HAB HIV Core Clinical Performance Measures for Adult/Adolescent Clients: Group 1

Performance Measure: ARV Therapy for Pregnant Women	**OPR-Related Measure:** Yes www.hrsa.gov/performancereview/measures.htm
Percentage of pregnant women with HIV infection who are prescribed antiretroviral therapy	
Numerator:	Number of HIV-infected pregnant women who were prescribed antiretroviral therapy during the 2nd and 3rd trimester
Denominator:	Number of HIV-infected pregnant women who had a medical visit with a provider with prescribing privileges[1], i.e. MD, PA, NP at least once in the measurement year
Patient Exclusions:	1. Patients whose pregnancy is terminated 2. Pregnant patients who are in the 1st trimester and newly enrolled in care during last three months of the measurement year
Data Element:	1. Is the client HIV-infected? (Y/N) a. If yes, is the client female? (Y/N) i. If yes, was she pregnant during the reporting period? (Y/N) 1. If yes, was she on antiretroviral therapy during this reporting period? (Y/N)
Data Sources:	• Ryan White Program Data Report, Section 5, Item 53 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 • Medical record data abstraction by grantee of a sample of records
National Goals, Targets, or Benchmarks for Comparison:	None available at this time.
Outcome Measures for Consideration:	° Rate of perinatal transmission in the measurement year ° Number of events of perinatal transmission in the measurement year
Basis for Selection and Placement in Group 1:	
Treatment recommendations for pregnant women infected with HIV-1 have been based on the belief that therapies of known benefit to women should not be withheld during pregnancy unless there are known adverse effects on the mother, fetus, or infant and unless these adverse effects outweigh the benefit to the woman. Antiretroviral therapy can reduce perinatal HIV-1 transmission by nearly 70%.[2] Measure reflects important aspect of care that significantly impacts survival, mortality and hinders transmission. Data collection is currently feasible and measure has a strong evidence base supporting the use.	
US Public Health Service Guidelines:	
Health-care providers considering the use of antiretroviral agents for HIV-1 infected women during pregnancy must take into account two separate but related issues:	

- Antiretroviral treatment of maternal HIV-1 infection, and
- Antiretroviral chemoprophylaxis to reduce the risk for perinatal HIV-1 transmission

The benefits of antiretroviral therapy for a pregnant woman must be weighed against the risk of adverse events to the woman, fetus, and newborn. Although ZDV chemoprophylaxis alone has substantially reduced the risk for perinatal transmission, antiretroviral monotherapy is now considered suboptimal for treatment of HIV-1 infection, and combination drug regimens are considered the standard of care for therapy. Initial evaluation of an infected pregnant woman should include an assessment of HIV-1 disease status and recommendations regarding antiretroviral treatment or alteration of her current antiretroviral regimen.

This assessment should include the following:

- Evaluation of the degree of existing immunodeficiency determined by CD4 T-cell count,
- Risk for disease progression as determined by the level of plasma RNA,
- History of prior or current antiretroviral therapy,
- Gestational age, and
- Supportive care needs.

Decisions regarding initiation of therapy should be the same for women who are not currently receiving antiretroviral therapy and for women who are not pregnant, with the additional consideration of the potential impact of such therapy on the fetus and infant.

Further, use of ZDV alone should not be denied to a woman who wishes to minimize exposure of the fetus to other antiretroviral drugs and therefore, after counseling, chooses to receive only ZDV during pregnancy to reduce the risk for perinatal transmission.[1]

References/Notes:

[1]A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ARV therapy.

[2]Recommendations for Use of Antiretroviral Drugs in Pregnant HIV-1-Infected Women for Maternal Health and Interventions to Reduce Perinatal HIV-1 Transmission in the United States (http://aidsinfo.nih.gov/ContentFiles/PerinatalGL.pdf)

HAB HIV Core Clinical Performance Measures for Adult/Adolescent Clients: Group 1

U.S. Department of Health and Human Services HRSA Health Resources and Services Administration

Performance Measure: CD4 T-Cell Count	**OPR-Related Measure:** Yes www.hrsa.gov/performancereview/measures.htm
Percentage of clients with HIV infection who had 2 or more CD4 T-cell counts performed in the measurement year	
Numerator:	Number of HIV-infected clients who had 2 or more CD4 T-cell counts performed at least 3 months apart during the measurement year
Denominator:	Number of HIV-infected clients who had a medical visit with a provider with prescribing privileges[1], i.e. MD, PA, NP at least once in the measurement year
Patient Exclusions:	1. Patients newly enrolled in care during last six months of the year
Data Element:	1. Is the client HIV-infected? (Y/N) a. If yes, did the client have a CD4 count test conducted during the reporting period? (Y/N) a. If yes, list the quarters of these tests
Data Sources:	• 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	IHI Goal: 90%[2] National HIVQUAL Data: [3]

	2003	2004	2005	2006
Top 10%	87.2%	87.7%	90.3%	87.5%
Top 25%	74.2%	78.0%	76.6%	78.8%
Median*	61.0%	62.7%	63.9%	62.5%

*from HAB data base

Outcome Measures for Consideration	° Rate of opportunistic infections in the measurement year ° Rate of clients with progression to AIDS in the measurement year ° Mortality rates

Basis for Selection and Placement in Group 1:

The CD4 T-cell count plays a vital role in determining the staging of HIV disease and indicating the need for prophylaxis against opportunistic infections. It continues to be used in decisions regarding initiation or adjustment of antiretroviral treatment.

The most recent CD4 T-cell count is the strongest predictor of subsequent disease progression and survival, according to clinical trials and cohort studies data on patients receiving antiretroviral therapy.[4]

Measure reflects important aspects of care that significantly impacts survival and mortality. Data collection is currently feasible and measure has a strong evidence base supporting the use.

US Public Health Service Guidelines:

" In general, CD4 T-cell count should be determined every three to six months to (1) determine when to start antiretroviral in patients who do not meet the criteria for initiation; (2) assess immunologic response to

antiretroviral therapy; and (3) assess the need for initiating chemoprophylaxis for opportunistic infections."[3]

References/Notes:

Guidelines state that CD4 T-cell counts should be measured at least every 3-4 months depending on the stage of the disease. The timeframe of 6 months was determined by clinical expert consensus for the purpose of this measure, but can and should be measured at more frequent intervals if needed.

[1]A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ARV therapy.

[2]IHI Measure reads, "Percent of Patients/Clients with a CD4 Count Test in the Past 4 Months" (http://www.ihi.org/IHI/Topics/HIVAIDS/HIVDiseaseGeneral/Measures/Percentof+patientswithaCD4counttestinthepast4months.htm)

[3]National HIVQUAL data looks at the percent of clients who have a CD4 T-cell count done every four months, not every six months. (http://www.hivguidelines.org/admin/files/qoc/hivqual/proj%20info/HQNatlAggScrs3Yrs.pdf)

[4]Panel on Antiretroviral Guidelines for Adult and Adolescents. Guidelines for the use of antiretroviral agents in HIV-infected adults and adolescents. Department of Health and Human Services. December 1, 2007; 1-143. Available at http://aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf. Accessed December 12, 2007.

HAB HIV Core Clinical Performance Measures for Adult/Adolescent Clients: Group 1

U.S. Department of Health and Human Services HRSA Health Resources and Services Administration

Performance Measure: HAART	**OPR-Related Measure:** Yes www.hrsa.gov/performancereview/measures.htm
Percentage of clients with AIDS who are prescribed HAART	
Numerator:	Number of clients with AIDS who were prescribed a HAART regimen[1] within the measurement year
Denominator:	Number of clients who: • have a diagnosis of AIDS (history of a CD4 T-cell count below 200 cells/mm^3 or other AIDS-defining condition[2]), and • had at least one medical visit with a provider with prescribing privileges[3], i.e. MD, PA, NP in the measurement year.
Patient Exclusions:	1. Patients newly enrolled in care during last three months of the measurement year
Data Element:	1. Is the client diagnosed with CDC-defined AIDS? (Y/N) a. If yes, was the client prescribed HAART during the reporting period? (Y/N)
Data Sources:	• Ryan White Program Data Report, Section 2, Items 26 and 31 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	IHI Goal: 90%[4] CDC and HIVRN data consistent that 80% of those in care "eligible for ARVs" on tx. This includes CD4<350 and not just AIDS.[5,6] National HIVQUAL Data:[7,8]

	2003	2004	2005	2006
Top 10%	100%	100%	100%	100%
Top 25%	100%	100%	100%	100%
Median*	100%	88.9%	95.7%	100%

*from HAB data base

Outcome Measures for Consideration:	◦ Rate of opportunistic infections in the measurement year ◦ Rate of HIV-related hospitalizations in the measurement year ◦ Mortality rates

Basis for Selection and Placement in Group 1:

"Randomized clinical trials provide strong evidence of improved survival and reduced disease progression by treating symptomatic patients and patients with CD4 T-cells <200 cells/mm^3."[9]

Measure reflects important aspect of care that significantly impacts survival, mortality and hinders transmission. Data collection is currently feasible and measure has a strong evidence base supporting the use.

HAB HIV Core Clinical Performance Measures for Adult/Adolescent Clients: Group 1

U.S. Department of Health and Human Services HRSA Health Resources and Services Administration

US Public Health Service Guidelines:

"Antiretroviral therapy is recommended for all patients with history of an AIDS-defining illness or severe symptoms of HIV infection regardless of CD4 T-cell count."[10]

References/Notes:

[1]Many authorities recommend two baseline CD4 T-cell measurements before decisions are made to initiate antiretroviral therapy because of wide variations in results. The test should be repeated yet a third time if discordant results are seen. The optimal time to initiate antiretroviral therapy among asymptomatic patients with CD4 T-cell counts >200 cells/mm^3 is unknown. This measure focuses strictly on the subset of patients for whom antiretroviral therapy is unequivocally recommended—those with a CD4 T-cell count below 200 cells/mm^3 or history of another AIDS-defining condition. Asymptomatic patients with CD4 T-cell counts of 201–350 cells/mm^3 should be offered treatment. For asymptomatic patients with CD4 T-cell of >350 cells/mm^3 and plasma HIV RNA >100,000 copies/ml most experienced clinicians defer therapy but some clinicians may consider initiating treatment. (See reference 8 below)

[2]AIDS Defining conditions are noted in CDC. 1993 Revised classification system for HIV infection and expanded surveillance case definition for AIDS among adolescents and adults. MMWR 1992;41(no. RR-17). (http://www.cdc.gov/mmwr/preview/mmwrhtml/00018871.htm)

[3]A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ARV therapy.

[4]IHI Measure reads, "Percent of Patients with Appropriate ARV Therapy Management" http://www.ihi.org/IHI/Topics/HIVAIDS/HIVDiseaseGeneral/Measures/PercentofPatientswithAppropriateARVTherapyManagement.htm)

[5] Gebo, JAIDS January 2005, vol. 38, pp. 96-103.

[6] Teshale Abstract #167, CROI 2005.

[7] The National HIVQUAL data may not be directly comparable due to varying exclusions. Indicator definitions can be accessed at http://www.hivguidelines.org/Content.aspx?PageID=53.

[8]http://www.hivguidelines.org/admin/files/qoc/hivqual/proj%20info/HQNatlAggScrs3Yrs.pdf

[9]"HAART, CD4<200" (http://www.hivguidelines.org/admin/files/qoc/hivqual/proj%20info/HQNatlAggScrs3Yrs.pdf)

[10]Panel on Antiretroviral Guidelines for Adult and Adolescents. Guidelines for the use of antiretroviral agents in HIV-infected adults and adolescents. Department of Health and Human Services. December 1, 2007; p. 9. Available at http://aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf. Accessed December 12, 2007.

