vaccination and recorded in the NCIR or paper log. Records of vaccine administered will be entered in the NC Immunization Registry. For providers who do not participate in NCIR, a Pandemic Flu Vaccine Administration Log is attached (Appendix A: Forms). The log will be completed and returned as determined by the Immunization Branch. The Immunization Branch will determine the method and frequency of reporting and advise all vaccine administration sites of these procedures.

First Responders/receivers

Each county plan should address the vaccination of first responders/receivers and information should be provided to them through the health department and their employer.

Training

All personnel are to be trained in accordance with the CDC SNS Guidance Version 10.02. This guidance requires that the following parts of the SNS plan be trained and exercised: Command and Control, Local to State Requesting SNS Procedures, POD to Local Requesting SNS Procedures, Tactical Communications Plan, Public Information & Communication Plan, Security Plan, Local Receiving Sit Plan, Inventory Management System, Distribution Plan, Dispensing Plans, and Treatment Center Plan.

Job action sheets have been developed and distributed for all roles at the vaccination sites as part of the NC SNS Plan. These job action sheets provide a step-by-step approach to the roles and responsibilities and are therefore also to be used as just in time training.

Adverse Events

Adverse events will be reported to the national Vaccine Adverse Events Reporting System (VAERS; www.vaers.hhs.gov), with direct reporting by individual healthcare providers and coordinated reporting through local health departments to the state Immunization Branch. During a pandemic, NC DPH will coordinate vaccine safety reporting by requiring the downloading and faxing of individual AEFI reports to the Vaccine Safety Coordinator. The Safety Coordinator will decide which cases need investigation.

Additional Responsibilities of the Vaccine Safety Coordinator:

- Serve as CDC's main point of contact for vaccine safety (reporting/surveillance)
- Serve as the state point of contact for clinicians, practitioners, and local health departments for vaccine safety related issues
- Build a network of vaccine safety contacts in the community through resources such as sentinel physician (SP) networks, hospital emergency rooms, and local health departments to facilitate adverse event reporting during an influenza pandemic
- Serve as the coordinator for education through the regional and local staff for vaccine safety reporting at the state and local level
- Participate in meetings (conference calls, webinar, and/or face-to-face) with CDC VAERS staff for updates and information exchange, training, and data interpretation, as needed. Prepare and disseminate reports to local health departments in a timely fashion so that local health departments have up-to-date information on AEFI.
- Serve as lead for convening appropriate Project Area staff in Emergency Preparedness, Immunization Information System (IIS) and Immunization programs to collaborate in the planning and operational aspects for reporting and investigating AEFI.

APPENDIX A

ACIP/ NVAC Priority Groups for Vaccination

(2005)

ACIP/NCAV Vaccine Priority Group Recommendations (2005)

Tier	Subtier	Population	Rationale
1	A	<ul style="list-style-type: none"> • Vaccine and antiviral manufacturers and others essential to manufacturing and critical support (~40,000) • Medical workers and public health workers who are involved in direct patient contact, other support services essential for direct patient care, and vaccinators (8-9 million) 	<ul style="list-style-type: none"> • Need to assure maximum production of vaccine and antiviral drugs • Healthcare workers are required for quality medical care (studies show outcome is associated with staff-to-patient ratios). There is little surge capacity among healthcare sector personnel to meet increased demand
	B	<ul style="list-style-type: none"> • Persons > 65 years with 1 or more influenza high-risk conditions, not including essential hypertension (approximately 18.2 million) • Persons 6 months to 64 years with 2 or more influenza high-risk conditions, not including essential hypertension (approximately 6.9 million) • Persons 6 months or older with history of hospitalization for pneumonia or influenza or other influenza high-risk condition in the past year (740,000) 	<ul style="list-style-type: none"> • These groups are at high risk of hospitalization and death. Excludes elderly in nursing homes and those who are immunocompromised and would not likely be protected by vaccination
	C	<ul style="list-style-type: none"> • Pregnant women (approximately 3.0 million) • Household contacts of severely immunocompromised persons who would not be vaccinated due to likely poor response to vaccine (1.95 million with transplants, AIDS, and incident cancer x 1.4 household contacts per person = 2.7 million persons) • Household contacts of children <6 month olds (5.0 million) 	<ul style="list-style-type: none"> • In past pandemics and for annual influenza, pregnant women have been at high risk; vaccination will also protect the infant who cannot receive vaccine. • Vaccination of household contacts of immunocompromised and young infants will decrease risk of exposure and infection among those who cannot be directly protected by

