

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



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

<b>Performance Measure:</b> Adherence Assessment & Counseling		<b>OPR-Related Measure:</b> Yes <a href="http://www.hrsa.gov/performance/performancereview/measures.htm">www.hrsa.gov/performance/performancereview/measures.htm</a>																					
Percentage of clients with HIV infection on ARVs who were assessed and counseled <sup>1,2</sup> for adherence two or more times in the measurement year																							
<b>Numerator:</b>	Number of HIV-infected clients, as part of their primary care, who were assessed and counseled for adherence two or more times at least three months apart																						
<b>Denominator:</b>	Number of HIV-infected clients on ARV therapy who had a medical visit with a provider with prescribing privileges <sup>3</sup> at least once in the measurement year																						
<b>Patient Exclusions:</b>	<ol style="list-style-type: none"> <li>1. Patients newly enrolled in care during last six months of the year</li> <li>2. Patients who initiated ARV therapy during last six months of the year</li> </ol>																						
<b>Data Element:</b>	<ol style="list-style-type: none"> <li>1. Is the client HIV-infected? (Y/N)               <ol style="list-style-type: none"> <li>a. If yes, was the client on ARVs?(Y/N)                   <ol style="list-style-type: none"> <li>i. If the client was on ARVs, did he/she receive adherence counseling during the measurement year? (Y/N).                       <ol style="list-style-type: none"> <li>1. If yes, list the quarters of these visits.</li> </ol> </li> </ol> </li> </ol> </li> </ol>																						
<b>Data Sources:</b>	<ul style="list-style-type: none"> <li>• Electronic Medical Record/Electronic Health Record</li> <li>• CAREWare, Lab Tracker, or other electronic data base</li> <li>• HIVQUAL reports on this measure for grantee under review</li> <li>• Medical record data abstraction by grantee of a sample of records</li> </ul>																						
<b>National Goals, Targets, or Benchmarks for Comparison:</b>	IHI Goal: 90% <sup>4</sup> National HIVQUAL Performance Data: <sup>5</sup> <table border="1" style="margin-left: 20px;"> <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>95.8%</td> <td>92.0%</td> <td>97.5%</td> <td>98.4%</td> </tr> <tr> <td>Top 25%</td> <td>82.7%</td> <td>79.2%</td> <td>88.3%</td> <td>91.6%</td> </tr> <tr> <td>Mean*</td> <td>57.5%</td> <td>39.7%</td> <td>46.8%</td> <td>55.7%</td> </tr> </tbody> </table> <p><small>*from HAB data base</small></p>				2003	2004	2005	2006	Top 10%	95.8%	92.0%	97.5%	98.4%	Top 25%	82.7%	79.2%	88.3%	91.6%	Mean*	57.5%	39.7%	46.8%	55.7%
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<b>Outcome Measures for Consideration:</b>	<ul style="list-style-type: none"> <li>○ Percent of undetectable viral loads among patients on ARV in the measurement year</li> <li>○ Percent of patients with ARV-resistance developed during therapy in the measurement year</li> <li>○ Mortality rates</li> <li>○ Incidence of HIV-related hospitalizations in the clinic population</li> <li>○ Incidence of clients with progression to AIDS in the clinic population</li> </ul>																						
<b>Basis for Selection and Placement in Group 2:</b>																							
<p>“Adherence is a key determinant in the degree and duration of virologic suppression. Among studies reporting on the association between suboptimal adherence and virologic failure, nonadherence among patients on HAART was the strongest predictor for failure to achieve viral suppression below the level of detection. HIV viral suppression, reduced rates of resistance, and improved survival have been correlated with high rates of adherence to antiretroviral therapy.</p>																							

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Prior to writing the first prescriptions, clinicians need to assess the patient's readiness to take medication. Patients need to understand that the first regimen is the best chance for long-term success. Resources need to be identified to assist in success. Interventions can also assist with identifying adherence education needs and strategies for each patient."<sup>6</sup>

Measure reflects important aspect of care that impacts HIV-related morbidity and focuses on treatment decisions that affect a sizable population. Although discussions of the importance of adherence to ARVs is important to begin prior to initiation of treatment, there is no standard of care for discussions to occur every 6 months for patients who may be years away from ARV treatment.

### **US Public Health Guidelines:**

"...adherence counseling and assessment should be done at each clinical encounter"<sup>7</sup> (10/10/06)

### **References/Notes:**

<sup>1</sup>Assessment of adherence includes: 1) patient reports of adherence by: a) quantifiable scales, e.g. missed 3 out of 10 doses; b) qualitative scale, e.g. Likert scale; or 2) quantification such as pharmacy dispensing records, pill counts or direct observation therapy.

<sup>2</sup>Adherence counseling can be provided by any member of the multidisciplinary primary care team.

<sup>3</sup>A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ARV therapy.

<sup>4</sup>IHI Measure reads, "Percent of Patients/Clients Assessed for Adherence to Antiretroviral (ARV) Therapy in the Past 4 Months"

(<http://www.ihl.org/IHI/Topics/HIVAIDS/HIVDiseaseGeneral/Measures/PercentofPatientsClientsAssessedforAdherencetoAntiretroviralARVTherapyinthePast4Months.htm>)

<sup>5</sup>(<http://www.hivguidelines.org/admin/files/qoc/hivqual/proj%20info/HQNatlAggScrs3Yrs.pdf>)

<sup>6</sup>Guidelines for the Use of Antiretroviral Agents in HIV-1-Infected Adults and Adolescents [April 7, 2005] (<http://aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL04072005001.pdf>)

