

OVERVIEW

PUBLIC

HEALTH

INITIATIVE

1/16/01

Alaska Public Health

More than a One-Shot Deal



- ☑ More and better trained public health professionals
- ☑ State-of-the-art communications network
- ☑ Better equipped State Laboratories
- ☑ Tracking of diseases & environmental exposures 1

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The Trust for
America's
Health

www.healthyamericans.org

Close Encounters of the 1st Kind: *Core Public Health*

Anchorage Daily News

PRICE 50 CENTS



⇒ *Vaccine preventable diseases*

⇒ *TB*

⇒ *Hepatitis A*

⇒ *AIDS*

⇒ *Foodborne illness*

THE
FOLLOWING
DOCUMENT(S)
ARE
POOR
ORIGINAL
COPIES

Close Encounters of the 2nd Kind: *Emerging Infections*



E. coli bacterium

⇒ *Hepatitis C*

State of Alaska
Epidemiology



Bulletin

⇒ *E. coli* 0157:H7

⇒ *Summer influenza among tourists*

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⇒ *Echovirus 18 viral meningitis*

Close Encounters of the 3rd Kind: *TERRORISM*



Explosive

▷ *Chemical*

▷ *Nuclear &
radiological*

▷ *Biological*

Public Health Preparedness for Bioterrorism

⇒ Detection

⇒ Investigation

⇒ Response

Detection: *Surveillance System*

- **Disease Reporting Requirements**

- Providers
- Laboratories

- **Providers**

- Recognize disease
- Obtain appropriate diagnostic specimens
- Reporting

- **Laboratories**

- Diagnostic testing
- Reporting

- **Public Health Nurses**

- Recognize disease
- Reporting
- Obtain specimens

Detection: Surveillance System

Conditions Reportable to Public Health

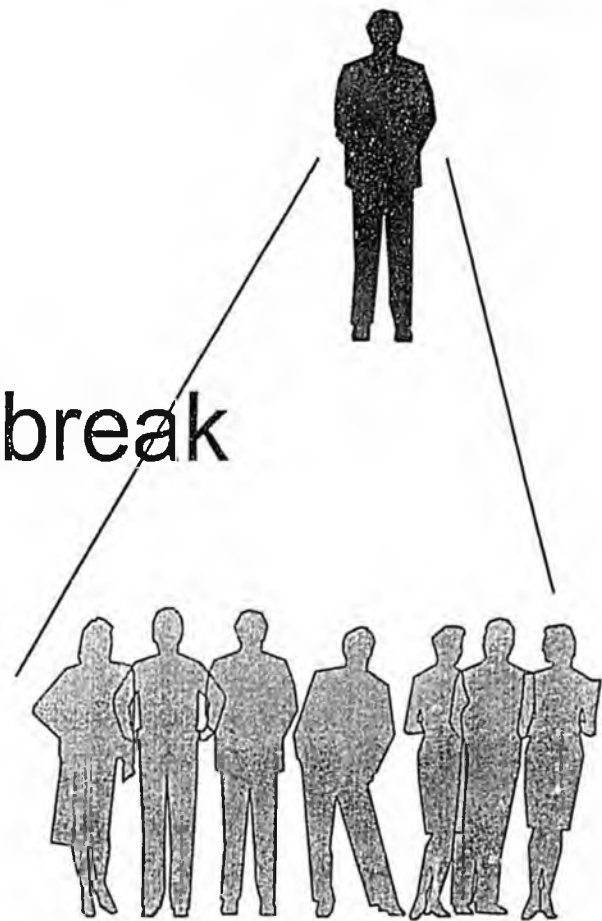
Chancroid
Leprosy (Hansen's Disease)
Giardiasis
Mumps
Typhoid Fever
Yersiniosis
Icterus
Trichinosis
Tularaemia
Rubella
Cholera
Syphilis
Elevated blood lead
BRUCELLA
Potomac fever
Firearm injury
Malaria
Hansen's disease virus (HIV)
Lyme disease
Legionellosis
Salmonellosis
Tuberculosis
Botulism
Hepatitis A, B, or C
Yellow fever
Echinococcosis
Campylobacteriosis
Bordetella pertussis
Pertussis
Influenza
Required immunodeficiency syndrome (AIDS)