HAB HIV Core Clinical Performance Measures for Adult/Adolescent Clients: Group 1

U.S. Department of Health and Human Services HRSA Health Resources and Services Administration

Performance Measure: Medical Visits	**OPR-Related Measure:** Yes www.hrsa.gov/performancereview/measures.htm
Percentage of clients with HIV infection who had two or more medical visits in an HIV care setting in the measurement year	
Numerator:	Number of HIV-infected clients who had a medical visit with a provider with prescribing privileges[1], i.e. MD, PA, NP, in an HIV care setting[2] two or more times at least 3 months apart during the measurement year
Denominator:	Number of HIV-infected clients who had a medical visit with a provider with prescribing privileges at least once in the measurement year
Patient Exclusions:	1. Patients newly enrolled in care during last six months of the year
Data Element:	1. Is the client HIV-infected? (Y/N) a. Did the client have at least 2 medical visits in an HIV care setting during the reporting period? (Y/N) i. If yes, list the quarters of these visits
Data Sources:	• Ryan White Program Data Report, Section 5, Items 42 and 43 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	None available at this time.
Outcome Measures for Consideration	° Rate of HIV-related hospitalizations in the measurement year ° Rate of HIV-related emergency room visits in the measurement year ° Rate of opportunistic infections in the measurement year ° Mortality rates
Basis for Selection and Placement in Group 1:	
Clinicians should schedule routine monitoring visits at least every 4 months for all HIV-infected patients who are clinically stable.[3,4] Greater experience among primary care physicians in the care of persons with AIDS improves survival.[5] Measure reflects important aspects of care that significantly impacts mortality. Data collection is currently feasible and measure has a strong evidence base supporting the use.	
US Public Health Service Guidelines:	
In general, patients with early-stage disease are seen at 3-month intervals to undergo routine medical evaluation and monitoring of CD4 T-cell count, viral load and CBC. During the initial evaluation more frequent visits are common because there is so much information to transmit. Visits should also be more frequent when therapy is introduced and when the CD4 T-cell count is <200 cells/mm^3 because complications	

are more likely.[6]

Multiple studies have demonstrated that better outcomes are achieved in patients cared for by a clinician with expertise. This has been shown in terms of mortality, rate of hospitalizations, compliance with guidelines, cost of care, and adherence to medications. The definition of expertise in these studies has varied, but most rely on the number of patients actively managed. Based on this observation, the Panel recommends HIV primary care by a clinician with at least 20 HIV-infected patients and preferably at least 50 HIV-infected patients. Many authoritative groups have combined the recommendation based on active patients, along with fulfilling ongoing CME requirements on HIV-related topics.[7]

References/Notes:

Guidelines state that routine monitoring of HIV-infected patients should occur at least every 3-4 months depending on the stage of the disease.[7] The timeframe of 6 months was determined by clinical expert consensus for the purpose of this measure, but CD4 T-cell counts can and should be measured at more frequent intervals if needed.

[1]A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ARV therapy.

[2]An HIV care setting is one which received Ryan White HIV/AIDS Treatment Modernization Act of 2006 funding to provide HIV care and has a quality management program in place to monitor the quality of care addressing gaps in quality of HIV care.

[3]New York State Department of Health. Primary care approach to the HIV-infected patient. New York: New York State Department of Health; 2004. p. 8. http://www.hivguideliens.org/Content.aspx?pageID=257[Accessed November 27, 2007].

[4]AETC National Resource Center. Clinical Manual for Management of the HIV-Infected Adult http://www.aidsetc.org/pdf/AETC-CM_071007.pdf [Accessed November 27, 2007].

[5]Kitahata MM, Van Rompaey SE, Dillingham PW, Koepsell TD, Deyo RA, Dodge W, Wagner EH. Primary care delivery is associated with greater physician experience and improved survival among persons with AIDS. J Gen Intern Med. 2003 Feb;18(2):157-8.

[6]Bartlett JG, Cheever LW, Johnson MP, Paauw DS [eds]. A Guide to Primary Care of People with HIV/AIDS. Rockville(MD): US Department of Health and Human Services, Health Resources and Services Administration, HIV/AIDS Bureau; 2004, p. 167. http://hab.hrsa.gov/tools/primarycareguide/. [Accessed November 27, 2007].

[7]Panel on Antiretroviral Guidelines for Adult and Adolescents. Guidelines for the use of antiretroviral agents in HIV-infected adults and adolescents. Department of Health and Human Services. December 1, 2007; 1-143. Available at http://aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf. Accessed December 12, 2007.

HAB HIV Core Clinical Performance Measures for Adult/Adolescent Clients: Group 1

U.S. Department of Health and Human Services HRSA Health Resources and Services Administration

<table>
<tr><td colspan="2">Performance Measure: PCP Prophylaxis</td><td>OPR-Related Measure: Yes
www.hrsa.gov/performancereview/measures.htm</td></tr>
<tr><td colspan="3">Percentage of clients with HIV infection and a CD4 T-cell count below 200 cells/mm^3 who were prescribed PCP prophylaxis</td></tr>
<tr><td>Numerator:</td><td colspan="2">Number of HIV-infected clients with CD4 T-cell counts below 200 cells/mm^3 who were prescribed PCP prophylaxis</td></tr>
<tr><td>Denominator:</td><td colspan="2">Number of HIV-infected clients who:
• had a medical visit with a provider with prescribing privileges[1], i.e. MD, PA, NP at least once in the measurement year, and
• had a CD4 T-cell count below 200 cells/mm^3</td></tr>
<tr><td>Patient Exclusions:</td><td colspan="2">1. Patients with CD4 T-cell counts below 200 cells/mm^3 repeated within 3 months rose above 200 cells/mm^3
2. Patients newly enrolled in care during last three months of the measurement year</td></tr>
<tr><td>Data Element:</td><td colspan="2">1. Is the client HIV-infected? (Y/N)
a. If yes, was the CD4 T-cell count <200 cells/mm^3? (Y/N)
i. If yes, was PCP prophylaxis prescribed? (Y/N)
1. If no, was the CD4 count repeated within 3 months? (Y/N)
a. If yes, did it remain below 200 cells/mm^3? (Y/N)
i. If yes, was PCP prophylaxis prescribed? (Y/N)</td></tr>
<tr><td>Data Sources:</td><td colspan="2">• 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</td></tr>
<tr><td>National Goals, Targets, or Benchmarks for Comparison:</td><td colspan="2">IHI Goal: 95%[2]
National HIVQUAL Data[3]:
<table>
<tr><td></td><td>2003</td><td>2004</td><td>2005</td><td>2006</td></tr>
<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>100%</td><td>100%</td></tr>
<tr><td>Median*</td><td>93.3%</td><td>90.9%</td><td>92.3%</td><td>94.4%</td></tr>
</table>
*from HAB data base</td></tr>
<tr><td>Outcome Measures for Consideration:</td><td colspan="2">° Rate of PCP in the measurement year
° Mortality rates
° Cost savings</td></tr>
<tr><td colspan="3">Basis for Selection and Placement in Group 1:</td></tr>
<tr><td colspan="3">Pneumocystis pneumonia (PCP) is the most common opportunistic infection in people with HIV. Without treatment, over 85% of people with HIV would eventually develop PCP. It is a major cause of mortality among persons with HIV infection, yet is almost entirely preventable and treatable. Pneumocystis almost always affects the lungs, causing a form of pneumonia. People with CD4 T-cell counts under 200 cells/mm^3</td></tr>
</table>

are at greatest risk of developing PCP. The drugs now used to prevent and treat PCP include TMP/SMX, dapsone, pentamidine, and atovaquone.[4]

Before the widespread use of primary PCP prophylaxis and effective ART, PCP occurred in 70%--80% of patients with AIDS. The course of treated PCP was associated with a mortality rate of between 20% and 40% in persons with profound immunosuppression. Approximately 90% of cases occurred among patients with CD4 T-cell counts <200 cells/mm^3. [5]

Measure reflects important aspect of care that significantly impacts survival and mortality. Data collection is currently feasible and measure has a strong evidence base supporting the use.

US Public Health Service Guidelines:

HIV-infected adults and adolescents, including pregnant women and those on HAART, should receive chemoprophylaxis against PCP if they have a CD4 T-cell count <200 cells/mm^3.[6]

References/Notes:

[1]A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ARV therapy.

[2] IHI Measure reads, "Percent of Patients with a CD4 Cell Count Below 200 cells/mm^3 Receiving Pneumocystis Carinii Pneumonia (PCP) Prophylaxis"

[3](http://www.hivguidelines.org/admin/files/qoc/hivqual/proj%20info/HQNatlAggScrs3Yrs.pdf)

[4] http://www.aidsinfonet.org/factsheet_detail.php?fsnumber=515

[5] 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://www.cdc.gov/mmwr/preview/mmwrhtml/rr5315a1.htm)

[6] 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)

U.S. Department of Health and Human Services
HRSA
Health Resources and Services Administration

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

<table>
<tr><td colspan="2">Performance Measure: Adherence Assessment & Counseling</td><td>OPR-Related Measure: Yes
www.hrsa.gov/performancereview/measures.htm</td></tr>
<tr><td colspan="3">Percentage of clients with HIV infection on ARVs who were assessed and counseled[1,2] for adherence two or more times in the measurement year</td></tr>
<tr><td>Numerator:</td><td colspan="2">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</td></tr>
<tr><td>Denominator:</td><td colspan="2">Number of HIV-infected clients on ARV therapy who had a medical visit with a provider with prescribing privileges[3] at least once in the measurement year</td></tr>
<tr><td>Patient Exclusions:</td><td colspan="2">1. Patients newly enrolled in care during last six months of the year
2. Patients who initiated ARV therapy during last six months of the year</td></tr>
<tr><td>Data Element:</td><td colspan="2">1. Is the client HIV-infected? (Y/N)
a. If yes, was the client on ARVs?(Y/N)
i. If the client was on ARVs, did he/she receive adherence counseling during the measurement year? (Y/N).
1. If yes, list the quarters of these visits.</td></tr>
<tr><td>Data Sources:</td><td colspan="2">• 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</td></tr>
<tr><td>National Goals, Targets, or Benchmarks for Comparison:</td><td colspan="2">IHI Goal: 90%[4]
National HIVQUAL Performance Data:[5]
<table>
<tr><td></td><td>2003</td><td>2004</td><td>2005</td><td>2006</td></tr>
<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>
</table>
*from HAB data base</td></tr>
<tr><td>Outcome Measures for Consideration:</td><td colspan="2">o Percent of undetectable viral loads among patients on ARV in the measurement year
o Percent of patients with ARV-resistance developed during therapy in the measurement year
o Mortality rates
o Incidence of HIV-related hospitalizations in the clinic population
o Incidence of clients with progression to AIDS in the clinic population</td></tr>
<tr><td colspan="3">Basis for Selection and Placement in Group 2:</td></tr>
<tr><td colspan="3">“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.</td></tr>
</table>

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."[6]

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"[7] (10/10/06)

References/Notes:

[1]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.
[2]Adherence counseling can be provided by any member of the multidisciplinary primary care team.
[3]A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ARV therapy.
[4]IHI Measure reads, "Percent of Patients/Clients Assessed for Adherence to Antiretroviral (ARV) Therapy in the Past 4 Months"
(http://www.ihi.org/IHI/Topics/HIVAIDS/HIVDiseaseGeneral/Measures/PercentofPatientsClientsAssessedforAdherencetoAntiretroviralARVTherapyinthePast4Months.htm)
[5](http://www.hivguidelines.org/admin/files/qoc/hivqual/proj%20info/HQNatlAggScrs3Yrs.pdf)
[6]Guidelines for the Use of Antiretroviral Agents in HIV-1-Infected Adults and Adolescents [April 7, 2005] (http://aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL04072005001.pdf)
[7]Ibid

<table>
<tr><td colspan="2">Performance Measure: Lipid Screening</td><td>OPR-Related Measure: No</td></tr>
<tr><td colspan="3">Percentage of clients with HIV infection on HAART who had a fasting lipid panel[1] during the measurement year</td></tr>
<tr><td>Numerator:</td><td colspan="2">Number of HIV-infected clients who:
• were prescribed HAART, and
• had a fasting lipid panel in the measurement year</td></tr>
<tr><td>Denominator:</td><td colspan="2">Number of HIV-infected clients who are on HAART and who had a medical visit with a provider with prescribing privileges[2] at least once in the measurement year</td></tr>
<tr><td>Patient Exclusions:</td><td colspan="2">None</td></tr>
<tr><td>Data Element:</td><td colspan="2">1. Is the client HIV-infected? (Y/N)
a. If yes, was the client on HAART?(Y/N)
i. If the client was on HAART, did he/she have a fasting lipid panel during the measurement year? (Y/N)</td></tr>
<tr><td>Data Sources:</td><td colspan="2">• 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</td></tr>
<tr><td>National Goals, Targets, or Benchmarks for Comparison:</td><td colspan="2">National HIVQUAL Data:[3]
<table>
<tr><td></td><td>2003</td><td>2004</td><td>2005</td><td>2006</td></tr>
<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>
</table>
*From HAB database</td></tr>
<tr><td>Outcome Measures for Consideration:</td><td colspan="2">o Incidence of cardiovascular events in clinic population
o Incidence of metabolic syndrome in the clinic population</td></tr>
<tr><td colspan="3">Basis for Selection and Placement in Group 2:</td></tr>
<tr><td colspan="3">Changes in body shape, fat distribution & 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.

