Communicable Disease Surveillance
~ Part of CD Law Seminar ~

Jean-Marie Maillard
GCDC Branch
Epidemiology Section

Asheville, 7/27/2005
Communicable Disease Laws

- Most, but not all, communicable disease statutes are in Article 6 of Chapter 130A of the NC General Statutes (citation: e.g., GS 130A-135)

- Communicable disease control rules are in Title 10A, chapter 41A of the North Carolina Administrative Code (citation: e.g., 10A NCAC 41A .0101)
Reporting of Communicable Diseases

- Expect changes
  - From paper (cards and forms) between MDs, LHDs, and state
  - To electronic system between LHDs and state ("NC-EDSS")
  - Alerting and communication (NC-EDSS, HAN)

- 10A NCAC 41A .0101 - contains list of reportable diseases, conditions, and positive lab. tests
  - Note foodborne diseases
  - 24-hour vs. 7-day reporting requirements
  - CD report card
Reportable Diseases and Conditions

- List is modified as needed
- Perceived public health importance
  - High potential for spread
  - Serious and/or severe illnesses
- Effective control measures available
- Special interest/study
Who Reports?

- Physicians (GS 130A-135)
- School principals & Day Care Center operators (GS 130A-136)
- Medical facilities *may* report (GS 130A-137)
Who Reports? (continued)

Operators of restaurants & other food or drink establishments must report foodborne disease (GS 130A-138):

– Outbreak or suspected outbreak in customers or employees
– Infected food handler
– Must call LHD within 24 hours
– Not required to send CD report card
Who Reports? (continued)

**Laboratories:**
- List of reportable positive tests expanded considerably in 1998
- Report direct to DPH rather than LHD (results other than STD)
- May report electronically (and not using CD report card)
How to report (for physicians)

- Telephone report – followed by card report within 7 days – for diseases reportable immediately (Bioterrorism potential) or within 24 hours
- Report card (NC DHHS 2124), along with disease specific surveillance form when required

Method of reporting described in 10A NCAC 41A
### Disease Specific Surveillance Form

**Viral Hepatitis Case Report**

**For Reporting of Patients with Symptomatic Acute Viral Hepatitis**

*(See case definition on reverse)*

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**

**PUBLIC HEALTH SERVICE**

**Centers for Disease Control**

**ATLANTA, GEORGIA 30333**

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<table>
<thead>
<tr>
<th><strong>STATE GEOGRAPHIC CODE</strong></th>
<th><strong>CDC CASE NO.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="State Geographic Code" /></td>
<td><img src="image" alt="CDC Case No." /></td>
</tr>
</tbody>
</table>

---

**PATIENT'S LAST NAME (please print clearly) (12-26)**

**FIRST AND MIDDLE NAME (if initial)**

**OCCUPATION**

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**STREET ADDRESS**

**TOWN OR CITY**

**STATE (2z Code)**

**COUNTY (27-36)**

**COUNTY FIPS CODE (27-40)**

---

**AGE (yrs) (41-48)**

**DATE OF BIRTH (49-55)**

**SEX (48)**

**RACE (50)**

- [ ] [ ] White
- [ ] [ ] Hispanic
- [ ] [ ] Black
- [ ] [ ] American Indian or Alaskan Native
- [ ] [ ] Asian or Pacific Islander

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**CLINICAL DATA**

**LABORATORY RESULTS**

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**DO NOT REPORT CASES OF CHRONIC HEPATITIS OR CHRONIC CARRIERS**

- Hepatitis A
- Hepatitis B
- Hepatitis C
- Non-A
- Non-B
- D
- Unspecified

---

**FOR PURPOSES OF NATIONAL SURVEILLANCE, ASK ALL OF THE FOLLOWING QUESTIONS FOR EVERY CASE OF HEPATITIS. THESE QUESTIONS MAY HELP DETERMINE WHERE THE PATIENT ACQUIRED HIS/HER INFECTION. PLEASE REFER TO THE WORK SHEET ON THE BACK OF THE LAST PAGE FOR ADDITIONAL QUESTIONS.**

