Infection Preventionist Lunch and Learn

September 12, 2023

Ashley O'Keefe, MLS(ASCP) CM, CIC, CDIPC



Series Objectives

- Encourage learning, growth, and networking
- Provide non-regulatory education and information
- Discuss topics relevant to new infection preventionists (IPs)

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Employee Health Screening for TB

Wisconsin TB Program
Claire Leback, MPH RN
Andrea Liptack, MSN, RN
Mary Pulchinski BSN, RN
September 12th, 2023



Agenda

Baseline employment screening

Annual (serial) screening recommendations

Post-exposure

Agenda

Baseline employment screening

Annual (serial) screening recommendations

Post-exposure

Baseline screening:

Now "post-offer/preplacement" POPP

= Point of hire or transfer into a clinical role



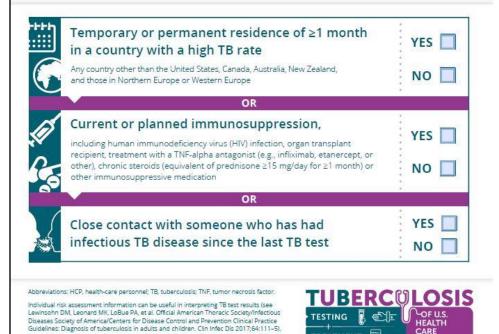
Baseline/POPP Screening:

- 1 Risk Assessment
- 2 Symptom evaluation
- 3 Testing





HCP should be considered at increased risk for TB if any of the following statements are marked "Yes":



Adapted from: Risk assessment form developed by the California Department of Health,

Sosa LE, Njie GJ, Lobato MN, et al. Tuberculosis Screening, Testing, and Treatment of U.S.

Health Care Personnel: Recommendations from the National Tuberculosis Controllers

Association and CDC, 2019. MMWR Morb Mortal Wkly Rep 2019;68:439-43. https://www.cdc.gov/mmwr/volumes/68/wr/mm6819a3.htm?s_cid=mm6819a3_w

Tuberculosis Control Branch

CDC Risk Assessment

https://www.cdc.gov/tb/topic/infectioncontrol/pdf/healthCareSettings-assessment.pdf

PERSONNEL

Control and Prevention

National Center for HIV/A/OS, Viral Hepatitis, STD, and

WISCONSIN TUBERCULOSIS (TB) RISK ASSESSMENT AND SYMPTOM EVALUATION

All of the information on this form shall be kept confidential.

Perform testing by interferon gamma release assay (IGRA) or tuberculin skin test (TST) if there are TB risk factors and/or symptoms identified by the questions below, or if testing is required (e.g., baseline employment testing).

Do not perform testing by IGRA or TST if the patient has previously confirmed latent tuberculosis infection (LTBI) or tuberculosis (TB) disease.

Do not treat for LTBI until active TB disease has been excluded:

Evaluate for active TB disease with a chest x-ray, symptom evaluation, and if indicated, sputum AFB smears, cultures and nucleic acid amplification testing. A negative TST or IGRA does not rule out active TB disease.

If any of the following boxes are checked, recommend LTBI testing. See page 2 for more detailed information on the risk assessment questions below.

SYMPTOM EVALUATION YES NO Recent TB symptoms: Persistent cough lasting three or more weeks AND one or more of the following symptoms: coughing up blood, fever, night sweats, unexplained weight loss, or fatigue RISK FOR TB INFECTION Birth, residence or travel (for ≥ 1 month) in a country with a high TB rate . Includes any country other than the United States, Canada, Australia, New Zealand, or a country in western or northern Europe. Travel is of extended duration or including likely contact with infectious TB. YES NO

RISK FOR PROGRESSION TO TB DISEASE

YES NO Human immunodeficiency virus (HIV) infection YES NO Current or planned immunosuppression including receipt of an organ transplant, treatment with an

Close contact to someone with infectious TB disease

TNF-alpha antagonist (e.g., infliximab, etanercept, or other), chronic steroids (equivalent of prednisone ≥15 mg/day for ≥1 month), or other immunosuppressive medication in combination with risk for infection from above

- A TB risk assessment and symptom evaluation have been completed for the individual named below. No risks or symptoms for TB were identified.
- A TB risk assessment and symptom evaluation have been completed for the individual named below. Risk factors and/or symptoms for TB have been identified; further testing is recommended to determine the presence or absence of tuberculosis in a communicable form.