<sup>7</sup>Ibid

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<b>Performance Measure:</b> Cervical Cancer Screening		<b>OPR-Related Measure:</b> Yes <a href="http://www.hrsa.gov/performance/performancereview/measures.htm">www.hrsa.gov/performance/performancereview/measures.htm</a>																					
Percentage of women with HIV infection who have a Pap screening in the measurement year																							
<b>Numerator:</b>	Number of HIV-infected female clients who had Pap screen results documented in the measurement year																						
<b>Denominator:</b>	Number of HIV-infected female clients who: <ul style="list-style-type: none"> <li>• were <math>\geq 18</math> years old<sup>1</sup> in the measurement year or reported having a history of sexual activity, and</li> <li>• had a medical visit with a provider with prescribing privileges<sup>2</sup> at least once in the measurement year</li> </ul>																						
<b>Patient Exclusions:</b>	1. Patients who were < 18 years old and denied history of sexual activity 2. Patients who have had a hysterectomy for non-dysplasia/non-malignant indications																						
<b>Data Element:</b>	1. Is the client HIV-infected? (Y/N) <ul style="list-style-type: none"> <li>a. If yes, is the client female? (Y/N)             <ul style="list-style-type: none"> <li>i. If yes, is she <math>\geq 18</math> years or reports having a history of sexual activity? (Y/N)                 <ul style="list-style-type: none"> <li>1. If yes, was the pap screening completed during the measurement year?</li> </ul> </li> </ul> </li> </ul>																						
<b>Data Sources:</b>	<ul style="list-style-type: none"> <li>• Ryan White Program Data Report, Section 5, Items 42 and 52 may provide data useful in establishing a baseline for this performance measure</li> <li>• Electronic Medical Record/Electronic Health Record</li> <li>• CAREWare, Lab Tracker, or other electronic data base</li> <li>• HIVQUAL reports on this measure for grantee under review</li> <li>• Medical record data abstraction by grantee of a sample of records</li> </ul>																						
<b>National Goals, Targets, or Benchmarks for Comparison</b>	IHI Goal: 90% <sup>3</sup> National HIVQUAL Data: <sup>4</sup> <table border="1" style="margin-left: 20px;"> <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>100%</td> <td>100%</td> <td>100%</td> <td>100%</td> </tr> <tr> <td>Top 25%</td> <td>84.3%</td> <td>86.7%</td> <td>87.0%</td> <td>89.2%</td> </tr> <tr> <td>Mean*</td> <td>70.5%</td> <td>67.7%</td> <td>71.8%</td> <td>70.8%</td> </tr> </tbody> </table> <p style="margin-left: 20px; font-size: small;">*from HAB data base</p>				2003	2004	2005	2006	Top 10%	100%	100%	100%	100%	Top 25%	84.3%	86.7%	87.0%	89.2%	Mean*	70.5%	67.7%	71.8%	70.8%
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Mean*	70.5%	67.7%	71.8%	70.8%																			
<b>Outcome Measures for Consideration</b>	<ul style="list-style-type: none"> <li>◦ Incidence of cervical cancer in the female HIV-infected clinic population</li> </ul>																						
<b>Basis for Selection and Placement in Group 2:</b>																							
Human Papillomavirus (HPV) is a common infection in the general population. Current evidence suggests that over 50% of sexually active adults have been infected with one or more HPV types. According to population-based prospective studies, HPV precedes the development of cervical cancer. <sup>5</sup>																							

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Cervical cancer may be the most common AIDS-related malignancy in women. Although not a common diagnosis in women in the general population, according to New York City AIDS Surveillance data from 1990 to 1995, the observed cervical cancer cases in HIV-positive women were two to three times higher than the expected number of cases.<sup>6,7</sup> Findings such as these resulted in the inclusion of cervical cancer in the Centers for Disease Control and Prevention (CDC) expanded definition of AIDS.<sup>8</sup>

When compared with HIV-negative women, HIV-positive women with invasive cervical cancer present at more advanced stages and with cancer metastasizing to unusual locations. HIV-positive women have poorer responses to standard therapy and have higher recurrences and death rates, as well as shorter intervals to recurrence or death.<sup>9,10</sup>

The CDC currently recommends that HIV-positive women have a complete gynecologic evaluation, including a Pap smear, as part of their initial HIV evaluations, or upon entry to prenatal care, and another Pap smear six months later. If both smears are negative, annual screening is recommended thereafter in asymptomatic women. The CDC further recommends more frequent screenings (every six months) for women with symptomatic HIV infection, prior abnormal Pap smears, or signs of HPV infection.<sup>11,12</sup>

Cervical cancer can often be prevented or detected in its earliest stages through effective screening with a Pap smear and avoidance of known risk factors. This accentuates the importance of routine gynecological care, which includes Pap smears for HIV-infected women.<sup>13</sup>

Measure reflects important aspect of care that impacts HIV-related morbidity and focuses on treatment decisions that affect a sizable population. Measure has a strong evidence base supporting the use.

### **US Public Health Guidelines:**

"In accordance with the recommendation of the Agency for Health Care Policy and Research, the Pap smear should be obtained twice during the first year after diagnosis of HIV infection and, if the results are normal, annually thereafter"<sup>14</sup> (6/14/02).

### **References/Notes:**

<sup>1</sup>Onset of sexual activity is not reliably reported or recorded. The age bracket of 18 years is selected for performance measurement purposes only and should not be interpreted as a recommendation about the age at which screening should begin to occur.

<sup>2</sup>A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ARV therapy.

<sup>3</sup>IHI Measure reads, "Percent of Female Patients/Clients with an Annual Papanicolaou (Pap) Test" (<http://www.ihl.org/IHI/Topics/HIVAIDS/HIVDiseaseGeneral/Measures/PercentofPatientswithPAPSmearinLastSixMonths.htm>)

<sup>4</sup>National HIVQUAL data looks at the percent of clients who have an annual pelvic exam. (<http://www.hivguidelines.org/admin/files/qoc/hivqual/proj%20info/HQNatlAggScrs3Yrs.pdf>)

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

<sup>5</sup>Davis, AT. Cervical dysplasia in women infected with the human immunodeficiency virus (HIV): A correlation with HIV viral load and CD4 count. *Gynecologic Oncology*. 2001; 80(3):350–354.

