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Infectious Disease Workshop for Correctional Facilities

Sponsored by
Pinal County Public Health Services District
In Partnership with Arizona Department of Corrections

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Wednesday, October 17, 2012

Holiday Inn Express
Conference Room
Florence, Arizona

Workshop Schedule

8:00 – 8:30	Registration *Continental Breakfast and Networking*
8:30 – 8:45	Welcome and Introductions Kore Redden, Pinal County Public Health Services District
8:45 – 9:00	Opening Remarks Tom Schryer, Director of Pinal County Public Health Services District
9:00 – 10:30	Infectious Disease Reporting Requirements Shoana Anderson, Arizona Department of Health Services Carla Chee, Arizona Department of Health Services Graham Briggs, Pinal County Public Health Services District
10:30 – 10:45	BREAK
10:45 – 11:45	Public Health Law in Relation to Correctional Facilities Leila Barraza, JD MPH, Deputy Director and Veda Collmer, JD, Visiting Attorney The Network for Public Health Law—Western Region
11:45 – 12:45	LUNCH (provided)
12:45 – 1:45	National Perspective on Correctional Public Health Laurie C. Reid, Captain—CDC USPHS
1:45 – 2:00	BREAK
2:00 – 3:00	Current Disease Trends in Correctional Facilities Shoana Anderson, Arizona Department of Health Services Carla Chee, Arizona Department of Health Services Graham Briggs, Pinal County Public Health Services District
3:00 – 3:15	BREAK
3:15 – 4:00	Emergency Preparedness in Correctional Facilities / Introduction to the Strategic National Stockpile Kore Redden, Pinal County Public Health Services District
4:00 – 5:00	Closing Remarks / Next Steps / Adjournment Submit Completed Workshop Evaluations

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PRESENTER BIOGRAPHIES

Shoana Anderson is currently the Office Chief for the Office of Infectious Disease Services at the Arizona Department of Health Services. In this role, she is responsible for responding to emerging public health threats, investigating infectious disease outbreaks, and implementing control measures to prevent the spread of disease. Mrs. Anderson received a BS in Microbiology from the University of Minnesota and an MPH in Epidemiology from Tulane University. She has over 10 years of experience in infectious disease epidemiology and has investigated over two hundred outbreaks in the state. In addition, she has worked internationally on vaccine preventable diseases and polio eradication in Southeast Asia.

Carla Chee is the current Chief for the Office of Disease Integration and Services at the Arizona Department of Health Services, which include HIV Surveillance, Ryan White Part B Care and Services, STD Control, Refugee Health, and TB Control. In this role, she represents the agency as the State AIDS Director and directs integration of office programs for collaboration with internal and external partners for strategic planning. Prior to her current position, Carla was the Manager for the TB Control Program. Her public health background includes a Bachelor of Arts in Public Health from the Johns Hopkins University and a Master of Health Sciences degree through the Mental Health Department at the Johns Hopkins Bloomberg School of Public Health.

Graham Briggs is originally from Minneapolis, MN and attained a Bachelor of Science in Microbiology while attending the University of Minnesota. He has worked in molecular immunology in the university setting and in the biotech industry before moving into public health. Graham has spent the last eleven years working in public health at the state and local level. He has worked as a microbiologist in infectious diseases for the Arizona State Public Health Laboratory, in a variety of epidemiology positions at the Arizona Department of Health Services and has managed the Infectious Diseases and Epidemiology Section for the Pinal County Public Health Services District for the last six years. In his current position Graham oversees surveillance and response to cases or outbreaks of infectious disease that represent a potential threat to the public's health.

Leila Barraza received her J.D. with a Certificate in Law, Science, and Technology from the Sandra Day O'Connor College of Law in 2008. She was a scholar in the Center for Law, Science & Innovation, and was a research assistant, conducting legal research on autism and vaccine-related litigation. Barraza was named Outstanding Law Student Volunteer for her work with the Arizona Attorney General Office's Community Services Program Satellite Office. She completed externships with the Arizona Attorney General's Office, the Arizona Department of Health Services' Office of Administrative Rules and Counsel, and the Arizona Court of Appeals,

Division One. Prior to attending law school, Barraza received a Master in Public Health from the Mel and Enid Zuckerman College of Public Health at the University of Arizona. She also worked for the Center for Rural Health at the Zuckerman College of Public Health following the completion of her master's degree. Barraza researched rural health issues and resources and shaped them into published documents, including the *Arizona Rural Health Resource Manual* and the *Arizona Rural Health Clinic Designation Manual*. Barraza provided technical assistance to rural and tribal hospitals and clinics regarding new medical designation opportunities, health practitioner recruitment, emergency medical services, and funding opportunities. Most recently, Barraza served as a law clerk for the Honorable Michael J. Brown and the Honorable John C. Gemmill at the Arizona Court of Appeals, Division One.

Veda Collmer received her law degree from the City University of New York School of Law in 2008 and is licensed in New York State. Her studies concentrated on public health law and policy. In 2007, Veda was selected for the New York State Executive Chamber Internship. She worked closely with the New York State Health and Human Services Division and the Department of Health in the development of several innovative statewide health initiatives. Her projects included tobacco cessation programs, mental health community housing, state regulation of daycare workers, and multiple other issues underlying proposed health legislation. Veda also interned with a non-profit public health organization to provide legal support for various New York City programs. She developed educational materials to advise public health programs about compliance with relevant statutes. Her interests include disease prevention and education and access to healthcare. Most recently, Veda was an attorney at Hiscock Legal Aid Society in Syracuse, where she provided free legal services to community. Veda also volunteered as a pro bono attorney with the Onondaga County Bar Association. Prior to law school, Veda practiced for nine years as an Occupational Therapist. As the recipient of the New York State Health Services Corp Scholarship, Veda utilized her training to meet the needs of underserved areas in rural upstate New York and New York City.

Laurie C. Reid, RN, MS, an officer in U.S. Public Health Service, Commissioned Corps, currently serves as the Senior Public Health Advisor in the Office of Health Equity, Division of HIV/AIDS prevention within the National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP) at the Centers for Disease Control and Prevention. The office is charged with coordinating and monitoring the Division's activities related to reducing health inequities among populations most disproportionately affected by HIV and AIDS. Captain Reid received a Bachelor of Science Degree in Nursing from Tuskegee University and a Master of Science in Health Care Administration from the University of Maryland, University College. She is regarded as a correctional health care subject matter expert and her experience is valued by other Federal agencies to include the Department of Justice, Department of Homeland Security, Department of Health and Human Services and other non-governmental correctional organizations. CAPT Reid was instrumental in developing the health care management program currently used by the United States Marshal Service; providing care to pretrial federal detainees

and was a key author for the guidance issued from HHS on H1N1 flu virus among correctional populations. She is a member of National Black Nurses Association; serving on two national committees and is the current President of the Atlanta Black Nurses Association. In her spare time, she works with several local churches and local and national organizations to provide consumer health education to include but not limited to Delta Sigma Theta Sorority, Inc., where she has served as a past local officer; the Coalition of 100 Black Women; 100 Black Men, Inc., Atlanta Technical College, Marietta Sixth Grade Academy; Visions, Inc., and Southeast AIDS Education and Training Center. She is sought after by CDC and Health and Human Services offices for her knowledge of correctional populations, homeless populations and is known for her ability to never meet a stranger and develop long lasting partnerships.

Since December 2008, **Kore Redden** serves as the Emergency Preparedness and Response Administrator for the Pinal County Public Health Services District. Her responsibilities include oversight of the CDC Public Health Emergency Preparedness Grant and the CDC Cities' Readiness Initiative Grant for the county. Before her current position, Kore spent nineteen years in the fire service and still maintains her certification as an Emergency Paramedic. She has extensive experience in medical operations, strategy and tactics, health and safety, logistics, finance, NIMS, and the incident command system (ICS). She holds a Bachelor of Science in Biology from Arizona State University and a Master of Public Health from A.T. Still University in Kirksville, Missouri.

Manny Gonzalez
Assistant County Manager

Administrative Services

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Fritz A. Behring
County Manager

October 17, 2012

Greetings,

We would like to take this opportunity to introduce ourselves. We are the Infectious Disease & Epidemiology Section of Pinal County Public District. Our role is to educate and assist you with reporting of infectious diseases, as mandated by Arizona Department of Health Services (ADHS), which may be diagnosed at your facility. We have developed a "Welcome" packet to provide direction in the process of correctly reporting occurrences of infectious disease as they are indentified by your facility.

Please take a moment to familiarize yourself with the "Report Communicable Diseases" list enclosed. This list indicates each specific disease that must be reported by your facility to the Pinal County Public Health District, as designated by ADHS. Also included you will find a starter supply of the "Communicable Disease Report" or "CDR", which is the appropriate form to use to report diagnosis of infectious disease to us. The original form can also be found online at the Arizona Department of Health Services website: http://azdhs.gov/phs/oids/downloads/cdr_form.pdf. Please refer to the "Report Communicable Diseases" list for reporting timelines related to each disease, as each diagnosis has differing requirements. The "Report Communicable Diseases" list should be posted in a conspicuous location, easily visible by your staff for quick reference. Once your facility has identified a suspect or confirmed case, completed the CDR and determined your reporting timeline using the "Report Communicable Diseases" list, you need only to forward that information to us via phone, fax or mail. Our contact information is as follows;

Pinal County Public Health Services District
Infectious Disease & Epidemiology Section
PO Box 2945
971 N Jason Lopez Circle Blg D
Florence, AZ 85132
Phone: (520) 866-7325
Fax: (520) 866-7173

It is our goal to work closely with you, our community healthcare partners, to establish a relationship which facilitates the timely identification and investigation of possible infectious diseases. We invite your questions and comments in this endeavor. Please do not hesitate to contact us if we can be of any further assistance.

We greatly appreciate your attention to this matter,

Graham Briggs
Administrator
Communicable Diseases & Epidemiology
Pinal County Public Health Services District

Manny Gonzalez
Assistant County Manager

Administrative Services

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Fritz A. Behring
County Manager

Pinal County Public Health Services District
Infectious Disease and Epidemiology Section
PO Box 2945
Florence AZ 85132
www.pinalcountyaz.gov

To report an infectious disease:

Main Number	(520) 866-7325
Fax Number	(520) 866-7173

TB Program	(520) 866-7324
STD Program	(520) 866-7325
Emergency Preparedness	(520) 866-7331

After hours On Call Duty Officer: (520) 866-6239

Arizona Administrative Code✦ Requires Providers To:

Report Communicable Diseases

to the Local Health Department

- ☎ Anthrax
- ☎ Botulism
- ☎ Emerging or exotic disease
- ☎ Enterohemorrhagic *Escherichia coli*
- ☎ Enterotoxigenic *Escherichia coli*
- ☎ Hemolytic uremic syndrome
- ☎ Listeriosis
- ☎ Measles (rubeola)
- ☎ Meningococcal invasive disease
- ☎ Pertussis (whooping cough)
- ☎ Plague
- ☎ Poliomyelitis
- ☎ Rabies in a human
- ☎ Smallpox
- ☎ Tularemia
- ☎ Typhoid fever
- ☎ Unexplained death with a history of fever
- ☎ Viral hemorrhagic fever
- ☎ Yellow fever
- ☎ Vancomycin-resistant or Vancomycin-intermediate *Staphylococcus aureus*
- ☎ Vancomycin-resistant *Staphylococcus epidermidis*

- ◑ Brucellosis
- ◑ Encephalitis, viral or parasitic
- ◑ Mumps
- ◑ Q fever
- ◑ Rubella syndrome, congenital
- ◑ Tuberculosis, active disease
- ◑ Tuberculosis latent infection in a child 5 years of age or younger (positive screening test result)
- ◑ Typhus fever
- ◑ Vaccinia-related adverse event

- ◑* Cholera
- ◑✱ Rubella (German measles)

- O Conjunctivitis: acute
- O Diarrhea, nausea, or vomiting
- O Scabies

- ✱O Amebiasis
- ✱O Campylobacteriosis
- ✱O Cryptosporidiosis
- ✱O Giardiasis
- ✱O Hepatitis A
- ✱O Hepatitis E
- ✱O Salmonellosis
- ✱O Shigellosis
- ✱O Taeniasis
- ✱O *Vibrio* infection
- ✱O Yersiniosis

- Aseptic meningitis: viral
- Basidiobolomycosis
- Chagas disease (American trypanosomiasis)
- Chancroid
- Chlamydia infection, sexually transmitted
- Coccidioidomycosis (valley fever)
- Colorado tick fever
- Creutzfeldt-Jakob disease
- *Cyclospora* infection
- Cysticercosis
- Dengue
- Ehrlichiosis and Anaplasmosis
- *Haemophilus influenzae*: invasive disease
- Hansen's disease (Leprosy)
- Hantavirus infection
- Hepatitis B and D
- Hepatitis C
- Herpes genitalis
- HIV infection and related disease
- Kawasaki syndrome
- Legionellosis (Legionnaires' disease)
- Leptospirosis
- Lyme disease
- Lymphocytic choriomeningitis
- Malaria
- Rubella (German measles)
- Reye syndrome
- Rocky Mountain spotted fever
- Streptococcal Group A: invasive disease
- Streptococcal Group B: invasive disease in infants younger than 90 days of age
- *Streptococcus pneumoniae* (pneumococcal invasive disease)
- Syphilis
- Tetanus
- Toxic shock syndrome
- Trichinosis
- Varicella (chickenpox)
- West Nile virus infection

☎ Submit a report by telephone or through an electronic reporting system authorized by the Department within 24 hours after a case or suspect case is diagnosed, treated, or detected or an occurrence is detected.

✱ If a case or suspect case is a food handler or works in a child care establishment or a health care institution, instead of reporting within the general reporting deadline, submit a report within 24 hours after the case or suspect case is diagnosed, treated, or detected.

◑ Submit a report within one working day after a case or suspect case is diagnosed, treated, or detected.

Submit a report within five working days after a case or suspect case is diagnosed, treated, or detected.

O Submit a report within 24 hours after detecting an outbreak.

www.azdhs.gov/phs/oids/hcp_rpt.htm

✦A.A.C. R9-6-202
Effective 04/01/2008

Arizona Department of Health Services

COMMUNICABLE DISEASE REPORT

Im nt Instructions - Please complete Sections 1 thru 3 for all reportable conditions. dition, complete Se 4 for STDs and HIV/AIDS, Section 5 for hepatitis, and Section 6 for tuberculosis. e completed, return to your county or tribal health agency. If reporting through MEDSIS, go to http://siren.az.gov.