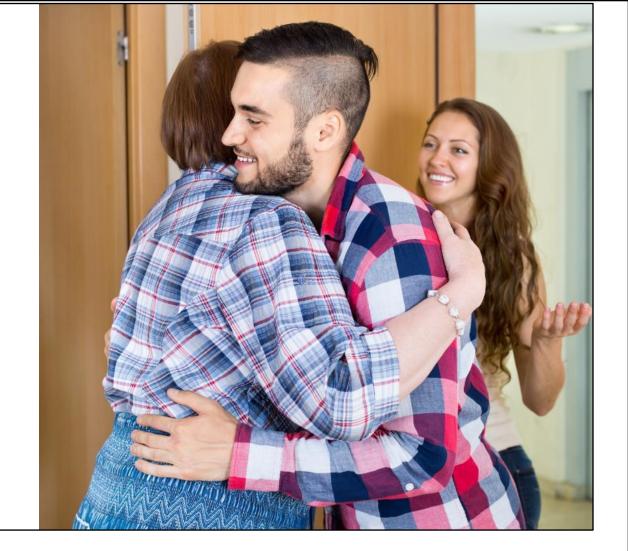
WI TB Program (WTBP) Risk Assessment

https://www.dhs.wisconsin.gov/library/collection/f-02314



Birth, travel, or residence in TB endemic countries

Close contact with active TB



Immunocompromising conditions:



NOT A RISK (IN WISCONSIN):

Nursing homes, health care facilities

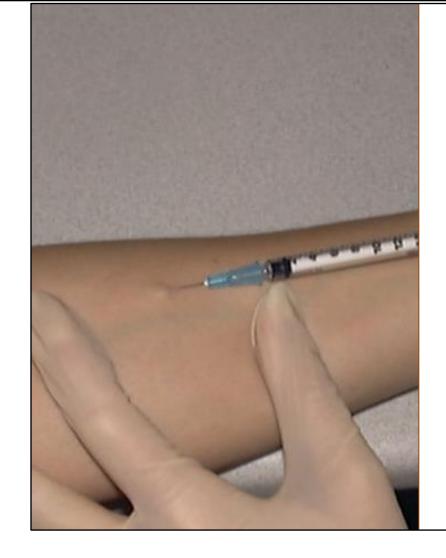
Jails, prisons

Homeless shelters



Rationale

Knowing the individual's risk helps us interpret the test result and determine next steps



Example

Skin tests have different positive cutoffs (5/10/15mm) based on risk.

Confirmatory test may be needed for low risk (CDC, 2017)



Risk assessments (for everyone)



Helps interpret test results

Helps determine whether confirmatory test needed (low-risk)

Baseline/POPP Screening:

- 1 Risk Assessment
- 2 Symptom evaluation
- 3 Testing

Symptom evaluation









and others (depending on site of infection)...

Rationale

Helps screen for active disease

May indicate need for repeat chest x-ray (CXR) in previous latent TB infection (LTBI)

DEPARTMENT OF HEALTH SERVICES Division of Public Health F-02314 (10/2019) STATE OF WISCONSIN Page 1 of 2

WISCONSIN TUBERCULOSIS (TB) RISK ASSESSMENT AND SYMPTOM EVALUATION

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Do not perform testing by IGRA or TST if the patient has previously confirmed latent tuberculosis infection (LTBI) or tuberculosis (TB) disease.

Do not treat for LTBI until active TB disease has been excluded:

Evaluate for active TB disease with a chest x-ray symptom evaluation, and if indicated, sputum AFB smears, cultures and rule out active TB disease.

See page 2 for more detailed information on the risk assessment question

SYMPTOM EVALUATION

YES NO Recent TB symptoms: Persistent cough lasting three or more weeks AND one or more of the symptoms: coughing up blood, fever, night sweats, unexplained weight to

RISK

YES NO

Birth, residence or traver from a remonant in a country with a high TB rate

- Includes any country other than the United States, Canada, Australia, New Zealand, or a country in western or northern Europe.
- Travel is of extended duration or including likely contact with infectious TB.

YES NO

Close contact to someone with infectious TB disease

RISK FOR PROGRESSION TO TB DISEASE

YES N

Human immunodeficiency virus (HIV) infection

YES NO

Current or planned immunosuppression including receipt of an organ transplant, treatment with an TNF-alpha antagonist (e.g., infliximab, etanercept, or other), chronic steroids (equivalent of prednisone ≥15 mg/day for ≥1 month), or other immunosuppressive medication in combination with risk for infection from above

- A TB risk assessment and symptom evaluation have been completed for the individual named below. No risks or symptoms for TB were identified.
- A TB risk assessment and symptom evaluation have been completed for the individual named below. Risk factors and/or symptoms for TB have been identified; further testing is recommended to determine the presence or absence of tuberculosis in a communicable form.