vaccination

- | | | |
|-----|---|--|
| D | <ul style="list-style-type: none"> • Public health emergency response workers critical to pandemic response (assumed one-third of estimated public health workforce=150,000) • Key government leaders | <ul style="list-style-type: none"> • Critical to implement pandemic response such as providing vaccinations and managing/monitoring response activities • Preserving decision-making capacity also critical for managing and implementing a response |
| 2 A | <ul style="list-style-type: none"> • Healthy 65 years and older (17.7 million) • 6 months to 64 years with 1 high-risk condition (35.8 million) • 6-23 months old, healthy (5.6 million) | <ul style="list-style-type: none"> • Groups that are also at increased risk but not as high risk as population in Tier 1B |
| B | <ul style="list-style-type: none"> • Other public health emergency responders (300,000 = remaining two-thirds of public health work force) • Public safety workers including police, fire, 911 dispatchers, and correctional facility staff (2.99 million) • Utility workers essential for maintenance of power, water, and sewage system functioning (364,000) • Transportation workers transporting fuel, water, food, and medical supplies as well as public ground public transportation (3.8 million) • Telecommunications/IT for essential network operations and maintenance (1.08 million) | <ul style="list-style-type: none"> • Includes critical infrastructure groups that have impact on maintaining health (e.g., public safety or transportation of medical supplies and food); implementing a pandemic response; and on maintaining societal functions |
| 3 | <ul style="list-style-type: none"> • Other key government health decision-makers (estimated number not yet determined) • Funeral directors/embalmers (62,000) | <ul style="list-style-type: none"> • Other important societal groups for a pandemic response but of lower priority |

- 4
- Healthy persons 2-64 years not included in above categories (179.3 million)
 - All persons not included in other groups based on objective to vaccinate all those who want protection

Appendix A:
Mass Vaccination Forms

North Carolina Department of Health and Human Services
Division of Public Health

Pandemic Influenza Vaccine Chain of Custody Form

Originating From:

Organization _____

Street Address _____

City _____ Phone number: _____

Delivered To:

Organization _____

Street Address _____

City _____ Phone number: _____

Contents of shipment:

Vaccine Type _____

Manufacturer/Lot# _____

Expiration date _____

vials/size vials _____

Vaccine Type _____

Manufacturer/Lot# _____

Expiration date _____

vials/size vials _____

Vaccine Type _____

Manufacturer/Lot# _____

Expiration date _____

vials/size vials _____

Vaccine Type _____

Manufacturer/Lot# _____

Expiration date _____

#vials/size vials _____

Total number of vials: _____

Temperature, quantity and condition of shipment should be checked on receipt prior to accepting custody of the vaccine.

Packed by/Date

Delivered by/Date

Received by/Date

PANDEMIC FLU VACCINE ADMINISTRATION LOG

Report Month/Year _____

Page _____ of _____

Provider Name _____

Contact person _____

Street Address _____

Contact Phone # _____

City _____

<u>Patient Name</u> (LN, FN, MI)	<u>Birth Date</u> (MM/DD/YY)	<u>Service Date</u> (MM/DD/YY)	<u>Vaccine Manufacturer and Lot #</u>	<u>Vaccine and Dose Number</u> Pre-pan 1 2 or Pandemic 1 2	<u>Priority Group</u> (1 A-D, 2 A-B, 3 or 4)

This form is to be used only by providers who do not use the North Carolina Immunization Registry (NCIR). This form must be faxed to the Immunization Branch weekly.