**During the 3-6 weeks prior to illness:**

1. **Was the patient a household contact of a child or employee in a nursery, day care center, or preschool?**
   - Yes: [ ]
   - No: [ ]

2. **Was the patient a contact of a confirmed or suspected hepatitis A case?**
   - Yes: [ ]
   - No: [ ]

3. **Was the patient a contact of a confirmed or suspected hepatitis A case?**
   - Yes: [ ]
   - No: [ ]

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**During the 2-6 months prior to illness:**

1. **Was the patient a household contact of a child or employee in a nursery, day care center, or preschool?**
   - Yes: [ ]
   - No: [ ]

2. **Was the patient a contact of a confirmed or suspected hepatitis A case?**
   - Yes: [ ]
   - No: [ ]

---

**Comments:**

**Investigator's Name:**

**Date:**

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**Form Approved**

**OMB No. 0920-0060**

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**First Copy – Local Health Department**

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**Disease Specific Surveillance Form**
Duties of LH Director, CD report

10A NCAC 41A .0103 (a) Upon receipt…
(1) immediately investigate
(2) determine control measures: needed, given, compliance
(3) forward report:
   – (C) …to the Division of Public Health within 7 days
   – (D) Forward to other LHD within 24 hours for person residing in another jurisdiction (and send copy to DPH)
   – (E) Forward to DPH within 24 hours for persons residing outside of NC
Flow of Surveillance Information

- **Physician**
  - (Phone; mail)
  - Local Health Department
    - (Phone; mail)
  - State Health Department
    - (Electronic)
  - National Surveillance (CDC)

- **Laboratory result**
  - (Mail, fax or electronic)
  - State Health Department
    - (Mail, phone, electronic)
  - Local Health Department
    - (have physician generate report if case definition criteria are met)
NC Communicable Disease Surveillance
- Current System -

- MD
- LHD (Local)
  - Daily Mail
  - Lab

- GCDC (State)
  - Weekly Electronic Transmission
  - Lab

- CDC (National)
NC Electronic Disease Surveillance
- New System -
Functional Requirements of NC-EDSS
Epidemiologic Surveillance - Analysis

**Time:**
- Trend (e.g., are we making progress, where are the needs); Seasonality
- Background, expected vs. observed: excess?

**Place:** clustering?
- Listeriosis in W-S, 1999
- Hepatitis A: Chapel Hill Winter 98, Meklenburg 2001

**Person:** Risk factors?
- Rubella in NC Hispanic population in late 90’s
- Hepatitis A in MSM, NC 2001-2002
Interpretation

Taking into account:

– Population changes
– Changes in reporting procedure
– Changes in personnel
– Scientific progress: diagnostic techniques, control measures
– … or real change in disease pattern?
Cases of *H. influenza* invasive disease reported in NC, 1987 - 1999
Cases reported up to 16 MAR 96.
FIGURE 1. Expected and observed number of tuberculosis cases — United States, 1980–1992

Cases (Log Scale)

50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0

Year


○ Observed Cases

— Expected Cases

51,700 Excess Cases
Rubella - NC 1987-2003

N=301. Hispanic cases: 80% aged 17-29 years old
Measles – NC 1987-2003

- A vaccine Preventable Disease
- A childhood disease
- Background rate: ~ 0
- 1989 outbreak:
  - Atypical age:
    - 19% aged < 10 y.o.
    - 76% aged 10-24 y.o.
- Use: Policy changes

N=318 Reported Cases - NC 1987-2003
Hepatitis A

- Person-to-person
- Foodborne
- Gender distribution: Male > Female (60%-40%)
- Age/Gender distribution: Young Males, 20-39 y.o.
- Raises the question: STD in MSM
Example of population change

Tuberculosis Cases in US-born vs. Foreign-born Persons
United States, 1992-2000

No. of Cases

<table>
<thead>
<tr>
<th>Year</th>
<th>US-born</th>
<th>Foreign-born</th>
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<tbody>
<tr>
<td>1992</td>
<td>20000</td>
<td>7000</td>
</tr>
<tr>
<td>1993</td>
<td>17000</td>
<td>6000</td>
</tr>
<tr>
<td>1994</td>
<td>14000</td>
<td>5000</td>
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<td>1995</td>
<td>12000</td>
<td>4000</td>
</tr>
<tr>
<td>1996</td>
<td>10000</td>
<td>3000</td>
</tr>
<tr>
<td>1997</td>
<td>8000</td>
<td>2000</td>
</tr>
<tr>
<td>1998</td>
<td>6000</td>
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<td>1999</td>
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</tr>
<tr>
<td>2000</td>
<td>4000</td>
<td>0</td>
</tr>
</tbody>
</table>
Remember....