WI TB Program Risk Assessment

&
Symptom
Evaluation

Symptom evaluation



For **all new hires**, regardless of previous testing status

Helps screen for active disease

Helps determine if repeat CXR is needed

Baseline/POPP Screening:

- 1 Risk Assessment
- 2 Symptom evaluation
- 3 Testing

Testing...

Those without past +s or LTBI

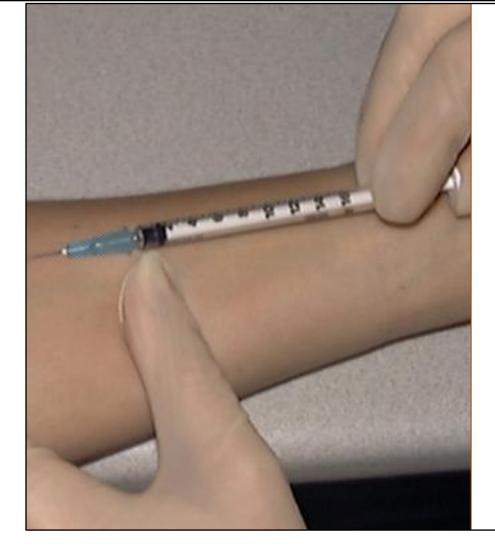
Helps screen for TB infection, establishes baseline result

Result should be available before contact with patients

Testing...

Interferon gamma release assay (IGRA) (preferred) TST (two-step)





Differing Positive Cut-offs

10mm: enhanced surveillance/referral*, medical risk, foreign born

15mm: HCP without risk

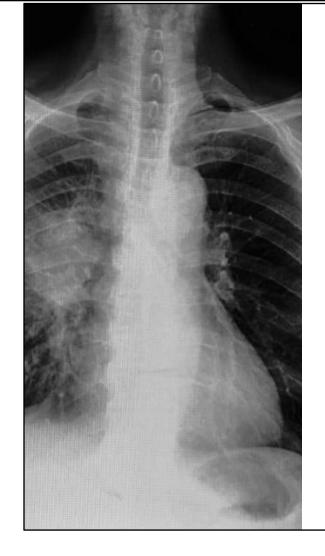
Repeat Past + Test?

Confirm + in low-risk individual

No documentation is available

Discordant results (consider risk)

BCG vaccinated individuals who may benefit from an IGRA

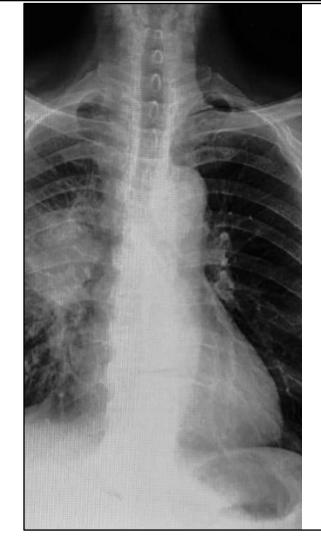


Previously Positive/ LTBI

New risk assessment

New symptom evaluation

Documentation of negative CXR



Newly Positive/LTBI

Symptom evaluation & risk assessment

Chest x-ray

Baseline/POPP Testing



For all new hires without LTBI

Understand when to repeat tests and CXRs

Result should be available before contact with patients



TB Tests

Nat'l guidelines

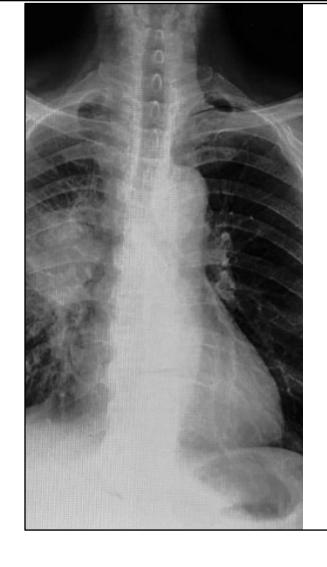
Institutions...should use a consistent approach considering time interval, exposure risk, and medical history

Consider 1 year cut-off for TSTs (JOEM, 2020)

WI TB Program

In the absence of new symptoms or risks, previously documented negative IGRA or TST results from within the past

12 months may be used



Repeat CXR (previous LTBI)?

Asymptomatic HCP with documented prior positive TB tests do not require imaging for clearance if they have documentation of normal chest imaging after the prior positive TB test (JOEM 2020) within 6 months (WTBP)

Repeat CXR During POPP?



Re-imaging can also be considered upon review of their TB risk assessments:

 When there has been known exposure or extended time spent in regions with elevated TB rates

(JOEM 2020)

Repeat CXR During POPP?