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[4], 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.[5]

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</td></tr>
</table>

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)…"[6]

References/Notes:

[1]A fasting lipid panel consists of fasting cholesterol, HDL, calculated LDL and triglycerides.

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

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

[4] Jacobson DL, Tang AM, Spiegalman 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

[5] Jacobson DL, Tang AM, Spiegalman 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

[6] 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.

<table>
<tr><td colspan="2">Performance Measure: TB Screening</td><td>OPR-Related Measure: No</td></tr>
<tr><td colspan="3">Percentage of clients with HIV infection who received testing with results documented for latent tuberculosis infection (LTBI) since HIV diagnosis</td></tr>
<tr><td>Numerator:</td><td colspan="2">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</td></tr>
<tr><td>Denominator:</td><td colspan="2">Number of HIV-infected clients who:
• do not have a history of previous documented culture-positive TB disease or previous documented positive TST or IGRA[1]; and
• had a medical visit with a provider with prescribing privileges[2] at least once in the measurement year.</td></tr>
<tr><td>Patient Exclusions</td><td colspan="2">None</td></tr>
<tr><td>Data Element:</td><td colspan="2">1. Is the client HIV-infected? (Y/N)
a. If yes, has the client ever had previous documented culture-positive TB disease or previous documented positive TST or IGRA? (Y/N)
i. If no, has the client ever been tested for LTBI with a TST or IGRA since his/her HIV diagnosis? (Y/N)
1. If yes, are the results documented? (Y/N)</td></tr>
<tr><td>Data Sources:</td><td colspan="2">• 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.</td></tr>
<tr><td>National Goals, Targets, or Benchmarks for Comparison</td><td colspan="2">National HIVQUAL Data:[3]
<table>
<tr><td></td><td>2003</td><td>2004</td><td>2005</td><td>2006</td></tr>
<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>
</table>
*from HAB data base</td></tr>
<tr><td>Outcome Measures for Consideration</td><td colspan="2">° Incidence of TB disease in the clinic population</td></tr>
<tr><td colspan="3">Basis for Selection and Placement in Group 2:</td></tr>
<tr><td colspan="3">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</td></tr>
</table>

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 America[12] 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 TB[14].

References/Notes:

[1]Previous documented culture-positive TB disease or previous documented positive TST or IGRA occurred prior to HIV diagnosis.
[2]A "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
[4]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.
[5]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.
[6]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.
[7]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.

[8]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.
[9]McCombs SB. Tuberculosis mortality in the United States, 1993-2001. Oral presentation at CDC. Atlanta. December 2003.
[10] Centers 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.
[11]American 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
[12] 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)
[13] Centers 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.
[14]Guidelines 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

Performance Measure: Hepatitis/HIV Alcohol Counseling	**OPR-Related Measure:** No
Percentage of clients[1] with HIV and Hepatitis B (HBV) or Hepatitis C (HCV) infection who received alcohol counseling[2] within the measurement year	
Numerator:	Number of HIV-infected clients who received alcohol counseling
Denominator:	Number of HIV-infected clients who: • were co-infected with HBV[3] or HCV; and • had a medical visit with a provider with prescribing privileges[4] at least once in the measurement period
Patient Exclusions:	None
Data Elements:	1. Is the client HIV-infected? (Y/N) a. If yes, is the client HBV or HCV-positive? (Y/N) i. If yes, did the client receive alcohol counseling during the measurement year? (Y/N)
Data Sources:	• Electronic Medical Record/Electronic Health Record • CAREWare, Lab Tracker, or other electronic data base • Medical record data abstraction by grantee of a sample of records • Billing records
National Goals, Targets, or Benchmarks for Comparison	None available at this time.
Outcome Measures for Consideration:	• Hepatitis-related mortality rates in the clinic population

Basis for Selection and Placement in Group 3:

Discussion of substance use allows the clinician to either provide counseling or make referrals to substance and alcohol treatment centers. A study of HIV positive veterans showed that hazardous drinking and alcohol diagnoses were associated with HIV disease progression and/or hepatic co-morbidity and anemia. It also concluded that alcohol problems are often missed by providers thus increasing the need for routine screening.[5]

Long-term studies of patients with chronic HCV infection show that between 2%-20% develop cirrhosis in 20 years. This rate of progression increases with older age, alcoholism and HIV infection.[6]

The measure is placed in Group 3 because the definition of "counseling" varies considerably across grantees.

The variation in definition impacts the feasibility of data collection.
US Public Health Guidelines:
"All patients with HIV/HCV infection should be advised to avoid or limit alcohol consumption…"[7]
References/Notes:
[1] "Clients" refers to all clients aged 13 years and older. [2] For the purposes of this measure, alcohol counseling refers to counseling provided by the primary care team that emphasizes the need to avoid or limit alcohol intake due to the impact on the liver. [3] Markers of Hepatitis B infection include Hep B Surface Antigen, Hep B e Antigen, Hep B e Antibody or Hep B DNA. [4]A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe medications. [5] Joseph Conigliaro, Adam J. Gordon, Kathleen A. McGinnis, Linda Rabeneck, and Amy C.; How Harmful Is Hazardous Alcohol Use and Abuse in HIV Infection: Do Health Care Providers Know Who Is at Risk?; Journal of Acquired Immune Deficiency Syndromes 33:521–525. [6] Centers for Disease Control and Prevention. Guidelines for Prevention and Treatment of Opportunistic Infections in HIV-Infected Adults and Adolescents. June 18, 2008; 1-134. (http://aidsinfo.nih.gov/contentfiles/Adult_OI.pdf)

Performance Measure: Influenza Vaccination	**OPR-Related Measure:** No
Percentage of clients[1] with HIV infection who have received influenza vaccination within the measurement period[2]	
Numerator:	Number of HIV-infected clients who received influenza vaccination within this time frame
Denominator:	Number of HIV-infected clients who had a medical visit with a provider with prescribing privileges[3] at least once in the measurement period
Patient Exclusions:	1. Patients allergic to vaccine components
Data Elements:	1. Is the client HIV-infected? (Y/N) a. If yes, is there documentation[4] in the health record that the client received influenza vaccine in the past 12 months? (Y/N)
Data Sources:	• Electronic Medical Record/Electronic Health Record • CAREWare, Lab Tracker, or other electronic data base • Medical record data abstraction by grantee of a sample of records • Billing records
National Goals, Targets, or Benchmarks for Comparison:	None available at this time
Outcome Measures for Consideration:	• Mortality rates of bacterial pneumonia in the clinic population

Basis for Selection and Placement in Group 3:

Influenza viruses cause disease among all age groups. While rates of infection are highest among children, rates of serious illness and death are highest among persons aged $\geq$ 65 years, children less than 2 years and persons of any age who have medical conditions that place them at increased risk for complications of influenza, including HIV.[5]

Influenza vaccination is the most effective method for preventing influenza and its severe complications. Vaccination has been demonstrated to produce substantial antibody titers against influenza among vaccinated HIV-infected persons who have minimal AIDS-related symptoms and high CD4+ T-lymphocyte cell counts.[6]

The measure is placed in Group 3 because it overlaps and focuses on similar aspects of care (vaccination) that were previously captured in measures included in Group 2. In addition, the data collection process is more

complex because of the timing of the vaccination.
US Public Health Guidelines:
"Annual vaccination against influenza is recommended for….adults and children who have immunosuppression (including immunosuppression caused by medications or by human immunodeficiency virus)."[7]
References/Notes:
[1] "Clients" includes all clients aged 13 years and older. [2] Due to the unique nature of this measure, the measurement period runs from April 1-March 31. [3]A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe medications. [4] Evidence of vaccination could include personal, school, physician, or immunization records or registries. [5]Centers for Disease Control and Prevention. Prevention and Control of Influenza: Recommendations from the Advisory committee on Immunization Practices (ACIP). MMWR 2007; 56(RR#6)[1-60]. Available at: http://www.cdc.gov/mmwr/PDF/rr/rr5606.pdf. [6]Ibid. [7]Ibid.

<table>
<tr><td colspan="2">Performance Measure: MAC Prophylaxis</td><td>OPR-Related Measure: No</td></tr>
<tr><td colspan="3">Percentage of clients[1] with HIV infection with CD4 count < 50 cells/mm^3 who were prescribed Mycobacterium avium Complex (MAC) prophylaxis[2] within the measurement year</td></tr>
<tr><td>Numerator:</td><td colspan="2">Number of HIV-infected clients with CD4 count < 50 cells/mm^3 who were prescribed MAC prophylaxis</td></tr>
<tr><td>Denominator:</td><td colspan="2">Number of HIV-infected clients who had a:
• CD4 count < 50 cells/mm^3; and
• medical visit with a provider with prescribing privileges[3] at least once in the measurement year</td></tr>
<tr><td>Patient Exclusions:</td><td colspan="2">1. Patients who have disseminated MAC</td></tr>
<tr><td>Data Elements:</td><td colspan="2">1. Is the client HIV-infected? (Y/N)
a. If yes, was the CD4 count < 50 cells/mm^3? (Y/N)
i. If yes, was MAC prophylaxis subsequently prescribed?</td></tr>
<tr><td>Data Sources:</td><td colspan="2">• 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
• Billing records</td></tr>
<tr><td>National Goals, Targets, or Benchmarks for Comparison:</td><td colspan="2">National HIVQUAL Data:[4]
<table>
<tr><td></td><td>2003</td><td>2004</td><td>2005</td><td>2006</td><td>2007</td></tr>
<tr><td>Top 10%</td><td>100%</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>100%</td><td>100%</td><td>100%</td></tr>
<tr><td>Mean*</td><td>86.5%</td><td>84.7%</td><td>85.7%</td><td>83.1%</td><td>84.6%</td></tr>
</table>
*from HAB data base</td></tr>
<tr><td>Outcome Measures for Consideration:</td><td colspan="2">• Incidence of MAC disease in the clinic population
• MAC-related mortality rates in the population assessed</td></tr>
<tr><td colspan="3">Basis for Selection and Placement in Group 3:</td></tr>
<tr><td colspan="3">MAC disease is an opportunistic infection that can cause severe illness in people with advanced AIDS but rarely affects others. The risk of disseminated MAC (DMAC) is directly related to the severity of immunosuppression. DMAC typically occurs in persons with CD4 counts < 50 cells/mm^3 and its frequency increases as the CD4 count declines. In the absence of antibiotic prophylaxis, DMAC occurs in up to 40% of AIDS patients with CD4 counts of < 50 cells/mm.[5]

The measure was placed in Group 3 because it focuses on similar aspects of care (prophylaxis) previously</td></tr>
</table>

captured in measures included in Groups 1 & 2.

