



TUBERCULOSIS SCREENING TESTS

INTERFERON GAMMA RELEASING ASSAY (IGRA) VS TUBERCULIN SKIN TEST (TST)

CONSIDERATIONS:

- TB screening tests are for detecting TB infection
- TB screening tests cannot differentiate between infection and disease
- TB screening tests requires an intact immune system
- TB screening tests in low incidence communities are more likely to be falsely positive.
- IGRAs include Quantiferon TB Gold-in tube (QFT-GIT) and T- Spot. Both were FDA approved in 2007.
- The only IGRA testing offered locally is the QFT-GIT test.
- QFT-GIT results should come with both qualitative test interpretation (positive or negative) and quantitative measurements (results for NIL, TB Ag, and Mitogen)
- Serial testing with TST should have baseline two-step TST
- Serial QFT-GIT do not need to have baseline
- TB disease is based on symptoms, clinical assessment, radiographic evidence, sputum or other source sampling.
- A positive TB screening test may be false positive
- A false negative result can occur if TST is not applied or read properly.
- A false negative result can occur if QFT-GIT sample is not collected properly.
- Latent TB infection is due to exposure to active TB disease

*An IGRA may be used in place of (but not in addition to) a TST in all situations in which CDC recommends tuberculin skin testing as an aid in diagnosing *M. tuberculosis* infection, with preferences and special considerations noted below. Despite the indication of a preference in these instances, use of the alternative test (FDA-approved IGRA or TST) is acceptable medical and public health practice.*

SITUATIONS WHERE AN IGRA IS PREFERRED BUT A TST IS ACCEPTABLE

- Patient highly unlikely to return for TST reading
- A person who is more likely to have received BCG (as a vaccine or for cancer therapy).

SITUATIONS WHERE AN TST IS PREFERRED BUT AN IGRA IS ACCEPTABLE

- A TST is preferred for testing children aged <5 years.

SITUATIONS WHERE EITHER A TST OR AN IGRA MAY BE USED WITHOUT PREFERENCE

Recent Contacts of Active TB:

- IGRA if foreign born and likely to have had BCG
- TST in children
- Both require repeat testing 8 – 10 weeks after end of exposure
- Use the same test format for repeat testing

Occupational Health Screening Setting:

- If screen with IGRA, follow-up tests should also be IGRA
- If follow-up with TST, baselines should be two-step TST
- TST conversion is defined as a change from negative to positive with an increase of ≥ 10 mm in induration within 2 years. TST conversion is associated with an increased risk for active tuberculosis.
- An IGRA conversion is defined as a change from negative to positive within 2 years without any consideration of the magnitude of the change in TB Response. Using this lenient criterion IGRA more likely to yield false positive conversion with repeat testing

SITUATIONS WHERE TESTING WITH BOTH AN IGRA AND A TST MAY BE CONSIDERED

Do not routinely test with both a TST and an IGRA.

- When the initial test (TST or IGRA) is negative and:
 - the risk for infection, the risk for progression, and the risk for a poor outcome are increased (e.g., when persons with HIV infection or children aged <5 years are at increased risk for *M. tuberculosis* infection) or
 - clinical suspicion exists for active tuberculosis (such as in persons with symptoms, signs, and/or radiographic evidence suggestive of active tuberculosis) and confirmation of *M. tuberculosis* infection is desired.

- In such patients with an initial test that is negative, taking a positive result from a second test as evidence of infection increases detection sensitivity. However, multiple negative results from any combination of these tests cannot exclude *M. tuberculosis* infection.
- When the initial test is positive and:
 - additional evidence of infection is required to encourage compliance (e.g., in foreign-born health-care workers who believe their positive TST result is attributable to BCG) or
 - person is healthy, no known exposure to TB, and has a low risk for both infection and progression. If second test is positive, better to consider as true positive
- Repeating an IGRA or performing a TST might be useful when the initial IGRA result is indeterminate, borderline, or invalid and a reason for testing persists (Nil is high or mitogen is low.)