- Prior imaging is not well
 documented or is not normal
- Abnormal CXR from past
- HCP was not treated for LTBI and has risk factors for progression

(JOEM 2020)

Agenda

Baseline employment screening

Annual (serial) screening recommendations

Post-exposure

MMWR (2019):

"In the absence of a known exposure of evidence of ongoing TB transmission, U.S. healthcare personnel... without LTBI should not undergo routine serial TB screening or testing at any interval after baseline."

Rationale

A systematic review found a low percentage of U.S. HCP have a positive TB test at baseline and upon serial testing.

Working in health care was not a risk factor for a positive TB test



Exceptions

Laboratorians who handle specimens with suspected or confirmed *M. tuberculosis* (Blue Ribbon Panel)

Community narcotic TX centers (WI DHS 75.15 (17))

"High risk" groups/facilities

Exceptions (cont'd)

"High risk" groups/facilities

Number of patients with infectious pulmonary TB

Delays in initiating airborne isolation

Conversions indicating ongoing transmission with prior serial testing

Annual Recommendations

TB education, including risks of infection/progression

Symptom evaluation (for untreated LTBI)

Annual Components

Component	National guidelines	WI TB Program
Risk assessment	Not recommended	Consider, as part of education
Symptom evaluation		
Testing		
Education		

Risk Assessment & Symptom Evaluation

(F-02314)

Look for new risks

Recent TB symptoms: Persistent cough lasting three or more weeks AND one or more of the following symptoms: coughing up blood, fever, night sweats, unexplained weight loss, or fatigue

RISK FOR TB INFECTION

(ES NO Birth, residence or travel (for ≥ 1 month) in a country with a high TB rate

Includes any country other than the United States, Canada, Australia, New Zealand, or a country in western or northern Europe.

Travel is of extended duration or including likely contact with infectious TB.

(ES NO Close contact to someone with infectious TB disease

RISK FOR PROGRESSION TO TB DISEASE

(ES NO Current or planned immunosuppression including receipt of an organ transplant, treatment with an TNF-alpha antagonist (e.g., infliximab, etanercept, or other), chronic steroids (equivalent of prednisone ≥15 mg/day for ≥1 month), or other immunosuppressive medication in combination with risk for infection from above

A TB risk assessment and symptom evaluation have been completed for the individual named below. No risks or symptoms for TB were identified.

A TB risk assessment and symptom evaluation have been completed for the individual named below. Risk factors and/or symptoms for TB have been identified; further testing is recommended to determine the presence or absence

https://www.dhs.wisconsin.gov/forms/f02314.pdf

of tuberculosis in a communicable form

DEPARTMENT OF HEALTH SERVICES F-02314F (10/2010) WISCONSIN TUBERCULOSIS (TB) RISK ASSESSMENT AND SYMPTOM EVALUATION FOR ANNUAL EMPLOYEE SCREENING All of the information on this form shall be kept confidential. Perform testing by interferon gamma release assay (IGRA) or tuberculin skin test (TST) if there are risk factors identified by the questions below, or if testing is required (e.g., baseline employment testing). Do not perform testing by IGRA or TST if the patient has previously confirmed latent tuberculosis infection (LTBI) or tuberculosis (TB) disease. Do not treat for LTBI until active TB disease has been excluded: Evaluate for active TB disease with a chest x-ray, symptom evaluation, and if indicated, sputum AFB smears, cultures and nucleic acid amplification testing. A negative TST or IGRA does not rule out active TB disease If any of the following boxes are checked, recommend LTBI testing. See page 2 for more detailed information on the risk assessment questions below. SYMPTOM EVALUATION 1) Recent TB symptoms: Persistent cough lasting three or more weeks AND one or more of the following symptoms: coughing up blood, fever, night sweats, unexplained weight loss, or fatigue. 2) Birth, residence or travel (for ≥ 1 month) in a country with a high TB rate . Includes any country other than the United States, Canada, Australia, New Zealand, or a country in western or . Travel is of extended duration or including likely contact with infectious TB 3) Close contact to someone with infectious TB disease RISK FOR PROGRESSION TO TB DISEASE 4) Human immunodeficiency virus (HIV) infection 5) Current or planned immunosuppression including receipt of an organ transplant, treatment with an TNF-alpha antagonist (e.g., infliximab, etanercept, or other), chronic steroids (equivalent of prednisone ≥15 mg/day for ≥1 month), or other immunosuppressive medication in combination with risk for infection from above. I, as the individual/patient listed below, have reviewed the TB risk factors and symptoms listed on this form (see 1-5 above). I attest that, to my knowledge, I do not have any risks or symptoms for TB. I, as the individual/patient listed below, have reviewed the TB risk factors and symptoms listed on this form (see 1-5 above). I have one or more risks or symptoms for TB. I understand that further testing is recommended to determine the presence or absence of tuberculosis in a communicable form. Individual/Patient Name (Print): Name Screener, if applicable (Print):