Section of Epidemiology
Division of Public Health
Dept. of Health & Social Services
State of Alaska
February 1999

<http://www.epi.hss.state.ak.us/pubs/rtr.pdf>

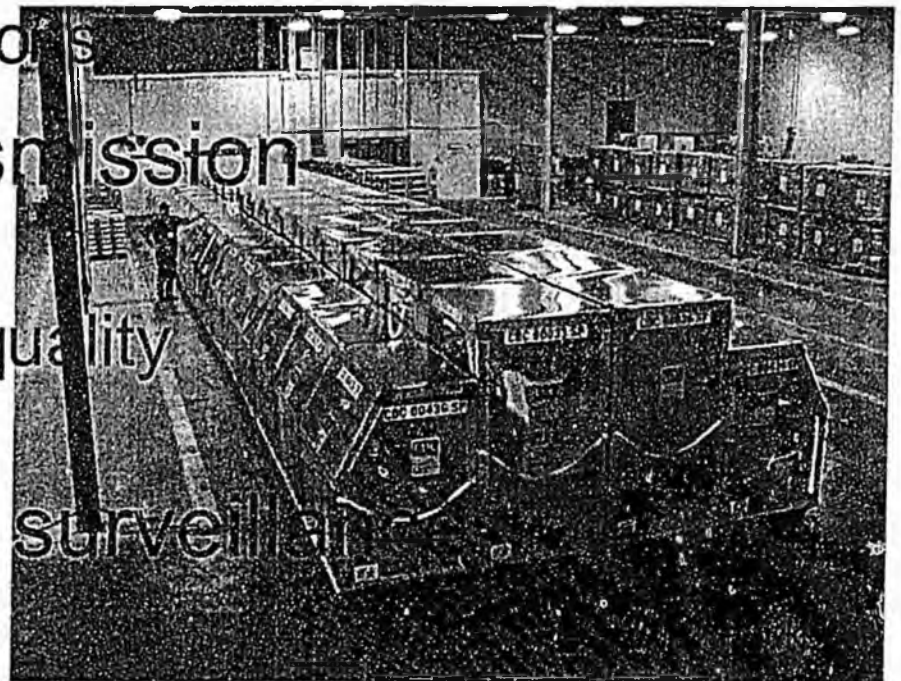
Investigation: *Diagnosis*

- Identify the disease
 - In the individual
 - In the community
- Establish existence of outbreak
- Characterize outbreak
 - Time
 - Place
 - Person



Response: Control & Prevention

- Implement control measures
 - Treat sick persons
 - Prophylax exposed persons
- Interrupt disease transmission
 - Vaccines & antibiotics
 - Control of food & water quality
 - Isolation and quarantine
- Establish tracking and surveillance
 - Monitor for new illness
 - Monitor for disease transmission



Public Health Planning for Bioterrorism

⇒ Preparedness

⇒ Surge Capacity

⇒ Communication

Preparedness

Adequate legal authority

Familiarity with exercising authority

Protection of public

Protection of individual rights

Due process

Systems in place

Expertise available

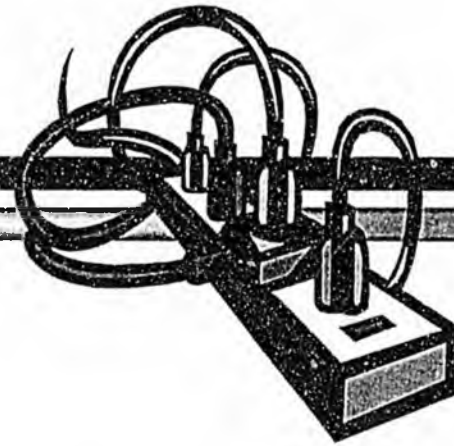
Begin developing capacity *now*

Bioterrorism Drills and Exercises

- Response to a threatened or actual bioterrorist event requires multiagency planning and coordination.
- Drills & exercises must be performed regularly at several levels:
 - State
 - Community
 - Health care facility