Appendix B:

Hospital Allocation of Vaccine

ED Name/Location	H value (assigned based on annual ED visits, 2004) *	% of Vaccine apportioned to all hospitals (~52% total vaccine) that is apportioned to this hospital **	Total doses to this hospital/month if 150,000 doses/month given to state, 78,000 doses/month to all hospitals	Total doses to this hospital/month if 300,000 doses/month given to the state, 156,000 doses/month to all hospitals
Alamance Regional Medical Center	3	1.7%	1,330	2,660
Albemarle Hospital	2	1.0%	780	1,560
Alleghany Memorial Hospital	1	0.4%	310	620
Angel Medical Center	1	0.4%	310	620
Annie Penn Hospital	1	0.4%	310	620
Anson Community Hospital	1	0.4%	310	620
Ashe Memorial Hospital, Inc.	1	0.4%	310	620
Beaufort County Hospital	1	0.4%	310	620
Bertie Memorial Hospital	1	0.4%	310	620
Betsy Johnson Regional Hospital	2	1.0%	780	1,560
Bladen County Hospital	1	0.4%	310	620
Blowing Rock Hospital	1	0.4%	310	620
Brunswick Community Hospital	1	0.4%	310	620
Caldwell Memorial Hospital, Inc.	1	0.4%	310	620
Cape Fear Valley Medical Center	4	2.5%	1,950	3,900
Carolinas Medical Center - Mercy	3	1.7%	1,330	2,660
Carolinas Medical Center - University Hospital	3	1.7%	1,330	2,660
Carolinas Medical Center (flagship hospital)	4	2.5%	1,950	3,900
Carteret General Hospital	1	0.4%	310	620
Catawba Valley Medical Center	2	1.0%	780	1,560
Central Carolina Hospital	2	1.0%	780	1,560
Charles A. Cannon, Jr. Memorial Hospital, Inc.	1	0.4%	310	620
Chatham Hospital	1	0.4%	310	620
Chowan Hospital	1	0.4%	310	620
Cleveland Regional Medical Center	3	1.7%	1,330	2,660
Columbus County Hospital	1	0.4%	310	620
Craven Regional Medical Center	3	1.7%	1,330	2,660
Davie County Hospital	1	0.4%	310	620
Davis Regional Medical Center	1	0.4%	310	620
Duke Health Raleigh Hospital	1	0.4%	310	620
Duke University Hospital	3	1.7%	1,330	2,660
Duplin General Hospital	1	0.4%	310	620
Durham Regional Hospital	3	1.7%	1,330	2,660