Individual/patient signature (optional):

Risk Assessment & Symptom **Evaluation for** Annual **Employee** Screening (F-02314E)

https://www.dhs.wisconsin.gov/forms/f02314e.pdf

Assessment Date

Annual Components

Component	National guidelines	WI TB Program
Risk assessment	Not recommended	Consider, as part of education
Symptom evaluation	Only for untreated LTBI	Consider, as part of education (all)
Testing		
Education		

DEPARTMENT OF HEALTH SERVICES Division of Public Health F-02314 (10/2019) STATE OF WISCONSIN Page 1 of 2

WISCONSIN TUBERCULOSIS (TB) RISK ASSESSMENT AND SYMPTOM EVALUATION

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Do not treat for LTBI until active TB disease has been excluded:

of tuberculosis in a communicable form.

Evaluate for active TB disease with a chest x-ray symptom evaluation, and if indicated, sputum AFB smears, cultures and out active TB disease.

YMPTOM	EVALUATION
YES NO	Recent TB symptoms: Persistent cough lasting three or more weeks AND one or more of the for symptoms: coughing up blood, fever, night sweats, unexplained weight loss, or fatigue
YES NO	Includes any country other trian the United States, Canada, Australia, New Zealand, or a country
/E0 NO	 in western or northern Europe. Travel is of extended duration or including likely contact with infectious TB.
ES NO	Close contact to someone with infectious TB disease
RISK FOR	PROGRESSION TO TB DISEASE
ES NO	Human immunodeficiency virus (HIV) infection
YES NO	Current or planned immunosuppression including receipt of an organ transplant, treatment with an TNF-alpha antagonist (e.g., infliximab, etanercept, or other), chronic steroids (equivalent of prednisone >15 mg/day for >1 month), or other immunosuppressive medication in combination with risk for
	infection from above
	≥15 mg/day for ≥1 month), or other immunosuppressive medication in combination with risk for infection from above assessment and symptom evaluation have been completed for the individual named below. No risk for TB were identified.

WI TB Program Risk Assessment

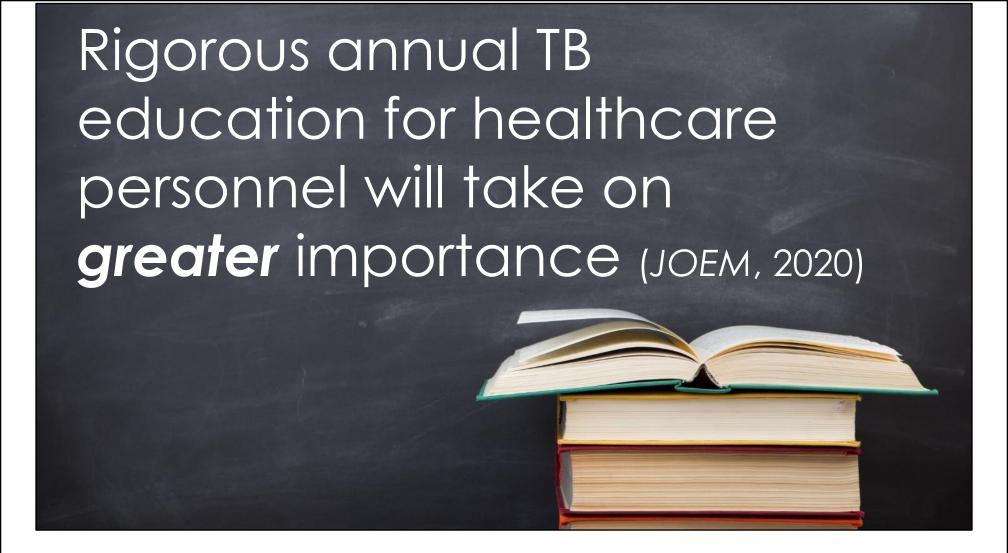
& Symptom Evaluation

Annual Components

Component	National guidelines	WI TB Program
Risk assessment	Not recommended	Consider, as part of education
Symptom evaluation	Only for untreated LTBI	Consider, as part of education (all)
Testing	Not recommended	Not recommended
Education		

Annual Components

Component	National guidelines	WI TB Program
Risk assessment	Not recommended	Consider, as part of education
Symptom evaluation	Only for untreated LTBI	Consider, as part of education (all)
Testing	Not recommended	Not recommended
Education	Recommended	Recommended



Agenda

Baseline employment screening

Annual (serial) screening recommendations

Post-exposure



Please note: An erratum has been published for this issue. To view the erratum, please click here.