A disease does NOT have to be reportable to be investigable!

10A NCAC 41A(c)
Whenever an outbreak of a disease... which is not required to be reported... but which represents a significant threat to the public health, the local health director shall give the appropriate control measures....
Confidentiality

- In general, records that identify a patient specifically are not public records and are to be treated confidentially.

- Surveillance data: at what level may a specific case become identifiable?
Confidentiality (continued)

Exceptions:

– When necessary for control of a disease representing a significant public health hazard [GS 130A-143(4) and rule .0211]

– When information is collected by a person other than a physician or nurse, it may not be protectable

– Others as specified in GS 130A-143
Traditional vs. Indicator Surveillance in Outbreak Detection

Syndromic/Electronic Surveillance vs. Traditional Disease Detection

- **Surveillance**
  - Probability of Disease Detection
  - Probability scales from 0 to 1

- **Incubation Period (Hours)**
  - 0 to 168 hours

- **Effective Treatment Period**
  - Gain of 2 days

- **Time**
  - Military & Civilian Fatalities With Traditional Alerting
  - Fatalities With Early Warning

Source: Johns Hopkins University / DoD Global Emerging Infections System
2003 NC Arboviral Surveillance
EEE Activity by County

Total Cases:
- Vet - Equine: 113 in 45 counties
- Vet - Non-equine: 7 in 2 counties
- Mosquito Pools: 9 in 5 counties
- Sentinel Chickens: 42 in 11 counties
- Humans: 1 in 1 county

Placement within each county is not geographically accurate within that county.

Data: NC DENR - PHPM, SLPH, Dept. of Ag
Maps: Marcene Toller, PHPM
As of 11-10-03
Emergency Department Visits after Hurricane Isabel, NC 9/18/2003

N=11,707
12-day series available from 13 hospitals
Injuries

Hurricane Isabel

- Cut
- Fracture
- Sprain
- Brain
- Foreign B
- Burn
- Back Pain
The new web of disease surveillance

NC PHIN

NC NEDSS

Syndromic Surveillance / NC BEIPS

Other systems (HAN, Immunization Registry, etc.)

PHRST

Local HD

Lab Results

Reported cases

Physician

Hospital ED

Hospital

Hosp.-based PH epidemiologists

Other

Other systems

Poison Center

EMS/PreMIS

Other systems

Other

Public Health

Information flow

Data source
Attributes of a Surveillance System

- Timely
- Useful
- Representative
- Acceptable
- Affordable
- “Simple”
## Traditional vs. Enhanced Surveillance

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Traditional Passive</th>
<th>Enhanced Surveillance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timely</td>
<td>Somehow</td>
<td>Yes, automation</td>
</tr>
<tr>
<td>Useful</td>
<td>Yes – but limitations (sensitivity, timeliness)</td>
<td>Better sensitivity; Thresholds; Timeliness</td>
</tr>
<tr>
<td>Representative</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Acceptable</td>
<td>Essential for cases to be reported</td>
<td>Agreements with reporting sources, unless mandatory</td>
</tr>
<tr>
<td>Affordable</td>
<td>Low cost</td>
<td>Set up expensive</td>
</tr>
<tr>
<td>“Simple”</td>
<td>Yes</td>
<td>No, but can be “user friendly”</td>
</tr>
</tbody>
</table>
Hospital E.D. Surveillance