County / IHS Number	State ID / MEDSIS ID	Da ceived by County

1. PATIENT INFORMATION

Patient's Name (Last) (First) (Middle Initial)	Date of Birth	Race (Check all that apply)	Ethnicity	Sex	Pregnant
		☐ White ☐ Pacific Islander ☐ Unknown ☐ Black ☐ Native American ☐ Asian ☐ Other	☐ Hispanic ☐ Non-Hispanic ☐ Unknown	☐ Male ☐ Transgender ☐ Female ☐ Unknown	☐ No ☐ Unknown ☐ Yes Due Date

Street Address	City	State	ZIP Code	County	Reservation	Telephone #

Patient's Occupation or School	Guardian (Not necessary for STD)	Outcome	Is the patient any of the following?
		☐ Survived ☐ Died Date	☐ Health care worker ☐ Food worker/handler ☐ Childcare worker/attendee Facility Name & Address

2. REPORTABLE CONDITION INFORMATION / LAB RESULTS

Diagnosis or Suspect Reportable Condition	Onset Date	Diagnosis Date

LAB RESULTS

Date Collected	Date Finalized	Specimen Type	Lab Test	Lab Result
		☐ Blood ☐ CSF ☐ Urine ☐ Stool ☐ NP Swab ☐ Sputum ☐ Other		
		☐ Blood ☐ CSF ☐ Urine ☐ Stool ☐ NP Swab ☐ Sputum ☐ Other		
		☐ Blood ☐ CSF ☐ Urine ☐ Stool ☐ NP Swab ☐ Sputum ☐ Other		

3. REPORTER AND PROVIDER INFORMATION

Reporting Source (Physician or other reporting source)	Facility

Street Address	City	State	ZIP Code	Telephone #

Provider (If different from reporter)	Facility

Provider Street Address	City	State	ZIP Code	Telephone #

Lab Name, Address and Telephone #

4. SEXUALLY TRANSMITTED DISEASES (STD) AND HIV/AIDS

Diagnosis

☐ **Syphilis** (specify below)
- ☐ Primary
- ☐ Secondary
- ☐ Early Latent (<1 year)
- ☐ Late (>1 year)
- ☐ Congenital

Mother's Name _____ Mother's DOB _____

☐ Other Syphilis _____

☐ Neurological Symptoms _____

☐ **Chlamydia** ☐ PID

☐ **Gonorrhea** ☐ PID

☐ **Herpes**

☐ **Chancroid**

☐ **HIV/AIDS**

Risk Factors
- ☐ IDU
- ☐ Sex with IDU
- ☐ Sex with males

Date of Last Negative HIV Test _____

Site of Infection
- ☐ Genitalia ☐ Rectum
- ☐ Throat ☐ Other

Patient had Sexual Contact with
- ☐ Males Only ☐ Refused
- ☐ Females Only ☐ Unknown
- ☐ Both

Martial Status
- ☐ Married ☐ Single
- ☐ Divorced ☐ Widowed
- ☐ Separated ☐ Domestic Partner
- ☐ Unknown

Sex Partners
# of partners _____
# of partners treated _____

Treatment

Date	Drug	Dosage

5. HEPATITIS PANEL

Hepatitis A Serology Results	Pos	Neg	Unk
Hepatitis A Antibody (Acute IgM anti-HAV)	☐	☐	☐

Hepatitis B Serology Results	Pos	Neg	Unk
Hepatitis B surface Antigen (HBsAg)	☐	☐	☐
Hepatitis B core Antibody IgM (HBcAb-IgM)	☐	☐	☐
Hepatitis B core Antibody Total (HBcAb)	☐	☐	☐
Hepatitis B surface Antibody (HBsAb)	☐	☐	☐
Hepatitis B e Antigen (HBeAg)	☐	☐	☐
Symptoms consistent with acute hepatitis	☐	☐	☐
Jaundice	☐	☐	☐

Liver Function Test ALT _____ AST _____

Hepatitis C Serology Results	Pos	Neg	Unk
Hepatitis C-EIA s/co ratio _____	☐	☐	☐
Hepatitis C-RIBA	☐	☐	☐
Hepatitis C-NAT/PCR	☐	☐	☐
Hepatitis C-Viral Load _____			

Liver Function Test ALT _____ AST _____

6. TUBERCULOSIS (TB)

Site of Disease
- ☐ Pulmonary
- ☐ Laryngeal
- ☐ Extrapulmonary

☐ **TB Infection in a Child 5 and Under** (Positive TB skin test result)

Medicine and Dosage
(Please enter information)

Comments

Version 10/22/2007

Patient's Name _____ (Last) (First) (M.I.)

Street Address _____ (ZIP CODE)

REPORT OF VERIFIED CASE OF TUBERCULOSIS

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
FORM APPROVED OMB NO. 0920-0026 Exp. Date 05/31/2011

REPORT OF VERIFIED CASE OF TUBERCULOSIS

1. Date Reported
Month Day Year

2. Date Submitted
Month Day Year

3. Case Numbers
Year Reported (YYYY) | State Code | Locally Assigned Identification Number

State Case Number
City/County Case Number
Reason:
Linking State Case Number
Linking State Case Number

4. Reporting Address for Case Counting
City
Within City Limits *(select one)* ☐ Yes ☐ No
County
ZIP CODE —

5. Count Status *(select one)*

Countable TB Case
☐ Count as a TB case

Noncountable TB Case
☐ Verified Case: Counted by another U.S. area (e.g., county, state)
☐ Verified Case: TB treatment initiated in another country *Specify*_____
☐ Verified Case: Recurrent TB within 12 months after completion of therapy

6. Date Counted
Month Day Year

7. Previous Diagnosis of TB Disease *(select one)*
☐ Yes ☐ No
If YES, enter year of previous TB disease diagnosis:

8. Date of Birth
Month Day Year

9. Sex at Birth *(select one)*
☐ Male ☐ Female

10. Ethnicity *(select one)*
☐ Hispanic or Latino
☐ Not Hispanic or Latino

11. Race *(select one or more)*
☐ American Indian or Alaska Native
☐ Asian: *Specify*_____
☐ Black or African American
☐ Native Hawaiian or Other Pacific Islander: *Specify*_____
☐ White

12. Country of Birth
"U.S.-born" (or born abroad to a parent who was a U.S. citizen) *(select one)* ☐ Yes ☐ No
Country of birth: *Specify*_____

13. Month-Year Arrived in U.S.
Month Year

14. Pediatric TB Patients (<15 years old)
Country of Birth for Primary Guardian(s): *Specify*
Guardian 1_____
Guardian 2_____
Patient lived outside U.S. for >2 months? *(select one)* ☐ Yes ☐ No ☐ Unknown
If YES, list countries, *specify*: _____

15. Status at TB Diagnosis *(select one)*
☐ Alive ☐ Dead
If DEAD, enter date of death: Month Day Year
If DEAD, was TB a cause of death? *(select one)*
☐ Yes ☐ No ☐ Unknown

16. Site of TB Disease *(select all that apply)*
☐ Pulmonary
☐ Pleural
☐ Lymphatic: Cervical
☐ Lymphatic: Intrathoracic
☐ Lymphatic: Axillary
☐ Lymphatic: Other
☐ Lymphatic: Unknown
☐ Laryngeal
☐ Bone and/or Joint
☐ Genitourinary
☐ Meningeal
☐ Peritoneal
☐ Other: Enter anatomic code(s) *(see list)*: 1 2 3
☐ Site not stated

REPORT OF VERIFIED CASE OF TUBERCULOSIS

17. Sputum Smear *(select one)*

☐ Positive ☐ Not Done
☐ Negative ☐ Unknown

Date Collected: Month Day Year

18. Sputum Culture *(select one)*

☐ Positive ☐ Not Done
☐ Negative ☐ Unknown

Date Collected: Month Day Year

Date Result Reported: Month Day Year

Reporting Laboratory Type *(select one)*: ☐ Public Health Laboratory ☐ Commercial Laboratory ☐ Other

19. Smear/Pathology/Cytology of Tissue and Other Body Fluids *(select one)*

☐ Positive ☐ Not Done
☐ Negative ☐ Unknown

Date Collected: Month Day Year

Enter anatomic code *(see list)*:

Type of exam *(select all that apply)*: ☐ Smear ☐ Pathology/Cytology

20. Culture of Tissue and Other Body Fluids *(select one)*

☐ Positive ☐ Not Done
☐ Negative ☐ Unknown

Date Collected: Month Day Year

Enter anatomic code *(see list)*:

Date Result Reported: Month Day Year

Reporting Laboratory Type *(select one)*: ☐ Public Health Laboratory ☐ Commercial Laboratory ☐ Other

21. Nucleic Acid Amplification Test Result *(select one)*

☐ Positive ☐ Not Done
☐ Negative ☐ Unknown
☐ Indeterminate

Date Collected: Month Day Year

Date Result Reported: Month Day Year

Enter specimen type: ☐ Sputum
OR
If not Sputum, enter anatomic code *(see list)*:

Reporting Laboratory Type *(select one)*: ☐ Public Health Laboratory ☐ Commercial Laboratory ☐ Other

Initial Chest Radiograph and Other Chest Imaging Study

22A. Initial Chest Radiograph *(select one)*

☐ Normal ☐ Abnormal* (consistent with TB) ☐ Not Done ☐ Unknown

* For ABNORMAL Initial Chest Radiograph: Evidence of a cavity *(select one)*: ☐ Yes ☐ No ☐ Unknown

Evidence of miliary TB *(select one)*: ☐ Yes ☐ No ☐ Unknown

22B. Initial Chest CT Scan or Other Chest Imaging Study *(select one)*

☐ Normal ☐ Abnormal* (consistent with TB) ☐ Not Done ☐ Unknown

* For ABNORMAL Initial Chest Radiograph: Evidence of a cavity *(select one)*: ☐ Yes ☐ No ☐ Unknown

Evidence of miliary TB *(select one)*: ☐ Yes ☐ No ☐ Unknown

23. Tuberculin (Mantoux) Skin Test at Diagnosis *(select one)*

☐ Positive ☐ Not Done
☐ Negative ☐ Unknown

Date Tuberculin Skin Test (TST) Placed: Month Day Year

Millimeters (mm) of Induration:

24. Interferon Gamma Release Assay for *Mycobacterium tuberculosis* at Diagnosis *(select one)*

☐ Positive ☐ Not Done
☐ Negative ☐ Unknown
☐ Indeterminate

Date Collected: Month Day Year

Test type:
*Specify*_____

25. Primary Reason Evaluated for TB Disease *(select one)*

☐ TB Symptoms
☐ Abnormal Chest Radiograph (consistent with TB)
☐ Contact Investigation
☐ Targeted Testing
☐ Health Care Worker
☐ Employment/Administrative Testing
☐ Immigration Medical Exam
☐ Incidental Lab Result
☐ Unknown

REPORT OF VERIFIED CASE OF TUBERCULOSIS

26. HIV Status at Time of Diagnosis *(select one)*

☐ Negative ☐ Indeterminate ☐ Not Offered ☐ Unknown
☐ Positive ☐ Refused ☐ Test Done, Results Unknown

If POSITIVE, enter:
State HIV/AIDS Patient Number: ☐☐☐☐☐☐☐☐☐☐ City/County HIV/AIDS Patient Number: ☐☐☐☐☐☐☐☐☐☐

27. Homeless Within Past Year *(select one)*

☐ No ☐ Yes ☐ Unknown

28. Resident of Correctional Facility at Time of Diagnosis *(select one)* ☐ No ☐ Yes ☐ Unknown

If YES, *(select one)*:
☐ Federal Prison ☐ Local Jail ☐ Other Correctional Facility
☐ State Prison ☐ Juvenile Correction Facility ☐ Unknown

If YES, under custody of Immigration and Customs Enforcement? *(select one)*
☐ No ☐ Yes

29. Resident of Long-Term Care Facility at Time of Diagnosis *(select one)* ☐ No ☐ Yes ☐ Unknown

If YES, *(select one)*:
☐ Nursing Home ☐ Residential Facility ☐ Alcohol or Drug Treatment Facility ☐ Unknown
☐ Hospital-Based Facility ☐ Mental Health Residential Facility ☐ Other Long-Term Care Facility

30. Primary Occupation Within the Past Year *(select one)*

☐ Health Care Worker ☐ Migrant/Seasonal Worker ☐ Retired ☐ Not Seeking Employment (e.g. student, homemaker, disabled person)
☐ Correctional Facility Employee ☐ Other Occupation ☐ Unemployed ☐ Unknown

31. Injecting Drug Use Within Past Year *(select one)*
☐ No ☐ Yes ☐ Unknown

32. Non-Injecting Drug Use Within Past Year *(select one)*
☐ No ☐ Yes ☐ Unknown

33. Excess Alcohol Use Within Past Year *(select one)*
☐ No ☐ Yes ☐ Unknown

34. Additional TB Risk Factors *(select all that apply)*

☐ Contact of MDR-TB Patient (2 years or less) ☐ Incomplete LTBI Therapy ☐ Diabetes Mellitus ☐ Other *Specify* _____
☐ Contact of Infectious TB Patient (2 years or less) ☐ TNF-α Antagonist Therapy ☐ End-Stage Renal Disease ☐ None
☐ Missed Contact (2 years or less) ☐ Post-organ Transplantation ☐ Immunosuppression (not HIV/AIDS)

35. Immigration Status at First Entry to the U.S. *(select one)*

☐ Not Applicable
- "U.S.-born" (or born abroad to a parent who was a U.S. citizen)
- Born in 1 of the U.S. Territories, U.S. Island Areas, or U.S. Outlying Areas

☐ Immigrant Visa ☐ Tourist Visa ☐ Asylee or Parolee
☐ Student Visa ☐ Family/Fiancé Visa ☐ Other Immigration Status
☐ Employment Visa ☐ Refugee ☐ Unknown

36. Date Therapy Started

Month ☐☐ Day ☐☐ Year ☐☐☐☐

37. Initial Drug Regimen *(select one option for each drug)*

	No	Yes	Unk		No	Yes	Unk		No	Yes	Unk
Isoniazid	☐	☐	☐	Ethionamide	☐	☐	☐	Moxifloxacin	☐	☐	☐
Rifampin	☐	☐	☐	Amikacin	☐	☐	☐	Cycloserine	☐	☐	☐
Pyrazinamide	☐	☐	☐	Kanamycin	☐	☐	☐	Para-Amino Salicylic Acid	☐	☐	☐
Ethambutol	☐	☐	☐	Capreomycin	☐	☐	☐	Other	☐	☐	☐
Streptomycin	☐	☐	☐	Ciprofloxacin	☐	☐	☐	*Specify* _____			
Rifabutin	☐	☐	☐	Levofloxacin	☐	☐	☐	Other	☐	☐	☐
Rifapentine	☐	☐	☐	Ofloxacin	☐	☐	☐	*Specify* _____			

Comments:

Patient's Name _____ (Last) (First) (M.I.)

Street Address _____ (Number, Street, City, State) _____ (ZIP CODE)

REPORT OF VERIFIED CASE OF TUBERCULOSIS

CDC SAFER·HEALTHIER·PEOPLE™

REPORT OF VERIFIED CASE OF TUBERCULOSIS

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)
ATLANTA, GEORGIA 30333
FORM APPROVED OMB NO. 0920-0026 Exp. Date 05/31/2011

Initial Drug Susceptibility Report

(Follow Up Report – 1)

Year Counted

State Case Number

City/County Case Number

Submit this report for all culture-positive cases.