Surge Capacity



- The ability to respond to large numbers of affected persons
- The ability to respond to multiple diseases simultaneously

Communications

- Health care providers
- Policy makers
- Patients and their families
- Persons exposed
- General public
- Agencies
- Media



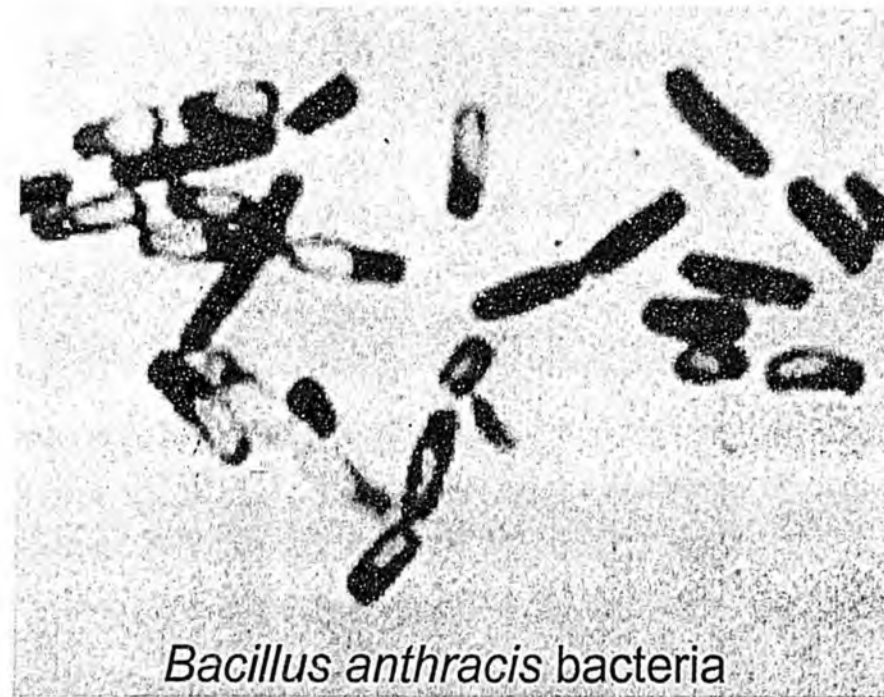
Health Alert Network

- AK Public Health Alert Network
- AK Public Health Training Network – distance learning
- Improved internet capacity for public health centers and Regional EMS Councils
- Other collaborative integrated communications systems.



Anthrax

Impact in the U.S. and Alaska



Bacillus anthracis bacteria

US Anthrax Cases

(Oct 8 – Dec 20, 2001)

Type of Anthrax	<i>Location</i>					Total
	FL	NYC	DC	NJ	CT	
Inhalation	2(1)	1(1)	5(1)	2(1)	1(1)	11(5)
Cutaneous	0	7	0	5	0	12
Total	2(1)	8(1)	5(1)	7(1)	1(1)	23(5)

Cases (Deaths)

US Anthrax Facts

(Oct 8 – Dec 20, 2001)

- 32,000 persons potentially exposed
- 5,000 persons on 60-day antibiotics
 - Ciprofloxin (\$2,550,000)
 - Doxycycline (\$1,050,000)
 - Penicillin (\$ 216,000)
- 7,500 specimens per week tested (\$1,125,000)
- Since 8 October cost > \$10M public funds

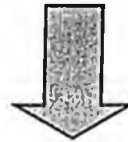
Alaska Anthrax Facts

(Oct 8 – Dec 20, 2001)

