

HAB HIV Core Clinical Performance Measures: Adult/Adolescent Clients Group 2



Performance Measure: TB Screening		OPR-Related Measure: No																					
Percentage of clients with HIV infection who received testing with results documented for latent tuberculosis infection (LTBI) since HIV diagnosis																							
Numerator:	Number of clients who received documented testing for LTBI with any approved test (tuberculin skin test [TST] or interferon gamma release assay [IGRA]) since HIV diagnosis																						
Denominator:	Number of HIV-infected clients who: <ul style="list-style-type: none"> do not have a history of previous documented culture-positive TB disease or previous documented positive TST or IGRA¹; and had a medical visit with a provider with prescribing privileges² at least once in the measurement year. 																						
Patient Exclusions	None																						
Data Element:	1. Is the client HIV-infected? (Y/N) <ol style="list-style-type: none"> If yes, has the client ever had previous documented culture-positive TB disease or previous documented positive TST or IGRA? (Y/N) <ol style="list-style-type: none"> If no, has the client ever been tested for LTBI with a TST or IGRA since his/her HIV diagnosis? (Y/N) <ol style="list-style-type: none"> If yes, are the results documented? (Y/N) 																						
Data Sources:	<ul style="list-style-type: none"> Ryan White Program Data Report, Section 5, Item 47 may provide data useful in establishing a baseline for this performance measure Electronic Medical Record/Electronic Health Record CAREWare, Lab Tracker or other electronic data base HIVQUAL reports on this measure for grantee under review Medical record data abstraction by grantee of a sample of records. 																						
National Goals, Targets, or Benchmarks for Comparison	National HIVQUAL Data: ³ <table border="1"> <thead> <tr> <th></th> <th>2003</th> <th>2004</th> <th>2005</th> <th>2006</th> </tr> </thead> <tbody> <tr> <td>Top 10%</td> <td>88.9%</td> <td>91.7%</td> <td>88.8%</td> <td>92.2%</td> </tr> <tr> <td>Top 25%</td> <td>77.4%</td> <td>73.5%</td> <td>74.8%</td> <td>78.2%</td> </tr> <tr> <td>Mean*</td> <td>58.8%</td> <td>56.0%</td> <td>57.1%</td> <td>56.2%</td> </tr> </tbody> </table> <p>*from HAB data base</p>				2003	2004	2005	2006	Top 10%	88.9%	91.7%	88.8%	92.2%	Top 25%	77.4%	73.5%	74.8%	78.2%	Mean*	58.8%	56.0%	57.1%	56.2%
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Outcome Measures for Consideration	<ul style="list-style-type: none"> Incidence of TB disease in the clinic population 																						
Basis for Selection and Placement in Group 2:																							
HIV is the most important known risk factor for progression to TB disease from latent TB infection (LTBI) after exposure to infectious TB patients. There is a 2% to 8% TB risk per year within 5 years after LTBI for HIV-infected adults ^{4,5} versus an 8% TB risk over 60 years for adults with LTBI but not HIV ⁶ . The TB risk for HIV-infected persons remains higher than for HIV-uninfected persons, even for HIV-infected persons who are taking antiretroviral medications. ^{7,8} TB disease is an AIDS-defining opportunistic condition that can be deadly. McCombs found a 3 times adjusted odds of being diagnosed with TB at death and a 5 times adjusted																							

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odds of dying during TB treatment for HIV-infected TB patients compared with other patients from 1993 through 2001.⁹ Immunologic and virologic evidence now indicates that the host immune response to *M. tuberculosis* enhances HIV replication and might accelerate the natural progression of HIV infection.¹⁰

Providers should screen all HIV infected patients for TB and LTBI as soon as possible after HIV diagnosis. TB and LTBI testing should be conducted among HIV-infected persons regardless of duration of infection since they are at increased risk for progressing to TB disease. Thus, an HIV-infected person having a prior positive TST for which he/she did not complete treatment is still eligible for treatment. However, early identification and treatment of TB disease improves outcomes and reduces the risk of transmission. TB should be suspected in any patient who has had a persistent cough for more than 2 to 3 weeks, especially if the patient has at least one additional symptom, including fever, night sweats (sufficient to require changing of bed clothes or sheets), weight loss, or hemoptysis (coughing up blood). Identification of LTBI and completion of LTBI treatment reduces the risk of development of TB disease by 70 to 90 percent.¹¹ Measure reflects important aspect of care that impacts HIV-related morbidity and mortality and focuses on treatment decisions that affect a sizable population. Measure has a strong evidence base supporting the use.