38. Genotyping Accession Number

Isolate submitted for genotyping *(select one)*: ☐ No ☐ Yes

If YES, genotyping accession number for episode:

39. Initial Drug Susceptibility Testing

Was drug susceptibility testing done? *(select one)* ☐ No ☐ Yes ☐ Unknown

If NO or UNKNOWN, do not complete the rest of Follow Up Report –1

If YES, enter date FIRST isolate collected for which drug susceptibility testing was done:

Month Day Year

Enter specimen type: ☐ Sputum

OR

If not Sputum, enter anatomic code *(see list)*:

40. Initial Drug Susceptibility Results *(select one option for each drug)*

	Resistant	Susceptible	Not Done	Unknown
Isoniazid	☐	☐	☐	☐
Rifampin	☐	☐	☐	☐
Pyrazinamide	☐	☐	☐	☐
Ethambutol	☐	☐	☐	☐
Streptomycin	☐	☐	☐	☐
Rifabutin	☐	☐	☐	☐
Rifapentine	☐	☐	☐	☐
Ethionamide	☐	☐	☐	☐
Amikacin	☐	☐	☐	☐
Kanamycin	☐	☐	☐	☐

	Resistant	Susceptible	Not Done	Unknown
Capreomycin	☐	☐	☐	☐
Ciprofloxacin	☐	☐	☐	☐
Levofloxacin	☐	☐	☐	☐
Ofloxacin	☐	☐	☐	☐
Moxifloxacin	☐	☐	☐	☐
Other Quinolones	☐	☐	☐	☐
Cycloserine	☐	☐	☐	☐
Para-Amino Salicylic Acid	☐	☐	☐	☐
Other	☐	☐	☐	☐
Specify _____				
Other	☐	☐	☐	☐
Specify _____				

Comments:

Patient's Name _____ (Last) (First) (M.I.)

Street Address _____ (Number, Street, City, State) _____ (ZIP CODE)

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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ATLANTA, GEORGIA 30333

FORM APPROVED OMB NO. 0920-0026 Exp. Date 05/31/2011

REPORT OF VERIFIED CASE OF TUBERCULOSIS

Case Completion Report

(Follow Up Report – 2)

Year Counted	State Case Number	City/County Case Number

Submit this report for all cases in which the patient was alive at diagnosis.

41. Sputum Culture Conversion Documented *(select one)* ☐ No ☐ Yes ☐ Unknown

If YES, enter date specimen collected for FIRST consistently negative sputum culture:

Month Day Year

If NO, enter reason for not documenting sputum culture conversion *(select one)*:

☐ No Follow-up Sputum Despite Induction ☐ Patient Refused ☐ Patient Lost to Follow-Up

☐ No Follow-up Sputum and No Induction ☐ Other *Specify* _____

☐ Died ☐ Unknown

42. Moved

Did the patient move during TB therapy? *(select one)* ☐ No ☐ Yes

If YES, moved to where *(select all that apply)*:

☐ In state, out of jurisdiction *(enter city/county)* *Specify* _____ *Specify* _____

☐ Out of state *(enter state)* *Specify* _____ *Specify* _____

☐ Out of the U.S. *(enter country)* *Specify* _____ *Specify* _____

If moved out of the U.S., transnational referral? *(select one)* ☐ No ☐ Yes

43. Date Therapy Stopped

Month Day Year

44. Reason Therapy Stopped or Never Started *(select one)*

☐ Completed Therapy ☐ Not TB

☐ Lost ☐ Died

☐ Uncooperative or Refused ☐ Other

☐ Adverse Treatment Event ☐ Unknown

If DIED, indicate cause of death *(select one)*:

☐ Related to TB disease ☐ Unrelated to TB disease

☐ Related to TB therapy ☐ Unknown

45. Reason Therapy Extended >12 months *(select all that apply)*

☐ Rifampin Resistance ☐ Non-adherence ☐ Clinically Indicated – other reasons

☐ Adverse Drug Reaction ☐ Failure ☐ Other *Specify* _____

46. Type of Outpatient Health Care Provider *(select all that apply)*

☐ Local/State Health Department (HD) ☐ IHS, Tribal HD, or Tribal Corporation ☐ Inpatient Care Only ☐ Unknown

☐ Private Outpatient ☐ Institutional/Correctional ☐ Other

Comments:

Patient's Name _____ (Last) (First) (M.I.)

State Case No. _____

REPORT OF VERIFIED CASE OF TUBERCULOSIS

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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Case Completion Report - *Continued*

(Follow Up Report – 2)

47. Directly Observed Therapy (DOT) *(select one)*

- ☐ No, Totally Self-Administered
- ☐ Yes, Totally Directly Observed
- ☐ Yes, Both Directly Observed and Self-Administered
- ☐ Unknown

Number of weeks of directly observed therapy (DOT) ☐☐☐

48. Final Drug Susceptibility Testing

Was follow-up drug susceptibility testing done? *(select one)* ☐ No ☐ Yes ☐ Unknown

If NO or UNKNOWN, do not complete the rest of Follow Up Report –2

If YES, enter date FINAL isolate collected for which drug susceptibility testing was done:

Month ☐☐ Day ☐☐ Year ☐☐☐☐

Enter specimen type: ☐ Sputum

OR

If not Sputum, enter anatomic code *(see list)*: ☐☐

49. Final Drug Susceptibility Results *(select one option for each drug)*

	Resistant	Susceptible	Not Done	Unknown
Isoniazid	☐	☐	☐	☐
Rifampin	☐	☐	☐	☐
Pyrazinamide	☐	☐	☐	☐
Ethambutol	☐	☐	☐	☐
Streptomycin	☐	☐	☐	☐
Rifabutin	☐	☐	☐	☐
Rifapentine	☐	☐	☐	☐
Ethionamide	☐	☐	☐	☐
Amikacin	☐	☐	☐	☐
Kanamycin	☐	☐	☐	☐

	Resistant	Susceptible	Not Done	Unknown
Capreomycin	☐	☐	☐	☐
Ciprofloxacin	☐	☐	☐	☐
Levofloxacin	☐	☐	☐	☐
Ofloxacin	☐	☐	☐	☐
Moxifloxacin	☐	☐	☐	☐
Other Quinolones	☐	☐	☐	☐
Cycloserine	☐	☐	☐	☐
Para-Amino Salicylic Acid	☐	☐	☐	☐
Other	☐	☐	☐	☐
Specify _____				
Other	☐	☐	☐	☐
Specify _____				

Comments:

Interjurisdictional Tuberculosis Notification

Referring Jurisdiction_city_____ county_____ state_____ Date sent ____/____/____

Contact person_____ Phone ( )_____ FAX ( )_____

☐ Verified case→State where reported:_____ RVCT#_____(attach RVCT) ☐Not reported_____

☐ Suspect case ☐Close contact ☐Reactor LTBI ☐Convertor ☐Source case investigation

Patient name_____ Sex ☐Male ☐Female
Last First Middle

Date of birth ____/____/____ Interpreter needed? ☐No ☐Yes, specify language_____

New address _____ Hispanic ☐No ☐Yes
Number/Street/Apt.

Race ☐ White ☐Black ☐Asian ☐Am.Indian/Nat.Alaskan. ☐Other:_____

_____
City/State/ZipCode

New telephone ( )_____ Date of expected arrival ____/____/____

New health provider: ☐ Unknown ☐Known (name, address, phone)_____

Insurance source: ☐None ☐Medicaid ☐Private ☐Medicare ☐Other_____

Emergency contact: Name_____ Phone_____

Laboratory information for ☐ this referred case/suspect ☐index case for this contact ☐not applicable

Date	Specimen type	Smear	Culture	Susceptibility	Chest X-ray	Other pertinent labs

Site(s) of disease: ☐ Pulmonary ☐Other(s) specify all_____

Date 1st negative smear ____/____/____ ☐Not yet Date 1st negative culture ____/____/____ ☐Not yet

TB skin test #1:Date ____/____/____ Result ____mm TB skin test #2: Date ____/____/____ Result____mm

Contact/LTBI Information **TB Skin test** ☐Not Done

TST #1 Date ____/____/____ Result _____mm TST#2 Date ____/____/____ Result_____mm

CXR ☐ Not Done Date ____/____/____ ☐Normal ☐Other:_____

Last known exposure to index case ____/____/____ Place/intensity of exposure:_____

Medications π this referred case/suspect π this referred contact/LTBI

Drug	Dose	Start date	Stop date

Planned completion date ____/____/____

DOT ☐No ☐Yes: start date ____/____/____

☐Daily ☐1x W ☐2x W ☐3x W

Last DOT Date ____/____/____

Adherence problems/significant drug side effects:

_____

_____

_____

Comments_____

_____

_____

Case Follow-Up In 30 days report to referring jurisdiction if located or not located and report final outcome.

Other Follow-Up ☐ Follow-up requested (form attached) ☐No follow-up requested

Correctional TB Case and Suspect Reporting Form

Patient's Number: MRN _____ and/or Agency # _____ Name: _____
Last First MI

DOB: ____/____/____ Sex: ☐ Male ☐ Female Alias: _____

C. .ry of Origin: _____ Date Entered U.S. ____/____/____ Date Patient Entered Facility: ____/____/____

Custody/Jurisdiction: ☐ US Marshal USM#_____ ☐ ICE Alien # _____ Other: _____

Initial Clinical Information

1. Chest X-ray/CT Scan: CXR Date: ____/____/____ Result: ☐ Negative ☐ Abnormal ☐ TB Suspect ☐ Cavitary ☐ Non-Cavitary
CT Scan Date: ____/____/____ Result: ☐ Negative ☐ Abnormal ☐ TB Suspect ☐ Cavitary ☐ Non-Cavitary

Specify Reading/Results: _____

2. Patient's TB History Case Status: ☐ New ☐ recurrent (prior history > 12 months prior) ☐ Entered Custody w/ Current TB diagnosis

☐ Prior M.TB Complex Date of previous diagnosis: ____/____/____ ☐ Prior treatment for TB disease Site of Disease: _____
☐ Prior LTBI Date of previous diagnosis: ____/____/____ ☐ Prior LTBI treatment

3. Patient History:

☐ Immunocompromised Yes, please specify: ☐ HIV ☐ AIDS Other: _____ Occupation: _____
☐ Homeless w/in the past year: ☐ Yes ☐ No Unemployed: ☐ Yes ☐ No ☐ Unknown
☐ Chemical Dependent w/in the past year: ☐ Yes ☐No ☐ Unknown
☐ Injecting ☐Non-Injecting ☐ Alcohol

4. Race: ☐ White ☐ American Indian or Native Alaskan ☐ Black ☐ Asian or Pacific Islander **5. Ethnicity:** ☐ Hispanic ☐ Non-Hispanic

6. Symptoms at diagnosis:

☐ No Symptoms Observed
☐ Fever ☐ Cough ☐ Hemoptysis ☐ Weight Loss ☐ Chills ☐ Productive Cough ☐ Night Sweats ☐ Other: _____

7. Airborne Isolation:
D ntered isolation: ____/____/____ Date released: ____/____/____ Location if other than facility: _____

8. PPD: Date Planted: ____/____/____ Date read: ____/____/____ TST result ☐ Positive _____ mm ☐ Negative ☐ not done/read

9. HIV test: Date: ____/____/____ Result: ☐ Positive ☐ Negative ☐ Indeterminate ☐ Refused ☐ Not Done ☐ Pending

10. Sputums Collected: ☐ Yes ☐ No Dates Collected: #1 ____/____/____ #2 ____/____/____ #3 ____/____/____

11. Initial Treatment: Start Date: ____/____/____ ☐ INH ☐ Rifampin ☐PZA ☐ Ethambutol ☐ B6 ☐ Other: _____

12: TB Case Referral:
☐ Enrolled in TB Referral Program ☐ Cure TB ☐ TB Net ☐ Reported to state/local health department Date: ____/____/____

13. Release Status: Date Released ____/____/____ Custody/Jurisdiction: ☐ ICE ☐ USM ☐ Other: _____
Date of Deportation: ____/____/____
Patient released with supply of medication: _____

14. TB Referral Program Contact Information: Date completed: ____/____/____ ☐ Cure TB ☐ TB Net

Patient Information

Address in country of origin:
_____
Address Line 1
_____
Address Line 2
_____
City State Zip Code Telephone

Contact Person #1 in country of origin:
_____
Name Telephone Relationship

Contact Person #2 in country of origin:
_____
Name Telephone Relationship

Contact Person(s) in the U.S.:
_____
Name Telephone Relationship

_____
Name Telephone Relationship

Correctional Facilities Pandemic Influenza Planning Checklist

Planning for pandemic influenza is critical for ensuring a sustainable health care delivery system within correctional facility settings. The Department of Health and Human Services (HHS) has developed the following checklist to help prison and jail systems to self-assess and improve their preparedness for responding to pandemic influenza. Given the differences among systems, individual facilities should adapt this checklist to meet their unique needs. This checklist should be used as one tool in developing an overall pandemic influenza plan for correctional systems as well as individual facilities. Responsible officials should incorporate information from State, regional and local health departments and emergency management agencies/authorities into the system and individual facility pandemic influenza plan. An additional benefit of this planning is that it can be used for other types of disaster preparedness.

All contact information specified below should include the names, titles, and contact information (i.e., office phone and cell phone numbers and e-mail and physical addresses) for individuals or organizations. These sheets should be provided to the system-level office (for prison and large jail systems). Further information can be found at www.pandemicflu.gov. For information on general emergency planning and continuity of operations, see www.ready.gov.

Develop a pandemic influenza preparedness and response plan

Completed	In Progress	Not Started	
☐	☐	☐	Incorporate pandemic influenza preparedness into correctional facility or system disaster planning and exercises. Review Federal, State, and local public health and emergency management agencies' pandemic plans in areas where you operate or have jurisdictional responsibilities. Ensure that your plan is NIMS (National Incident Management System) compliant and align your plan with the local Incident Command System (ICS) and local pandemic influenza plans to achieve a unified approach to incident management. See "State and Local Governments," www.pandemicflu.gov/plan/states/index.html and http://www.fema.gov/emergency/nims/index.shtm.
☐	☐	☐	Assign responsibility for coordinating pandemic influenza preparedness planning to a person with appropriate training and authority. Verify Command and Control areas of responsibility and authority during a pandemic. Develop a plan for back-up if that person becomes ill during a pandemic.

	Pandemic Influenza Preparedness (PIP) Coordinator	Alternate PIP Coordinator
Name		
Title		
Contact Information (Office phone, cell phone, e-mail)		

☐	☐	☐	Form a multidisciplinary planning committee to address pandemic influenza preparedness specifically. Alternatively, pandemic influenza preparedness can be addressed by an existing committee with appropriate skills and knowledge and relevant mission.
☐	☐	☐	Committee Name:_____
☐	☐	☐	Appoint members of the planning committee to include (as applicable in different settings) the representatives listed in the table below:

Committee Representative	Name and Title	Contact Information (office phone, cell phone, e-mail)	Alternate Representative
PIP Coordinator			
Secretary/ Commissioner/ Warden/Sheriff/ Director			
Medical Director			
Health Services Representative(s)			

Develop a pandemic influenza preparedness and response plan *(continued)*

Completed	In Progress	Not Started

Committee Representative	Name and Title	Contact Information (office phone, cell phone, e-mail)	Alternate Representative
Infection control expert			
Environment Health Officer/POC			
Maintenance Director			
Staff Trainer(s)			
Dietary Services Coordinator/Director			
Pharmacist			
Security Coordinator/ Director			
Human Resources Representative			
Communications Director			
Others			

☐ ☐ ☐ Establish points of contact for influenza pandemic preparedness in the local and State health departments (table below is provided as a guide).
(See: http://www.pandemicflu.gov/state/statecontacts.html)

Agency	Contact Name(s) and Title(s)	Contact Information (office phone, cell phone, e-mail)
Local Health Dept.		
State Health Dept.		
State Corrections Dept.		