US Public Health Guidelines:

"Adults and adolescents who have HIV infection should receive chemoprophylaxis against disseminated MAC disease if they have CD4 count < 50 cells/mm.[3"6]

References/Notes:

[1] "Clients" includes all clients aged 13 years and older.
[2]Current regimens for preventing MAC can be found at: Centers for Disease Control and Prevention. Guidelines for Prevention and Treatment of Opportunistic Infections in HIV-Infected Adults and Adolescents. June 18, 2008; 1-134. (http://aidsinfo.nih.gov/contentfiles/Adult_OI.pdf)
[3]A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe medications.
[4] MAC Prophylaxis (http://www.hivguidelines.org/admin/files/qoc/hivqual/proj%20info/HQNatlAggScrs3Yrs.pdf)
[5] National AIDS Education & Training Centers (2006). Clinical Manual for Management of the HIV-Infected Adult.
[6]Centers for Disease Control and Prevention. Guidelines for Prevention and Treatment of Opportunistic Infections in HIV-Infected Adults and Adolescents. June 18, 2008; 1-134. (http://aidsinfo.nih.gov/contentfiles/Adult_OI.pdf)

Performance Measure: Mental Health Screening	**OPR-Related Measure:** Yes www.hrsa.gov/performancereview/measures.htm
Percentage of new clients[1] with HIV infection who have had a mental health screening	
Numerator:	Number of HIV-infected clients who received a mental health screening
Denominator:	Number of HIV-infected clients who: • were new during the measurement year, and • had a medical visit with a provider with prescribing privileges[2] at least once in the measurement year
Patient Exclusions:	None
Data Elements:	1. Is the client HIV-infected? (Y/N) a. If yes, was the client new to the program during the measurement year? (Y/N) i. If yes, did the client receive mental health screening during the measurement year? (Y/N)
Data Sources:	• 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 • Billing records
National Goals, Targets, or Benchmarks for Comparison	National HIVQUAL Data:[3]

	2003	2004	2005	2006	2007
Top 10%	100%	100%	80.6%	86.7%	100%
Top 25%	93.0%	89.5%	35.1%	52.4%	84.0%
Mean*	68.2%	58.5%	21.9%	28.1%	42.0%

*from HAB data base

Outcome Measures for Consideration:	• Rate of mental health referrals • Mental health-related hospitalizations • Rate of suicide in the clinic population • Rate of mental health disorders being treated in the clinic population
Basis for Selection and Placement in Group 3:	
Patients living with HIV infection must often cope with multiple social, psychiatric, and medical issues. The ability to cope with these issues can dramatically impact management of the disease. The initial evaluation should include an assessment of substance abuse, economic factors, social	

support, mental illness and co-morbidities. [4]

The measure was placed in Group 3 because feasibility of data collection can vary considerably across grantees.

US Public Health Guidelines:

"Patients living with HIV infection must often cope with multiple social, psychiatric, and medical issues. Thus, the (initial) evaluation should also include assessment of substance abuse, economic factors, social support, mental illness, co-morbidities, and other factors that are known to impair the ability to adhere to treatment and to alter outcomes. Once evaluated, these factors should be managed accordingly."[5]

References/Notes:

[1] "Clients" includes all clients aged 13 years and older.
[2]A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe medications.
[3] The components of the mental health indicator were broken down and implemented for the 2005-2007 data. The Mental Health/Substance Use Subcommittee of the National HIVQUAL Clinical Advisory Committee include the following components for an annual Mental Health Screening for people with HIV: Cognitive function assessment, including mental status; Depression screening; Anxiety screening; Sleeping habits assessment; Appetite assessment; Domestic violence screening; Post Traumatic Stress Disorder screening; Psychiatric history (optional); Psychosocial assessment (optional). (http://www.hivguidelines.org/admin/files/qoc/hivqual/proj%20info/HQNatlAggScrs3Yrs.pdf
[4]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; 1-128. (http://aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf)
[5]Ibid

Performance Measure: Tobacco Cessation Counseling	**OPR-Related Measure:** No
Percentage of clients[1] with HIV infection who received tobacco cessation counseling within the measurement year	
Numerator:	Number of HIV-infected clients who received tobacco cessation counseling
Denominator:	Number of HIV-infected clients who: • used tobacco products within the measurement year; and • had a medical visit with a provider with prescribing privileges[2] at least once in the measurement year
Patient Exclusions:	1. Patients who deny tobacco use throughout the measurement year
Data Elements:	1. Is the client HIV-infected? (Y/N) a. If yes, did the client use tobacco during the reporting period? (Y/N) i. If yes, did the client receive tobacco cessation counseling during the measurement year? (Y/N)
Data Sources:	• 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 • Billing records
National Goals, Targets, or Benchmarks for Comparison	National HIVQUAL Data:[3]

	2003	2004	2005	2006	2007
Top 10%	100%	100%	100%	100%	100%
Top 25%	93.3%	97.8%	98.4%	100%	100%
Mean*	69.3%	75.0%	76.8%	81.8%	83.8%

* HAB database

Outcome Measures for Consideration:	• Rate of head & neck and lung cancer • Rate of tobacco use in the clinic population

Basis for Selection and Placement in Group 3:

A recent study has shown that lung cancer rates are 2.7 times greater for people living with HIV.[4] As tobacco use among HIV-infected patients poses significant health risks, tobacco-dependent patients should be provided assistance to enroll in smoking cessation programs. Various studies have shown that brief interventions by the clinician to encourage tobacco cessation and offer substitution programs can decrease smoking rates[5] and tobacco use.[6] Cessation reduces the risk of incidence or the progression of tobacco-related diseases and increases life expectancy.[7,8,9] HIV care providers should provide cessation assistance in the form of counseling, pharmacotherapy or referral to cessation programs.

The measure was placed in Group 3 because the feasibility of data collection can vary considerably across grantees.

US Public Health Guidelines:

"The U.S. Preventive Services Task Force strongly recommends that clinicians screen all adults for tobacco use and provide tobacco cessation interventions for those who use tobacco products."[10]

References/Notes:

[1] "Clients" includes all clients aged 13 years and older.
[2] A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe medications.
[3]Tobacco Use (http://www.hivguidelines.org/admin/files/qoc/hivqual/proj%20info/HQNatlAggScrs3Yrs.pdf)
[4]Philips, Abs 8, CROI, Boston, 2008.
[5] Page AR, Walters DJ, Schlegel RP, Best JA. Smoking cessation in family practice: The effects of advice and nicotine chewing gum prescription. Addict Behav 1986;11(4):443-6.
[6] Demers RY, Neale AV, Adams R, Trembath C, Herman SC. The impact of physicians' brief smoking cessation counseling: A MIRNET study. J Fam Pract 1990;31(6):625-9.
[7] Rigotti NA. Treatment of tobacco use and dependence. N Engl J Med 2002;346:506-512.
[8] Lancaster T, Stead L, Silagy C, Sowden A. Effectiveness of interventions to help people stop smoking: findings from the Cochrane Library. BMJ 2000;321:355-8.
[9] Methods, Successes, and Failures of Smoking Cessation Programs E B Fisher Jr,, E Lichtenstein, D Haire-Joshu, G D Morgan, H R Rehberg Annual Review of Medicine, February 1993, Vol. 44, Pages 481-513.
[10] Agency for Healthcare Research and Quality. The Guide to Clinical Preventive Services: Recommendations of the U.S. Preventive Services Task Force, June 2006, p. 120.

Performance Measure: Toxoplasma Screening	**OPR-Related Measure:** No
Percentage of clients[1] with HIV infection for whom Toxoplasma screening[2] was performed at least once since the diagnosis of HIV infection[3]	
Numerator:	Number of HIV-infected clients who have documented Toxoplasma status in health record
Denominator:	Number of HIV-infected clients who had a medical visit with a provider with prescribing privileges[4] at least once in the measurement year
Patient Exclusions:	1. Patients with known toxoplasmic disease, e.g. *Toxoplasma gondii* encephalitis
Data Elements:	1. Is the client HIV-infected? (Y/N) a. If yes, is there documentation of the client's Toxoplasma status in the health record? (Y/N)
Data Sources:	• Electronic Medical Record/Electronic Health Record • CAREWare, Lab Tracker or other electronic data base • Medical record data abstraction by grantee of a sample of records • Billing records
National Goals, Targets, or Benchmarks for Comparison:	None available at this time
Outcomes Measures for Consideration:	• Toxoplasmosis-related mortality rates in the clinic population • Incidence of Toxoplasmosis in the clinic population

Basis for Selection and Placement in Group 3:

Toxoplasmic disease appears to occur almost exclusively because of reactivation of latent tissue cysts. Clinical disease is rare among patients with CD4 counts >200 cells/*u*L. The greatest risk is among patients with a CD4 cell count < 50/*u*L. HIV-infected patients with *Toxoplasma gondii* encephalitis (TE) are almost uniformly seropositive for anti-toxoplasma IgG antibodies.[5]

The measure is placed in Group 3 because it overlaps and focuses on similar aspects of care (prophylaxis) previously captured in measures included in Group 1. Certain geographic regions have lower rates of toxoplasmic disease.

US Public Health Guidelines:

"HIV-infected persons should be tested for immunoglobulin G (IgG) antibody to Toxoplasma soon after the diagnosis of HIV infection to deter latent infection with *T. gondii* (strength of recommendation: BIII)."[6]

"*Toxoplasma*-seronegative persons who are not taking a PCP prophylactic regimen known to be active

against TE should be retested for IgG antibody to *Toxoplasma* when their CD4+ counts decline to <100/*u*L to determine whether they have seroconverted and are therefore at risk for TE (strength of recommendation: CIII)."[7]

References/Notes:

[1] "Clients" refers to all clients aged 13 years and older.
[2]Toxoplasma screening refers to testing for the presence of anti-toxoplasma immunoglobulin G (IgG) antibodies to detect latent infection with *Toxoplasma gondii*.
[3]Unless there is concern about ongoing exposure, annual re-screening is not generally recommended.
[4]A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe medications.
[5]Centers for Disease Control and Prevention. Guidelines for Prevention and Treatment of Opportunistic Infections in HIV-Infected Adults and Adolescents. June 18, 2008; 1-134. (http://aidsinfo.nih.gov/contentfiles/Adult_OI.pdf)
[6]Ibid
[7]Ibid

HAB HIV Performance Measures: Pediatrics

U.S. Department of Health and Human Services HRSA Health Resources and Services Administration

Pediatric Performance Measure: Adherence Assessment & Counseling

Percentage of pediatric patients[1] with HIV infection on ARVs who were assessed and counseled[2,3] for adherence two or more times in the measurement year

Numerator:	Number of HIV-infected pediatric patients, as part of their primary care, who were assessed and counseled for adherence two or more times at least three months apart
Denominator:	Number of HIV-infected pediatric patients on ARV therapy who had a medical visit with a provider with prescribing privileges[4] at least once in the measurement year
Patient Exclusions:	1. Patients newly enrolled in care during last six months of the year 2. Patients who initiated ARV therapy during last six months of the year
Data Element:	1. Is the pediatric patient HIV-infected? (Y/N) a. If yes, was the patient seen by a provider with prescribing privileges during the measurement year? i. If yes, was the patient on ARVs?(Y/N) 1. If the patient was on ARVs, did the patient and/or the parent/guardian (as appropriate) receive adherence counseling during the measurement year? (Y/N). a. If yes, list the dates of these visits.
Data Sources:	• 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:	HIVQUAL-US Performance Data for adults/adolescents:[5]