<sup>6</sup>Approximately 16,000 new cases of cervical cancer are diagnosed each year, and about 4,800 women die from this disease annually. *Clinical Guide to Clinical Preventive Services: Report of the U.S. Preventive Services Task Force*. Chapter 9.

<sup>7</sup>Chiasson, MA. Declining AIDS mortality in New York City. *New York City Department of Health. Bull*

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NY Acad. Med. 1997; 74:151–152.

<sup>8</sup>Centers for Disease Control and Prevention (CDC). 1993. Revised classification system for HIV infection and expanded surveillance case definition for AIDS among adolescents and adults. MMWR. 1992; 41(RR-17). (<http://www.cdc.gov/mmwr/preview/mmwrhtml/00018871.htm>)

<sup>9</sup> Ibid.

<sup>10</sup>U.S. Department of Health and Human Services. Anderson, JA, editor. Guide to the Clinical Care of Women with HIV; 2005.

<sup>11</sup><http://www.niaid.nih.gov/factsheets/womenhiv.htm>

<sup>12</sup>The interval for each patient should be recommended by the physician based on risk factors, i.e., early onset of sexual history, a history of multiple sex partners, low socioeconomic status, and, for women infected with HIV, more frequent screening, according to the established guidelines.

<sup>13</sup>Kjaer, S. Type specific persistence of high risk human papillomavirus (HPV) as indicator of high grade cervical squamous intraepithelial lesions in young women: population based prospective follow-up study, Brit Med J. 2002; 325: 572–578.

<sup>14</sup>Centers 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>)

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<b>Performance Measure:</b> Hepatitis B Vaccination		<b>OPR-Related Measure:</b> Yes <a href="http://www.hrsa.gov/performance/measure/measure.htm">www.hrsa.gov/performance/measure/measure.htm</a>
Percentage of clients with HIV infection who completed the vaccination series for Hepatitis B		
<b>Numerator:</b>	Number of HIV-infected clients with documentation of having ever completed the vaccination series for Hepatitis B <sup>1,2</sup>	
<b>Denominator:</b>	Number of HIV-infected clients who had a medical visit with a provider with prescribing privileges <sup>3</sup> at least once in the measurement year	
<b>Patient Exclusions:</b>	<ol style="list-style-type: none"> <li>1. Patients newly enrolled in care during the measurement year</li> <li>2. Patients with evidence of current HBV infection (Hep B Surface Antigen, Hep B e Antigen, Hep B e Antibody or Hep B DNA)</li> <li>3. Patients with evidence of past HBV infection with immunity (Hep B Surface Antibody without evidence of vaccination)</li> </ol>	
<b>Data Element:</b>	<ol style="list-style-type: none"> <li>1. Is the client HIV-infected? (Y/N) <ol style="list-style-type: none"> <li>a. If yes, does the client have documentation of Hepatitis B immunity or is HBV-infected? (Y/N) <ol style="list-style-type: none"> <li>i. If no, is there documentation that the client has completed the vaccine series for Hepatitis B?(Y/N)</li> </ol> </li> </ol> </li> </ol>	
<b>Data Sources:</b>	<ul style="list-style-type: none"> <li>• Electronic Medical Record/Electronic Health Record</li> <li>• CAREWare, Lab Tracker, or other electronic data base</li> <li>• Medical record data abstraction by grantee of a sample of records</li> </ul>	
<b>National Goals, Targets, or Benchmarks for Comparison:</b>	<p>Published data from the HIV Outpatient Study (HOPS) reports 17% of patients with HIV infection who were eligible for vaccination received at least 3 doses of vaccine.<sup>4</sup></p> <p>“Hepatitis B vaccination coverage among adults at high risk...[was] 45% in 2004.”<sup>5</sup></p>	
<b>Outcome Measures for Consideration:</b>	<ul style="list-style-type: none"> <li>○ Incidence of Hepatitis B infection in the clinic population</li> </ul>	
<b>Basis for Selection and Placement in Group 2:</b>		
<p>Hepatitis B virus (HBV) is the leading cause of chronic liver disease worldwide. In developed countries, HBV is transmitted primarily through sexual contact and injection-drug use. Even though risk factors are similar, HBV is transmitted more efficiently than HIV-1. Although up to 90% of HIV-1–infected persons have at least one serum marker of previous exposure to HBV, only approximately 10% have chronic hepatitis B, as evidenced by the detection of hepatitis B surface antigen (HBsAg) in the serum persisting for a minimum of 6 months.<sup>6</sup></p> <p>HIV-1 infection is associated with an increased risk for the development of chronic hepatitis B after HBV exposure. Limited data indicate that co-infected patients with chronic hepatitis B infection have higher HBV DNA levels and are more likely to have detectable hepatitis B e antigen (HBeAg), accelerated loss of</p>		

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protective hepatitis B surface antibody (anti-HBs), and an increased risk for liver-related mortality and morbidity.<sup>7,8</sup>

There is a protective antibody response in approximately 30%-55% of healthy adults aged  $\leq 40$  years after the first dose of vaccine. After age 40, the proportion of persons with a protective antibody response after a 3-dose vaccination regimen declines. In addition to age, other host factors (e.g., smoking, obesity, genetic factors, and immune suppression) contribute to decreased vaccine response. Response to hepatitis B vaccination also is reduced in other immunocompromised persons (e.g., HIV-infected persons, hematopoietic stem-cell transplant recipients, and patients undergoing chemotherapy).

Measure reflects important aspect of care that impacts HIV-related morbidity and focuses on treatment decisions that affect a sizable population. Measure has a strong evidence base supporting the use.