- GS 130A-480 and rule .0105
- NCHA contracted for hospitals to provide ED surveillance data, to allow syndromic surveillance
  - Also supported passage of legislation for mandatory reporting of de-identified data
  - Help small hospitals with grants to implement EMRs
- DPH contracting with UNC-NCEDD project to build and deploy this complex system
<table>
<thead>
<tr>
<th>Hospital Name</th>
<th>Annual ED Patient Volume</th>
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<tbody>
<tr>
<td>Pitt County Memorial</td>
<td>56,000</td>
</tr>
<tr>
<td>New Hanover Regional</td>
<td>71,000</td>
</tr>
<tr>
<td>Cape Fear Valley</td>
<td>91,000</td>
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<tr>
<td>Wake Med</td>
<td>119,000</td>
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<tr>
<td>Duke</td>
<td>56,000</td>
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<tr>
<td>UNC</td>
<td>57,000</td>
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<tr>
<td>Moses Cone</td>
<td>102,000</td>
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<tr>
<td>WFU-Baptist</td>
<td>57,000</td>
</tr>
<tr>
<td>Mission Hospitals</td>
<td>80,000</td>
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<tr>
<td>Carolina’s Medical Center</td>
<td>110,000</td>
</tr>
<tr>
<td>VAMC</td>
<td>NA</td>
</tr>
</tbody>
</table>

*Source: NC DHHS, Div. Facilities Services*
Hospital Selection for PH Epis

- Geopolitical Considerations
- Region
- ED Volume and Bed Size
- Hospital System or Network
- 11 Hospitals ≈ 60% of NC Acute Care
- 12th position: coordinator at NC SPICE
PHE’s Role

- Vital link between Public Health and clinical medicine
  - Active surveillance
  - Investigation
  - Education and outreach
Active Surveillance

Category A Agents
- laboratory-based
- weekly negative reporting

Syndromes
- Influenza-like Illness
- GI syndrome
- Neurological syndrome
- Rash + Fever
Hospital-based Public Health Epidemiologists

- Community-Acquired Infection
  - Outbreaks
  - Cases of special public health interest
  - Biological and chemical terrorism
Investigation

- Coordinate with Public Health
  - Local Health Department
  - PHRSTs
  - NC DPH GCDC Branch

- Outbreaks
  - Norovirus in a hospital ward

- Special interest cases
  - Influenza-associated pediatric encephalopathy
North Carolina Bioterrorism and Emerging Infection Prevention System

NC STATE UNIVERSITY
COLLEGE OF VETERINARY MEDICINE LABORATORY

Division of Public Health

Private Laboratories

Carolina Poison Center

Animal Disease Diagnostic Laboratory System

BioSense

North Carolina Office of the Chief Medical Examiner

NCEDD
North Carolina Emergency Department Database

North Carolina EMS Preventive Medicine Information System (PreMIS)
<table>
<thead>
<tr>
<th>County</th>
<th>Total Cases</th>
<th>C1 Flag</th>
<th>C2 Flag</th>
<th>C3 Flag</th>
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<tbody>
<tr>
<td>DURHAM</td>
<td>9</td>
<td>X</td>
<td>X</td>
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### Table

<table>
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<tr>
<th>County</th>
<th>Total Cases</th>
<th>C1 Flag</th>
<th>C2 Flag</th>
<th>C3 Flag</th>
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<tbody>
<tr>
<td>COLUMBUS</td>
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<td>1</td>
<td>0</td>
<td>2</td>
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<td>CRAVEN</td>
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<td>CUMBERLAND</td>
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<td>CURRITUCK</td>
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<td>DARE</td>
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<td>0</td>
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<td>30</td>
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<td>HALEFAX</td>
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<td>2</td>
</tr>
<tr>
<td>HARTRETT</td>
<td>0</td>
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</table>
Communicable Disease Investigation

Jean-Marie Maillard
General Communicable Disease Control Branch
Epidemiology Section
Investigation as required by Laws and Rules

- GS 130A-144(a) The local Health director shall investigate, as required by the Commission, cases of communicable diseases and communicable conditions reported to the local health director…

- 10A NCAC 41A .103 Duties of Local Health Director: (a) Upon receipt of a report… (1) immediately investigate…
“Traditional” surveillance: lacks sensitivity and provides delayed information
Contacts and social network of SARS index and special interest cases, NC 2003

EMS and other health care workers are among the first to benefit from better detection of communicable diseases.

