Protecting Health Care Workers and Clients from Tuberculosis

A Basic Primer
Utah Department of Health, 2011
What is Tuberculosis (TB)?

- Caused by a bacteria
- Spread only through the air
- Usually effects the lungs, but can spread to many parts of the body
- Usually treatable with antibiotics, but resistant strains can be a problem
How is TB Spread?

- Sick person coughs out airborne droplet bacteria (also, but less likely, via speaking or singing)
- Breathing the shared air
- Usually (but not always) requires repeat exposures
- TB bacteria is very small and light, so it can remain in the air after the sick person is gone
How Common is TB?

• Worldwide = 1/3 have TB infection; 8 million have active TB disease; 1.5 million deaths
• U.S. = 11,545 cases in 2009 (decreasing annually since 1953), approximately 500 deaths. Estimate 10% population has TB infection
• Utah is a low-incidence state = 37 cases in 2009; most (but not all) are in SL, Weber, Cache, Utah and Davis counties; annual numbers fluctuate, but continue to trend down
Disease Progression

• Initial infection is detectable 2 – 10 weeks after exposure (newly infected person is not infectious)

• Usually causes disease 5 – 10% of the time; the other 90% = Latent TB Infection = no symptoms and not infectious

• Usually curable

• Can be fatal if untreated
Disease Progression (2)

- Lungs affected 80% of the time
- Other 20% can be anywhere in the body
Infectiousness of the Patient

- Lungs or larynx
- Abnormal chest xray (greatest infectiousness usually associated with the presence of a cavity)
- Sputum is positive
- Coughing
- No, or inadequate, treatment
Infectiousness (2)

- Not infectious when symptoms, especially cough, decreased and, on proper drugs for at least 2 weeks and, sputum is negative
- Never was infectious if initial chest xray is normal
Symptoms
Some, or all, may be present

- Prolonged cough > 2 weeks
- Bloody sputum
- Unexplained fatigue
- Loss of appetite
- Unexplained weight loss
- Night sweats
- Chest pain
- Unexplained fevers
Treatment

- Latent TB Infection treated with Isoniazid (INH) x 6 – 9 months, to prevent progression to Active TB Disease (ATBD) (voluntary)
- ATBD treated with multiple drugs for at least 6 months (mandatory)
- Directly Observed Therapy (DOT) = patient with ATBD is watched by nurse or outreach worker taking every dose (mandatory)
Health Care Worker Screening
Mandated by OSHA, per CDC guidelines

• For all new employees
• After an exposure
• Annually in high-risk settings, where infectious TB can be expected
Health Care Worker Screening (2)

- Skin test (PPD) or blood test (Quantiferon)
- Chest xray if positive (or documented previous positive)
- Facility determines frequency of post-hire testing based on risk
Prevention of Transmission

See your facility’s Infection Control Plan, but in general

- Give coughing client a surgical mask to wear, or cover mouth with a tissue and
- Remove client from the area
- Report to your supervisor for further action (typically home or hospital isolation until TB can be ruled out)
- Annual fit-testing of clinical staff for N-95 mask
Questions?

• Ask your supervisor
• Call the Utah Department of Health, 801-538-6224 or 538-9906
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