☐ ☐ ☐ Establish linkages with local, regional or State emergency preparedness groups (table below is provided as a guide).

Emergency Preparedness Groups	Contact Name and Title	Contact Information (office phone, cell phone, e-mail)
City		
County		
Other regional		

☐ ☐ ☐ Identify one or more representatives from acute care hospitals as committee liaisons that may facilitate hospitalization of seriously ill inmates or facilitate transfer of patients into the correctional facility (table below is provided as a guide).

Acute Care Hospital	Liaison(s) Name and Title	Contact Information (office phone, cell phone, e-mail)

Develop a pandemic influenza preparedness and response plan *(continued)*

Completed	In Progress	Not Started	
☐	☐	☐	Designate authority (and back-up individuals) to activate the correctional system pandemic influenza plan.

	Authority
Name	
Title	
Contact Information (Office phone, cell phone, e-mail)	

☐	☐	☐	Set up chain of command and procedures to signal activation of the agency's influenza pandemic response plan, altering operations (e.g., shutting down non-critical operations or operations in affected areas or concentrating resources on critical activities), as well as returning to normal operations.
☐	☐	☐	Ensure all staff are familiar with the local Incident Command System (ICS) and understand the roles and persons assigned within that structure. See http://www.fema.gov/emergency/nims/index.shtm for more information.
☐	☐	☐	Determine the potential impact of a pandemic on the agency or organization by using multiple possible scenarios of varying severity relative to illness, absenteeism, supplies, availability of resources, access to legal system representatives, etc. Incorporate pandemic influenza into agency emergency management planning and exercise.
☐	☐	☐	Obtain relevant sections of the Department of Health and Human Services Pandemic Influenza Plan (available at http://www.hhs.gov/pandemicflu/plan) for incorporation into the system or facility plan, as appropriate.
☐	☐	☐	Obtain copies of available State, regional and local pandemic plans for incorporation into the system or facility plan, as applicable. (When appropriate, facility representatives should participate in development of these plans). (See: http://www.pandemicflu.gov/plan/stateplans.html).
☐	☐	☐	Describe organizational structure that will be used to implement the plan.
☐	☐	☐	Include provisions for timely and periodic review and revision of the plan, including dated history of revisions and clear identification of most current plan.
☐	☐	☐	Include allowances for the administrator or other authorized personnel to modify the plan in response to evolving circumstances that may represent a threat to the well-being and safety of the inmates and/or personnel.
☐	☐	☐	Make sure that the plan checklist includes the date and signature of senior managerial representatives to confirm understanding and general conformity with the plan details.
☐	☐	☐	Submit a completed plan to the Secretary/ Commissioner's Office by [insert date] for review and approval by [insert dates completed and sent for review].

Elements of an Influenza Pandemic Plan for Each System and Facility Should Include the Following:

Completed	In Progress	Not Started	
☐	☐	☐	Assign a person(s) (with a back-up identified) the responsibility for monitoring Federal and State public health advisories using the internet (www.pandemicflu.gov) and other appropriate information sources and to notify the pandemic influenza coordinator and the planning committee (system and facility levels) when pandemic influenza is reported in the United States and when it is reported within the geographic area of the correctional facility.

	Responsible Person	Alternate
Name		
Title		
Contact Information (Office phone, cell phone, e-mail)		

Elements of an Influenza Pandemic Plan for Each System and Facility Should Include the Following: *(continued)*

Completed	In Progress	Not Started	
			A plan for surveillance (monitoring) and detection of seasonal and pandemic influenza in inmates and staff (see www.hhs.gov/pandemicflu/plan/sup1.html). The plan should ensure:
☐	☐	☐	Develop a written protocol for monitoring seasonal influenza-like illness in inmates and staff (i.e., weekly or daily number of inmates and staff with influenza-like illness). See: http://www.cdc.gov/flu/professionals/diagnosis/. Institute a system for tracking illness trends during seasonal influenza to ensure that the facility can detect stressors that may affect operating capacity, including staffing and supply needs, during a pandemic.
☐	☐	☐	Create a protocol for the detection, evaluation, diagnosis and treatment of inmates and personnel with symptoms of pandemic influenza. (see: http://www.hhs.gov/pandemicflu/plan/sup5.html).
☐	☐	☐	Institute a system to monitor and internally review transmission of pandemic influenza among inmates and staff in the facility. Information from this monitoring system is used to implement containment measures (e.g., isolation, cohorting).
			A communication plan. See: http://www.hhs.gov/pandemicflu/plan/sup10.html.
☐	☐	☐	Assign responsibility for communication with public health authorities and within the corrections system for planning and response.

	Responsible Person	Alternate
Name		
Title		
Contact Information (Office phone, cell phone, e-mail)		

☐	☐	☐	Develop a list of local hospitals/health facilities, emergency medical services, commercial and clinical laboratories, relevant community organizations (including those involved with disaster preparedness) and update as necessary including points of contact to facilitate communication across organizational lines during pandemic conditions. (Attach a copy to the pandemic plan).
☐	☐	☐	Assign responsibility for communication with inmates, staff, and the community regarding the status and impact of pandemic influenza in the facility. Develop a plan for back-up if that person becomes ill during a pandemic. Having one voice that speaks for the facility during a pandemic will help ensure the delivery of timely and accurate information.
☐	☐	☐	Ensure that communications are available in appropriate formats for individuals with disabilities (e.g., visual or hearing impairments) and limited English proficiency.
			An education and training plan. Each system and each facility should develop or obtain an education and training program to ensure that all personnel understand the implications of, and control measures for, pandemic influenza and the current system/facility and community response plans.
☐	☐	☐	Designate responsibility for coordinating education and training on pandemic influenza, including identifying and facilitating access to available programs, as well as tracking which personnel have completed the training.
☐	☐	☐	Identify existing and potential sources for alternative training options such as Web casts, DVD, CD-ROM and local training programs conducted by the health department, area hospitals, local colleges or trade schools for clinical and non-clinical education for corrections staff. (See: http://www.cdc.gov/flu/professionals/training/).
☐	☐	☐	Identify or develop language, format (i.e., prepared for individuals with visual, hearing or other disabilities), and reading-level appropriate materials (e.g., brochures, pamphlets) to supplement and support education and training programs of personnel and inmates. (See www.cdc.gov/flu/groups.htm and www.cdc.gov/flu/professionals/infectioncontrol/index.htm).
☐	☐	☐	Ensure that education and training includes information on infection control measures to prevent the spread of pandemic influenza, such as hand hygiene and sneeze/cough etiquette.
☐	☐	☐	Pre-identify, perform background checks, credential and train personnel who will be brought in for surge capacity.
			An infection control plan for managing inmates and visitors with pandemic influenza that includes the following:
☐	☐	☐	Create policies and procedures for cohorting inmates with known or suspected pandemic influenza using one or more of the following strategies: 1) Confining ill and exposed inmates to their cells, 2) Placing inmates with symptoms of pandemic influenza together in one area of the facility, or closing off units that have symptomatic inmates. Policies and protocols for restricting staff who are assigned to work on affected units from working on other units.

Elements of an Influenza Pandemic Plan for Each System and Facility Should Include the Following: *(continued)*

Completed	In Progress	Not Started	
☐	☐	☐	Develop policies and procedures for handling intake, influenza screening, processing and placement of new inmates with known or suspected pandemic influenza.
☐	☐	☐	Design an infection control policy for the use of recommended personal protective equipment and infection control measures for staff. (See: http://www.hhs.gov/pandemicflu/plan/sup4.html)
☐	☐	☐	Develop procedures for implementing respiratory hygiene/cough etiquette for staff and inmates throughout the facility. (See: www.cdc.gov/flu/professionals/infectioncontrol/resphygiene.htm and the Community Mitigation guidance at http://www.pandemicflu.gov/plan/community/mitigation.html.)
☐	☐	☐	Specify criteria and protocols for appropriately closing the facility to new admissions, including notification of feeder jails and reception (intermediary classification and assessment) centers.
☐	☐	☐	Develop criteria and procedures for transfer of inmates with known or suspected pandemic influenza to hospitals, if it becomes necessary. Policies and procedures for clinical management of inmates who need hospitalization but must remain in the facility due to limited hospital beds.
☐	☐	☐	Plan for discharging released inmates with known or suspected pandemic influenza
☐	☐	☐	Develop criteria and protocols for limiting non-essential visitors, including an education and communication strategy for visitors, especially those traveling long distances. Include policies and procedures for pandemic influenza screening of all persons coming into the facility.
			A plan for the impact of a pandemic on your employees that includes the following: (See: www.hhs.gov/pandemicflu/plan/sup11.html and the Community Mitigation guidance at http://www.pandemicflu.gov/plan/community/mitigation.html.)
☐	☐	☐	Develop contingency plans for 30 – 40% employee absences. Keep in mind that absences may occur due to personal illness, family member illness, community mitigation measures, quarantines, school, childcare, or business closures, public transportation disruptions, or fear of exposure to ill individuals, as well as first responder, National Guard, or military reserve obligations.
☐	☐	☐	Identify critical job functions and plan now for to cover those functions in case of prolonged absenteeism during a pandemic. Develop succession plans for each critical agency position to ensure the continued effective performance of your organization by identifying and training replacements for key people when necessary. These replacements should be integrated into employee development activities, and should include critical contracted services as well.
☐	☐	☐	As necessary, plan for cross-training employees, use of auxiliary personnel and recent retirees, recruiting temporary personnel during a crisis, or establishing flexible worksite options (e.g., telecommuting) and flexible work hours (e.g., staggered shifts) if appropriate.
☐	☐	☐	Develop a mechanism for employees to immediately report their own possible influenza illness during a pandemic (24/7).
☐	☐	☐	Establish compensation and leave policies that strongly encourage ill workers to stay home until they are no longer contagious. During a pandemic, employees with influenza-like symptoms (such as fever accompanied by sore throat, muscle aches and cough) should not enter the worksite to keep from infecting other workers. Employees who have been exposed to someone with influenza, particularly ill members of their household, may also be asked to stay home and monitor their symptoms.
☐	☐	☐	Employees who develop influenza-like symptoms while at the worksite should leave as soon as possible. Explore the availability of resources for testing for influenza in coordination with local and State health departments. Consult with State and local public health authorities regarding appropriate treatment for ill employees. Prepare policies that will address needed actions when an ill employee refuses to stay away from work. Federal agencies can consult guidance provided by the Office of Personnel Management (OPM) at www.opm.gov/pandemic.
☐	☐	☐	Develop policies that focus on preventing the spread of respiratory infections in the workplace. This policy might include social distancing practices, the promotion of respiratory hygiene/cough etiquette, and appropriate attention to environmental hygiene and cleaning. (For more information see www.pandemicflu.gov and http://www.pandemicflu.gov/plan/community/mitigation.html as well as OPM's guidance at www.opm.gov/pandemic.)
☐	☐	☐	Provide educational programs and materials (language, culture, and reading-level appropriate) to personnel on: • pandemic fundamentals (e.g., signs and symptoms of influenza, modes of transmission, medical care) See www.pandemicflu.gov, www.cdc.gov/flu/protect/stopgerms.htm, http://www.cdc.gov/flu/protect/covercough.htm., and www.cdc.gov/flu/professionals/infectioncontrol/resphygiene.htm. • personal and family protection and response strategies (e.g., hand hygiene, coughing/sneezing etiquette, etc.). Post instructional signs that illustrate correct infection control procedures in all appropriate locations, including offices, restrooms, waiting rooms, processing rooms, detention facilities, vehicles, etc. See www.pandemicflu.gov, www.cdc.gov/flu/protect/stopgerms.htm, http://www.cdc.gov/flu/protect/covercough.htm., and • community mitigation interventions (e.g., social distancing, etc.) http://www.pandemicflu.gov/plan/community/mitigation.html.

Elements of an Influenza Pandemic Plan for Each System and Facility Should Include the Following: *(continued)*

Completed	In Progress	Not Started	
☐	☐	☐	Provide information to employees to help them and their families prepare and plan for a pandemic. See www.pandemicflu.gov/plan/individual/index.html
☐	☐	☐	Identify employees who may need to stay home if schools dismiss students and childcare programs close for a prolonged period of time (up to 12 weeks) during a severe pandemic. Advise employees not to bring their children to the workplace if childcare cannot be arranged. Plan for alternative staffing or staffing schedules on the basis of your identification of employees who may need to stay home.
☐	☐	☐	Provide training for law enforcement officers, office managers, medical or nursing personnel, and others as needed for performance of assigned emergency response roles. Identify a training coordinator and maintain training records.
☐	☐	☐	Stock recommended personal protective equipment (PPE) and environmental infection control supplies and make plans to distribute to employees, contractors, and others (including detainees) as needed. These supplies should include tissues, waste receptacles, single-use disinfection wipes, and alcohol-based hand cleaner (containing at least 60% alcohol). EPA registered disinfectants labeled for human influenza A virus may be used for cleaning offices, waiting rooms, bathrooms, examination rooms, and detention facilities. PPE may include gloves, surgical masks and respirators (disposable N95s or higher respirators or reusable respirators), eye protection, pocket masks (for respiratory resuscitation) and protective cover wear (e.g., impervious aprons). The specific uses for the above supplies will be advised by State and local health officials during a pandemic. Further information can be found at www.pandemicflu.gov. and at http://www.osha.gov/Publications/OSHA3327pandemic.pdf
☐	☐	☐	Work with State and/or local public health to develop a plan for distribution of pandemic influenza vaccine and antiviral medications to personnel. See current HHS recommendations for pandemic influenza vaccine and antiviral use at http://www.hhs.gov/pandemicflu/plan/sup6.html and http://www.hhs.gov/pandemicflu/plan/sup7.html.
☐	☐	☐	Encourage and track seasonal influenza vaccination for employees every year. See www.cdc.gov/flu/protect/preventing.htm. Encourage all employees and their families to be up-to-date on all adult and child vaccinations recommended by the Advisory Committee on Immunization Practices. See www.cdc.gov/nip/recs/adult-schedule.htm and www.cdc.gov/nip/recs/child-schedule.htm.
☐	☐	☐	Evaluate employee access to and availability of health care, mental health, social services, community, and faith-based resources during a pandemic, and improve services as needed. See www.hhs.gov/pandemicflu/plan/sup11.html.
☐	☐	☐	Develop a plan for managing personnel who are at increased risk for influenza complications (e.g., pregnant women, immunocompromised workers) by placing them on administrative leave, altering their work location, or other appropriate alternatives during a pandemic health crisis, consistent with the EEO laws.
			A vaccine and antiviral use plan, including:
☐	☐	☐	Refer to web sites containing current CDC and State health department recommendations and guidance for the use, availability, access and distribution of vaccines and antiviral medications during a pandemic. For more information, see: www.hhs.gov/pandemicflu/plan/sup6.html and www.hhs.gov/pandemicflu/plan/sup7.html.
☐	☐	☐	Develop policies and a plan that addresses prioritization of personnel and inmates to be vaccinated or treated based on the availability of vaccines, antiviral medications, and other limited quantity treatment or prophylaxis, consistent with HHS guidance and State health department recommendations (see: www.hhs.gov/pandemicflu/plan/appendixd.html).
☐	☐	☐	Establish an implementation plan for rapid delivery of vaccines, antiviral treatments, and prevention strategies for staff and inmates based on the preceding prioritization strategy.
			A plan to address concerns related to surge capacity during a pandemic including staffing and supply issues. The plan should:
☐	☐	☐	Develop a staffing plan that specifies the minimum number and categories of personnel necessary to maintain the operation of the prison or jail, based on inmate census and the need to provide medical and nursing care in a safe manner.