Notes:
1. Acute respiratory distress syndrome
2. Community acquired pneumonia
3. Healthcare workers
A disease does NOT have to be reportable to be investigable!

10A NCAC 41A .0103(c)
Whenever an outbreak of a disease... which is not required to be reported... but which represents a significant threat to the public health, the local health director shall give the appropriate control measures...
Reasons for Investigating an Outbreak

- Identify and eliminate source of infection
- Define the required control measures
- Develop strategies to prevent future outbreaks
- Describe new diseases and learn more about known diseases
- Evaluate existing prevention strategies
- Address public concern about the outbreak
Outbreak investigation: a collaborative enterprise

Epidemiology

Laboratory

Environmental Health
Collaborative approach

- Local public health professionals, clinicians
- Epidemiologist(s) and disease experts at the local, regional, state, national level
- Laboratory technicians
- Environmental health specialists; Industrial hygienist
- Industry: restaurant, food supply, recreation others as needed
- Public information officer
- Law enforcement officers
Steps of an investigation

1. Confirm diagnosis
2. Confirm outbreak (linked cases, excess/expected)
3. Convene epidemic team
4. Plan investigation: epidemio, lab, environmental
5. Case definition
6. Collect data, *standardized questionnaire*
7. Analyze data (time, place, person)
8. Control measures (curative, prophylactic, preventive)
9. Increase surveillance and reporting
10. Write report
Outbreaks – Public Health Emergencies

- Public Health Command Center
  Office of PH Preparedness and Response,
  PH Regional Surveillance Teams

- Bioterrorism, e.g., anthrax, 2001

- Natural events
  - Infectious: SARS, Influenza, Monkeypox
  - Weather related: hurricane, flood, ice storm
Phases of the NC Public Health Preparedness and Response Plan

- **Phase I**  Baseline
- **Phase II**  Heightened Threat
- **Phase III**  Post-event, limited outbreak
- **Phase IV**  Post-event, large outbreak
- **Phase V**  Recovery
Components of the NC Public Health Public Health Preparedness and Response Plan

- Surveillance
- Disease investigation
- Vaccination/prophylaxis
- Quarantine and isolation
- Mass care
- Mass fatality
- Public information
- Command/Control/Communications
## Planning Matrix for NC Public Health Preparedness & Response Plan

<table>
<thead>
<tr>
<th></th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>V</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SURVEILLANCE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>CONTINUES UNTIL &gt;1 INCUBATION PERIOD</td>
</tr>
<tr>
<td><strong>DISEASE</strong></td>
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<td><strong>INVESTIGATION</strong></td>
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<td><strong>VACCINATION</strong></td>
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<tr>
<td><strong>/ PROPHYLAXIS</strong></td>
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<td></td>
<td>POSSIBLE CHANGE TO VAX POLICY</td>
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<tr>
<td><strong>QUARANTINE</strong></td>
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<tr>
<td><strong>/ ISOLATION</strong></td>
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<td></td>
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</tbody>
</table>

**I BASELINE**

**II HEIGHTENED THREAT**

**III POST EVENT LIMITED OUTBREAK**

**IV POST EVENT LARGE OUTBREAK**

**V RECOVERY**

- **SURVEILLANCE**
  - ONGOING – PASSIVE
  - ACTIVE – SHD ORDERS INCREASED REPORTING
  - ACTIVE – TRACKING & REPORTING
  - ACTIVE – EXTENSIVE TRACKING & REPORTING
  - CONTINUES UNTIL > 1 INCUBATION PERIOD

- **DISEASE INVESTIGATION**
  - PLAN, TRAIN AND EDUCATE
  - ACTIVE CASE FINDING
  - CASE INTERVIEW/ LAB STUDIES/ SITE INVEST.
  - CASE TRACKING
  - CONTINUES UNTIL >1 INCUBATION PERIOD W/O CASE