MEDICAL MANAGEMENT AFTER TESTING

- Diagnoses of *M. tuberculosis* infection should include consideration of epidemiologic and medical history as well as other clinical information.
- Persons with a **positive TST or IGRA** result should be evaluated for the
 - likelihood of *M. tuberculosis* infection (has exposure history)
 - risks for progression to active tuberculosis if infected (young, old, diabetic, immune compromised)
 - symptoms and signs of active tuberculosis.
 - If risks, symptoms, or signs are present, additional evaluation is indicated to determine if the person has LTBI or active tuberculosis.
- A **diagnosis of LTBI** requires that active tuberculosis be excluded by medical evaluation,
 - taking a medical history
 - physical examination to check for suggestive symptoms and signs
 - chest radiograph
 - when indicated, testing of sputum or other clinical samples for the presence of *M. tuberculosis*.
 - Neither an IGRA nor TST can distinguish LTBI from active tuberculosis.
- **Suspect active TB** - persons who have symptoms, signs, or radiographic evidence of active tuberculosis or who are at increased risk for progression to active tuberculosis if infected
 - positive result with either an IGRA or TST should be taken as evidence of *M. tuberculosis* infection
 - negative IGRA or TST results are not sufficient to exclude infection in these persons, and clinical judgment dictates when and if further diagnostic evaluation and treatment are indicated.
- In **healthy persons** - a single positive IGRA or TST result should not be taken as reliable evidence of *M. tuberculosis* infection.
 - false-positive result is more likely.
 - likelihood of *M. tuberculosis* infection and of disease progression should be reassessed
 - initial test results should be confirmed.
 - discounting an isolated positive result as a false positive is reasonable
- **Discordant test results** (i.e., one positive and the other negative), assess:
 - probability of infection
 - risk for disease if infected
 - risk for a poor outcome if disease occurs.

- BCG history, not high risk for poor outcome - TST reactions of <15 mm in size may reasonably be discounted as false positives when an IGRA is clearly negative.
- Test result
 - size of induration and presence of blistering for a TST
 - quantitative values of IGRA
- One positive (either TST or IGRA) is all you need if:
 - clinical suspicion exists for active tuberculosis (e.g., in persons with symptoms, signs, and/or radiographic evidence of active tuberculosis)
 - the risks for infection, progression, and a poor outcome are increased (e.g., when persons with HIV infection or children aged <5 years are at increased risk for *M. tuberculosis* infection).

MMWR June 25, 2010 / 59(RR05);1-25 Updated Guidelines for Using Interferon Gamma Release Assays to Detect *Mycobacterium tuberculosis* Infection --- United States, 2010

Diana T. Yu, MD, MSPH
Health Officer, Thurston and Mason County

WASHINGTON ADMINISTRATIVE CODE 246-101-
NOTIFIABLE CONDITIONS RULE REVISION PROJECT IS
UNDER WAY

For the past year an advisory committee and stakeholder group has worked to revise the Notifiable Condition Rule. They are winding down the process and have a tentative schedule for collecting interested parties comments, conducting agency review, filing papers to make the changes, a public hearing and final rule filing, an ambitious schedule from now through *November 2010*. We will keep you updated with proposed changes as the information is made available.

CHANGES TO PUBLIC HEALTH & SOCIAL SERVICES STAFF AND ORGANIZATION OF PROGRAMS

With staff changes in our Department the decision was made to reorganize how we complete work in the Investigation and Control of Disease (ICD) Program.