US Public Health Guidelines:

“Several liver-associated complications that are ascribed to flares in HBV activity or toxicity of antiretroviral agents can affect the treatment of HIV in patients with HBV coinfection. Therefore, providers should know the HBV status of all patients with HIV. For patients who are HBV negative, prophylaxis is recommended. This consists [of] 3 doses of vaccine for “all susceptible patients (i.e., antihepatitis B core antigen-negative).”<sup>9</sup> (6/14/02)

References/Notes:

<sup>1</sup>Patients in the middle of the vaccination series on 12/31/x would not be captured in the numerator in year x. They would, if the series was completed on schedule, be captured in year x+1.

<sup>2</sup>Centers for Disease Control and Prevention. Treating opportunistic infections among HIV-infected adults and adolescents: Recommendations from CDC, the National Institutes of Health, and the HIV Medicine Association/Infectious Diseases Society of America. MMWR 2004; 53(No. RR-15). ([http://aidsinfo.nih.gov/ContentFiles/TreatmentofOI\\_AA.pdf](http://aidsinfo.nih.gov/ContentFiles/TreatmentofOI_AA.pdf)).

<sup>3</sup>A “provider with prescribing privileges” is a health care professional who is certified in their jurisdiction to prescribe ARV therapy.

<sup>4</sup>Tedaldi EM, Baker RK, Moorman AC, Wood KC, Fuhrer J, McCabe RE, Holmberg SD; HIV Outpatient Study (HOPS) Investigators. Hepatitis A and B vaccination practices for ambulatory patients infected with HIV. Clinical Infectious Diseases. 2004 May 15;38(10):1478-84. (<http://www.journals.uchicago.edu/CID/journal/issues/v38n10/32448/32448.web.pdf>)

<sup>5</sup>Centers for Disease Control and Prevention. Hepatitis B Vaccination Coverage Among Adults —United States, 2004. MMWR 2006;55:509-11 (<http://www.cdc.gov/mmwr/PDF/wk/mm5518.pdf>)

<sup>6</sup>Centers for Disease Control and Prevention. Treating opportunistic infections among HIV-infected adults and adolescents: recommendations from CDC, the National Institutes of Health, and the HIV Medicine Association/Infectious Diseases Society of America. MMWR 2004; 53(No. RR-15). ([http://aidsinfo.nih.gov/ContentFiles/TreatmentofOI\\_AA.pdf](http://aidsinfo.nih.gov/ContentFiles/TreatmentofOI_AA.pdf))

<sup>7</sup>Panel on Antiretroviral Guidelines for Adult and Adolescents. Guidelines for the use of antiretroviral agents in HIV-1-Infected Adults and Adolescents. Department of Health and Human Services. January 29, 2008. Available at <http://aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf> Accessed April 2, 2008.

<sup>8</sup>Centers 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>)

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<sup>9</sup>Centers for Disease Control and Prevention. Treating opportunistic infections among HIV-infected adults and adolescents: recommendations from CDC, the National Institutes of Health, and the HIV Medicine Association/Infectious Diseases Society of America. MMWR 2004;53(No. RR-15).



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<b>Performance Measure:</b> Hepatitis C Screening		<b>OPR-Related Measure:</b> Yes <a href="http://www.hrsa.gov/performance/measure.htm">www.hrsa.gov/performance/measure.htm</a>																					
Percentage of clients for whom Hepatitis C (HCV) screening was performed at least once since the diagnosis of HIV infection																							
<b>Numerator:</b>	Number of HIV-infected clients who have documented HCV status in chart <sup>1</sup>																						
<b>Denominator:</b>	Number of HIV-infected clients who had a medical visit with a provider with prescribing privileges <sup>2</sup> at least once in the measurement year																						
<b>Patient Exclusions:</b>	None																						
<b>Data Element:</b>	1. Is the client HIV-infected? (Y/N) a. If yes, is there documentation of the client's Hepatitis C status in the medical record? (Y/N)																						
<b>Data Sources:</b>	<ul style="list-style-type: none"> <li>• Ryan White Program Data Report, Section 5, Items 42 and 48 may provide data useful in establishing a baseline for this performance measure</li> <li>• Electronic Medical Record/Electronic Health Record</li> <li>• CAREWare, Lab Tracker, or other electronic data base</li> <li>• HIVQUAL reports on this measure for grantee under review</li> <li>• Medical record data abstraction by grantee of a sample of records</li> </ul>																						
<b>National Goals, Targets, or Benchmarks for Comparison</b>	IHI Goal: 95% <sup>3</sup> National HIVQUAL Performance Data <sup>4</sup> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <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>100%</td> <td>100%</td> <td>100%</td> <td>100%</td> </tr> <tr> <td>Top 25%</td> <td>99.4%</td> <td>100%</td> <td>100%</td> <td>100%</td> </tr> <tr> <td>Mean*</td> <td>86.2%</td> <td>88.8%</td> <td>90.5%</td> <td>90.9%</td> </tr> </tbody> </table> <small>*from HAB data base</small>				2003	2004	2005	2006	Top 10%	100%	100%	100%	100%	Top 25%	99.4%	100%	100%	100%	Mean*	86.2%	88.8%	90.5%	90.9%
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Mean*	86.2%	88.8%	90.5%	90.9%																			
<b>Outcome Measures for Consideration:</b>	<ul style="list-style-type: none"> <li>○ Hepatitis C- related mortality rates in the clinic population</li> </ul>																						
<b>Basis for Selection and Placement in Group 2:</b>																							
<p>Chronic hepatitis C infection is common in persons with HIV infection, and although it is a source of substantial morbidity and mortality, it may be amenable to treatment. HIV/ hepatitis C co-infection may predispose HIV-infected patients to liver toxicity from HAART<sup>5</sup> and HCV treatment may exacerbate the side effects of some ARV medications.<sup>6</sup></p> <p>Measure reflects important aspect of care that impacts HIV-related morbidity and focuses on treatment decisions that affect a sizable population. Measure has a strong evidence base supporting the use.</p>																							
<b>US Public Health Guidelines:</b>																							

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“All HIV-infected patients should be screened for HCV infection”<sup>7</sup> (6/14/02)

### References/Notes:

<sup>1</sup>Unless there is concern about ongoing exposure (e.g., via active injection drug use), annual re-screening is not generally recommended.