- **VACCINATION/ PROPHYLAXIS**
  - PRE-EVENT STAGES 1 & 2
  - INCREASED PRE-EVENT (STAGE 3?)
  - VAX/PROPHY OF CONTACTS (SNS?)
  - MASS VAX/ PROPHY (SNS)
  - POSSIBLE CHANGE TO VAX POLICY

- **QUARANTINE/ ISOLATION**
  - PLAN, TRAIN AND EDUCATE
  - IDENTIFY & NOTIFY C,X,R FACILITIES
  - QUARANTINE/ ISOLATION OF CASES/SUSPECT AREAS
  - LTD. QUAR. MASS ISOLATION OF CASES/ AREAS
  - QUARANTINE LIMITED TO RESOLVING CASES
# Planning Matrix for NC Public Health Preparedness & Response Plan

<table>
<thead>
<tr>
<th></th>
<th>I. BASELINE</th>
<th>II. HEIGHTENED THREAT</th>
<th>III. EVENT LIMITED OUTBREAK</th>
<th>IV. EVENT LARGE OUTBREAK</th>
<th>V. RECOVERY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MASS CARE</strong></td>
<td>PLAN, TRAIN AND EDUCATE</td>
<td>HOSPITALS ON ALERT - REVIEW EMER PLAN/STATUS</td>
<td>IMPACTED HOSPITALS EMER. STATUS(SNS?)</td>
<td>HOSPITALS EMER STATUS SERT /EMAC/ FED (SNS)</td>
<td>CONTINUES UNTIL PATIENT LOAD NORMALIZES</td>
</tr>
<tr>
<td><strong>MASS FATALITY</strong></td>
<td>PLAN, TRAIN AND EDUCATE</td>
<td>ALERT NCEM, STATE DMORT OFF. MEDICAL EXAMINER</td>
<td>ACTIVATE STATE DMORT MED. EXAMR M.F. PLAN</td>
<td>ACTIVATE STATE &amp; FED DMORT; EMAC ASSISTANCE</td>
<td>STAND DOWN AS FATALITIES RETURN TO NORMAL LVLS</td>
</tr>
<tr>
<td><strong>PUBLIC INFORMATION</strong></td>
<td>PLAN, TRAIN AND EDUCATE</td>
<td>ACTIVE RISK COMMUNICATION – COORDINATE WITH DHHS, PHP&amp;R SERT</td>
<td>ACTIVATED: SERT JIC; EVENT REPORTING; COORDINATE WITH FBI/SBI</td>
<td>ACTIVATED: SERT JIC; EVENT REPORTING; COORDINATE WITH FBI/SBI</td>
<td>CONTINUES THRU &gt; 1 INCUBATION PERIOD W/O CASE</td>
</tr>
</tbody>
</table>
Web-based Outbreak Questionnaire

Background

– Statewide Triple Play exercise, October 2003
– Pneumonic plague outbreak
– Following exposure at animal show that attracted statewide attendance
– Multi-county outbreak; highly contagious disease
– Lack of method to capture case data in adequate manner, when faced with large outbreak or rapid increase of cases, scattered over wide area
Utilize Internet to collect information

- To provide standardized questionnaire
- To make it rapidly available where needed
- To securely collect information on reported cases
- To pull case data in single database
- To allow rapid analysis of all available data
Solution (2)

- **Need:** Survey builder
- **Users with Administrator rights can build outbreak questionnaire and analyze data**
- **Users with Reporter rights may report cases**
- **Secure access based on assigned user name and password to access Web site**

- **PHCC briefing use:** canned report for “snapshot” of main characteristics of cases:
  e.g., number of cases, County of residence, age, sex
Prepare standardized questionnaire

- Done by administrative users: epidemiologists at local, regional or state level (incl. PHRST, PHE, others)
- Make new outbreak investigation
- Choose questionnaire from existing templates with needed adaptation, or build new one
- Pre-existing “blocks” of questions allow rapid design; these can be customized as needed
# Template Selection

**Instructions:**
- To search for a template enter your criteria below and press the Search Existing Templates button.
- To create a new template press the Create New Template button.
- To view an existing template click on the View link.
- To copy an existing template click on the Copy link.
- To edit an existing template click on the Edit link.