US Public Health Guidelines:

Guidelines for TB services for HIV-infected persons, such as those jointly published by the Public Health Service and the Infectious Diseases Society of America¹² or by the Centers for Disease Control and Prevention (CDC)¹³ call for:

- provision of a TST when HIV infection is first recognized,
- annual or periodic TSTs for HIV-infected persons who are initially TST-negative and belong to groups at substantial risk for TB exposure or if they experience immune reconstitution,
- chest radiographs and clinical evaluations to rule out active TB among those who are TST positive (reactions ≥ 5 mm) or who have symptoms (regardless of TST result), and
- LTBI treatment (once active TB has been excluded) for those having a positive TST or for those who are recent contacts of persons with infectious active TB¹⁴.

References/Notes:

¹Previous documented culture-positive TB disease or previous documented positive TST or IGRA occurred prior to HIV diagnosis.

²A “provider with prescribing privileges” is a health care professional who is certified in their jurisdiction to prescribe ARV therapy.

³“PPD screening”

<http://www.hivguidelines.org/admin/files/qoc/hivqual/proj%20info/HQNatlAggScrs3Yrs.pdf>

⁴Markowitz N, Hansen NI, Hopewell PC, et al. Incidence of tuberculosis in the United States among HIV-infected persons. *Annals of Internal Medicine*. 1997;126:123-32.

⁵Selwyn PA, Hartel D, Lewis VA, et al. A prospective study of the risk of tuberculosis among intravenous drug users with human immunodeficiency virus infection. *New England Journal of Medicine*. 1989;320:545-50.

⁶Aronson NE, Santosham M, Comstock GW, et al. Long-term efficacy of BCG vaccine in American Indians and Alaska Natives: A 60-year follow-up study. *Journal of the American Medical Association*. 2004;291(17):2086-91.

⁷The Antiretroviral therapy cohort collaboration. Incidence of tuberculosis among HIV-infected patients receiving highly active antiretroviral therapy in Europe and North America. *Clinical Infectious Diseases*. 2005;41:1772-1782.

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⁸Jones JL, Hanson DL, Dworkin MS, DeCock KM, and the Adult/Adolescent Spectrum of HIV Disease Group. HIV-associated tuberculosis in the era of highly active antiretroviral therapy. International Journal of TB and Lung Disease. 2000;4(11):1026-1031.

⁹McCombs SB. Tuberculosis mortality in the United States, 1993-2001. Oral presentation at CDC. Atlanta. December 2003.

¹⁰Centers for Disease Control and Prevention. Prevention and treatment of tuberculosis among patients infected with human immunodeficiency virus: Principles of therapy and revised recommendations. MMWR Recomm Rep 1998 Oct 30;47(RR-20):1-58.

¹¹American Thoracic Society/Centers for Diseases Control and Prevention/Infectious Diseases Society of America. Treatment of tuberculosis. Am J Respir Crit Care Med 2003;167:603-662

¹²Centers for Disease Control and Prevention. Guidelines for Preventing Opportunistic Infections Among HIV-Infected Persons — 2002 Recommendations of the U.S. Public Health Service and the Infectious Diseases Society of America. MMWR 2002;51 (No. RR-8) (<http://www.cdc.gov/mmwr/PDF/rr/rr5108.pdf> or <http://aidsinfo.nih.gov/ContentFiles/OIpreventionGL.pdf>)

¹³Centers for Disease Control and Prevention. Prevention and treatment of tuberculosis among patients infected with human immunodeficiency virus: Principles of therapy and revised recommendations. MMWR Recomm Rep 1998 Oct 30;47(RR-20):1-58.

¹⁴Guidelines for the Investigation of Contacts of Persons with Infectious Tuberculosis Recommendations from the National Tuberculosis Controllers Association and CDC. MMWR December 16, 2005 / Vol. 54 / No. RR-15