	2004	2005	2006	2007
Top 10%	92.0%	97.5%	98.4%	90.4%
Top 25%	79.2%	88.3%	91.6%	NA
Mean*	39.7%	46.8%	55.7%	46.9%

*from HAB data base

Outcome Measures for Consideration:	• Percent of undetectable viral loads among patients on ARV in the measurement year • Percent of patients with ARV-resistance developed during therapy in the measurement year • Mortality rates • Incidence of HIV-related hospitalizations in the clinic population • Incidence of patients with progression to AIDS in the clinic population

Basis for Selection:

Medication adherence to antiretroviral therapy has been strongly correlated with HIV viral suppression, reduced rates of resistance, an increase in survival and improved quality of life.[6,7] Evidence indicates that adherence problems occur frequently in children and adolescents with some studies reporting fewer than 50% of children and/or caretakers reporting full adherence to their regimens.[7]

Infants and young children are dependent on others for administration of medication, thus assessment

requires evaluation of the caregivers as well as the ability and willingness of the child to take the medications.[7]

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:

Strategies to maximize adherence should be discussed prior to initiation of antiretroviral therapy and again at the time of changing regimens. Adherence to therapy must be stressed at each visit, along with continued exploration of strategies to maintain and/or improve adherence.[6]

References / Notes:

[1]Pediatric patient includes any patient younger than 13 years.
[2]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.
[3]Adherence counseling can be provided to the patient and/or the parent/guardian as appropriate by any member of the multidisciplinary primary care team.
[4]A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ARV therapy.
[5]HIVQUAL Indicator: Adherence assessed at least once during the review period.
Available at: http://www.hivguidelines.org/admin/files/qoc/hivqual/proj%20info/HQNatlAggScrs3Yrs.pdf.
[6] DHHS Panel on Antiretroviral Guidelines for Adults and Adolescents. Guidelines for the Use of Antiretroviral Agents in HIV-1-Infected Adults and Adolescents. December 1, 2009. Available at http://aidsinfo.nih.gov/contentfiles/AdultandAdolescentGL.pdf. Accessed June 9, 2010, pp. 111-113.
[7]Working Group on Antiretroviral Therapy and Medical Management of HIV-Infected Children. Guidelines for the Use of Antiretroviral Agents in Pediatric HIV Infection. February 23, 2009; pp 1-139. Available at http://aidsinfo.nih.gov/ContentFiles/PediatricGuidelines.pdf. Accessed December 20, 2009, pp.13-15; 61-62.

HAB HIV Performance Measures: Pediatrics

Pediatric Performance Measure: ARV Therapy	
Percentage of pediatric patients[1] with HIV infection who met age-specific eligibility criteria[2] were prescribed ARV therapy during the measurement year	
Numerator:	Number of HIV-infected pediatric patients who were prescribed ARV therapy
Denominator:	Number of HIV-infected pediatric patients who: • had a medical visit with a provider with prescribing privileges[3] at least once in the measurement year; AND • met the following age-specific eligibility criteria[2]: <12 mos. = All HIV-infected pediatric patients 1 to <5 yrs = AIDS or significant HIV-related symptoms; or CD4 <25% regardless of symptoms or HIV RNA level ≥5 yrs = AIDS or significant HIV-related symptoms; or CD4<350 cells/mm^3; • OR, are currently on ARV therapy
Patient Exclusions:	1. Patients newly enrolled in care during last four months of the measurement year
Data Elements:	1. Is the pediatric patient HIV-infected? (Y/N) a. If yes, was the patient seen by a provider with prescribing privileges during the measurement year? (Y/N) i. If yes, did the patient meet the eligibility criteria for ARV therapy? (Y/N) 1. If yes, was the patient prescribed ARV therapy? (Y/N)
Data Sources:	• Electronic Medical Record/Electronic Health Record • CAREWare, Lab Tracker or other electronic data base • Medical record data abstraction by grantee of a sample of records • Billing records
National Goals, Targets, or Benchmarks for Comparison:	None available at this time
Outcome Measures for Consideration:	• Rate of opportunistic infections in the clinic population • Rate of HIV-related hospitalizations in the clinic population • HIV-related mortality rates • CD4 values
Basis for Selection:	
Recommendations for initiating therapy have been more aggressive in children than adults for several	

reasons: 1) HIV disease progression in children is more rapid than in adults; and 2) laboratory parameters are less predictive of risk of disease progression.[2] Because CD4 count and HIV RNA values and risk of disease progression vary considerably by age in children, recommendations for when to start therapy differs by age of the child.

The measure reflects important aspects of care that significantly reduces morbidity and mortality. The measure has a strong evidence base supporting the use.

US Public Health Guidelines:

Working Group Recommendations (Table 2):
"Initiation of antiretroviral therapy is recommended for infants aged <12 months, regardless of clinical status, CD4 percentage or viral load. Based on data showing that surrogate marker-based risk of progression varies considerably by age but that CD4 count-associated risk of progression in children age 5 years or older is similar to young adults, the Working Group has moved to recommendations for three age bands for initiation of treatment: infants under age 12 months, children age 1-<5 years, and children and adolescents ≥ 5 years."[2]

References / Notes:

[1] "Pediatric patients" includes all patients younger than 13 years.
[2] Working Group on Antiretroviral Therapy and Medical Management of HIV-Infected Children. Guidelines for the Use of Antiretroviral Agents in Pediatric HIV Infection. February 23, 2009. Available at **http://aidsinfo.nih.gov/ContentFiles/PediatricGuidelines.pdf**. Accessed December 20, 2009, pp. 24-29.
[3] A "provider with prescribing privileges" is a health care professional who is certified in his/her jurisdiction to prescribe medications.

HAB HIV Performance Measures: Pediatrics

Pediatric Performance Measure: CD4 Value	
Percentage of pediatric patients[1] with HIV infection who had at least three (3) CD4 values[2] performed in the measurement year	
Numerator:	Number of HIV-infected pediatric patients who had three or more CD4 values performed at least three months apart during the measurement year
Denominator:	Number of HIV-infected pediatric patients who had a medical visit with a provider with prescribing privileges[3] at least once in the measurement year
Patient Exclusions:	1. Pediatric patients with HIV infection newly enrolled in care during the last nine months of the measurement year
Data Elements:	1. Is the pediatric patient HIV-infected? (Y/N) a. If yes, was the patient seen by a provider with prescribing privileges during the measurement year? (Y/N) i. If yes, did the patient have three or more CD4 values performed at least three months apart during the measurement year? (Y/N) 1. If yes, list the dates the specimens were obtained.
Data Sources:	• Electronic Medical Record/Electronic Health Record • CAREWare, Lab Tracker or other electronic data base • Medical record data abstraction by grantee of a sample of records • Billing records
National Goals, Targets, or Benchmarks for Comparison:	None available at this time
Outcome Measures for Consideration:	• Rate of opportunistic infections in the clinic population • Rate of HIV-related mortality in the clinic population
Basis for Selection:	
The CD4 count and percentage decline as HIV infection progresses. Patients with lower CD4 values have poorer prognosis than patients with higher values. CD4 values should be monitored every 3-4 months with increased frequency if clinical, immunological or virologic deterioration is suspected.[4] The measure reflects important aspects of care that significantly impacts survival and mortality. Data collection is currently feasible and measure has a strong evidence base supporting the use.	
US Public Health Guidelines:	
"In HIV-infected children…the CD4 count and percentage decline as HIV infection progresses, and patients with lower CD4 values have a poorer prognosis than patients with higher values. CD4 values should be obtained as soon as possible after a child has a positive test for HIV and every 3–4 months thereafter. Increased frequency of evaluations may be needed for children with suspected clinical, immunologic, or	

virologic deterioration; to confirm an abnormal value; or when initiating or changing therapy.
References / Notes:
[1] "Pediatric patients" includes all patients younger than 13 years. [2] "CD4 values" includes CD4 T-cell counts and CD4 percentages. CD4 percentages are recommended for children < 5 years of age and absolute CD4 counts for children ≥ 5 years of age.[4] [3]A "provider with prescribing privileges" is a health care professional who is certified in his/her jurisdiction to prescribe medications. [4] Working Group on Antiretroviral Therapy and Medical Management of HIV-Infected Children. Guidelines for the Use of Antiretroviral Agents in Pediatric HIV Infection. February 23, 2009. Available at **http://aidsinfo.nih.gov/ContentFiles/PediatricGuidelines.pdf**. Accessed December 20, 2009, pp. 13-17.

Pediatric Performance Measure: Developmental Surveillance	
Percentage of HIV- infected or exposed pediatric patients[1] who had developmental surveillance[2] documented[3] in the measurement year	
Numerator:	Number of HIV-infected or exposed pediatric patients who had developmental surveillance documented in the measurement year
Denominator:	Number of HIV-infected or exposed pediatric patients who had a medical visit with provider with prescribing privileges[4] at least once in the measurement year
Patient Exclusions:	None
Data Elements:	1. Is the pediatric patient HIV-infected or exposed? (Y/N) a. If yes, was the patient seen by a provider with prescribing privileges during the measurement year? (Y/N) i. If yes, was developmental surveillance documented in the measurement year? (Y/N) 1. If yes, list the date.
Data Sources:	• Electronic Medical Record/Electronic Health Record • Medical record data abstraction by grantee of a sample of records • Billing records
National Goals, Targets, or Benchmarks for Comparison:	None available at this time
Outcome Measures for Consideration:	• Rate of developmental delays in clinic population • Rate of appropriate grade level in comparison to chronological age • Rate of referrals for intervention for developmental or educational problems • Mean age of diagnosis of developmental problems

Basis for Selection:

Developmental delays in HIV- infected and exposed children are more prevalent than in the general population. One study showed that clinically and immunologically stable HIV-infected children had more frequent behavioral problems and lower developmental and cognitive scores than established childhood norms.[5]

Early identification of developmental disorders is critical to the well-being of children and their families. The American Academy of Pediatrics' policy statement recommends that developmental surveillance be performed at each medical care encounter and screening tests be administered regularly at 9-, 18- and 30-month visits.[6] Children diagnosed with developmental disorders should be identified as children with special health care needs and chronic-condition management should be initiated.

HAB HIV Performance Measures: Pediatrics

US Public Health Guidelines:
None
References / Notes:
[1] "Pediatric patients" includes all patients younger than 13 years. [2]According to the AAP[6], developmental surveillance is the process of recognizing children who may be at risk of developmental delays. Developmental surveillance should be age appropriate. For children < 5 years, surveillance should focus on the four spheres of development: 1) fine motor skills; 2) gross motor skills; 3) language development; and 4) social skills. For children ≥ 5 years, surveillance should have an education focus. Screening refers to the use of standardized tools to identify and refine the recognized risk. Evaluation is a complex process aimed at identifying specific developmental disorders that are affecting a child. [3]Developmental surveillance must be documented in the health record as performed by any provider caring for the child. If developmental delay is suspected, further examination with a validated developmental screening tool is indicated. For the purposes of this measure, any developmental screening or evaluation efforts count for surveillance. [4]A "provider with prescribing privileges" is a health care professional who is certified in his/her jurisdiction to prescribe medications. [5] Nozyce, M. et al. A Behavioral and Cognitive Profile of Clinically Stable HIV-Infected Children. Pediatrics 2006;117: 763-770. [6] American Academy of Pediatrics. Identifying Infants and young children with developmental disorders in the medical home: An algorithm for development surveillance and screening. Pediatrics 2006; 118: 405-420.