![Image of template selection page](https://www.nchp.phinc.org/Outbreak/)

## Search Templates

<table>
<thead>
<tr>
<th>Template Name</th>
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<td>2005-06-17 16:11:12</td>
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</tr>
</tbody>
</table>

**Revision:** 1.0.0.25
## ANTHRAX CASE INVESTIGATION FORM

**Interviewer Information**

- **Name:**
- **Phone Number:**
- **Email Address:**
- **Date of Interview:**
- **Agency/Group:**

**Demographic Information**

- **Patient's Last Name:** (write "unknown" if unknown name)
- **Patient's First Name:**
- **Patient's Middle/Maiden Name:**
- **Age in Years:** (Enter Zero if less than 1 Year Old)
- **Sex:**
  - Male
  - Female
  - Unknown
- **Race:**
  - White
  - American Indian or Alaska Native
  - Asian or Pacific Islander
  - Other
  - Unknown
- **Ethnicity:**
  - Hispanic
  - Non-Hispanic
- **Address Street:**
- **Address City:**
- **Address State:**
- **Address Zip Code:**
- **Address County:**
- **Phone Number:**
- **GPS LAT:**
- **GPS LONG:**
Halifax Anthrax Test Questionnaire

Interviewer Information

* Name: 
Phone Number: (xxx-xxx-xxxx)
Email Address: (name@somewhere.com)
* Date of Interview: (mm/dd/yyyy)
Agency/Group: 
* SSN#: (xxx-xx-xxxx)

Demographic Information

* Patient's Last Name (write "unknown" if unknown name): 
Patient's First Name: 
Patient's Middle/Maiden Name: 
* Age in Years (Enter Zero if Less than 1 Year Old): 
* Sex: 
  - Male 
  - Female 
  - Unknown
* Race: 
  - White 
  - American Indian or Alaska Native 
  - Black 
  - Asian or Pacific Islander 
  - Other 
  - Unknown
* Ethnic Origin: 
  - Hispanic 
  - Non-Hispanic
Address Street: 
Address City: 
Address State: 
Address ZIP Code: 
Address County: 

Save  Cancel
### RAPID REGISTRY FORM - OVERT EVENT

Prompts marked with * are required within that section.

| **CASE ID**: |  |
| **Date**: | (mm/dd/yyyy) |
| **Time**: | (hh:mm) |
| **Event #**: |  |

**DHRST MEMBER:**

|  |
|  |

**NON-DHRST:**

Verbal consent to be read to the respondent: "Hello, my name is [ ] and I am from [ ]. We are collecting information from people potentially exposed to this event so we can send them information about their exposure and any public health services available to them. This brief survey will take approximately 10 minutes but may be followed up in the future with a more thorough interview/assessment to help ensure your health and safety. You may choose not to answer any question you wish and you are free to refuse participation in this study at any time. All the information you provide will be kept strictly confidential within the limits of the law."

| **Name**: |  |
| **Age**: |  |
| **SEX**: | Male  Female  Unknown |
| **Interview Site**: |  |
| **GPS Lat**: |  |
| **GPS Long**: |  |
| **Contact Information Address**: |  |
| **Phone Number**: | (xxx-xxxx-xxxx) |
| **Contact Phone Number**: | (xxx-xxxx-xxxx) |

### Questionnaire:

1. Since the event [3], have you become sick [1] or experienced any changes/new symptoms? (If no, skip to #11):
   - Yes  No  DK

   If Yes, specifically when did you become sick/ill?