Morbidity and Mortality Weekly Report

Recommendations and Reports

December 16, 2005 / Vol. 54 / No. RR-15

Guidelines for the Investigation of Contacts of Persons with Infectious Tuberculosis

Recommendations from the National Tuberculosis
Controllers Association and CDC

https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5415a1.htm

Baseline (<4 weeks)

Post-exposure (>8 weeks)

Symptom screen- all

Symptom screen- all

Testing-previous negatives Testing-previous negatives

CXR- new positives and +symptoms

CXR- new positives and +symptoms

LTBI treatment- all confirmed LTBI

LTBI treatment- all confirmed LTBI

Baseline (<4 weeks)

Symptom screen- all Symptom screen- all

Testing-previous negatives Testing-previous negatives

CXR- new positives and

+symptoms

LTBI treatment- all confirmed LTBI

CXR- new positives and

+symptoms

LTBI treatment- all

confirmed LTBI



Baseline (<4 weeks)



Symptom screen-all

Testing- previous negatives

CXR- new positives and +symptoms

LTBI treatment- all confirmed LTBI

Baseline Testing >4 weeks?

JOEM 2020

- 1. Symptom evaluation
- 2. History of prior TB infection or treatment
- 3. Risk of progression to disease

WI TB Program

Early positives in a contact investigation can guide testing strategy

Weigh decision with timing, extent of exposure, knowledge of immunologic response

Baseline (<4 weeks)

Post-exposure (>8 weeks)