- *The Immunization Program became a separate section of our Personal Health Division on June 1. Christy Gustafson who was our Immunization and Vaccine for Children Coordinator has moved to the Nurse Family Partnership Program.*
- *Marianne Remy has moved into the Immunization Coordinator position and will work with Lisa Furtwangler who will continue to support Vaccine for Children Program activities and Leyna Yarosz who will work on a special American Recovery and Reinvestment Act funded project with Marianne, to facilitate Child Profile Immunization Registry use, reminder recall systems and quality improvement activities. Staff contact information may be found below.*

GENERAL NOTIFIABLE CONDITION INFORMATION

General information about notifiable conditions in Washington can be found at www.doh.wa.gov/notify/

The site has helpful information about Washington disease incidence, links to the Washington Administrative Code, purpose of reporting and surveillance, reporting requirements, case definitions, disease guidelines, reporting posters and contact information.

THURSTON COUNTY NOTIFIABLE CONDITION
REPORTING INFORMATION

**CONFIDENTIAL NOTIFIABLE CONDITION REPORTING
LINE** (24 hour automated reporting line) 360-786-5470

To report a case, leave the following information about the patient

- Name of the condition you are reporting
- Patient's name
- Patient's address and phone
- Diagnosing physician's name and phone #
- Patient's date of birth
- Treatment prescribed
- Patient's occupation, travel history

Please inform the patient about their test results and condition and let them know the health department will contact them for follow-up.

REGULAR BUSINESS HOURS - If you need to speak with someone about a notifiable condition during regular business hours please call 360-867-2672.

AFTER HOURS – If you need to speak to someone about a public health **EMERGENCY OR AN IMMEDIATELY NOTIFIABLE CONDITION** in Thurston County, try local health first, call 911 and ask to have the Health Officer call you back.

If no one is available at the Thurston County Public Health Department or through 911 and you are calling to report a condition that is **IMMEDIATELY NOTIFIABLE**, please call 877-539-4344.

PUBLIC HEALTH & SOCIAL SERVICES DEPARTMENT
STAFF

We strive to be a resource for the community. If you have questions contact us.

- Diana T. Yu, MD, MSPH, Health Officer, 360-867-2501
- Communicable Disease/TB, Dolores Dorffeld, 360-867-2533
- Immunizations, Marianne Remy, 360-867-2524
- Medical Reserve Corp, Sue Poyner, 360-867-2551
- STD's/HIV Coordinator, Monica Lyons, 360-867-2536
- Travel Clinic, Callie Wilson, 360-867-2539
- Chronic Disease Prevention, Chris Hawkins, 360-867-2513

NEWSLETTER

If you have questions about this newsletter or would like to request it in an alternative format please contact:

Jeanie Knight, Epidemiologist, 360-867-2535

For additional copies of this issue or to view past issues online visit: www.co.thurston.wa.us/health/admin/news

For additional information visit our website at: www.co.thurston.wa.us/health

NOTIFIABLE CONDITIONS REPORTED IN THURSTON
COUNTY

Selected Reported Thurston County
Notifiable Conditions

	Cases Reported in May		Cases Reported through May	
	2009	2010	2009	2010
Campylobacter	3	5	7	12
Chlamydial Infections	51	50	289	270
Cryptosporidium	0	0	0	1
E.coli	0	0	0	0
Foodborne Disease Cases	0	0	0	6
Foodborne Disease Outbreaks	0	0	0	1
Giardia	1	1	7	7
Gonorrhea	4	7	12	15
Haemophilus influenzae	0	0	0	0
Hepatitis A (acute)	0	0	0	0
Hepatitis B (acute)	0	0	0	1
Hepatitis C (acute)	0	2	0	2
Herpes, genital (primary)	7	5	36	40
Measles	0	0	0	0
Meningococcal	0	0	1	2
Mumps	0	0	3	0
Pertussis	0	1	2	3
Rabies, Bat	0	0	0	0
Rubella	0	0	0	0
Salmonella	3	5	10	15
Shigella	0	0	0	0
Syphilis EL	0	0	0	0
Syphilis L/LL	0	0	0	1
Syphilis Primary & Secondary	0	0	0	1
Syphilis Total	0	0	0	2
Tuberculosis	0	0	5	8