Elements of an Influenza Pandemic Plan for Each System and Facility Should Include the Following: *(continued)*

Completed	In Progress	Not Started	
☐	☐	☐	Assign responsibility for assessing day-to-day staffing and other needs during an influenza pandemic to someone with proper authority and training.

	Responsible Person
Name	
Title	
Contact Information (office phone, cell phone, e-mail)	

☐	☐	☐	Define criteria for declaring a "staffing crisis" that would enable the use of emergency staffing alternatives.
☐	☐	☐	Include protocols for mandatory security and medical staff overtime within applicable State law or system regulations. Assess the value of voluntary emergency staffing agreements, preferably written, with medical and clinical staff members for all-cause disasters prior to implementing mandatory staffing.
☐	☐	☐	Address facilities that use contracted medical staffing. Arrangements should be made for voluntary or mandatory crisis staffing on a collaborative basis. Contract providers do not have the same authority as the State to require mandatory overtime, so cooperative planning is necessary.
☐	☐	☐	Provide cross training of facility staff to help sustain operating capacity.
☐	☐	☐	Include linkages to local and regional planning and response groups to collaborate on addressing widespread healthcare staffing shortages during a crisis.
☐	☐	☐	Estimate consumable resource needs (e.g., masks, gloves, hand hygiene products) for approximately six to eight weeks and consider stockpiling these quantities depending on storage capacity, purchasing flexibility, and other facility-specific considerations.
☐	☐	☐	Develop a primary plan and contingency plan to address supply shortages, including detailed procedures for the pre-pandemic acquisition of supplies through normal channels as well as procedures for replenishing supplies under crisis conditions.
			Development of a strategy to help increase health care bed capacity in the community, if feasible. Plans should consider:
☐	☐	☐	Identification of potential problems and concerns associated with temporary use of facility space for acute care beds and develop strategies for addressing these issues with both security and medical personnel in advance of need.
☐	☐	☐	Identification of areas within the facility that could be used to create additional acute care beds for expanded health care capacity; discuss availability with local and regional planning groups.
☐	☐	☐	Signed transfer agreements with hospitals and/or other providers for the facility to accept non-influenza patients, if applicable, to enable hospitals to focus on the most seriously ill patients with pandemic influenza.
			Development of a strategy for handling and storing increased numbers of deceased persons, including communications plans for contacting appropriate family members or others regarding disposition of remains. The plan should:
☐	☐	☐	Address expanding morgue capabilities with local hospitals and other relevant institutions.
☐	☐	☐	Identify an area in the facility that could be used as a temporary morgue.
			Coordinate your plan with other agencies and organizations
☐	☐	☐	Review your pandemic influenza preparedness and response plan with key stakeholders inside and outside the agency, including employee representatives, and determine opportunities for collaboration, modification of the plan, and the development of complementary responsibilities.
☐	☐	☐	Share preparedness and response plans with other correctional agencies and law enforcement support agencies in your community, region or State in order to share resources, identify collaboration strategies, and improve community response efforts. Develop, review, and modify local and State mutual aid agreements, if necessary. Mutual aid during an influenza pandemic can not be counted on as multiple jurisdictions in a given region may be affected simultaneously and have limited aid to offer.

Elements of an Influenza Pandemic Plan for Each System and Facility Should Include the Following: *(continued)*

Completed	In Progress	Not Started	
☐	☐	☐	Coordinate all requests for assistance with the next higher level governmental entity (e.g., local officials coordinate with State officials, State officials coordinate with Federal officials). Coordination is essential to ensure the assets: (1) can be provided in accordance with existing laws, (2) the requested resources are available. During a pandemic influenza, assistance from the next higher level of government may be limited due to competing higher priority demands and the effects of the influenza pandemic on these assets.
☐	☐	☐	Integrate planning with emergency service and criminal justice organizations such as courts, law enforcements, probation and parole, social services, multi-jurisdictional entities, public works, and other emergency management providers (fire, EMS, mutual aid, etc.).
☐	☐	☐	Security functions are essential during a pandemic influenza. Through your city or county attorney, corporation counsel or other appropriate authority, collaborate with the Office of the State Attorney General to clarify and review security needs and resources available to your facility.
☐	☐	☐	Identify local or regional entities, such as health-care agencies, community organizations, businesses, or critical infrastructure sites, to determine potential collaboration opportunities. This collaboration might involve situational awareness, exercises or drills, or public safety training.
☐	☐	☐	Collaborate with local and/or State public health agencies to assist with the possible investigation of contacts within a suspected outbreak, the enforcement of public health orders, as well as the provision of security, protection, and possibly, critical supplies to quarantined persons. Each law enforcement agency will need to interact with local, State, county, and tribal public health officials to define the extent of the authorities provided from State legislation, develop procedures for the local initiation, implementation, and use of those authorities, as well as define protections from liability for law enforcement that may arise from quarantine and isolation enforcement. Operational planning must be flexible enough to address all scenarios in an all hazards environment, and in light of emerging infectious diseases.

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TB in Correctional Facilities in the United States

Background

TB in correctional settings is a public health concern. Approximately 4-6% of TB cases reported in the United States occur among people incarcerated at the time of diagnosis. The incarcerated population contains a high proportion of people at greater risk for TB than the overall population.

Risk factors contributing to the high rate of TB in correctional facilities include:

- The physical structure of correctional facilities that can include close living quarters, overcrowding, and the potential for inadequate ventilation;
- Interruption of therapy caused by the movement of inmates into and out of facilities, and inmates returning to the community;
- Language and cultural barriers, including lack of access to health information and stigma associated with the disease; and
- Relatively high rates of human immunodeficiency virus (HIV) infection among inmates who if co-infected with TB bacteria, are at high risk for progressing from latent TB infection (http://www.cdc.gov/tb/topic/basics/default.htm#ltbi) to TB disease (http://www.cdc.gov/tb/topic/basics/default.htm#activetb). In addition to HIV, other underlying medical conditions may increase the risk that latent TB infection will progress to TB disease.

TB Control in Correctional Facilities

TB control can be particularly problematic in correctional facilities, in which persons from diverse backgrounds and communities are housed in close proximity for varying periods.

Effective TB prevention and control measures in correctional facilities include:

- Early identification of persons with TB disease through entry and periodic follow-up screening;
- Successful treatment of TB disease and latent TB infection;
- Appropriate use of airborne precautions (e.g., airborne infection isolation, environmental controls, and respiratory protection);
- Comprehensive discharge planning; and
- Thorough and efficient contact investigations when a TB case has been identified.

These measures should be instituted in close collaboration with local or state health department TB-control programs and other key partners. Continuing education of inmates, detainees, and correctional facility staff is necessary to maximize cooperation and participation. To ensure TB prevention and control measures are effective, periodic program evaluation should be conducted.

Data on TB in Correctional Facilities

- Surveillance data
  - Tuberculosis Cases and Percentages by Residence in Correctional Facilities, Age> 15: Reporting Areas, 2010 (Reported Tuberculosis in the United States, 2010). (http://wwwdev.cdc.gov/tb/topic/populations/correctional/Table29.pdf)
    This chart provides an overview of the number of TB cases reported as diagnosed in correctional settings in the U.S. and a breakdown by state.
  - Correctional Population in the United States, 2010 (United States Department of Justice, Bureau of Justice Statistics, 2011).
    - Table 1: Estimated number of persons supervised by adult correctional systems, by correctional status, 2000 and 2005-1010. (http://bjs.ojp.usdoj.gov/content/pub/pdf/cpus10.pdf#page=3) (http://www.cdc.gov/Other/disclaimer.html)
      This table provides an overview of the estimated numbers of persons incarcerated in the United States between 2000 and 2010.

CDC Resources on TB and Correctional Facilities

- CDC Correctional and Public Health Resources by State (http://www.cdc.gov/correctionalhealth/map.html)

- CDC Recommendations
  - Prevention and Control of Tuberculosis in Correctional and Detention Facilities; Recommendations from CDC (http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5509a1.htm) *MMWR* 2006; 55 (No, RR -09, 1-44)
  - Prevention and Control of Tuberculosis in Correctional and Detention Facilities (http://www.cdc.gov/tb/publications/slidesets/corrections/default.htm) (Slide Set)

- Basic TB Information
  - TB Facts Series
    - English Version (http://www.cdc.gov/tb/publications/factsheets/general.htm)
    - Spanish Version (http://www.cdc.gov/tb/esp/publications/factsheets/general.htm)
  - Questions and Answers about Tuberculosis
    - English Version (http://www.cdc.gov/tb/publications/faqs/default.htm)
    - Spanish Version (http://www.cdc.gov/tb/esp/publications/faqs/default.htm)

For additional CDC resources on TB, see Patient and General Public Materials (http://www.cdc.gov/tb/education/patient_edmaterials.htm) and Health Care Providers and TB Program Materials (http://www.cdc.gov/tb/education/provider_edmaterials.htm).

Related Links

- American Correctional Association (http://www.aca.org/) (http://www.cdc.gov/Other/disclaimer.html)
- Federal Bureau of Prisons (http://www.bop.gov/) (http://www.cdc.gov/Other/disclaimer.html)
- National Commission on Correctional Healthcare (http://www.ncchc.org/) (http://www.cdc.gov/Other/disclaimer.html)

- National Institute of Corrections (http://nicic.gov/) (http://www.cdc.gov/Other/disclaimer.html)
- National Institute of Justice (http://www.nij.gov/) (http://www.cdc.gov/Other/disclaimer.html)
- National TB Controllers Association (http://www.tbcontrollers.org/ntca-2/committees/corrections/) (http://www.cdc.gov/Other/disclaimer.html) (Corrections Committee)
- United States Department of Justice (http://www.justice.gov/) (http://www.cdc.gov/Other/disclaimer.html)
- United States Immigration and Customs Enforcement (http://www.ice.gov/) (http://www.cdc.gov/Other/disclaimer.html)

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Content source: Division of Tuberculosis Elimination

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International Travelers

In many countries, TB is much more common than in the United States. TB is a serious international public health problem. Although multidrug-resistant (MDR) (../../drtb/default.htm#mdr) and extensively drug-resistant (XDR) TB (../../drtb/default.htm#xdr) are occurring globally, they are still rare. HIV-infected travelers are at greatest risk if they come in contact with a person with MDR or XDR TB. All travelers should avoid high risk settings where there are no infection control measures in place.

Documented places where transmission has occurred include crowded hospitals, prisons, homeless shelters, and other settings where susceptible persons come in contact with persons with TB disease.

Air travel itself carries a relatively low risk of infection with TB of any kind.

- TB Information for International Travelers (fact sheet) (../../../publications/factsheets/general/tbtravelinfo.htm)

Related Links

- TB Guidance for Haiti Earthquake Responders (../../../NewsandAnnoucements/earthquakes.htm)
- CDC Health Information for International Travel (http://wwwn.cdc.gov/travel/default.aspx)
  - Tuberculosis (http://wwwn.cdc.gov/travel/yellowBookCh4-TB.aspx)
  - Illness and Injury Abroad (http://wwwn.cdc.gov/travel/content/illness-injury-abroad.aspx)
- Registration of Traveler Emergency Contact and Itinerary Information (http://wwwn.cdc.gov/travel/contentRegisterContactInfo.aspx)
- Tuberculosis and Air Travel: Guidelines for Prevention and Control (WHO) (http://whqlibdoc.who.int/hq/2006/WHO_HTM_TB_2006.363_eng.pdf) (http://www.cdc.gov/Other/disclaimer.html) (PDF)

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TB and HIV Coinfection

Even though fewer people in the United States have tuberculosis (TB), it remains a serious threat, especially for people living with HIV. People living with HIV are more likely than others to become sick with TB. Worldwide, TB is one of the leading causes of death among people living with HIV.

Without treatment, as with other opportunistic infections, HIV and TB can work together to shorten lifespan.

- Someone with untreated latent TB infection (../basics/default.htm#ltbi) and HIV infection is **much more** likely to develop TB disease (../basics/default.htm#activetb) during his or her lifetime than someone without HIV infection.
- Among people with latent TB infection, HIV infection is the strongest known risk factor for progressing to TB disease.
- A person who has both HIV infection and TB disease has an AIDS-defining condition.

People infected with HIV who also have either latent TB infection or TB disease can be effectively treated. The first step is to ensure that people living with HIV are tested for TB infection. If found to have TB infection, further tests are needed to rule out TB disease. The next step is to start treatment for latent TB infection or TB disease based on test results.

Treatment

Untreated latent TB infection can quickly progress to TB disease in people living with HIV since the immune system is already weakened. And without treatment, TB disease can progress from sickness to death.

Fortunately, there are a number of treatment options for people living with HIV who also have either latent TB infection or TB disease. Consult with your state or local health department (../../links/tboffices.htm) for treatment options.

- Treatment of Drug-Susceptible Tuberculosis Disease in HIV-Infected Persons (../../publications/factsheets/treatment/treatmentHIVpositive.htm) (Fact sheet)

Related Links

For Patients

- Take steps to control TB when you have HIV (../../publications/pamphlets/TB&HIV_EN.pdf) (Pamphlet) (PDF-1.3 MB)
- Tuberculosis - The Connection between TB and HIV (The AIDS Virus) (../../publications/pamphlets/tbandhiv_eng.htm) (Pamphlet)
- TB and HIV/AIDS (../../publications/factsheets/testing/HIVscreening.htm) (Fact sheet)
- TB and HIV Coinfection (Video) (tbhiv_video.htm)
- TB Testing for People Living with HIV (Podcast) (http://www2c.cdc.gov/podcasts/player.asp?f=8624584)
- Questions and Answers About TB (../../publications/faqs/default.htm)

For Health Care Providers

- TB and HIV Coinfection (../../publications/pamphlets/TB_HIVcoinfection/default.htm) (Brochure)
- Managing Drug Interactions in the Treatment of HIV-Related Tuberculosis (../../publications/guidelines/TB_HIV_Drugs/default.htm)
- TB and HIV/AIDS Guidelines (../../publications/guidelines/HIV_AIDS.htm)
- TB and HIV/AIDS Fact sheets (../../publications/factsheets/specpop.htm)
- TB Treatment Guidelines (../../publications/guidelines/treatment.htm)

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MRSA FACT SHEET

What is MRSA?