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

<sup>3</sup>IHI Measure reads, “Percent of Patients/Clients with Known Hepatitis C Status”

(<http://www.ihl.org/IHI/Topics/HIVAIDS/HIVDiseaseGeneral/Measures/PercentofPatientsClientswithKnownHepatitisCStatus.htm>)

<sup>4</sup>(<http://www.hivguidelines.org/admin/files/qoc/hivqual/proj%20info/HQNatlAggScrs3Yrs.pdf>)

<sup>5</sup>AIDS Institute, New York State Department of Health. Criteria for the Medical Care of Adults with HIV Infection, Hepatitis C Virus Updated September 2004 [*Text taken from the NYSDOH AI publication - "Criteria for the Medical Care of Adults with HIV Infection"*]

([http://www.hivguidelines.org/public\\_html/hep-c/hepc.pdf](http://www.hivguidelines.org/public_html/hep-c/hepc.pdf))

<sup>6</sup>Guidelines for the Use of Antiretroviral Agents in HIV-1-Infected Adults and Adolescents

(<http://aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf>)

<sup>7</sup>Centers 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>)

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<b>Performance Measure:</b> HIV Risk Counseling		<b>OPR-Related Measure:</b> Yes <a href="http://www.hrsa.gov/performance/measure/performancereview/measures.htm">www.hrsa.gov/performance/measure/performancereview/measures.htm</a>
Percentage of clients with HIV infection who received HIV risk counseling <sup>1</sup> within the measurement year		
<b>Numerator:</b>	Number of HIV-infected clients, as part of their primary care, who received HIV risk counseling	
<b>Denominator:</b>	Number of HIV-infected clients who had a medical visit with a provider with prescribing privileges <sup>2</sup> at least once in the measurement year	
<b>Patient Exclusions:</b>	None	
<b>Data Element:</b>	<ol style="list-style-type: none"> <li>1. Is the client HIV-infected? (Y/N) <ol style="list-style-type: none"> <li>a. If yes, did the client receive HIV risk counseling at least once during the measurement year with appropriate feedback to the provider?(Y/N)</li> </ol> </li> </ol>	
<b>Data Sources:</b>	<ul style="list-style-type: none"> <li>• Electronic Medical Record/Electronic Health Record</li> <li>• CAREWare, Lab Tracker, or other electronic data base</li> <li>• Medical record data abstraction by grantee of a sample of records</li> </ul>	
<b>National Goals, Targets, or Benchmarks for Comparison:</b>	None available at this time	
<b>Outcome Measures for Consideration:</b>	<ul style="list-style-type: none"> <li>○ Incidence of new HIV infection</li> <li>○ Incidence of STD cases in clinic population</li> <li>○ Rates of substance abuse counseling and referrals</li> </ul>	
<b>Basis for Selection and Placement in Group 2:</b>		
<p>Reducing transmission of human immunodeficiency virus (HIV) in the United States requires new strategies, including emphasis on prevention of transmission by HIV-infected persons. Through ongoing attention to prevention, risky sexual and needle sharing behaviors among persons with HIV infection can be reduced and transmission of HIV infection prevented. Medical care providers can substantially affect HIV transmission by screening their HIV-infected patients for risk behaviors; communicating prevention messages; discussing sexual and drug-use behavior; positively reinforcing changes to safer behavior; referring patients for services such as substance abuse treatment; facilitating partner notification, counseling, and testing; and identifying and treating other sexually transmitted diseases.<sup>3</sup></p> <p>Measure reflects important aspect of care that impacts HIV-related morbidity and focuses on treatment decisions that affect a sizable population. Measure has a strong evidence base supporting the use.</p>		
US Public Health Guidelines:		

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



"HIV-infected patients should be screened for behaviors associated with HIV transmission by using a straightforward, nonjudgmental approach. This should be done at the initial visit and subsequent routine visits or periodically, as the clinician feels necessary, but at a minimum of yearly. Any indication of risky behavior should prompt a more thorough assessment of HIV transmission risks." <sup>4</sup> (7/18/03)

### References/Notes:

<sup>1</sup>HIV risk counseling includes assessment of risk, counseling and as necessary, referrals. Counseling occurs in the context of comprehensive medical care and can be provided by any member of the multidisciplinary primary care team.

<sup>2</sup>A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ARV therapy.

<sup>3</sup>Centers for Disease Control and Prevention. Incorporating HIV prevention into the medical care of persons living with HIV: recommendations of CDC, the Health Resources and Services Administration, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America.

MMWR 2003;52 (No. RR-12) (<http://www.cdc.gov/mmwr/PDF/rr/rr5212.pdf> or [http://aidsinfo.nih.gov/ContentFiles/HIVPreventionInMedCare\\_TB.pdf](http://aidsinfo.nih.gov/ContentFiles/HIVPreventionInMedCare_TB.pdf))