HAB HIV Performance Measures: Pediatrics

Pediatric Performance Measure: Health Care Transition Planning for HIV-infected Youth	
Percentage of adolescents[1] with HIV infection who had a discussion about health care transition planning documented[2] in the health record in the measurement year	
Numerator:	Number of HIV-infected adolescents who had a discussion about health care transition planning documented in the health record in measurement year
Denominator:	Number of HIV-infected adolescents who: • were ≥ 17 years old in the measurement year, and • had a medical visit with a provider with prescribing privileges[3] at least once in the measurement year
Patient Exclusions:	1. Adolescents who were newly diagnosed with HIV infection in the measurement year
Data Elements:	1. Is the adolescent HIV-infected? (Y/N) a. If yes, is the adolescent ≥ 17 years (Y/N) i. If yes, was the patient seen by a provider with prescribing privileges during the measurement year? (Y/N) 1. If yes, is a discussion about health care transition documented in the health record in the measurement year? (Y/N) a. If yes, list the date
Data Sources:	• Electronic Medical Record/Electronic Health Record • Medical record data abstraction by grantee of a sample of records
National Goals, Targets, or Benchmarks for Comparison:	None available at this time
Outcome Measures for Consideration:	• Retention in care after transition from pediatric/adolescent program to adult care
Basis for Selection:	
According to the Society for Adolescent Medicine, transitional health programs should be prepared to address common concerns of young people. Transition programs should be flexible enough to meet the needs of a wide range of young people. The transfer of care should be individualized to meet the specific needs of the young person and his/her family. Health care transition is most successful when there is a designated professional who, together with the patient and family, takes responsibility for the process. The Society for Adolescent Medicine has outlined six critical steps to ensuring successful transition to adult-oriented care.[4]	

The American Academy of Pediatrics recommends creating a written health care transition plan by age 14 together with the young person and family.[5]

US Public Health Guidelines:

Adolescents may feel unfamiliar with the busier clinics typical of adult medical providers. Providing support and guidance to the adolescent and to the adult medical care provider as to what is expected from each may be helpful. [6]

References / Notes:

[1] Each adolescent matures at a different rate and impacts the timeframe when transition planning occurs. By 17 years of age, discussions about transition of health care to an adult program should have occurred as the process can take place over a period of years. The age of 17 years is selected for performance measurement purposes only and should not be interpreted as a recommendation at which discussion should begin to occur. Providers are encouraged to have discussions about transition to an adult program before the adolescent reaches 17 years of age.

[2] "Documented discussion" means that the provider or another member of the medical team has talked with the adolescent about transition of health care to an adult program and the discussion is noted in the health record.

[3]A "provider with prescribing privileges" is a health care professional who is certified in his/her jurisdiction to prescribe medications.

[4]Society for Adolescent Medicine (2003). Transition to adult health care for adolescents and young adults with chronic conditions. Journal of Adolescent Health; 33:309-311.

[5]American Academy of Pediatrics (2002). A consensus statement on health care transitions for young adults with special health care needs. Pediatrics; 110: pp. 1304-1306.

[6] Working Group on Antiretroviral Therapy and Medical Management of HIV-Infected Children. Guidelines for the Use of Antiretroviral Agents in Pediatric HIV Infection. February 23, 2009. Available at http://aidsinfo.nih.gov/ContentFiles/PediatricGuidelines.pdf. Accessed December 20, 2009, pp. 64-65.

HAB HIV Performance Measures: Pediatrics

Pediatric Performance Measure: HIV Drug Resistance Testing Before Initiation of Therapy	
Percentage of pediatric patients[1] with HIV infection who had an HIV drug resistance test performed[2] before initiation[3] of ARV therapy if therapy started during the measurement year	
Numerator:	Number of HIV-infected pediatric patients who had an HIV drug resistance test performed at any time before initiation of ARV therapy
Denominator:	Number of HIV-infected pediatric patients who: • were prescribed ARV therapy during the measurement year for the first time; and • had a medical visit with a provider with prescribing privileges[4] at least once in the measurement year
Patient Exclusions:	None
Data Elements:	1. Is the pediatric patient HIV-infected? (Y/N) a. If yes, was the patient seen by a provider with prescribing privileges during the measurement year? (Y/N) i. If yes, was ARV therapy prescribed during the measurement year for the first time? (Y/N) 1. If yes, was an HIV drug resistance test performed at any time prior to prescribing ARV therapy? (Y/N) a. If yes, list date.
Data Sources:	• Electronic Medical Record/Electronic Health Record • CAREWare, Lab Tracker or other electronic data base • Medical record data abstraction by grantee of a sample of records • Billing records
National Goals, Targets, or Benchmarks for Comparison:	None available at this time
Outcome Measures for Consideration:	• Percent of undetectable viral loads within six months on initial ARV in the clinic population
Basis for Selection:	
Mutations in HIV RNA readily arise during viral replication. Ongoing replication in the presence of ARV drugs progressively selects for strains of HIV with mutations that result in drug resistance. Resistance testing is recommended prior to initiation of therapy in all treatment-naïve children.[5] The measure reflects important aspect of care that significantly impacts survival and mortality. The measure	

has a strong evidence base supporting the use.

US Public Health Guidelines:

"Mother-to-child transmission and horizontal transmission of drug-resistant HIV strains have been well documented and are associated with suboptimal virologic response to initial antiretroviral therapy. Drug-resistant variants of HIV may persist for months after birth in infected infants and impair the response to antiretroviral therapy. Consequently, antiretroviral drug-resistance testing is recommended prior to initiation of therapy in all treatment-naïve children." [5]

References / Notes:

[1] "Pediatric patients" includes all patients younger than 13 years.
[2]HIV drug resistance testing may occur either during or prior to the measurement year, as long as it is performed before ARV therapy is initiated.
[3] The focus of the measure is on initiation of first antiretroviral regimen for HIV treatment, not prophylaxis or re-initiation.
[4]A "provider with prescribing privileges" is a health care professional who is certified in his/her jurisdiction to prescribe medications.
[5]Working Group on Antiretroviral Therapy and Medical Management of HIV-Infected Children. Guidelines for the Use of Antiretroviral Agents in Pediatric HIV Infection. February 23, 2009; pp 1-139. Available at **http://aidsinfo.nih.gov/ContentFiles/PediatricGuidelines.pdf**. Accessed December 20, 2009, pp. 102-104.

HAB HIV Performance Measures: Pediatrics

Pediatric Performance Measure: Lipid Screening

Percentage of pediatric patients[1] with HIV infection on ARV therapy who had a lipid panel[2] during the measurement year

Numerator:

Number of HIV-infected pediatric patients who had a lipid panel performed in the measurement year

Denominator:

Number of HIV-infected pediatric patients who:

- are on ARV therapy; and
- had a medical visit with a provider with prescribing privileges[3] at least once in the measurement year

Patient Exclusions:

1. Patients less than 12 months of age at end of measurement year

Data Element:

1. Is the pediatric patient HIV-infected? (Y/N)
    a. If yes, did the patient have a medical visit with a provider with prescribing privileges during the measurement year? (Y/N)
        i. If yes, was the patient on ARV therapy?(Y/N)
            1. If yes, did he/she have a lipid panel performed during the measurement year? (Y/N)

Data Sources:

- 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:

HIVQUAL-US Data for adults & adolescents:[4]

	2004	2005	2006	2007
Top 10%	100%	100%	100%	100%
Top 25%	100%	97.9%	100%	NA
Mean*	79.1%	80.2%	84.7%	85%

*From HAB database

Outcome Measures for Consideration:

- Incidence of metabolic syndrome in the clinic population
- Long term rate of cardiovascular disease

Basis for Selection:

Changes in body shape, fat distribution & metabolism occur with frequency among HIV-infected patients, particularly those prescribed HAART. Metabolic changes that have been observed include hyperlipidemia.[5] Compared with the pre-HAART era, recent studies in children have demonstrated that protease inhibitor (PI) therapy improves weight but may be associated with increased serum levels of fasting lipids.[6] For children on ARV therapy, lipid level monitoring every 6-12 months is important to detect side effects and to identify patients who may require treatment.[5] As children live longer with HIV infection and undergo more intensive and potentially cardiotoxic therapies, cardiac morbidity and mortality may become an increasing problem.[6]

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:

"Baseline laboratory assessments should be done prior to initiation of therapy; these include…serum lipid evaluation (cholesterol, triglycerides). Monitoring of drug toxicities should be tailored to the particular medications the child is taking; for example, periodic monitoring of serum glucose and lipids in patients receiving PIs."[5]

References / Notes:

[1] For the purposes of this measure, "pediatric patients" includes all patients age 1-13 years.
[2]A lipid panel consists of blood cholesterol and triglycerides.
[3]A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ARV therapy.
[4]HIVQUAL-US Indicator: All HIV-infected patients (not just those on ARV Therapy) are evaluated for an annual lipid screening. Available at: http://www.hivguidelines.org/admin/files/qoc/hivqual/proj%20info/HQNatlAggScrs3Yrs.pdf.
[5]Working Group on Antiretroviral Therapy and Medical Management of HIV-Infected Children. Guidelines for the Use of Antiretroviral Agents in Pediatric HIV Infection. February 23, 2009. Available at http://aidsinfo.nih.gov/ContentFiles/PediatricGuidelines.pdf. Accessed June 9, 2010, pp.61-62, 73.
[6] Miller, T. et al. Risk factors for cardiovascular disease in children infected with Human Immunodeficiency Virus-1. Journal of Pediatrics 2008; 153: 491-497.

HAB HIV Performance Measures: Pediatrics

Pediatric Performance Measure: Medical Visit	
Percentage of pediatric patients[1] with HIV infection who had three or more medical visits in an HIV care setting[2] in the measurement year	
Numerator:	Number of HIV-infected pediatric patients who had a medical visit with a provider with prescribing privileges[3] in an HIV care setting[2] three or more times at least three months apart in the measurement year
Denominator:	Number of HIV-infected pediatric patients who had a medical visit with a provider with prescribing privileges in an HIV care setting at least once in the measurement year
Patient Exclusions:	1. Pediatric patients newly enrolled in care during the last nine months of the measurement year
Data Elements:	1. Is the pediatric patient HIV-infected? (Y/N) a. If yes, was the patient seen by a provider with prescribing privileges at least once in an HIV care setting during the measurement year? (Y/N) i. If yes, did the patient have at least three medical visits at least three months apart in the measurement year? (Y/N) 1. If yes, list the dates of these visits.
Data Sources:	• Ryan White Services Report • Electronic Medical Record/Electronic Health Record • CAREWare, Lab Tracker or other electronic data base • Medical record data abstraction by grantee of a sample of records • Billing records
National Goals, Targets, or Benchmarks for Comparison:	None available at this time
Outcome Measures for Consideration:	• Rate of opportunistic infections in the clinic population • Rate of HIV-related mortality in the clinic population • Rate of severe immunosuppression • Rate of viral load suppression
Basis for Selection:	
The CD4 count and percentage decline as HIV infection progresses. Patients with lower CD4 values have poorer prognosis than patients with higher values. CD4 values should be monitored every 3-4 months with increased frequency if clinical, immunological or virologic deterioration is suspected. Medical care visits every 3-4 months ensures the ability to obtain CD4 values, monitor ARV therapy adherence and toxicity, perform developmental screening, and initiate planning of disclosure of HIV status.[4] Measure reflects important aspects of care that significantly impacts mortality. Data collection is currently feasible and measure has a strong evidence base supporting the use.	