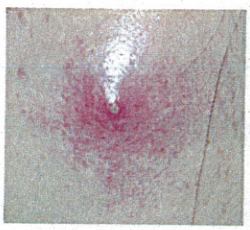
MRSA is methicillin-resistant *Staphylococcus aureus*, a potentially dangerous type of staph bacteria that is resistant to certain antibiotics and may cause skin and other infections. As with all regular staph infections, recognizing the signs and receiving treatment for MRSA skin infections in the early stages reduces the chances of the infection becoming severe. MRSA is spread by:

- Having direct contact with another person's infection
- Sharing personal items, such as towels or razors, that have touched infected skin
- Touching surfaces or items, such as used bandages, contaminated with MRSA

What are the signs and symptoms?

Most staph skin infections, including MRSA, appear as a bump or infected area on the skin that may be:

- Red
- Swollen
- Painful
- Warm to the touch
- Full of pus or other drainage
- Accompanied by a fever



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http://phil.cdc.gov

What if I suspect an MRSA skin infection?

Cover the area with a bandage and contact your healthcare professional. It is especially important to contact your healthcare professional if signs and symptoms of an MRSA skin infection are accompanied by a fever.

How are MRSA skin infections treated?

Treatment for MRSA skin infections may include having a healthcare professional drain the infection and, in some cases, prescribe an antibiotic. Do not attempt to drain the infection yourself – doing so could worsen or spread it to others. If you are given an antibiotic, be sure to take all of the doses (even if the infection is getting better), unless your healthcare professional tells you to stop taking it.

How can I protect my family from MRSA skin infections?

- Know the signs of MRSA skin infections and get treated early
- Keep cuts and scrapes clean and covered
- Encourage good hygiene such as cleaning hands regularly
- Discourage sharing of personal items such as towels and razors

For more information, please call 1-800-CDC-INFO or visit www.cdc.gov/MRSA.

Developed with support from the CDC Foundation through an educational grant from Pfizer Inc.

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Prevention of MRSA Infections in Correctional Facilities

Advice for Inmates

Inmates can protect themselves and others from staph infection, including MRSA, by following the personal prevention steps. (personal.html)

Inmates who frequent the athletic facilities can read more on the Preventing MRSA in Athletic Facilities (athletic.html) page.

Facility Management

Please refer to the BOP [Federal Bureau of Prisons] Clinical Practice Guidelines for the Management of Methicillin-Resistant *Staphylococcus aureus* (MRSA) Infections [PDF - 43 pages] (http://www2a.cdc.gov/ncidod/hip/dhqplinkdisclaimer.asp?a_gotolink=http://www.bop.gov/news/PDFs/mrsa.pdf) February 2010

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Content source: Centers for Disease Control and Prevention
National Center for Emerging and Zoonotic Infectious Diseases (NCEZID)
Division of Healthcare Quality Promotion (DHQP)

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Personal Prevention of MRSA Skin Infections

Protect yourself through good hygiene.

The key to preventing MRSA infections is for everyone to practice good hygiene:

1. Keep your hands clean by washing thoroughly with soap and water or using an alcohol-based hand rub.
2. Keep cuts and scrapes clean and covered with a bandage until healed.
3. Avoid contact with other people's wounds or bandages.
4. Avoid sharing personal items such as towels or razors.

Prevent the spread of MRSA if you have it.

Prevent spreading MRSA skin infections to others by following these steps:

1. **Cover your wound.**
   Keep wounds that are draining, or have pus, covered with clean, dry bandages until healed. Follow your healthcare provider's instructions on proper care of the wound. Pus from infected wounds can contain staph, including MRSA, so keeping the infection covered will help prevent the spread to others. Bandages and tape can be discarded with the regular trash.
2. **Clean your hands.**
   You, your family, and others in close contact should wash their hands frequently with soap and water or use an alcohol-based hand rub, especially after changing the bandage or touching the infected wound.
3. **Do not share personal items.**
   Avoid sharing personal items, such as towels, washcloths, razors, clothing, or uniforms, that may have had contact with the infected wound or bandage. Wash sheets, towels, and clothes that become soiled with water and laundry detergent. Use a dryer to dry clothes completely.
4. **Maintain a clean environment**
   Establish cleaning procedures for frequently touched surfaces and surfaces that come into direct contact with your skin.
5. **Talk to your doctor.**
   Tell any healthcare providers who treat you that you have or had a staph or MRSA skin infection. There are things that can be done to protect people that carry staph/MRSA from getting an infection or spreading it to others when they are in the hospital or have surgery.

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Prevention of MRSA Infections in Athletic Facilities

Improve Hygiene Among Athletes

- Refer athletes to the Information & Advice for Athletes (../groups/advice-for-athletes.html) page.
- Make sure supplies are available to comply with prevention measures (e.g., soap in shower and at sinks, bandages for covering wounds, hand hygiene such as alcohol-based hand rubs).
- Enforce policies and encourage practices designed to prevent disease spread. Make sure athletes:
  - keep wounds covered and contained
  - shower immediately after participation
  - shower before using whirlpools
  - wash and dry uniforms after each use
  - report possible infections to coach, athletic trainer, school nurse, other healthcare providers, or parents.

Cleaning & Disinfecting Athletic Facilites

Detailed information can be found on the Cleaning & Disinfecting Athletic Facilities for MRSA (../environment/athleticFacilities.html) page.

Excluding Athletes with MRSA Infections from Participation

- If sport-specific rules do not exist, in general, athletes should be excluded if wounds cannot be properly covered during participation.
  - The term "properly covered" means that the skin infection is covered by a securely attached bandage or dressing that will contain all drainage and will remain intact throughout the activity. If wounds can be properly covered, good hygiene measures should be stressed to the athlete such as performing hand hygiene before and after changing bandages and throwing used bandages in the trash.
- A healthcare provider might exclude an athlete if the activity poses a risk to the health of the infected athlete (such as injury to the infected area), even though the infection can be properly covered.
- Athletes with active infections or open wounds should not use whirlpools or therapy pools not cleaned between athletes and other common-use water facilities like swimming pools until infections and wounds are healed.

Additional Resources:

- For Athletes: Information and Advice (../groups/advice-for-athletes.html)
- For Coaches & Athletic Directors: Information and Advice (../groups/advice-for-coaches.html)
- For Team Healthcare Providers: Information and Advice (../groups/advice-for-team-healthcare.html)

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Institutional Settings

Scabies outbreaks have occurred among patients, visitors, and staff in institutions such as nursing homes, long-term care facilities, and hospitals. Such outbreaks frequently are the result of delayed diagnosis and treatment of crusted (Norwegian) scabies in debilitated, immunocompromised, institutionalized, or elderly persons. The characteristic itching and rash of scabies can be absent in such persons, leading to frequent misdiagnosis and delayed or inadequate treatment and continued transmission. Scabies often is not recognized until it begins to appear among staff and other patients at the institution.

Local and/or state health departments may be able to provide guidelines for preventing and controlling scabies outbreaks.

Suggested Guidelines

- Prevention (/parasites/scabies/health_professionals/prevent.html)
- Control (/parasites/scabies/health_professionals/control.html)
- Single Case (/parasites/scabies/health_professionals/single.html)
- Multiple Cases (/parasites/scabies/health_professionals/multiple.html)
- Crusted Scabies Cases (/parasites/scabies/health_professionals/crusted.html)

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Content source: Global Health - Division of Parasitic Diseases and Malaria

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Prevention

Early detection, treatment, and implementation of appropriate isolation and infection control practices are essential in preventing scabies outbreaks. Institutions should maintain a high index of suspicion that undiagnosed skin rashes and conditions may be scabies, even if characteristic signs or symptoms of scabies are absent (e.g. no itching). New patients and employees should be screened carefully and evaluated for any skin conditions that could be compatible with scabies. The onset of scabies in a staff person who has had scabies before can be an early warning sign of undetected scabies in a patient. Skin scrapings should be obtained and examined carefully by a person who is trained and experienced in identifying scabies mites. Appropriate isolation and infection control practices (e.g. gloves, gowns, avoidance of direct skin-to-skin contact, etc.) should be used when providing hands-on care to patients who might have scabies. Epidemiologic and clinical information about confirmed and suspected scabies patients should be collected and used for systematic review in order to facilitate early identification of and response to potential outbreaks.

Most recent reports recommend an aggressive approach to preventing and controlling scabies in institutions, particularly when crusted (Norwegian) scabies is confirmed or suspected.

Related Links

For Health Professionals and Institutional Staff

- Medications (/parasites/scabies/health_professionals/meds.html)
- References: Scabies In Institutions (/parasites/scabies/publications.html#institutions)

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Control

A scabies outbreak suggests that transmission has been occurring within the institution for several weeks to months — thus increasing the likelihood that some infested staff or patients may have had time to spread scabies elsewhere in the community, including to other facilities. Measures to control scabies in an institution depend on factors such as how many cases are diagnosed or suspected, how long infested persons have been at the institution while undiagnosed and/or unsuccessfully treated, and whether any of the cases are crusted (Norwegian) scabies. Because it is so highly transmissible, crusted scabies requires rapid and aggressive detection, diagnosis, infection control, and treatment measures to prevent and control spread.

The local health department should be notified of any outbreak that may have community implications, including possible spread by patients or staff to other institutions.

Control measures for a single case of non-crusted scabies (/parasites/scabies/health_professionals/single.html) should consist of heightened surveillance for early detection of new cases, proper use of infection control measures when handling patients (e.g. avoidance of direct skin-to-skin contact, handwashing, etc.), confirmation of the diagnosis of scabies, early and complete treatment and follow-up of cases, and prophylactic treatment of staff, other patients, and household members who had prolonged skin-to-skin contact with suspected and confirmed cases. Skin-to-skin contact with scabies patients should be avoided for at least 8 hours after treatment.

Control measures for multiple cases of non-crusted scabies (/parasites/scabies/health_professionals/multiple.html) should consist of heightened surveillance for early detection of new cases, proper use of infection control measures when handling patients (e.g. avoidance of direct skin-to-skin contact, handwashing, etc.), confirmation of the diagnosis of scabies, early and complete treatment and follow-up of cases, and prophylactic treatment of staff, other patients, and household members who had prolonged skin-to-skin contact with suspected and confirmed cases. Skin-to-skin contact with scabies patients should be avoided for at least 8 hours after treatment. In addition, an institution-wide information program should be implemented to instruct all management, medical, nursing, and support staff about scabies, the scabies mite, and how scabies is and is not spread. Epidemiologic and clinical data should be reviewed to determine the extent of the outbreak and risk factors for spread.

Control measures for an outbreak involving one or more cases of crusted scabies (/parasites/scabies/health_professionals/crusted.html) should involve rapid and aggressive detection, diagnosis, infection control, and treatment measures because this form of scabies is so highly transmissible. Unrecognized crusted scabies often is the source of institutional outbreaks of scabies. Infection control personnel and dermatologists should be involved as soon as scabies is suspected in an institution. An institution-wide information program should be implemented to instruct all management, medical, nursing, and support staff about scabies, the scabies mite, and how scabies is and is not spread.

Until successfully treated, patients with crusted scabies should be isolated from other patients who do not have crusted scabies. Assigning a cohort of caretakers to care only for patients with crusted scabies can reduce the potential for further transmission. Direct skin-to-skin contact between a patient with crusted scabies and his/her caretakers and visitors should be eliminated by following strict contact precautions, including the use of protective garments such as gowns, gloves, and shoe covers. The patient's room should be cleaned thoroughly. Bedding and clothing used by a person with scabies should be machine-laundered using the hot water and hot dryer cycles.

All staff, volunteers, and visitors who may have been exposed to a patient with crusted scabies, or to clothing, bedding, or furniture used by such a patient, should be identified and treated. Treatment should be strongly considered even in equivocal circumstances because of the complexity of controlling an institutional outbreak and the low risk associated with treatment. All suspected and confirmed cases, as well as all potentially exposed patients, staff, visitors, and family members should be treated at the same time to prevent reexposure. Remember that symptoms of scabies can take weeks to appear the first time a person is infested; however, the person still can spread scabies during this asymptomatic period.

Persons with crusted scabies generally require treatment at least twice, a week apart. Topical treatment with permethrin or oral treatment with ivermectin has been used successfully, although ivermectin currently is not FDA-approved for treatment of scabies.

Long-term surveillance for scabies is imperative to eradicate scabies from an institution. All new patients and staff should be screened and treated for skin conditions suggestive of possible scabies. The local health department and neighboring institutions should be notified of the outbreak and of any patients who may have been transferred to or of staff who may have worked in other institutions.

Related Links

For Health Professionals and Institutional Staff

- Medications (/parasites/scabies/health_professionals/meds.html)
- References: Scabies In Institutions (/parasites/scabies/publications.html#institutions)

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Single Case

Local and/or state health departments may be able to provide guidelines for preventing and controlling scabies outbreaks.

Below are suggestions for developing guidelines for preventing, detecting, and responding to a single case of **non-crusted scabies** in an institution. *(NOTE: For information specific to a single or multiple cases of crusted scabies, please see Crusted Scabies Cases (/parasites/scabies/health_professionals/crusted.html).)*

Surveillance

Establish surveillance.

- Have an active program for early detection of infested patients and staff.
- Maintain a high index of suspicion that scabies may be the cause of undiagnosed skin rash; suspected cases should be evaluated and confirmed by obtaining skin scrapings.
- Screen all new patients and staff for scabies.

Diagnostic Services

Ensure that adequate diagnostic services are available.

- Consult with an experienced dermatologist for assistance in differentiating skin rashes and confirming the diagnosis of scabies.
- Ensure someone on-staff is trained and experienced in obtaining and examining a skin scraping to identify scabies mites.

Control & Treatment

Establish appropriate procedures for infection control and treatment.

- Maintain records with patient name, age, sex, room number, roommate(s) name(s), skin scraping status and result(s), and name(s) of all staff who provided hands-on care to the patient before implementation of infection control measures: symptoms can take up to 2 months to appear in exposed persons and staff.
- Avoid direct skin-to-skin contact with any patient who has or is suspected to have scabies.
- Use gloves when giving hands-on care to any patient who is suspected or confirmed to have scabies; wash hands thoroughly after providing care to any patient.
- Avoid skin-to-skin contact with person with scabies for at least 8 hours after application of scabicide treatment
- Identify and treat all persons (e.g. staff, relatives, patients, etc.) having prolonged, direct skin-to-skin contact with an infested person before he/she was treated.
- Offer treatment to household members (e.g. spouses, children, etc.) of staff who are receiving scabies treatment.
- Staff generally can return to work the day after receiving a dose of treatment with permethrin or ivermectin; however, symptomatic staff who provide hands-on care to any patient may need to use disposable gloves for several days after treatment until sure they are no longer infested.
- Use procedures that minimize risk of transmission of secondary bacterial infections that may develop with scabies.