<sup>4</sup>Ibid

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



<b>Performance Measure:</b> Lipid Screening		<b>OPR-Related Measure:</b> No																					
Percentage of clients with HIV infection on HAART who had a fasting lipid panel <sup>1</sup> during the measurement year																							
<b>Numerator:</b>	Number of HIV-infected clients who: <ul style="list-style-type: none"> <li>• were prescribed HAART, and</li> <li>• had a fasting lipid panel in the measurement year</li> </ul>																						
<b>Denominator:</b>	Number of HIV-infected clients who are on HAART and who had a medical visit with a provider with prescribing privileges <sup>2</sup> at least once in the measurement year																						
<b>Patient Exclusions:</b>	None																						
<b>Data Element:</b>	1. Is the client HIV-infected? (Y/N) <ol style="list-style-type: none"> <li>If yes, was the client on HAART?(Y/N) <ol style="list-style-type: none"> <li>If the client was on HAART, did he/she have a fasting lipid panel during the measurement year? (Y/N)</li> </ol> </li> </ol>																						
<b>Data Sources:</b>	<ul style="list-style-type: none"> <li>• Electronic Medical Record/Electronic Health Record</li> <li>• CAREWare, Lab Tracker, or other electronic data base</li> <li>• HIVQUAL reports on this measure for grantee under review</li> <li>• Medical record data abstraction by grantee of a sample of records</li> </ul>																						
<b>National Goals, Targets, or Benchmarks for Comparison:</b>	National HIVQUAL Data: <sup>3</sup> <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>100%</td> <td>100%</td> <td>100%</td> <td>100%</td> </tr> <tr> <td>Top 25%</td> <td>100%</td> <td>100%</td> <td>97.9%</td> <td>100%</td> </tr> <tr> <td>Mean*</td> <td>80.7%</td> <td>79.1%</td> <td>80.2%</td> <td>84.7%</td> </tr> </tbody> </table> <small>*From HAB database</small>				2003	2004	2005	2006	Top 10%	100%	100%	100%	100%	Top 25%	100%	100%	97.9%	100%	Mean*	80.7%	79.1%	80.2%	84.7%
	2003	2004	2005	2006																			
Top 10%	100%	100%	100%	100%																			
Top 25%	100%	100%	97.9%	100%																			
Mean*	80.7%	79.1%	80.2%	84.7%																			
<b>Outcome Measures for Consideration:</b>	<ul style="list-style-type: none"> <li>○ Incidence of cardiovascular events in clinic population</li> <li>○ Incidence of metabolic syndrome in the clinic population</li> </ul>																						
<b>Basis for Selection and Placement in Group 2:</b>																							
<p>Changes in body shape, fat distribution &amp; metabolism occur with frequency among HIV-infected patients, particularly those prescribed HAART. Metabolic changes that have been observed include hypertriglyceridemia, low high-density-lipoprotein (HDL) cholesterol and changes in LDL cholesterol.</p> <p>Although rates of prevalence vary, studies have found the rate of prevalence for metabolic syndrome to be almost 25% in a population of patients taking HAART<sup>4</sup>, where metabolic syndrome is defined as the presence of at least 3 of the following: hypertriglyceridemia, low high-density lipoprotein cholesterol, hypertension, abdominal obesity or high serum glucose.<sup>5</sup></p> <p>All patients should receive a lipid profile at least once a year in order to monitor general health. For patients on HAART, lipid level monitoring is important to detect side effects and to identify patients who may require</p>																							

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



treatment.

Measure reflects important aspect of care that impacts HIV-related morbidity and focuses on treatment decisions that affect a sizable population. Measure has a strong evidence base supporting the use.

### **US Public Health Guidelines:**

As part of pretreatment evaluation: “The following laboratory tests should be performed for each new patient during initial patient visits: ...and serum lipids if considered at risk for cardiovascular disease and for baseline evaluation prior to initiation of combination antiretroviral therapy (AIII)...”<sup>6</sup>

### References/Notes:

<sup>1</sup>A fasting lipid panel consists of fasting cholesterol, HDL, calculated LDL and triglycerides.

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

<sup>3</sup>(<http://www.hivguidelines.org/admin/files/qoc/hivqual/proj%20info/HQNatlAggScrs3Yrs.pdf>) The HIVQUAL indicator includes all patients on ARV therapy.

<sup>4</sup> Jacobson DL, Tang AM, Spiegelman D. Incidence of Metabolic Syndrome in a Cohort of HIV-Infected Adults and Prevalence Relative to the US Population (National Health and Nutrition Examination Survey).. [J Acquir Immune Defic Syndr](#). 2006 Sep 14

<sup>5</sup> Jacobson DL, Tang AM, Spiegelman D. Incidence of Metabolic Syndrome in a Cohort of HIV-Infected Adults and Prevalence Relative to the US Population (National Health and Nutrition Examination Survey).. [J Acquir Immune Defic Syndr](#). 2006 Sep 14

<sup>6</sup> Panel on Antiretroviral Guidelines for Adult and Adolescents. Guidelines for the use of antiretroviral agents in HIV-1-Infected Adults and Adolescents. Department of Health and Human Services. January 29, 2008, p. 3, 82. Available at <http://aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf> Accessed April 2, 2008.

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



<b>Performance Measure:</b> Oral Exam		<b>OPR-Related Measure:</b> Yes <a href="http://www.hrsa.gov/performance/measure.htm">www.hrsa.gov/performance/measure.htm</a>			
Percent of clients with HIV infection who received an oral exam by a dentist at least once during the measurement year					
<b>Numerator:</b>	Number of clients who had an oral exam by a dentist during the measurement year, based on patient self report or other documentation				
<b>Denominator:</b>	Number of clients with HIV infection who had a medical visit with a provider with prescribing privileges <sup>1</sup> at least once in the measurement year				
<b>Patient Exclusions:</b>	None				
<b>Data Element:</b>	1. Is the client HIV-infected? (Y/N) a. If yes, did the client receive an oral exam by a dentist during the measurement year?(Y/N)				
<b>Data Sources:</b>	<ul style="list-style-type: none"> <li>• Ryan White Program Data Report, Section 3, Item 33c may provide data useful in establishing a baseline for this performance measure<sup>2</sup></li> <li>• Electronic Medical Record/Electronic Health Record</li> <li>• CAREWare, Lab Tracker or other electronic data base</li> <li>• HIVQUAL reports on this measure for grantee under review</li> <li>• Medical record data abstraction by grantee of a sample of records</li> </ul>				
<b>National Goals, Targets, or Benchmarks for Comparison</b>	IHI Goal: 75% <sup>3</sup> National HIVQUAL Data: <sup>4</sup>				
		2003	2004	2005	2006
	Top 10%	66.7%	78.5%	66.7%	77.4%
	Top 25%	46.7%	62.2%	53.6%	56.4%
	Mean*	34.6%	39.7%	37.3%	39.4%
	*from HAB data base				
<b>Outcome Measures for Consideration:</b>	Rates of dental disease and oral pathology.				
<b>Basis for Selection and Placement in Group 2:</b>					
<p>Oral health care is an important component of the management of patients with HIV infection. A poorly functioning dentition can adversely affect the quality of life, complicate the management of medical conditions, and create or exacerbate nutritional and psychosocial problems.<sup>5</sup> When the oral cavity is compromised by the presence of pain or discomfort, maintaining adherence to complicated antiretroviral therapy regimens becomes more difficult.<sup>6</sup></p> <p>There is limited evidence on the risks of oral procedures among persons with HIV/AIDS. Evidence for the utility of selected oral lesions as markers for seroconversion is limited to a single study of a single oral condition—candidiasis.<sup>7</sup> In the later stages of HIV disease, greater numbers of oral lesions and aggressive</p>					