HAB HIV Performance Measures: Pediatrics

US Public Health Guidelines:
"In HIV-infected children…the CD4 count and percentage decline as HIV infection progresses, and patients with lower CD4 values have a poorer prognosis than patients with higher values…Children should have a monitoring visit at least every 3-4 months to assess both efficacy and potential toxicity of antiretroviral regimens."[4]
References / Notes:
[1] "Pediatric patients" includes all patients younger than 13 years. [2]A "provider with prescribing privileges" is a health care professional who is certified in his/her jurisdiction to prescribe medications. [3]An HIV care setting is one which received Ryan White HIV/AIDS Treatment Extension Act of 2009 funding to provide HIV care and has a quality management program in place to monitor the quality of care addressing gaps in quality of HIV care. [4]Working Group on Antiretroviral Therapy and Medical Management of HIV-Infected Children. Guidelines for the Use of Antiretroviral Agents in Pediatric HIV Infection. February 23, 2009; pp 1-139. Available at **http://aidsinfo.nih.gov/ContentFiles/PediatricGuidelines.pdf**. Accessed December 20, 2009, pp.13-15; 61-62.

HAB HIV Performance Measures: Pediatrics

Pediatric Performance Measure: PCP Prophylaxis for HIV-Infected Children	
Percentage of eligible infants and children[1] with HIV infection who were prescribed PCP prophylaxis in the measurement year	
Numerator:	Number of HIV-infected infants or children who were prescribed PCP prophylaxis during the measurement year
Denominator:	Number of: • HIV-infected infants or children ≥ 6 weeks of age who meet the following age-specific eligibility criteria[2]: <12 months = All HIV-infected infants regardless of CD4 count 1-5 yrs = CD4<500 cells/mm^3 or CD4%<15% ≥6 yrs = CD4<200 cells/mm^3 or CD4%<15% AND • had a medical visit with a provider with prescribing privileges[3] at least once in the measurement year
Patient Exclusions:	1. Patients with CD4 values below age appropriate threshold repeated within 3 months that rose above age appropriate threshold
Data Elements:	1. Was the infant or child seen by a provider with prescribing privileges during the measurement year? (Y/N) a. If yes, is the infant or child HIV-infected? (Y/N) i. If yes, is the infant or child ≥ 6 weeks of age? (Y/N) 1. If yes, did the infant or child meet the age-specific eligibility criteria? (Y/N) a. If yes, was the infant or child prescribed PCP prophylaxis during the measurement year? (Y/N) i. If yes, list the date.
Data Sources:	• Electronic Medical Record/Electronic Health Record • CAREWare, Lab Tracker or other electronic data base • Medical record data abstraction by grantee of a sample of records • Billing records
National Goals, Targets, or Benchmarks for Comparison:	None available at this time
Outcome Measures for	• Rate of PCP in the clinic population • HIV-related mortality rates

Consideration:	

Basis for Selection:

"PCP remains a common AIDS-indicator disease among HIV-infected infants and children. The highest incidence of PCP in HIV-infected children is in the first year of life, with cases peaking at age 3–6 months. The single most important factor in susceptibility of HIV-infected children of all ages to PCP is the status of cell mediated immunity of the host."[2]

The measure reflects important aspect of care that significantly impacts survival and mortality. Data collection is currently feasible and measure has a strong evidence base supporting the use.

US Public Health Guidelines:

"Chemoprophylaxis is highly effective in preventing PCP. Criteria for its use are based on the patient's age and CD4 count or percentage. Prophylaxis is recommended for all HIV-infected children aged >6 years who have CD4 counts <200 cells/mm^3 or CD4 <15%, for children aged 1–5 years with CD4 counts of <500 cells/mm^3 or CD4 <15%, and for all HIV-infected infants aged <12 months regardless of CD4 count or percentage. Infants born to HIV-infected mothers should be considered for prophylaxis beginning at 4–6 weeks of age. HIV-infected infants should be administered prophylaxis until 1 year of age, at which time they should be reassessed on the basis of the age-specific CD4 count or percentage thresholds mentioned above. Infants with indeterminate HIV infection status should receive prophylaxis until they are determined to be HIV-uninfected or presumptively uninfected with HIV. Prophylaxis is not recommended for infants who meet criteria for definitively or presumptively HIV-uninfected."[2]

References / Notes:

[1] "Children" includes all patients younger than 13 years; "infants" are those children 12 months of age or younger.

[2]Centers for Disease Control and Prevention. Guidelines for the Prevention and Treatment of Opportunistic Infections Among HIV-Exposed and HIV-Infected Children. MMWR 2009;58(No. RR-11). http://aidsinfo.nih.gov/contentfiles/Pediatric_OI.pdf Accessed January 29, 2010, pp. 45-48; 68-69.

[3]A "provider with prescribing privileges" is a health care professional who is certified in his/her jurisdiction to prescribe medications.

Pediatric Performance Measure: Planning for Disclosure of HIV Status to Child	
Percentage of pediatric/adolescent patients[1] with HIV infection who know their HIV status or for whom there is a documented discussion[2] about disclosure in the measurement year	
Numerator:	Number of HIV-infected pediatric/adolescent patients who know their status or for whom the provider and guardian had a documented discussion about disclosure
Denominator:	Number of HIV-infected pediatric/adolescent patients who: • were ≥ 12 years old at the beginning of the measurement year, and • had a medical visit with a provider with prescribing privileges[3] at least once in the measurement year
Patient Exclusions:	None
Data Elements:	1. Is the pediatric/adolescent patient HIV-infected? (Y/N) a. If yes, is the child ≥ 12 years old? (Y/N) i. If yes, was the patient seen by a provider with prescribing privileges during the measurement year? (Y/N) 1. If yes, does the child know of his/her HIV status **or** is there a documented discussion about disclosure in the measurement year? (Y/N) a. If yes, list date.
Data Sources:	▪ Electronic Medical Record/Electronic Health Record ▪ Medical record data abstraction by grantee of a sample of records
National Goals, Targets, or Benchmarks for Comparison:	None available at this time
Outcome Measures for Consideration:	▪ Rate of undetectable viral load among children ≥ 12 years ▪ Proportion of adolescents who know their HIV status in the clinic population ▪ Rate of sexually transmitted infections among youth in the clinic population
Basis for Selection:	
The American Academy of Pediatrics reaffirmed in 2009 a policy statement that strongly encourages	

disclosure to school-age HIV-infected children. Adolescents should know their HIV status and be fully informed regarding consequences for their health, including sexual behavior. The process for disclosure should be discussed and planned with caregivers. Disclosure should be geared to the child's level of cognitive development and maturity.[4]

Most children without cognitive deficits have the capacity to understand the diagnosis and concepts about immune systems and health. Disclosure can help children understand the illness and may further a child's willingness to adhere to his/her treatment regimen. A disclosure plan also prevents an accidental disclosure from occurring, such as when the child overhears the caregiver discussing the illness. Children who accidentally learn of their diagnosis may have a more difficult time adjusting to it.[5]

US Public Health Guidelines:

None

References / Notes:

[1] For purposes of this measure, "pediatric/adolescent patients" includes all children $\geq$ 12 years. While each adolescent matures at a different rate disclosure by 12 years of age is generally appropriate. Planning for disclosure should occur well before 12 years of age so that disclosure can occur by 12 years of age.
[2] "Documented discussion" means that the provider or another member of the medical team has talked with the guardian and/or child about disclosure and the discussion is noted in the health record.
[3]A "provider with prescribing privileges" is a health care professional who is certified in his/her jurisdiction to prescribe medications.
[4]American Academy of Pediatrics (Reaffirmed 2009). Disclosure of illness status to children and adolescents with HIV infection. Pediatrics, 103(1); January 1999, pp. 164-166.
[5]New York State Department of Health AIDS Institute (November 2009). Disclosure of HIV to perinatally infected children and adolescents, pp. 1-16.

Pediatric Performance Measure: TB Screening

Percentage of pediatric patients[1] with HIV infection who received testing with results documented for latent tuberculosis infection (LTBI) during the measurement year

Numerator:

Number of pediatric patients who received documented testing for LTBI with tuberculin skin test (TST) during the measurement year

Denominator:

Number of HIV-infected pediatric patients who:

- do not have a history of previous documented treatment of TB disease[2] or previous documented positive TST; and
- had a medical visit with a provider with prescribing privileges[3] at least once in the measurement year.

Patient Exclusions

None

Data Element:

1. Is the pediatric patient HIV-infected? (Y/N)
    a. Did the patient have a medical visit with a provider with prescribing privileges during the measurement year? (Y/N)
        i. If yes, has the patient ever had previous treatment for TB disease or previous documented positive TST? (Y/N)
            1. If **no**, has the patient been tested for LTBI with a TST during the measurement year? (Y/N)
                a. If yes, are the results documented? (Y/N)

Data Sources:

- 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

HIVQUAL-US Data for adults & adolescents:[4]

	2004	2005	2006	2007
Top 10%	91.7%	88.8%	92.2%	100%
Top 25%	73.5%	74.8%	78.2%	NA
Mean*	56.0%	57.1%	56.2%	69.7%

*from HAB data base

Outcome Measures for Consideration:

- Incidence of TB disease in the clinic population

Basis for Selection:

During 1993–2001, 12.9% of adults with TB were reported to be coinfected with HIV, compared with 1.1% of all children with TB. The actual rate of HIV coinfection in U.S. children with TB is unknown because of

the low rate of HIV testing in this population.[5]

Numerous studies have documented the increased risk for TB among HIV-infected adults.[5] Once infected, children aged <4 years and all HIV-infected children are more likely to develop active TB disease. Untreated tuberculosis can result in poor immunologic and clinical responses despite virologic suppression.[6] Usually the clinical features of TB among HIV-infected children are similar to those among children without HIV infection, although the disease usually is more severe. Because children with HIV infection are at high risk for TB, annual testing of this population is recommended to diagnose LTBI.

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:

Because children with HIV infection are at high risk for TB, annual testing of this population is recommended to diagnose LTBI.[6]

In the United States, where TB exposure is uncommon and BCG is not routinely administered, HIV-infected infants and children should have a TST (5-TU purified protein derivitive) at 3 months of age, and children should be tested at HIV diagnosis. HIV-infected children should be retested at least once per year. HIV-infected infants and children should be treated for LTBI if they have a positive TST or exposure to a person who has contagious TB (after exclusion of active TB disease in the infant or child and regardless of the child's TST results).[5]

References / Notes:

[1] "Pediatric patients" includes all patients younger than 13 years.
[2] Previous documented treatment for TB disease or previous documented positive TST occurred prior to HIV diagnosis.
[3] A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ARV therapy.
[4] HIVQUAL-US Indicator: All HIV+ patients without previous treatment for TB or a previous positive PPD test are evaluated to determine whether they have been screened for tuberculosis. Available at: http://www.hivguidelines.org/admin/files/qoc/hivqual/proj%20info/HQNatlAggScrs3Yrs.pdf.
[5] Centers for Disease Control and Prevention. Guidelines for the Prevention and Treatment of Opportunistic Infections Among HIV-Exposed and HIV-Infected Children. MMWR 2009;58(No. RR-11). http://aidsinfo.nih.gov/contentfiles/Pediatric_OI.pdf Accessed February 10, 2010, p.19
[6] Working Group on Antiretroviral Therapy and Medical Management of HIV-Infected Children. Guidelines for the Use of Antiretroviral Agents in Pediatric HIV Infection. February 23, 2009. Available at http://aidsinfo.nih.gov/ContentFiles/PediatricGuidelines.pdf. Accessed June 9, 2010, p.78.

