University Student Health
Screening for Tuberculosis

Jodi Robertson RN - Administrative Nurse
Student Health Services
Southern Illinois University Carbondale
618-453-4444
jlr1993@siu.edu
Objectives

- Describe how university student health services implements TB screening of international students arriving from high risk countries
- Discuss how university student health services notifies students and tracks TB screening and treatment
- Explain how student health service collaborates with local health department TB nurse for care and treatment of all positive TB reactors
Student Health Services

- Student health fee is assessed each semester and services included are:
  - Primary Care
  - Psychiatry & Counseling
  - Sports Medicine, Physical Therapy
  - Preventive Medicine (Immunizations/Travel)
  - Wellness and Health Promotions
  - Dental
  - Pharmacy, X-ray, and Lab

- ACHA compliant health insurance plan is required
TB risks factors!

- No laws require temporary visitors, including international students, to have a health screening before arrival.
- Campuses are at risk for communicable disease outbreaks.
- Countries/territories with an estimated incidence rate of 20 cases per 100,000 or greater are considered to have a high incidence of tuberculosis.
- A large number of incoming international students from countries with the highest incidence of TB in the world.
Global impact of TB
http://www.who.int/mediacentre/factsheets/fs104/en/

- Africa carried the most severe burden, with 281 cases per 100,000 population in 2014 (compared with a global average of 133).
- In 2014, about 80% of reported TB cases occurred in 22 countries. The 6 countries that stand out as having the largest number of incident cases in 2014 were India, Indonesia, Nigeria, Pakistan, People’s Republic of China and South Africa.
- Some countries are experiencing a major decline in cases, while in others the numbers are dropping very slowly. Brazil and China for example, are among the 22 countries with a sustained decline in TB cases over the past 20 years.
ACHA Guidelines
Tuberculosis Screening and Targeted Testing of College and University Students, updated April 2016

- The American College Health Association (ACHA) recommendations for TB screening help college and universities develop comprehensive student health policies to mitigate disease transmission.

TB Testing/Screening Methods

- **IGRA blood testing** - Used for International Students from high risk countries
- **PPD testing** - is still used for non high risk country of origin students
- **Tuberculosis Risk Assessment Questionnaire** - Used for screening International students arriving from low risk countries
Immunization & TB Compliance

- Students must meet compliance by 10th day of semester
- International Students must complete TB screening in addition to immunization compliance
- If compliance is not met by deadline date, a registration “hold” is placed on student’s account
Getting Compliance 😊

- Immunization compliance forms in admission packet & online
- University’s registration software interfaces with Student Health Services (SHS) EMR for tracking
- Collaborate with International Student Programs, and Center for English as a Second Language (CESL) programs
- SHS hosts international student orientations every semester
TB Screening

- Appointment with SHS nurse for TB screening & TB risk assessment (TBRA)
- High vs. Low risk country determines testing method
- Patient education regarding TB testing
- Verify contact information for follow up communications
Positive TB Test - Symptoms

- Positive reactor with symptoms
  - Airborne precaution
  - Negative pressure room
  - Provider evaluation asap
  - CXR stat

- Notify Local Health Department
- Assist to arrange Isolation
  - University Housing
  - Off Campus
Positive Reactor - No Symptoms
Nurse Follow up

- Repeat TB Risk Assessment questions
- Review Education Handouts- (LTBI vs. Active TB)
- CXR
- Labs-CMP, CBC, HIV
- Schedule Provider appointment
- Review LTBI treatment options:
  - 9 months INH (& B6)
  - 12 week DOT INH/RIF (& B6)
  - Yearly risk Assessment
Positive Reactor - Provider Follow Up

- Medical evaluation & test result review (labs and CXR)
- Discuss options:
  - Yearly TB risk agreement (*internal form*)
  - Patient chooses medication Rx
  - Enrollment in TB treatment program
Latent TB Treatment

- **INH and B6 9 month**
  - Appointment monthly at Student Health for medication side effect review and next bottle pick up
  - Cost covered by county health department

- **12 week dose regimen**
  - Rifapentine and isoniazid once a week DOT for 12 weeks
Treatment algorithm for tuberculosis

MMWR - June 20, 2003 / Vol. 52 / No. RR
At Risk
+ Quantiferon (IGRA) (HIV negative)
Negative Sx Risk Assess
Equivocal CXR (no cavitation)

Sputum for AFB/Culture/NAA
Rx 4 drug (INH/RIF/EMB/PZA)

Re-evaluate at 2 months
No Symptoms Positive AFB/Culture/NAA
Complete 6 month Rx for Active TB w/
additional 4 months of 2 drugs INH/RIF

No Symptoms Negative AFB/Culture/NAA
Repeat CXR
CXR Improved
Complete 6 month Rx for Culture
negative Pulmonary TB w/
additional
4 months 2 drugs INH/RIF

*CXR Unchanged
Complete Rx for Latent TB
w/ additional 4 weeks of weekly
DOT 2 drugs INH/RIF
or
w/ additional 7 months INH

With or without symptoms CXR Worse
Re-evaluate w/ Sputums
Consultation with ID/Pulmonary

*F/U CXR abnormality as needed, Consider Pulmonology Consult/CT
Care & Treatment Barriers

- Communication
  - Language
  - Contact
- Cost
  - Medication
  - Imaging studies
  - Specialist referral
- Housing
- Campus stay (minimum 4 weeks)
Direct Observation Therapy

- Student Health Services collaborates with county health department to provide Direct Observation Therapy to students taking TB treatment.
- SHS Nurses administer & documents the treatment each visit.
- If the county TB nurse approves video recorded DOT, the student health nurse observes each video recording and documents appropriately on the medication record.
Case # 1 - Female From India

- 2/20 - 23 y/o + blood assay & no TB symptoms- (dx inactive TB by Provider)
- 2/20 - LTBI rx written and scheduled with TB nurse
- 2/27 - TB nurse notes- CXR is Questionable right upper lobe nodule - consult w/Provider & sputum x 3 ordered
- 4/20 - Sputum AFB smear negative & PCR negative
- 6/27 - 1 Culture positive ID MTB, drugs susceptible (dx Active asymptomatic TB/culture positive)
- 7/2 - Initiated daily Directly Observed Therapy and student did comply but had some missed doses.
- 3/11 - Rx completed & final CXR no acute process
Case #2- Male Student From India

- 1/29 - 22yo Male + Blood Assay - No TB symptoms
- 2/4 - CXR- Hazy consolidation rt. upper lobe
- 2/11 - AFB Smear negative x3
- 2/11 - Start 4 drug (& B6) by: Direct Observation Video Monitoring

- 3/10 - Sputum culture MTB complex
- 4/05 - CXR @ 2 months shows improvement (dx active asymptomatic TB culture positive)
- 4/11 - Repeat sputum @ 2 months all negative
- 8/9 - Rx completes
RESOURCES

- www.acha.org/documents/resources/guidelines/ACHA_Tuberculosis_Screening.pdf
- www.cdc.gov
- www.who.int/tb/country/en/
QUESTIONS?