ED Name/Location	H value (assigned based on annual ED visits, 2004) *	% of Vaccine apportioned to all hospitals (~52% total vaccine) that is apportioned to this hospital **	Total doses to this hospital/month if 150,000 doses/month given to state, 78,000 doses/month to all hospitals	Total doses to this hospital/month if 300,000 doses/month given to the state, 156,000 doses/month to all hospitals
FirstHealth Montgomery Memorial Hospital	1	0.4%	310	620
FirstHealth Moore Reg.Hosp.	3	1.7%	1,330	2,660
FirstHealth Richmond Memorial Hospital	1	0.4%	310	620
Forsyth Medical Center	4	2.5%	1,950	3,900
Franklin Regional Medical Center	1	0.4%	310	620
Frye Regional Medical Center	1	0.4%	310	620
Gaston Memorial Hospital	4	2.5%	1,950	3,900
Grace Hospital, Inc.	2	1.0%	780	1,560
Granville Medical Center	1	0.4%	310	620
Halifax Regional Medical Center	2	1.0%	780	1,560
Harris Regional Hospital, Inc.	1	0.4%	310	620
Haywood Regional Medical Center	1	0.4%	310	620
Heritage Hospital	1	0.4%	310	620
High Point Regional Health Systems	3	1.7%	1,330	2,660
Highlands-Cashiers Hospital	1	0.4%	310	620
Hoots Memorial Hospital	1	0.4%	310	620
Hugh Chatham Memorial Hospital	1	0.4%	310	620
Iredell Memorial Hospital, Inc.	2	1.0%	780	1,560
J. Arthur Doshier Memorial Hospital	1	0.4%	310	620
Johnston Memorial Hospital	2	1.0%	780	1,560
Kings Mountain Hospital	1	0.4%	310	620
Lake Norman Regional Medical Center	1	0.4%	310	620
Lenoir Memorial Hospital, Inc.	2	1.0%	780	1,560
Lexington Memorial Hospital	2	1.0%	780	1,560
Lincoln Medical Center	2	1.0%	780	1,560
Margaret R. Pardee Memorial Hospital	1	0.4%	310	620
Maria Parham Medical Center	2	1.0%	780	1,560
Martin General Hospital	1	0.4%	310	620
Mission Hospitals, Inc.	4	2.5%	1,950	3,900
Morehead Memorial Hospital	2	1.0%	780	1,560
Moses H. Cone Hospital	4	2.5%	1,950	3,900
Murphy Medical Center, Inc.	1	0.4%	310	620

ED Name/Location	H value (assigned based on annual ED visits, 2004) *	% of Vaccine apportioned to all hospitals (~52% total vaccine) that is apportioned to this hospital **	Total doses to this hospital/month if 150,000 doses/month given to state, 78,000 doses/month to all hospitals	Total doses to this hospital/month if 300,000 doses/month given to the state, 156,000 doses/month to all hospitals
Nash General Hospital	3	1.7%	1,330	2,660
New Hanover Regional Medical Center	4	2.5%	1,950	3,900
North Carolina Baptist Hospital	4	2.5%	1,950	3,900
NorthEast Medical Center	3	1.7%	1,330	2,660
Northern Hospital of Surry County	2	1.0%	780	1,560
Onslow Memorial Hospital	2	1.0%	780	1,560
Our Community Hospital	1	0.4%	310	620
Park Ridge Hospital	1	0.4%	310	620
Pender Memorial Hospital	1	0.4%	310	620
Person Memorial Hospital	1	0.4%	310	620
Pitt County Memorial Hospital	4	2.5%	1,950	3,900
Presbyterian Hospital	3	1.7%	1,330	2,660
Presbyterian Hospital Matthews	2	1.0%	780	1,560
Pungo District Hospital Corporation	1	0.4%	310	620
Randolph Hospital	2	1.0%	780	1,560
Rex Hospital	2	1.0%	780	1,560
Roanoke - Chowan Hospital	1	0.4%	310	620
Rowan Regional Medical Center	3	1.7%	1,330	2,660
Rutherford Hospital	2	1.0%	780	1,560
Sampson Regional Medical Center	2	1.0%	780	1,560
Sandhills Regional Medical Center	1	0.4%	310	620
Scotland Memorial Hospital	1	0.4%	310	620
Southeastern Regional Medical Center	3	1.7%	1,330	2,660
Spruce Pine Community Hospital	1	0.4%	310	620
St. Luke's Hospital	1	0.4%	310	620
Stanly Memorial Hospital	2	1.0%	780	1,560
Stokes-Reynolds Memorial Hospital	1	0.4%	310	620
Swain County Hospital	1	0.4%	310	620
The McDowell Hospital	1	0.4%	310	620
The Outer Banks Hospital	1	0.4%	310	620