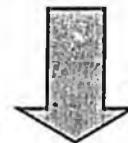
- Zero persons exposed
- 110 incidents
- 69 incidents required lab testing
- 345 lab tests (\$51,750)
- Responders
 - Local Law Enforcement, State Troopers & FBI
 - Fire Department & HazMat
 - Military
 - Division of Emergency Services - SECC
 - Division of Public Health

Alaska: Suspected Cutaneous Anthrax Investigation

12/12/01 Evening consultation for cutaneous
lesion in a mail handler

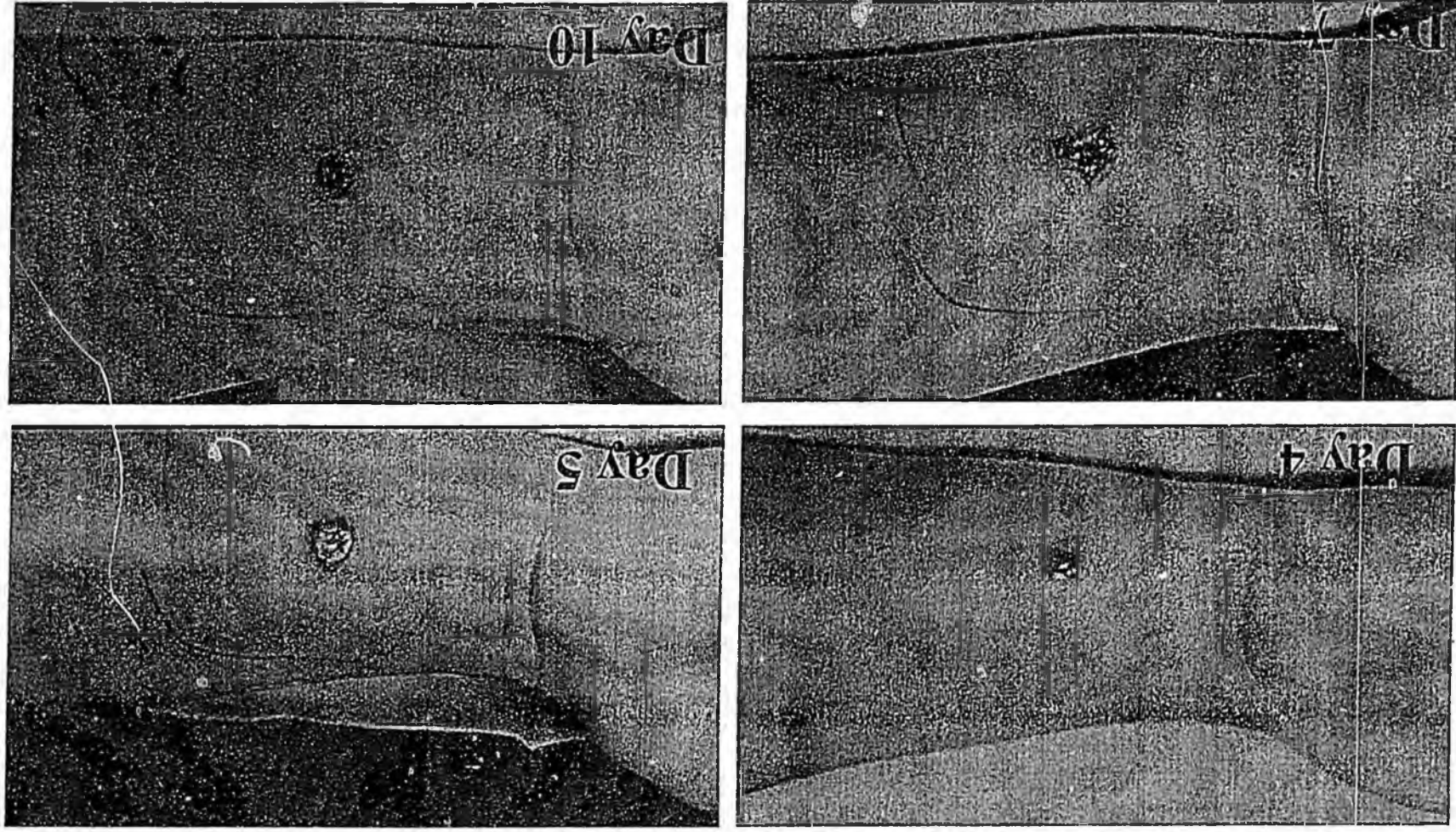


State Laboratory testing at midnight



Diagnosis of anthrax considered possible

Confirmed Cutaneous Anthrax NYC DOH - October 2001



<http://www.nyc.gov/html/doh/html/cd/wtc1hcp.html>

Alaska: Suspected Cutaneous Anthrax Investigation

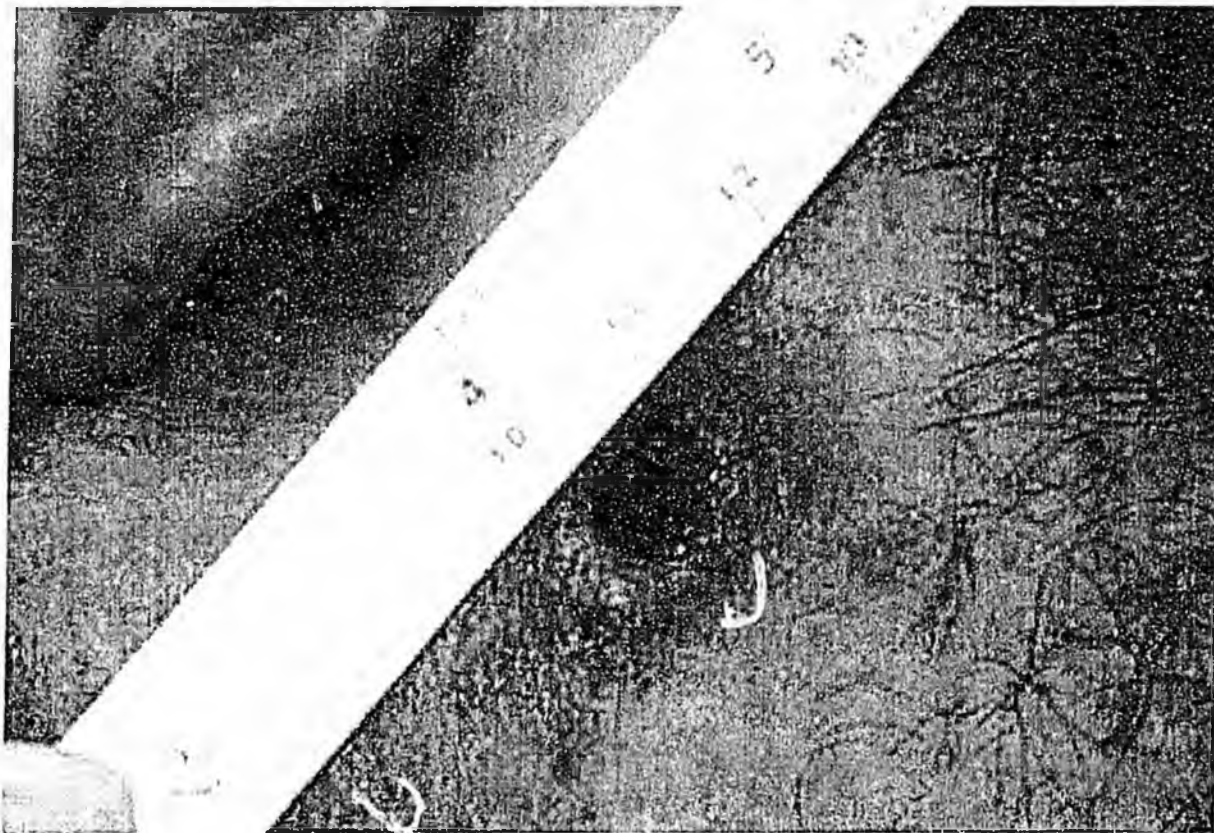


Figure 1 - ***Suspected*** cutaneous anthrax in a mail handler, North Slope, Alaska.
December 11, 2001