2. On your skin, have you noticed any:
   - Redness  Swelling  Infection  Blistering  Blisters  None

3. Have you noticed any eye problems such as:
   - Blurred Vision  Decreased Vision  Tearing  Irritation  Pain  None

4. Since [3], have you had:
   - Cough  Throat Irritation  Difficulty Breathing/Shortness of Breath
   - Pain/Deep Breath  Wheezing  Fluid in Your Lungs
   - Fast Breathing/Hyperventilation  None

5. Since [3], have you felt or experienced:
   - Stomach Pain/Cramping  Constipation  None
   - Diarrhea  Vomiting  None
   - Nausea  Blood in Stool or Vomit  None
Control Measures
~ Part of CD Law Seminar ~

Jean-Marie Maillard
GCDC Branch
Epidemiology Section
Upon receipt of a report of communicable disease… the local health director shall
(1) investigate… determine identity of persons for whom control measures are required

(2) determine what control measures have been given and ensure that proper control measures… have been given and complied with
Control Measures in 10A NCAC 41A

.0200 of 10A NCAC 41A
- General
- HIV
- Hepatitis B
- STD
- TB
- Health Care Settings
- HIV and HBV infected health care workers
- Smallpox and vaccinia
- Laboratory Testing
- Handling and transportation of bodies
- SARS

.0300 Special Control Measures (sale of turtles, sales of birds)

.0400 and .0500: Immunization and vaccines
Control Measures – General

10A NCAC 41A .0201(a)

– Except for a few diseases & conditions specifically covered in the rules, control measures are those specified in APHA publication, *Control of Communicable Diseases Manual*

– Guidelines and recommendations from the CDC supercede those contained in the *Control of CD Manual*
Guiding Principles

Rule 10A NCAC 41A .0201(b)

– … reasonably be expected to decrease the risk of transmission … consistent with recent scientific and public health information

– for diseases transmitted by the airborne route … physical isolation for the duration of infectivity

– … fecal oral route … exclusion from food handling, attendance or work in a day care center

– … sexual or blood-borne route … prohibit blood, organ or semen donation, needle-sharing, sexual contact
Define control measures as guided by available information

- Unknown etiology or source
  - Adapt to circumstances, e.g., close a restaurant
  - Carefully thinking of potential consequences, e.g., exclusion of sick children or closure of DCC may increase risk of spread in the community

- Diagnosed illness
  - Provide required prophylaxis with written order to close contacts or otherwise exposed persons, e.g., rifampin for meningococcal disease, IG for hepatitis A
NORTH CAROLINA PUBLIC HEALTH

SARS Isolation and Quarantine Orders

- SARS in NC, General Info
- North Carolina SARS Response Plan (1/27/04)
- SARS Info for NC Health Care Providers
- SARS News and Updates

Note: This page is intended to provide guidance and a point of reference for Local Health Departments in using SARS Isolation and Quarantine Orders.

A person known to have or suspected of having Severe Acute Respiratory Syndrome (SARS) is required to follow communicable disease control measures as recommended by the U.S. Centers for Disease Control and Prevention.

An ISOLATION ORDER should be issued pursuant to the local health director's authority in G.S. 130A-145 when a person diagnosed with SARS or suspected of having SARS is unable or unwilling to follow control measures.

A SARS ISOLATION ORDER template has been developed by the N.C. Division of Public Health for use by local health directors in the case of persons who meet the CDC case definition for SARS and are unable or unwilling to follow control measures. A 72-hour SARS ISOLATION ORDER is to be used in situations where a person who may have had exposure to SARS is symptomatic with either fever or respiratory symptoms, but does not meet the strict case definition established by the CDC. CDC currently recommends that these individuals be managed either medically or on a 72-hour basis and monitored in a medical setting. Use this order if the person is unable or unwilling to follow control measures.

A person who has had significant exposure to a person known or suspected of having Severe Acute Respiratory Syndrome (SARS) is also required to follow communicable disease control measures as recommended by the U.S. Centers for Disease Control and Prevention. A SARS QUARANTINE ORDER should be issued pursuant to the local health director's authority in G.S. 130A-145 when a person who has been exposed to a patient under investigation for SARS or to a person who has been diagnosed with SARS is unable or unwilling to follow control measures.

If an individual subject to a SARS ISOLATION ORDER or SARS QUARANTINE ORDER is non-compliant, local law enforcement officers should be called on for assistance, G.S. 15A-449 (1)(b)(4), which was added by NC bioterrorism legislation, authorizes a law enforcement officer to detain an individual arrested for violation of an ISOLATION or QUARANTINE ORDER. The person will be detained in the area designated in the ORDER. The person can be detained until the initial appearance before a judicial official.