ED Name/Location	H value (assigned based on annual ED visits, 2004) *	% of Vaccine apportioned to all hospitals (~52% total vaccine) that is apportioned to this hospital **	Total doses to this hospital/month if 150,000 doses/month given to state, 78,000 doses/month to all hospitals	Total doses to this hospital/month if 300,000 doses/month given to the state, 156,000 doses/month to all hospitals
Thomasville Medical Center	1	0.4%	310	620
Transylvania Community Hospital, Inc.	1	0.4%	310	620
Union Regional Medical Center	2	1.0%	780	1,560
University of North Carolina Hospitals	3	1.7%	1,330	2,660
Valdese General Hospital	1	0.4%	310	620
WakeMed	4	2.5%	1,950	3,900
WakeMed Cary Hospital (formerly Western Wake)	2	1.0%	780	1,560
WakeMed North Healthplex	1	0.4%	310	620
Washington County Hospital, Inc.	1	0.4%	310	620
Watauga Medical Center, Inc.	1	0.4%	310	620
Wayne Memorial Hospital , Inc.	2	1.0%	780	1,560
Wilkes Regional Medical Center	1	0.4%	310	620
Wilson Medical Center	2	1.0%	780	1,560

* “H value” is determined by the size of the hospital using the reported Emergency Department visits (2004) as a proxy for size. . Each hospital is assigned an integer (1, 2, 3 or 4). The total number of ED visits for all hospitals with the same integer (1, 2, 3 or 4) is 25% of the total ED visits reported for 2004.

** As the pandemic evolves this per cent may be adjusted based on the level of already vaccinated individuals, the need for vaccination and the availability of vaccine among other variables.

Appendix C:

Vaccine Apportionment to Counties

County	C value*	% of Vaccine apportioned to all counties (approximately 30% of the total vaccine) that is apportioned to this county **	Total doses to this county/month if 150,000 doses/month given to state, 45,000 doses/month to all counties	Total doses to this county/month if 300,000 doses/month given to the state, 90,000 doses/month to all counties
ALEXANDER	1	0.4%	180	360
ALLEGHANY	1	0.4%	180	360
ANSON	1	0.4%	180	360
ASHE	1	0.4%	180	360
AVERY	1	0.4%	180	360
BEAUFORT	1	0.4%	180	360
BERTIE	1	0.4%	180	360
BLADEN	1	0.4%	180	360
CAMDEN	1	0.4%	180	360
CARTERET	1	0.4%	180	360
CASWELL	1	0.4%	180	360
CHATHAM	1	0.4%	180	360
CHEROKEE	1	0.4%	180	360
CHOWAN	1	0.4%	180	360
CLAY	1	0.4%	180	360
COLUMBUS	1	0.4%	180	360
CURRITUCK	1	0.4%	180	360
DARE	1	0.4%	180	360
DAVIE	1	0.4%	180	360
DUPLIN	1	0.4%	180	360
EDGECOMBE	1	0.4%	180	360
FRANKLIN	1	0.4%	180	360
GATES	1	0.4%	180	360
GRAHAM	1	0.4%	180	360
GRANVILLE	1	0.4%	180	360
GREENE	1	0.4%	180	360
HALIFAX	1	0.4%	180	360
HAYWOOD	1	0.4%	180	360
HERTFORD	1	0.4%	180	360
HOKE	1	0.4%	180	360
HYDE	1	0.4%	180	360
JACKSON	1	0.4%	180	360