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



periodontal breakdown are more likely; therefore, oral health care visits should be scheduled more frequently.<sup>8</sup>

Measure reflects important aspect of care that impacts HIV-related morbidity and focuses on treatment decisions that affect a sizable population. Completing an oral health exam at least every 12 months is not specified in the PHS guidelines but is accepted as good practice.

### **US Public Health Guidelines:**

Primary health care providers should make an initial dental referral for every HIV/AIDS patient under their care. Oral health care providers should examine all patients on a semiannual basis for dental prophylaxis and other appropriate preventive care. As HIV-related medications may affect dental treatment and cause adverse effects, the patient's oral health care provider should review all medications being used by the patient and should understand the potential for these medications to affect oral health care.<sup>9</sup>

### References/Notes:

<sup>1</sup>A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ARV therapy.

<sup>2</sup>RDR does not provide number of dental exams, preventive, curative treatments and/or surgeries. It only provides information on the number of clients and number of visits in the "Oral health care" service category.

<sup>3</sup>IHI Measure reads, "Percent of Patients Receiving an Annual Dental Exam"

(<http://www.ihf.org/IHI/Topics/HIVAIDS/HIVDiseaseGeneral/Measures/PercentofPatientsReceivinganAnnualDentalExam.htm>)

<sup>4</sup><http://www.hivguidelines.org/admin/files/qoc/hivqual/proj%20info/HQNatlAggScrs3Yrs.pdf>

<sup>5</sup>US DHHS Oral Health in America: A Report of the Surgeon General

<http://www2.nidcr.nih.gov/sgr/sgrohweb/welcome.htm>

<sup>6</sup>[http://www.hivguidelines.org/public\\_html/center/clinical-guidelines/oral\\_care\\_guidelines/oral\\_health\\_book/oral\\_health\\_supp\\_pages/oral\\_health\\_chap1.htm#references](http://www.hivguidelines.org/public_html/center/clinical-guidelines/oral_care_guidelines/oral_health_book/oral_health_supp_pages/oral_health_chap1.htm#references)

<sup>7</sup><http://www.ahrq.gov/clinic/epcsums/denthivsum.htm>

<sup>8</sup>[http://www.hivguidelines.org/public\\_html/center/clinical-guidelines/adult\\_hiv\\_guidelines/supplemental\\_pages/oral\\_health\\_adults/pdf/adults\\_oral\\_health.pdf](http://www.hivguidelines.org/public_html/center/clinical-guidelines/adult_hiv_guidelines/supplemental_pages/oral_health_adults/pdf/adults_oral_health.pdf)

<sup>9</sup>New York State Dept of Health AIDS Institute *Oral Health Care for People With HIV Infection*

<http://www.hivguidelines.org/Content.aspx?pageID=263>



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



<b>Performance Measure:</b> Syphilis Screening		<b>OPR-Related Measure:</b> Yes <a href="http://www.hrsa.gov/performance/measure.htm">www.hrsa.gov/performance/measure.htm</a>																					
Percentage of adult clients with HIV infection who had a test for syphilis performed within the measurement year																							
<b>Numerator:</b>	Number of HIV-infected clients who had a serologic test for syphilis performed at least once during the measurement year																						
<b>Denominator:</b>	Number of HIV-infected clients who: <ul style="list-style-type: none"> <li>were <math>\geq 18</math> years old in the measurement year<sup>1</sup> or had a history of sexual activity <math>&lt; 18</math> years, and</li> <li>had a medical visit with a provider with prescribing privileges<sup>2</sup> at least once in the measurement year</li> </ul>																						
<b>Patient Exclusions:</b>	1. Patients who were $< 18$ years old and denied a history of sexual activity																						
<b>Data Element:</b>	1. Is the client HIV-infected? (Y/N) <ul style="list-style-type: none"> <li>a. If yes, is the client <math>\geq 18</math> years or reports having a history of sexual activity? (Y/N) <ul style="list-style-type: none"> <li>1. If yes, was the client screened for syphilis during the measurement year?</li> </ul> </li> </ul>																						
<b>Data Sources:</b>	<ul style="list-style-type: none"> <li>Ryan White Program Data Report , Section 5, Items 42 and 48 may provide data useful in establishing a baseline for this performance measure</li> <li>Electronic Medical Record/Electronic Health Record</li> <li>CAREWare, Lab Tracker, or other electronic data base</li> <li>HIVQUAL reports on this measure for grantee under review</li> <li>Medical record data abstraction by grantee of a sample of records</li> </ul>																						
<b>National Goals, Targets, or Benchmarks for Comparison</b>	IHI Goal: 90% <sup>3</sup> National HIVQUAL Data: <sup>4</sup> <table border="1" style="width: 100%; text-align: center;"> <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>99.0%</td> <td>100%</td> <td>100%</td> <td>100%</td> </tr> <tr> <td>Top 25%</td> <td>90.4%</td> <td>92.2%</td> <td>95.7%</td> <td>95.6%</td> </tr> <tr> <td>Mean*</td> <td>73.7%</td> <td>78.5%</td> <td>82.1%</td> <td>80.0%</td> </tr> </tbody> </table> <small>*from HAB data base</small>				2003	2004	2005	2006	Top 10%	99.0%	100%	100%	100%	Top 25%	90.4%	92.2%	95.7%	95.6%	Mean*	73.7%	78.5%	82.1%	80.0%
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Top 10%	99.0%	100%	100%	100%																			
Top 25%	90.4%	92.2%	95.7%	95.6%																			
Mean*	73.7%	78.5%	82.1%	80.0%																			
<b>Outcome Measures for Consideration</b>	<ul style="list-style-type: none"> <li>o Incidence of neurosyphilis in the clinic population</li> </ul>																						
<b>Basis for Selection and Placement in Group 2:</b>																							
HIV-1 infection appears to alter the diagnosis, natural history, management, and outcome of <i>T. pallidum</i> infection.																							
Measure reflects important aspect of care that impacts HIV-related morbidity and focuses on treatment decisions that affect a sizable population. Measure has a strong evidence base supporting the use.																							