Environmental Disinfection

Establish appropriate procedures for environmental disinfection.

- Machine wash and dry bedding and clothing of scabies patients using the hot water and hot dryer cycles.
- Environmental disinfestation is neither necessary nor warranted. Routine cleaning and vacuuming of the room should be done if and when a patient with non-crusted scabies leaves the facility or moves to a new room.

Communication

- Establish procedures for identifying and notifying at-risk patients and staff who are no longer at the institution.
- Ensure a proactive employee health service approach to scabies including providing information about scabies to all staff and providing dermatologic consultation for employees and, when appropriate, their household members.
- Maintain an open and cooperative attitude between management and staff.

Related Links

For Health Professionals and Institutional Staff

- Medications (/parasites/scabies/health_professionals/meds.html)
- References: Scabies In Institutions (/parasites/scabies/publications.html#institutions)

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Multiple Cases

Local and/or state health departments may be able to provide guidelines for preventing and controlling scabies outbreaks.

Below are suggestions for developing guidelines for preventing, detecting, and responding to multiple cases of **non-crusted scabies** in an institution. *(For information specific to a single or multiple cases of crusted scabies, please see Crusted Scabies Cases (/parasites/scabies/health_professionals/crusted.html).)*

Surveillance

Establish surveillance.

- Have an active program for early detection of infested patients and staff.
- Maintain a high index of suspicion that scabies may be the cause of undiagnosed skin rash; suspected cases should be evaluated and confirmed by obtaining skin scrapings.
- Screen all new patients and staff for scabies.
- Notify local health department of outbreak and determine if any evidence of increased scabies in the general community; notify other institutions to or from which infested or exposed patients may have transferred.

Diagnostic Services

Ensure that adequate diagnostic services are available.

- Consult with an experienced dermatologist for assistance in differentiating skin rashes and confirming the diagnosis of scabies.
- Ensure someone on-staff is trained and experienced in obtaining and examining a skin scraping to identify scabies mites.

Control & Treatment

Establish appropriate procedures for infection control and treatment.

- Maintain records with patient name, age, sex, room number, roommate(s) name(s), skin scraping status and result(s), and name(s) of all staff who provided hands-on care to the patient before implementation of infection control measures: symptoms can take up to 2 months to appear in exposed persons and staff.
- Use epidemiologic data about distribution of confirmed cases by building, room, floor, wing, occupation (for staff), dates of admission, and onset of scabies-like condition to determine: 1) levels of risk for patients and staff; 2) extent of the outbreak (e.g. confined or widespread in the facility; and 3) temporal relationship among cases.
- Avoid direct skin-to-skin contact with any patient who is suspected or confirmed to have scabies.
- Use gloves when giving hands-on care to any patient who is suspected or confirmed to have scabies; wash hands thoroughly after providing care to any patient.
- Avoid skin-to-skin contact with person with scabies for at least 8 hours after application of scabicide treatment.
- Identify and treat all persons (e.g. staff, relatives, patients, etc.) having prolonged, direct skin-to-skin contact with an infested person before he/she was treated.
- Offer treatment to household members (e.g. spouses, children, etc.) of staff who are receiving scabies treatment.
- Staff generally can return to work the day after receiving a dose of treatment with permethrin or ivermectin; however, symptomatic staff who provide hands-on care to any patient may need to use disposable gloves for several days after treatment until sure they are no longer infested.
- Use procedures that minimize risk of transmission of secondary bacterial infections that may develop with scabies.

Environmental Disinfection

Establish appropriate procedures for environmental disinfection.

- Machine wash and dry bedding and clothing of scabies patients using the hot water and hot dryer cycles.
- Environmental disinfestation is neither necessary nor warranted. Routine cleaning and vacuuming of the room should be done if and when a patient with non-crusted scabies leaves the facility or moves to a new room.

Communication

- Establish procedures for identifying and notifying at-risk patients and staff who are no longer at the institution.
- Ensure a proactive employee health service approach to scabies including providing information about scabies to all staff and providing dermatologic consultation for employees and, when appropriate, their household members.
- Maintain an open and cooperative attitude between management and staff.

Related Links

For Health Professionals and Institutional Staff

- Medications (/parasites/scabies/health_professionals/meds.html)
- References: Scabies In Institutions (/parasites/scabies/publications.html#institutions)

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Crusted Scabies Cases (Single or Multiple)

Local and/or state health departments may be able to provide guidelines for preventing and controlling scabies outbreaks.

Below are suggestions for developing guidelines for preventing, detecting, and responding to a single case or multiple cases of **crusted (Norwegian) scabies** in an institution.

Surveillance

Establish surveillance.

- Have an active program for early detection of infested patients and staff; unrecognized crusted scabies is frequently the source of institutional scabies outbreaks.
- Maintain a high index of suspicion that scabies may be the cause of undiagnosed skin rash; suspected cases should be evaluated and confirmed by obtaining skin scrapings; persons with crusted scabies may not show the characteristic symptoms of scabies such as rash and itching (pruritus).
- Screen all new patients and staff for scabies.
- Notify the local health department; notify other institutions to or from which infested or exposed patients may have transferred.
- Maintain ongoing surveillance for scabies among all patients and staff to identify new or unsuccessfully treated cases of scabies.

Diagnostic Services

Ensure that adequate diagnostic services are available.

- Consult with an experienced dermatologist for assistance in differentiating skin rashes and confirming the diagnosis of scabies.
- Ensure someone on-staff is trained and experienced in obtaining and examining a skin scraping to identify scabies mites.

Control & Treatment

Establish appropriate procedures for infection control and treatment.

- Remember that persons with crusted scabies are infested with very large numbers of mites; this increases the risk of transmission both from brief skin-to-skin contact and from contact with items such as bedding, clothing, furniture, rugs, carpeting, floors, and other fomites that can become contaminated with skin scales and crusts shed by a person with crusted scabies.
- Maintain records with patient name, age, sex, room number, roommate(s) name(s), skin scraping status and result(s), and name(s) of all staff who provided hands-on care to the patient before implementation of infection control measures: symptoms can take up to 2 months to appear in exposed persons and staff.
- Use epidemiologic data about distribution of confirmed cases by building, room, floor, wing, occupation (for staff), dates of admission, and onset of scabies-like condition to determine: 1) levels of risk for patients, staff, and visitors; 2) extent of the outbreak (e.g. confined or widespread in the facility; and 3) temporal relationship among cases.
- Use contact precautions with protective garments (e.g. gowns, disposable gloves, shoe covers, etc.) when providing care to any patient with crusted scabies until successfully treated; wash hands thoroughly after providing care to any patient.
- Isolate patients with crusted scabies from other patients who do not have crusted scabies; consider assigning a cohort of caretakers to care only for patients with crusted scabies.
- Maintain contact precautions until skin scrapings from a patient with crusted scabies are negative; persons with crusted scabies generally must be treated at least twice, a week apart; oral ivermectin may be necessary for successful treatment.
- Limit visitors for patients with crusted scabies; visitors should use the same contact precautions and protective clothing as staff.

- Identify and treat all patients, staff, and visitors who may have been exposed to a patient with crusted scabies or to clothing, bedding, furniture or other items (fomites) used by such a patient; strongly consider treatment even in equivocal circumstances because controlling an outbreak involving crusted scabies can be very difficult and risk associated with treatment is relatively low.
- Offer treatment to household members (e.g. spouses, children, etc.) of staff who are undergoing scabies treatment.
- Treat patients, staff, and household members at the same time to prevent reexposure and continued transmission.
- Staff generally can return to work the day after receiving a dose of treatment with permethrin or ivermectin; however, symptomatic staff who provide hands-on care to any patient may need to use disposable gloves for several days after treatment until sure they are no longer infested.
- Use procedures that minimize risk of transmission of secondary bacterial infections that may develop with scabies.

Environmental Disinfection

Establish appropriate procedures for environmental disinfection.

- Ensure bedding and clothing used by a person with crusted scabies is collected and transported in a plastic bag and emptied directly into washer to avoid contaminating other surfaces and items; machine wash and dry all items using the hot water and high heat cycles (temperatures in excess of 50°C or 122°F for 10 minutes will kill mites and eggs); ensure laundry personnel use protective garments and gloves when handling contaminated items.
- Attempt to ensure that all persons who receive treatment have the clothing and bedding they used anytime during the 3 days before treatment machine-washed and dried using the hot water and high heat cycles.
- Clean the room of patients with crusted scabies regularly to remove contaminating skin crusts and scales that can contain many mites.
- Thoroughly clean and vacuum the room when a patient with crusted scabies leaves the facility or moves to a new room.

Communication

- Establish procedures for identifying and notifying at-risk patients and staff who are no longer at the institution.
- Ensure a proactive employee health service approach to scabies including providing information about scabies to all staff and providing dermatologic consultation for employees and, where appropriate, their household members.
- Maintain an open and cooperative attitude between management and staff.

Related Links

For Health Professionals and Institutional Staff

- Medications (/parasites/scabies/health_professionals/meds.html)
- References: Scabies In Institutions (/parasites/scabies/publications.html#institutions)

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Prevention & Treatment

Español: Prevención y tratamiento (/chickenpox/about/prevention-treatment-sp.html)

Prevention

The best way to prevent chickenpox is to get the chickenpox vaccine. Children, adolescents, and adults should have two doses of chickenpox vaccine.

Chickenpox vaccine is very safe and effective at preventing the disease. Most people who get the vaccine will not get chickenpox. If a vaccinated person does get chickenpox, it is usually mild—with fewer blisters and mild or no fever. The chickenpox vaccine prevents almost all cases of severe disease.

For more information about chickenpox vaccine, see Vaccination (/chickenpox/vaccination.html).

For people exposed to chickenpox, call a health care provider if the person

- has never had chickenpox disease and is not vaccinated with the chickenpox vaccine
- has a weakened immune system caused by disease or medication; for example,
  - People with HIV/AIDS or cancer
  - Patients who have had transplants, and
  - People on chemotherapy, immunosuppressive medications, or long-term use of steroids
- is pregnant

Treatments at Home for People with Chickenpox

There are several things that can be done at home to help relieve the symptoms and prevent skin infections. Calamine lotion and colloidal oatmeal baths may help relieve some of the itching. Keeping fingernails trimmed short may help prevent skin infections caused by scratching blisters.

Over-the-counter Medications

Use non-aspirin medications, such as acetaminophen, to relieve fever from chickenpox.

Do not use aspirin or aspirin-containing products to relieve fever from chickenpox. The use of aspirin in children with chickenpox has been associated with Reye's syndrome, a severe disease that affects the liver and brain and can cause death.

When to Call the Health Care Provider

For people with chickenpox at risk of serious complications, call a health care provider if the person

- is older than 12 years of age
- has a weakened immune system
- is pregnant
- develops any of the following:
  - fever that lasts longer than 4 days
  - fever that rises above 102°F (38.9°C)

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Outbreaks

Data on the number of chickenpox (varicella) outbreaks that occur each year in the United States are limited. But, since the chickenpox vaccine was introduced, the number of outbreaks has gone down.

See Control & Investigation of Outbreaks (outbreaks/control-investigation.html) for guidance in monitoring, investigating and controlling varicella outbreaks.

Chickenpox outbreaks continue to occur even in settings such as schools where most children are vaccinated with one dose. However, there have been fewer outbreaks reported ever since the two-dose chickenpox vaccination program started in the United States. Also, these outbreaks have been smaller. The vaccine may not prevent all chickenpox, but it is very effective at preventing severe cases.

Outbreak Surveillance, Investigation, and Control

Prompt identification, investigation, and control of chickenpox outbreaks are important. Even mild cases can be contagious. CDC works with state health departments to monitor chickenpox outbreaks. States are encouraged to report annual chickenpox outbreaks to CDC using the outbreak reporting worksheet [150 KB, 1 page] (/chickenpox/outbreaks/downloads/appx-a-vor-wksht.pdf).

For more information, see the Chapter on Varicella (http://www.cdc.gov/vaccines/pubs/surv-manual/chpt17-varicella.html) in the Manual for the Surveillance of Vaccine-Preventable Diseases.

Preventing and Controlling Chickenpox Outbreaks

Chickenpox vaccination is recommended for preventing and controlling outbreaks of chickenpox.

- People who do not have evidence of immunity to chickenpox (/chickenpox/hcp/immunity.html) should get a first or second dose of chickenpox vaccine as appropriate
- For outbreaks in preschool children, two doses of chickenpox vaccine are recommended for best protection
- Optimally, outbreak control efforts should be implemented as soon as a case is identified. Chickenpox vaccination should be offered even if the outbreak is identified late. Chickenpox outbreaks in some settings, for example, child care centers, schools, and institutions, can last as long as 4–5 months. Thus, offering chickenpox vaccine during an outbreak may provide protection to persons not yet exposed and shorten the duration of the outbreak.
- People who get their first or second dose of chickenpox vaccine as part of outbreak control measures may be immediately readmitted to school.
- People vaccinated with the first dose of chickenpox vaccine as part of outbreak control measures should be scheduled for the second dose as appropriate.

Guidelines and Resources

- Control & Investigation of Varicella Outbreaks (/chickenpox/outbreaks/control-investigation.html)
- Varicella Outbreak Reporting Worksheet [150 KB, 1 page] (/chickenpox/outbreaks/downloads/appx-a-vor-wksht.pdf)
- Specimen Collection Form (/chickenpox/lab-testing/collecting-specimens.html#form)

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Control & Investigation of Varicella Outbreaks

To improve existing knowledge about the epidemiology of varicella and to have a basis for refining varicella vaccination policy, it is important to monitor and investigate varicella outbreaks.

Strategies for the Control and Investigation of Varicella Outbreaks Manual

The manual (manual.html) provides guidance in the control and investigation of varicella outbreaks. With input from state and local public health departments, CDC's National Center for Immunization and Respiratory Diseases (NCIRD) developed this guidance in 2008 and is currently updating it. Following these guidelines, public health officials can identify appropriate responses to reports of varicella cases to determine if an outbreak exists and, if so, to evaluate its scope and to implement control measures appropriate in the outbreak setting.

The guidelines are provided in 9 sections, with a large appendix offering useful samples as well as a thorough reference section.