Symptom screen-all

Symptom screen-all

Testing-previous negatives Testing-previous negatives

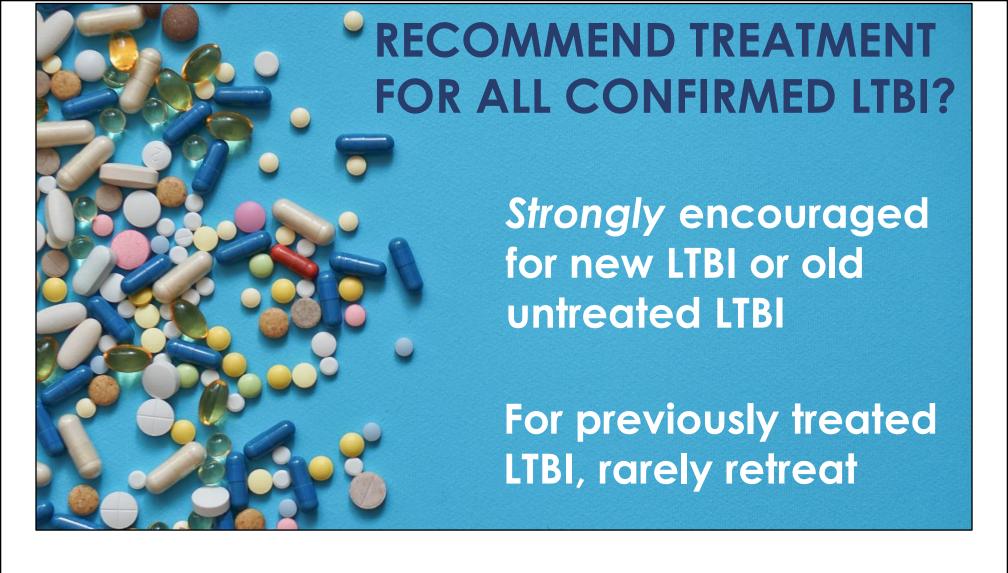
+symptoms

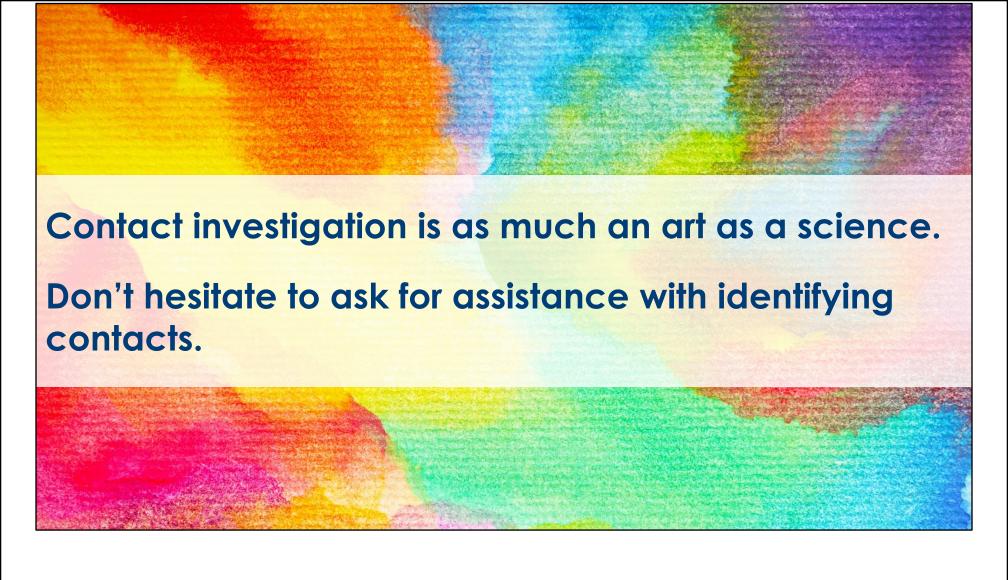
CXR- new positives and CXR- new positives and +symptoms

LTBI treatment- all confirmed LTBI

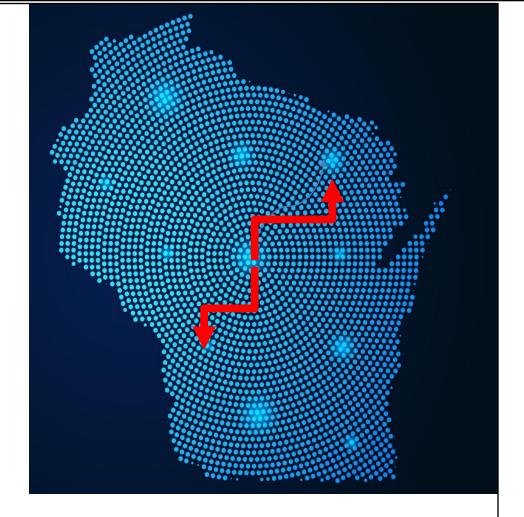


LTBI treatment- all confirmed LTBI





Please reach out to the WI TB Program for assistance with contact tracing in large investigations.



Tuberculosis Screening and Testing:

Health Care Personnel (HCP) and Caregivers (including assisted living staff)



Definitions:

TB risk assessment: Use of a questionnaire to determine a person's risk for TB infection.

Symptom evaluation: Assessment for signs and symptoms of active tuberculosis (TB) disease.

TB testing: Performing an interferon gamma release assay (IGRA) blood test or tuberculin skin test (TST) to determine if a person has been infected with *M. tuberculosis* bacteria.

Screening and Testing Upon Hire

Screening for latent TB infection (LTBI) and TB disease should be performed before assumption of duties in which HCP and caregivers will have direct contact with patients and includes the following three steps:

TB risk assessment

Perform a baseline TB risk assessment questionnaire for HCP and caregivers to determine risk for TB infection. See resources for an example questionnaire¹.

Symptom evaluation

Symptoms for TB include cough lasting more than three weeks AND one of more of the following: coughing up blood, fever, night sweats, unexplained weight loss, or fatigue.

■ TB testing

<u>Perform baseline testing for all HCP</u> and caregivers without documented evidence of prior LTBI or TB disease. See page 2 for screening of staff with previous positive results. IGRA or TST may be performed; IGRA is preferred. See *Figure 1* on page 2 for interpretation of test results for low risk individuals.

- If testing is positive, obtain chest x-ray and refer HCP or caregiver to provider for additional workup for TB disease.
- In the absence of newly identified risks or symptoms, previous documented negative IGRA or TST results (within 12 months) may be used.
- If TST is used as the baseline testing, 2-step testing is recommended for HCP and caregivers who have not
 had TST testing previously or have only had one negative TST test greater than 12 months ago. If 2 or
 more TST tests have been previously performed, all results are negative, and documentation of results is
 available, a one-step TST may be performed before hire.
- Initial risk assessment, testing, and symptom evaluation can serve as a baseline should an exposure occur and a TB contact investigation become necessary. Additionally, baseline risk assessment, testing, and symptom evaluation can facilitate the detection and treatment of latent tuberculosis infection (LTBI) and TB disease in HCP before employment begins and reduce the risk of transmission to patients and other HCP.