County	C value*	% of Vaccine apportioned to all counties (approximately 30% of the total vaccine) that is apportioned to this county **	Total doses to this county/month if 150,000 doses/month given to state, 45,000 doses/month to all counties	Total doses to this county/month if 300,000 doses/month given to the state, 90,000 doses/month to all counties
JONES	1	0.4%	180	360
LEE	1	0.4%	180	360
LENOIR	1	0.4%	180	360
MACON	1	0.4%	180	360
MADISON	1	0.4%	180	360
MARTIN	1	0.4%	180	360
MCDOWELL	1	0.4%	180	360
MITCHELL	1	0.4%	180	360
MONTGOMERY	1	0.4%	180	360
NORTHAMPTON	1	0.4%	180	360
PAMLICO	1	0.4%	180	360
PASQUOTANK	1	0.4%	180	360
PENDER	1	0.4%	180	360
PERQUIMANS	1	0.4%	180	360
PERSON	1	0.4%	180	360
POLK	1	0.4%	180	360
RICHMOND	1	0.4%	180	360
RUTHERFORD	1	0.4%	180	360
SAMPSON	1	0.4%	180	360
SCOTLAND	1	0.4%	180	360
STANLY	1	0.4%	180	360
STOKES	1	0.4%	180	360
SWAIN	1	0.4%	180	360
TRANSYLVANIA	1	0.4%	180	360
TYRRELL	1	0.4%	180	360
VANCE	1	0.4%	180	360
WARREN	1	0.4%	180	360
WASHINGTON	1	0.4%	180	360
WATAUGA	1	0.4%	180	360
WILKES	1	0.4%	180	360
YADKIN	1	0.4%	180	360
YANCEY	1	0.4%	180	360
LINCOLN	1	0.4%	180	360

County	C value*	% of Vaccine apportioned to all counties (approximately 30% of the total vaccine) that is apportioned to this county **	Total doses to this county/month if 150,000 doses/month given to state, 45,000 doses/month to all counties	Total doses to this county/month if 300,000 doses/month given to the state, 90,000 doses/month to all counties
BRUNSWICK	2	1.2%	550	1,100
BURKE	2	1.2%	550	1,100
CALDWELL	2	1.2%	550	1,100
CLEVELAND	2	1.2%	550	1,100
CRAVEN	2	1.2%	550	1,100
HARNETT	2	1.2%	550	1,100
HENDERSON	2	1.2%	550	1,100
IREDELL	2	1.2%	550	1,100
MOORE	2	1.2%	550	1,100
NASH	2	1.2%	550	1,100
ORANGE	2	1.2%	550	1,100
RANDOLPH	2	1.2%	550	1,100
ROBESON	2	1.2%	550	1,100
ROCKINGHAM	2	1.2%	550	1,100
ROWAN	2	1.2%	550	1,100
SURRY	2	1.2%	550	1,100
WAYNE	2	1.2%	550	1,100
WILSON	2	1.2%	550	1,100
ALAMANCE	2	1.2%	550	1,100
PITT	2	1.2%	550	1,100
BUNCOMBE	3	2.3%	1,040	2,080
CABARRUS	3	2.3%	1,040	2,080
CATAWBA	3	2.3%	1,040	2,080
DAVIDSON	3	2.3%	1,040	2,080
GASTON	3	2.3%	1,040	2,080
JOHNSTON	3	2.3%	1,040	2,080
NEW HANOVER	3	2.3%	1,040	2,080
ONslow	3	2.3%	1,040	2,080
UNION	3	2.3%	1,040	2,080

County	C value*	% of Vaccine apportioned to all counties (approximately 30% of the total vaccine) that is apportioned to this county **	Total doses to this county/month if 150,000 doses/month given to state, 45,000 doses/month to all counties	Total doses to this county/month if 300,000 doses/month given to the state, 90,000 doses/month to all counties
CUMBERLAND	3	2.3%	1,040	2,080
DURHAM	3	2.3%	1,040	2,080
FORSYTH	4	6.0%	2,700	5,400
GUILFORD	4	6.0%	2,700	5,400
MECKLENBURG	4	6.0%	2,700	5,400
WAKE	4	6.0%	2,700	5,400

* “C value” is determined by county population data, 2004. Each county is assigned an integer (1, 2, 3 or 4). The total population for all counties with the same integer (1, 2, 3 or 4) is 25% of the total population of the state.

** As the pandemic evolves this per cent may be adjusted based on the level of already vaccinated individuals, the need for vaccination and the availability of vaccine among other variables.