View "Strategies for the Control and Investigation of Varicella Outbreaks" online (manual.html) or download [412 KB, 37 pages] (downloads/manual.pdf). Each section is described and linked here:

- Introduction (manual.html#intro)
  Review varicella epidemiology and the impact of the varicella vaccination program, vaccine recommendations, school immunization requirements, and the importance of data from varicella outbreak surveillance and investigations.
- Background (manual.html#backgrd)
  Find information on the clinical presentation of varicella disease in unvaccinated and vaccinated persons, clinical presentation of shingles, and vaccine effectiveness and efficacy of 1 and 2 doses of varicella vaccine.
- Reporting (manual.html#rptg)
  Learn about ongoing varicella surveillance activities and recommendations for varicella case-based surveillance and outbreak surveillance. For additional resources, see VZV Surveillance (/chickenpox/hcp/conducting-surveillance.html).
- Case Definition and Classifications (manual.html#case)
  Find case definitions and classifications for varicella disease and varicella-related deaths, as well as the laboratory criteria for a varicella diagnosis.
- Laboratory Diagnosis of Varicella (manual.html#diagnosis)
  Identify when varicella cases should be laboratory confirmed and when VZV genotyping is important. For more information, see VZV Laboratory Testing (../lab-testing/index.html).
- Definitions (manual.html#def)
- Recommendations (manual.html#recs)
- Vaccine (manual.html#vac)
  Refer to resources on varicella vaccine recommendations and reporting of adverse events.
- Conclusions (manual.html#conclusions)
  Review strategies for controlling varicella outbreaks and preventing further spread of disease.
- References (manual.html#ref)
- Appendices (manual-appx.html)
  View or download a varicella outbreak reporting worksheet; samples of an exposure letter, a survey to identify varicella cases, letters of notification of a varicella outbreak, a case investigation form, and varicella surveillance worksheet; and formulas for varicella outbreaks.

Related Pages

- Conducting Varicella Surveillance (/chickenpox/hcp/conducting-surveillance.html)

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Correctional Facilities and Viral Hepatitis

Adults in correctional facilities are at risk for Hepatitis B virus (HBV) infection through sex with HBV-infected persons, injection drug use, and sharing close living quarters with other inmates infected with HBV. In addition, a high percentage of prison inmates have Hepatitis C virus (HCV) infection.

Hepatitis B Vaccination

The Advisory Committee on Immunization Practices recommends Hepatitis B vaccination for adults in correctional settings because of their increased risk for infection, both inside and outside of prisons and jails. Although the majority of HBV infections among incarcerated persons are acquired in the community, infection may also be transmitted within correctional settings. Furthermore, upon release, susceptible inmates are often at increased risk for infection if they resume high-risk behaviors.

Correctional settings also provide an opportunity to vaccinate at-risk adults who do not routinely access prevention services in the community. Vaccinating inmates in prisons has been demonstrated to be feasible and cost-saving. Many state prison systems and the Federal Bureau of Prisons have implemented Hepatitis B vaccination programs of varying scope, and acceptance of vaccination by inmates is high.

Hepatitis C Testing

The prevalence of HCV infection in prison inmates is substantially higher than that of the general U.S. population. Among prison inmates, 16%–41% have ever been infected with HCV, and 12%–35% are chronically infected, compared to 1%–1.5% in the uninstitutionalized US population. HCV infection is primarily associated with a history of injection drug use. CDC recommends that correctional facilities ask inmates questions about their risk factors for HCV infection during their entry medical evaluations. Inmates reporting risk factors should be tested for HCV infection and those who test positive for HCV should receive further medical evaluation to determine if they have chronic infection and/or liver disease.

Guidelines and Recommendations

Hepatitis B Vaccination Recommendations for Adults
(http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5516a1.htm?s_cid=rr5516a1_e); Appendix A
(http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5516a2.htm?s_cid=rr5516a2_e), B
(http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5516a3.htm?s_cid=rr5516a3_e), C
(http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5516a4.htm?s_cid=rr5516a4_e)
PDF version [PDF - 40 pages] (http://www.cdc.gov/mmwr/PDF/rr/rr5516.pdf) (with appendices)
MMWR 2006;55(RR-16)

Prevention and Control of Infections with Hepatitis Viruses in Correctional Settings
(http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5201a1.htm)
PDF version [PDF - 44 pages] (http://www.cdc.gov/mmwr/PDF/rr/rr5201.pdf)

MMWR 2003;52(RR-1)

CDC Materials

Fact Sheet

Hepatitis C and Incarceration
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- **Federal**

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Botulism From Drinking Prison-Made Illicit Alcohol — Utah 2011

Foodborne botulism is a rare, potentially fatal paralytic illness caused by eating food contaminated by *Clostridium botulinum* toxin. It occurs most often as a single case not linked to others by a common food source. As a result of improvements in food canning, when outbreaks do occur, they typically involve fewer than five persons. During October 2–4 2011, eight maximum security inmates at the Utah State Prison in Salt Lake County were diagnosed with foodborne botulism. An investigation by Salt Lake Valley Heath Department, Utah Department of Health, and CDC identified pruno, an illicit alcoholic brew, as the vehicle. The principal ingredients in pruno are fruit, sugar, and water. Many additional ingredients, including root vegetables, are sometimes added, depending on the availability of foods in prison. A baked potato saved from a meal served weeks earlier and added to the pruno was the suspected source of *C. botulinum* spores. Many of the affected inmates suffered severe morbidity, and some required prolonged hospitalizations. Knowing the link between pruno and botulism might help public health and correctional authorities prevent future outbreaks, respond quickly with appropriate health-care to inmates with acute descending paralysis and/or other symptoms, and reduce associated treatment costs to states.

Epidemiologic Investigation

A case of botulism was defined as signs and symptoms of cranial nerve palsies (e.g. double vision, blurred vision, dysphagia, or impaired gag reflex) and weakness, with onset during September 30–October 4, 2011, in a Utah State Prison inmate who had either a clinical specimen positive for C. botulinum (organism or toxin) or a history of consuming the same batch of pruno as an inmate with a positive clinical specimen. Eight inmates had illnesses that met the case definition. Salt Lake Valley Heath Department and Utah Department of Health were notified of a patient with suspected botulism when an inmate at the Utah State Prison was hospitalized at a local hospital (hospital A) on October 2, 2011, with a 3-day history of dysphagia, double vision, progressive weakness, and vomiting. He reported that his symptoms began within 12 hours of drinking pruno. Inmates who had consumed pruno or had symptoms of botulism were urged through a series of announcements and cell-to-cell visits by prison correctional officers and medical staff members to accept medical treatment. The inmates were assured that no punitive actions would be taken if they admitted to drinking pruno. By October 4, an additional 12 inmates sought medical attention for clinical complaints or history of recent pruno consumption. Of the 13 inmates who reported drinking pruno, eight met the case definition by having signs or symptoms compatible with botulism. These eight inmates were admitted to the neuro-critical care unit of hospital A and treated. The other five inmates who drank pruno were evaluated on October 4 by a physician at hospital A and were determined to not have clinical findings consistent with botulism. They were observed in the prison infirmary for 7 days and remained well.

The eight hospitalized patients were aged 24–35 years and lived in close proximity within the same maximum security prison unit. The median time to onset of symptoms was 37 hours after consumption of brew A (range: <12–80 hours). The eight hospitalized patients all drank pruno from the same batch (brew A) on September 30, 2011; in addition, two of the eight drank pruno from a second batch (brew B) on October 2, 2011. Of the five inmates who did not develop botulism, one reported tasting a small amount of brew A, which he spit out, and four reported consuming only brew B. Although most ingredients used in the two brews were the same, a baked potato was included in brew A but not brew B.

Among the eight hospitalized patients, three were placed on mechanical ventilation within 24 hours of admission. The median neuro-critical care unit hospitalization stay was 4 days (range: 2–23 days); time spent in nonprison health-care facilities ranged from 2–58 days. All patients received heptavalent botulinum antitoxin (HBAT), an investigational new drug that is available through CDC (*1*) and is the mainstay of treatment for noninfant botulism. Because of a misunderstanding at hospital A, informed consent for HBAT administration was not obtained before infusion. HBAT was administered without adverse events and recipients were later informed of its investigational status. After hospital discharge, all eight patients were evaluated in the prison infirmary where they received care for 1–76 days. According to prison medical personnel, most of the inmates continued to have various clinical complaints 11 months after the outbreak, including weakness and loss of muscle mass, dysphagia and reflux. Difficulty sleeping, increased anxiety, and depression also were reported, but did not appear to be from causes other than the botulism incident. One inmate still reported difficulty breathing and another reported double vision. No deaths resulted from the outbreak.

Laboratory Results

Serum, stool, and gastric aspirate specimens collected before antitoxin administration were submitted to the Utah Unified State Laboratory: Public Health and CDC for *C. botulinum* and botulinum toxin testing. A moist sock used to filter brew A also was submitted for testing at the Utah laboratory. Specimens

from five of the eight confirmed patients were positive for *C. botulinum* type A or its toxin. A small amount of pruno squeezed out of the sock yielded *C. botulinum* type A.

Field Investigation

Several batches of pruno were reportedly in circulation among inmates at the time of the outbreak. Pruno batch A was made with oranges, grapefruit, canned fruit, water, powdered drink mix (a source of sugar), and a baked potato. Among these ingredients, the baked potato was the only ingredient used in brew A that was not used in simultaneously circulating pruno batches. Consequently, preparation of baked potatoes in the prison kitchen and methods used to prepare brew A were the primary focus of the field investigation.

Investigators performed a systematic retrospective risk assessment, including interviews with food service workers and inspection of the prison kitchen, to determine whether practices that increase the risk for botulism occurred during preparation of baked potatoes. Cooking practices were not observed directly, and no baked potatoes were available for testing. Food service workers reported that baked potatoes were prepared twice a month from raw whole potatoes, and not baked in foil. No other preparation or storage methods that would produce the anaerobic environment necessary for toxin production were identified, making it unlikely that potatoes served to inmates contained toxin.

The inmate who prepared brew A reported the potato was removed from a meal tray, stored at ambient temperature for an undetermined number of weeks in either a sealed plastic bag or jar obtained from the commissary, peeled using his fingernails, and added to a plastic bag containing other ingredients a few days before brew A consumption. The ingredients were fermented in this bag for several days before being distributed to other inmates in resealable plastic bags. Toxin likely was produced when the potato was added to a bag containing low-acidity pruno ingredients under warm, anaerobic conditions during pruno fermentation. Warm conditions commonly are obtained by placing the bagged mixture in warm water and insulating the bag with clothing, towels, or bedding (*2*). Plastic bags and jars used in pruno fermentation are easily accessible to inmates. Laundry and items purchased from the commissary are delivered in plastic bags and foods packaged in jars and resealable bags can be purchased from the commissary. During the investigation, many types of plastic bags and jars were observed in cells.

In addition to clinical morbidity, the outbreak resulted in considerable cost to Utah taxpayers. These included hospital charges of nearly $500,000; secure emergency transport and correctional facility monitoring at hospital A; and local, state, and federal public health and correctional facility resources for the investigation.

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Editorial Note

The association between botulism and pruno, an illicit alcoholic beverage often made by inmates, is not well known, and cases of botulism from pruno might be underrecognized. This is the largest outbreak of botulism associated with pruno consumption; two previously reported outbreaks affected one and two inmates, respectively (*3*). This also is the second largest botulism outbreak in the United States since 2006, surpassed only by a 2007 outbreak attributed to a widely distributed commercial hotdog chili sauce that affected 10 persons (*4*). Since this investigation, four confirmed cases of botulism among inmates at a federal prison in Arizona were identified on August 3, 2012. As in Utah, potato-containing pruno or food containing leftover pulp from potato-containing pruno was consumed by all four affected inmates and is the suspected vehicle (*5*).

Botulism is a rare but serious, potentially life-threatening paralytic illness that is a public health emergency because many persons can be sickened by a contaminated food. The classic symptoms of botulism (e.g., blurred or double vision, slurred speech, difficulty swallowing, and muscle weakness) are not unique to botulism. Clinicians who act promptly when botulism is suspected can reduce the associated morbidity and mortality of botulism. The disease and long-term sequelae can be reduced by prompt treatment and HBAT administration. Although the eight inmates sickened by one batch of pruno in this outbreak were identified quickly through active case finding by prison employees, they still required prolonged hospitalizations, including treatment in the neuro-critical care unit, inpatient and outpatient rehabilitation, continued mental health support, and additional medical follow-up. Most of the inmates continued to complain of clinical sequelae 11 months after the outbreak.

Botulism is uncommon because special, rarely obtained conditions are necessary for botulinum toxin production from *C. botulinum* spores, including an anaerobic, low-salt, low-acid, low-sugar environment at ambient temperatures (*6*). This investigation, and investigations in California during previous

outbreaks, determined that pruno containing potato can provide this favorable environment for botulinum toxin production from *C. botulinum*. Potatoes and other root vegetables commonly have botulinum spores from the soil on their surfaces (*7*). Although most batches of pruno reportedly do not contain potatoes, pruno-associated botulism outbreaks all have involved pruno made with potatoes, The addition of potatoes to pruno, therefore, might introduce spores to pruno ingredients. Botulinum spores, however, are omnipresent; although potatoes are the likely source of botulinum spores from outbreaks associated with pruno, other possible sources of contamination include other root vegetables, if added to the brew, and bags used for pruno fermentation. Pruno ingredients commonly include fruits and sugar. When proportion of these ingredients available for inclusion in pruno is less, the pH of the mixture might exceed 4.6 and sugar content might be low, promoting toxin production. Fermentation occurs in the anaerobic environment of a sealed bag, a condition necessary for toxin production.

This outbreak underscores the need for health department and correctional facility awareness of the association between pruno and botulism. Prison health-care providers should notify health departments immediately if they suspect botulism from pruno so that an investigation can begin quickly and botulinum antitoxin requested from CDC immediately. When pruno is the suspected vehicle, case finding strategies should account for the possibility that one pruno batch might be shared among many inmates, even in areas where inmate movements and interactions are highly restricted (e.g., maximum security). Bags, socks, and other equipment used to make pruno might be shared between batches, and pulp left over from pruno might be added to other foods consumed by prisoners. These factors all might increase the number of affected patients. Aggressive case finding in both recent outbreaks enabled timely identification of ill persons. Timely identification is critical to minimizing morbidity, averting fatalities, and minimizing economic burden to states. Prompt HBAT administration can reduce botulism morbidity and mortality. During this investigation, inmates reported that pruno is widely used in correctional facilities throughout the country and is an ingrained part of prison culture. Although illness might be reduced though education of inmates about the association between pruno and botulism, pruno production in prisons likely will not stop.

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What is already known on this topic?

Foodborne botulism is rare, but it can kill rapidly, and contaminated products might expose many persons. Symptoms of botulism include double vision, blurred vision, drooping eyelids, slurred speech, difficulty swallowing, dry mouth, and muscle weakness. These symptoms are not unique to botulism; prompt treatment and heptavalent botulinum antitoxin (HBAT) administration can reduce botulism morbidity and mortality.

What is added by this report?

This report documents an outbreak of severe illness with prolonged morbidity and great public expense that occurred in a prison from "pruno," alcohol made illicitly by inmates. When a potato or other root vegetable is added to pruno, the risk for foodborne botulism increases. The cost of the outbreak was approximately $500,000 and involved many hours of investigation and prompt hospital treatment. Long-term sequelae, even with prompt treatment, can result.

What are the implications for public health practice?

Preparation of pruno is common in correctional facilities. Public health authorities should know the risk for botulism in correctional facilities and its association with pruno that contains potatoes. When botulism associated with pruno is suspected, state health departments should immediately be notified and more cases should be sought because one pruno batch might be shared among many inmates, even in restricted areas. Timely identification of cases and administration of botulinum antitoxin is critical to minimize morbidity, avert fatalities, and reduce the economic burden to states.

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