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



### US Public Health Guidelines:

“HIV-infected patients should be screened for behaviors associated with HIV transmission by using a straightforward, nonjudgmental approach. This should be done at the initial visit and subsequent routine visits or periodically, as the clinician feels necessary, but at a minimum of yearly. Any indication of risky behavior should prompt a more thorough assessment of HIV transmission risks. Screening for STDs should be repeated periodically (i.e., at least annually) if the patient is sexually active or if earlier screening revealed STDs. Screening should be done more frequently (e.g., at 3–6-month intervals) for asymptomatic persons at higher risk.<sup>5</sup> (7/18/03)

### References/Notes:

<sup>1</sup> Onset of sexual activity is not reliably reported or recorded. The lower age bracket of 18 years is selected for performance measurement purposes only and should not be interpreted as a recommendation about the age at which screening should begin to occur.

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

<sup>3</sup> IHI Measure reads, “Percent of Patients with Annual Syphilis Screen”

(<http://www.ihl.org/IHI/Topics/HIVAIDS/HIVDiseaseGeneral/Measures/PercentofPatientswithAnnualSyphilisScreen.htm>)

<sup>4</sup> ([http://www.hivguidelines.org/public\\_html/center/quality-of-care/hivqual-project/hivqual-workshop/03-04-natl-score-top10-25.pdf](http://www.hivguidelines.org/public_html/center/quality-of-care/hivqual-project/hivqual-workshop/03-04-natl-score-top10-25.pdf))

<sup>5</sup> Centers for Disease Control and Prevention. Incorporating HIV prevention into the medical care of persons living with HIV: recommendations of CDC, the Health Resources and Services Administration, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America. MMWR 2003;52 (No. RR-12) ([http://aidsinfo.nih.gov/ContentFiles/HIVPreventionInMedCare\\_TB.pdf](http://aidsinfo.nih.gov/ContentFiles/HIVPreventionInMedCare_TB.pdf) or [http://aidsinfo.nih.gov/ContentFiles/HIVPreventionInMedCare\\_TB.pdf](http://aidsinfo.nih.gov/ContentFiles/HIVPreventionInMedCare_TB.pdf))

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



<b>Performance Measure:</b> TB Screening		<b>OPR-Related Measure:</b> No																					
Percentage of clients with HIV infection who received testing with results documented for latent tuberculosis infection (LTBI) since HIV diagnosis																							
<b>Numerator:</b>	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																						
<b>Denominator:</b>	Number of HIV-infected clients who: <ul style="list-style-type: none"> <li>do not have a history of previous documented culture-positive TB disease or previous documented positive TST or IGRA<sup>1</sup>; and</li> <li>had a medical visit with a provider with prescribing privileges<sup>2</sup> at least once in the measurement year.</li> </ul>																						
<b>Patient Exclusions</b>	None																						
<b>Data Element:</b>	1. Is the client HIV-infected? (Y/N) <ol style="list-style-type: none"> <li>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"> <li>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"> <li>If yes, are the results documented? (Y/N)</li> </ol> </li> </ol> </li> </ol>																						
<b>Data Sources:</b>	<ul style="list-style-type: none"> <li>Ryan White Program Data Report, Section 5, Item 47 may provide data useful in establishing a baseline for this performance measure</li> <li>Electronic Medical Record/Electronic Health Record</li> <li>CAREWare, Lab Tracker or other electronic data base</li> <li>HIVQUAL reports on this measure for grantee under review</li> <li>Medical record data abstraction by grantee of a sample of records.</li> </ul>																						
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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%																			
<b>Outcome Measures for Consideration</b>	<ul style="list-style-type: none"> <li>Incidence of TB disease in the clinic population</li> </ul>																						
<b>Basis for Selection and Placement in Group 2:</b>																							
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 <sup>4,5</sup> versus an 8% TB risk over 60 years for adults with LTBI but not HIV <sup>6</sup> . The TB risk for HIV-infected persons remains higher than for HIV-uninfected persons, even for HIV-infected persons who are taking antiretroviral medications. <sup>7,8</sup> 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																							

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

odds of dying during TB treatment for HIV-infected TB patients compared with other patients from 1993 through 2001.<sup>9</sup> 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.<sup>10</sup>

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.<sup>11</sup> 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 America<sup>12</sup> or by the Centers for Disease Control and Prevention (CDC)<sup>13</sup> 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  $\geq 5$  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 TB<sup>14</sup>.

### References/Notes:

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

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

<sup>3</sup>“PPD screening”

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

<sup>4</sup>Markowitz 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.

<sup>5</sup>Selwyn 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.

<sup>6</sup>Aronson 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.

<sup>7</sup>The 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.

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



<sup>8</sup>Jones 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.

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

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