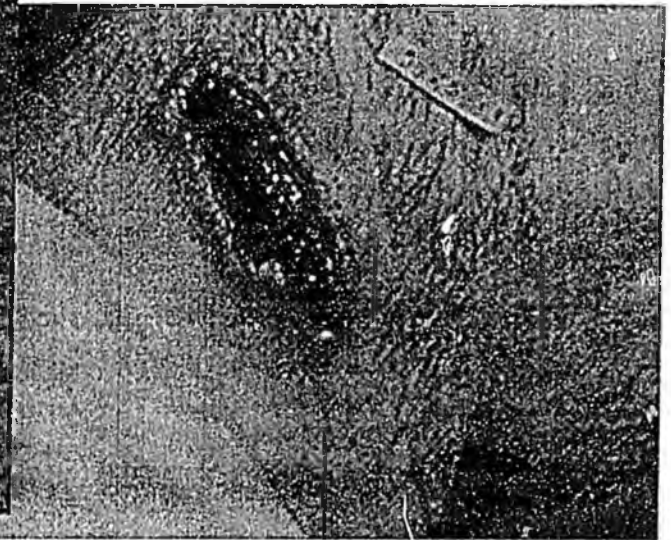


Figure 2 - ***Confirmed*** cutaneous anthrax (Journal of the American Medical Association, 1999;281:1735-1745)

Alaska: Suspected Cutaneous Anthrax Investigation

- Immediate needs
 - Rapid communication - multiple agencies
 - Confirmation of diagnosis
 - Obtain appropriate specimens for lab testing
 - Treat patient(s)
- Coordinated efforts
 - Law enforcement
 - Public health
 - USPS



Alaska: Suspected Cutaneous Anthrax Investigation

- If anthrax was confirmed, the following actions would be needed:
- Establish risk/exposure path
- Determine who is at risk
- Determine need for medical prophylaxis
- Determine need for environmental testing



Alaska: Implications of Confirmed Anthrax

- Impact on Alaska mail distribution
 - Closure of mail system before Christmas
- Need for mass medication administration
- Environmental sampling
- Environmental decontamination



Alaska:

Simultaneous public health events

- Encephalitis in Anchorage schools
 - Meningococccemia
 - Epstein-Barr virus encephalitis
 - Enterovirus
- Botulism in Y-K Region
- Influenza outbreak statewide
- Rabies exposure on North Slope
- Viral meningitis in Prince William Sound

#1 Homeland Security

Public Health Nursing - \$734.2 GF

- **Increase Nursing staff to improve PHN ability to identify & respond to a terrorist attack**
- **Enhance travel & operational support to ensure staff are adequately trained**
- **Hire Bioterrorism Nurse Specialist to train & advise PHN staff & ensure skills are up to date**
- **Increase communications capacity to ensure PHN ability to receive and send critical information**

#2 Homeland Security

Laboratories-\$1,424.3 GF

- Increase personnel services funding to enhance recruitment & retention of microbiologists to do critical lab work
- Increase availability of lab test kits and supplies to ensure lab tests can be done quickly, in the required numbers
- Enhance the computer system within the lab to ensure test results, findings & information can be disseminated quickly

#3 Homeland Security

Epidemiology - \$842.8 GF

- **Increase the physician and nurse epidemiology capacity to:**
 - better educate health care providers about bioterrorism
 - provide additional medical direction & support in the event of an attack
- **Increase ability of the epi staff to travel and provide training and support to public & private provider communities**
- **Hire a pharmacist to ensure pharmaceutical management capacity in advance of and in the event of a terrorist attack**

#4 Homeland Security

EMS - \$598.5 GF

- **Improve the communications networking between all agencies involved in bioterrorism**
 - Provide coordination for new communication initiatives

- **Support the ability of the EMS regions to train local responders and communities relative to their role in a terrorist attack**