P-02382 (8/2019)

Wisconsin Tuberculosis Program | Wisconsin Department of Health Services

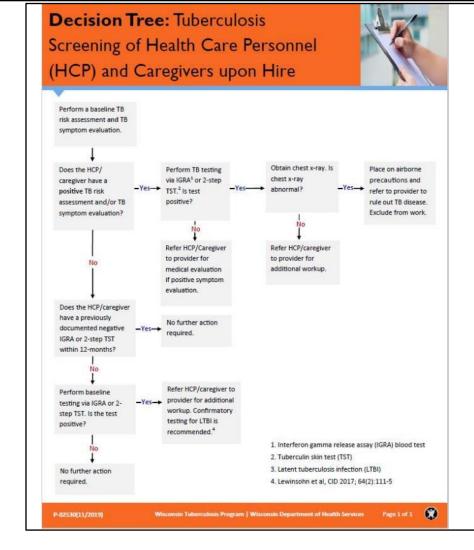
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HCP TB Screening Fact Sheet

dhs.wi.gov/publications/p02382.pdf

https://www.dhs.wisconsin.gov/publications/p02382.pdf



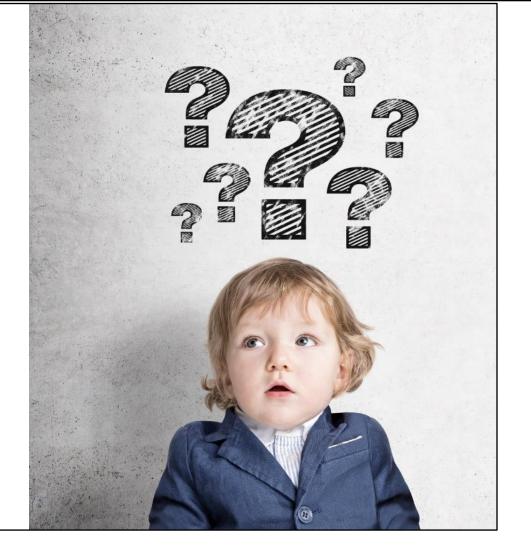
HCP TB Screening Decision Tree

dhs.wi.gov/publications/p02 530.pdf

https://www.dhs.wisconsin.gov/publications/p02530.pdf

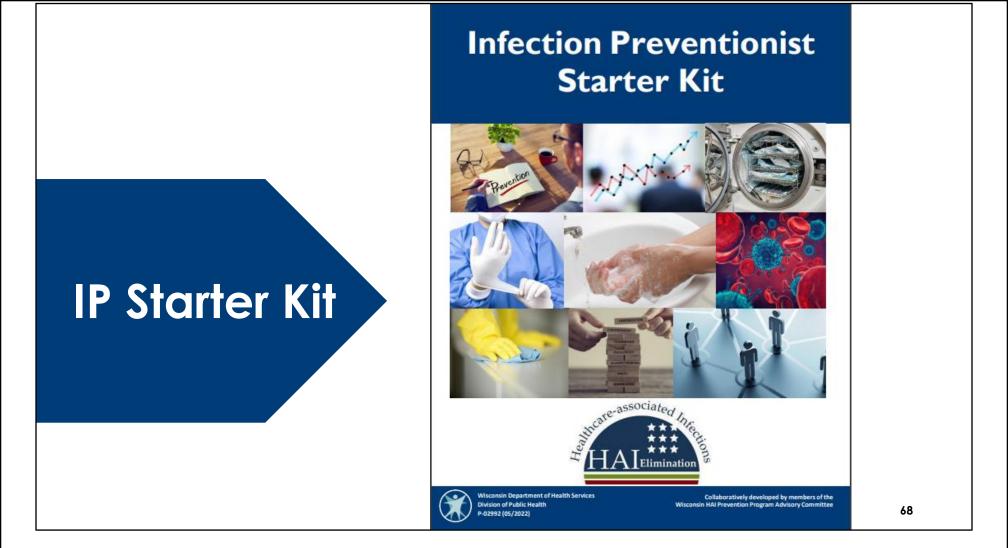
Questions?





Send your questions and topic suggestions. Submit your ideas to Ashley O'Keefe at ashley.okeefe@dhs.wisconsin.gov. 67

Please submit your ideas to Ashley O'Keefe at ashley.okeefe@dhs.wisconsin.gov.



IP Starter Kit: https://www.dhs.wisconsin.gov/publications/p02992.pdf

HAI Prevention Program Contact Information



Email: dhs:wisconsin.gov



Phone: 608-267-7711



(()) Website: www.dhs.wisconsin.gov/hai/contacts.htm

Phone: 608-267-7711

Website: www.dhs.wisconsin.gov/hai/contacts.htm

Upcoming Lunch and Learn Session

Date: Tuesday, October 10, 2023

Topic: Respiratory Recap