U.S. Department of Health and Human Services HRSA Health Resources and Services Administration

Performance Measure:	**CD4 Cell Count**[1]	**National Quality Forum #:** 404
Percentage of patients aged six months and older with a diagnosis of HIV/AIDS, with at least two CD4 cell counts or percentages performed during the measurement year at least 3 months apart		
Numerator:	Patients with at least two CD4 cell counts or percentages performed during the measurement year at least 3 months apart	
Denominator:	All patients aged 6 months and older with a diagnosis of HIV/AIDS, who had at least two medical visits during the measurement year, with at least 90 days between each visit	
Patient Exclusions:	None	
Data Elements:	1. Does the patient, aged six months and older, have a diagnosis of HIV/AIDS? (Y/N) a. If yes, did the patient have at least two medical visits during the measurement year, with at least 90 days in between each visit? (Y/N) i. If yes, list the dates the CD4 cell counts were performed. 1. Were CD4 cell counts performed at least three months during the measurement year? (Y/N)	
Comparison Data:	National HIVQUAL: Every 4 months: Percentage of patients for whom one or more CD4 count was performed during each four-month trimester of the review period at least 60 days apart Every 6 months: Percentage of patients for whom one or more CD4 count was performed during each six month semester of the review period at least 60 days apart (http://www.hivqualus.org/ and http://www.nationalqualitycenter.org/index.cfm/35778/ index.cfm/22/82627)	
U.S. Department of Health & Human Services Guidelines:	Adult guidelines:[2] "In untreated patients, CD4 counts should be monitored every 3 to 6 months to determine the urgency of ART initiation. In patients on ART, the CD4 count is used to assess the immunologic response to ART and the need for initiation or discontinuation of prophylaxis for opportunistic infections (AI)."[1] Pediatric guideline:[3] "Baseline laboratory assessments including CD4 T lymphocyte (CD4 cell) count/percentage and HIV RNA level, … should be done before initiation of therapy. A baseline assessment of ARV resistance using a genotype assay also is recommended (see Antiretroviral Resistance Testing). Within 4 to 8 weeks after initiating or changing therapy, children receiving ART should be seen to…receive laboratory tests to evaluate the effectiveness of therapy (CD4 count/percentage, plasma HIV RNA level [viral load]) and to detect medication-related toxicities. "Thereafter, medication adherence and regimen toxicity and effectiveness should be assessed every 3 to 4 months in children taking ARV drugs. Some experts monitor CD4 cell counts and HIV RNA levels less frequently in children and youth who are adherent to	

	2007	2009	2011
Every 4 months (median)	64.4%	-	56%
Every 6 months (median)	91.2%	91.1%	91%

	therapy and have sustained viral suppression and stable clinical status for more than 2 to 3 years."[2]
Use in Other Federal Programs:	None
References/ Notes:	[1]The HIV/AIDS Bureau did not develop this measure. The National Committee on Quality Assurance developed this measure. Measure details available at: http://www.qualityforum.org/Projects/im/Infectious_Disease_Endorsement_Maintenance_2012/Infectious_Disease_Consensus_Standards_Endorsement_Maintenance_2012.aspx#t=2&p=2%7C1%7C&s= [2]Panel on Antiretroviral Guidelines for Adults and Adolescents. Guidelines for the use of antiretroviral agents in HIV-1-infected adults and adolescents. Department of Health and Human Services. Available at http://aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf. Section accessed July 25, 2013. C-3. [3]Panel on Antiretroviral Therapy and Medical Management of HIV-Infected Children. Guidelines for the Use of Antiretroviral Agents in Pediatric HIV Infection. Available at http://aidsinfo.nih.gov/contentfiles/lvguidelines/pediatricguidelines.pdf. Accessed July 25, 2013. H-1 and 2.

HAB HIV Core Clinical Performance Measures
Viral load monitoring and viral load suppression
November 2011

<table>
<tr><td colspan="2">Performance Measure: Viral Load Monitoring</td></tr>
<tr><td colspan="2">Percentage of patients, regardless of age, with a diagnosis of HIV/AIDS with a viral load test performed at least every six months during the measurement year</td></tr>
<tr><td>Numerator:</td><td>Number of patients with a viral load test performed at least every 6 months</td></tr>
<tr><td>Denominator:</td><td>Number of patients, regardless of age, with a diagnosis of HIV/AIDS who had at least two medical visits during the measurement year, with at least 60 days in between each visit</td></tr>
<tr><td>Patient Exclusions:</td><td>Patients newly enrolled in care during last 6 months of the measurement year</td></tr>
<tr><td>Data Element:</td><td>1. Does the patient, regardless of age, have a diagnosis of HIV/AIDS? (Y/N)
a. If yes, did the patient have at least two medical visits during the measurement year, with at least 60 days in between each visit? (Y/N)
i. If yes, list the dates the viral load tests were performed.
1. Were viral load tests performed at least every six months during the measurement year? (Y/N)</td></tr>
<tr><td>Data Sources:</td><td>• Ryan White Program Services Report (RSR) questions 47 (date of first outpatient/ambulatory care visit); 48 (outpatient/ambulatory care visits dates); and 50 (viral load counts)
• 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</td></tr>
<tr><td>National Goals, Targets, or Benchmarks for Comparison:</td><td>National HIVQUAL Data: [1]
<table>
<tr><td></td><td>2003</td><td>2004</td><td>2005</td><td>2006</td><td>2007</td><td>2009</td></tr>
<tr><td>Top 10%</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td><td>98.9%</td><td>100%</td></tr>
<tr><td>Top 25%</td><td>97.1%</td><td>97.0%</td><td>95.7%</td><td>95.7%</td><td>95.5%</td><td>94.2%</td></tr>
<tr><td>Median*</td><td>89.7%</td><td>90.9%</td><td>89.6%</td><td>91.6%</td><td>90.3%</td><td>89.4%</td></tr>
</table>
*from HAB data base</td></tr>
<tr><td colspan="2">Basis for Selection and Placement in Group 1:</td></tr>
<tr><td colspan="2">Viral load testing serves as a surrogate marker for response to antiretroviral therapy and can be useful in predicting clinical progression.

Measure reflects important aspects of care that significantly impacts survival and mortality. Data collection is currently feasible and measure has a strong evidence base supporting the use.</td></tr>
<tr><td colspan="2">US Department of Health and Human Services Guidelines:</td></tr>
<tr><td colspan="2">Antiretroviral therapy (ART) should be initiated in all patients with a history of an AIDS-defining illness or with a CD4 count <500 cells/mm^3. The primary goal of ART is to reduce HIV-associated morbidity and mortality. This is best accomplished by using antiretroviral therapy to maximally inhibit HIV replication, as measured by consistent plasma HIV RNA (viral load) values below the level of detection using commercially available assays. [2]</td></tr>
</table>

Plasma HIV RNA (viral load) should be measured in all patients at baseline and on a regular basis thereafter, especially in patients who are on treatment, because viral load is the most important indicator of response to antiretroviral therapy (ART)…Thus, viral load testing serves as a surrogate marker for treatment response and can be useful in predicting clinical progression.[2]
References/Notes:
[1]HIVQUAL-US Indicator: Percent of patients who received a viral load test during each six-month semester http://hivqualus.org/index.cfm/22/9842 and https://www.ehivqual.org/ [2]Panel on Antiretroviral Guidelines for Adults and Adolescents. Guidelines for the use of antiretroviral agents in HIV-1-infected adults and adolescents. Department of Health and Human Services. January 10, 2011; pp. 9, 27-28. http://www.aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf
Corresponding National Quality Forum (NQF) Endorsed Measure:
None

Performance Measure: Viral Load Suppression

Percentage of patients, regardless of age, with a diagnosis of HIV/AIDS with viral load below limits of quantification[1] at last test during the measurement year

Numerator:

Number of patients with viral load below limits of quantification[1] at last test during the measurement year

Denominator:

Number of patients, regardless of age, with a diagnosis of HIV/AIDS who:

- had at least two medical visits during the measurement year with at least 60 days in between each visit; and
- were prescribed antiretroviral therapy for at least 6 months; and
- had a viral load test during the measurement year

Patient Exclusions:

None

Data Element:

1. Does the patient, regardless of age, have a diagnosis of HIV/AIDS? (Y/N)
    a. If yes, did the patient have at least two medical visits during the measurement year with at least 60 days in between each medical visit? (Y/N)
        i. If yes, was the patient prescribed antiretroviral therapy for at least 6 months? (Y/N)
            1. If yes, was a viral load test drawn? (Y/N)
                a. If yes, did the patient have viral load below limits of quantification[1] on the last test? (Y/N)
                    i. If yes, list date.

Data Sources:

- Ryan White Program Services Report (RSR) questions 47 (date of first outpatient/ambulatory care visit); 48 (outpatient/ambulatory care visits dates); 50 (viral load counts); and 52 (ART prescription)
- Electronic Medical Record/Electronic Health Record
- CAREWare, Lab Tracker, or other electronic data base
- Medical record data abstraction by grantee of a sample of records

National Goals, Targets, or Benchmarks for Comparison:

National HIVQUAL Data: [2]

	2003	2004	2005	2006	2007	2009
Top 10%	76.2%	83.3%	86.5%	87.0%	90.9%	95.1%
Top 25%	70.3%	76.5%	80.0%	82.0%	85.7%	89.9%
Median*	61.7%	66.7%	70.0%	72.7%	79.5%	81.8%

*from HAB data base

Kaiser Permanente:[3] 88.8%

Veterans Administration[4]: 73%

HIV Research Network (HIVRN)[5]: 70%

Basis for Selection and Placement in Group 1:

The primary goal of antiretroviral therapy (ART) is to reduce HIV-associated morbidity and mortality. This is best accomplished by using antiretroviral therapy to maximally inhibit HIV replication, as measured by consistent plasma HIV RNA (viral load) values below the level of detection using commercially available assays. [6]

Measure reflects important aspect of care that significantly impacts survival, mortality and hinders transmission. Data collection is currently feasible and measure has a strong evidence base supporting the use.

US Public Health Service Guidelines:

ART should be initiated in all patients with a history of an AIDS-defining illness or with a CD4 count <500 cells/mm^3. The primary goal of ART is to reduce HIV-associated morbidity and mortality. This is best accomplished by using antiretroviral therapy to maximally inhibit HIV replication, as measured by consistent plasma HIV RNA (viral load) values below the level of detection using commercially available assays. [6]

Plasma HIV RNA (viral load) should be measured in all patients at baseline and on a regular basis thereafter, especially in patients who are on treatment, because viral load is the most important indicator of response to antiretroviral therapy (ART)…Thus, viral load testing serves as a surrogate marker for treatment response and can be useful in predicting clinical progression.[6]

Optimal viral suppression is generally defined as a viral load persistently below the level of detection (<20–75 copies/mL, depending on the assay used). In addition, low-level positive viral load results (typically <200 copies/mL) appear to be more common with some viral load assays than others, and there is no definitive evidence that patients with viral loads quantified as <200 copies/mL using these assays are at increased risk for virologic failure. For the purposes of clinical trials the AIDS Clinical Trials Group (ACTG) currently defines virologic failure as a confirmed viral load >200 copies/mL, which eliminates most cases of apparent viremia caused by blips or assay variability.[6]

References/Notes:

[1]"Below limits of quantification" is defined as < 200 copies/mL. The Department of Health and Human (DHHS) guidelines and the AIDS Clinical Trials Group define virologic failure as a confirmed viral load >200 copies/mL. http://www.aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf

[2] HIVQUAL-US Indicator: Percent of patients on ART whose last viral load was ≤400 copies/mL who had at least 2 viral loads completed http://hivqualus.org/index.cfm/22/9842 and https://www.ehivqual.org/

[3]Horberg, M. et al HIV quality performance measures in a large integrated healthcare system *AIDS Patient Care and STDs*. January 2011, 25(1): 21-28.

[4]Backus, L., et al National Quality Forum performance measures for HIV/AIDS Care The Department of Veterans Affairs' Experience. *Arch Intern Med*; 2010; 170(14): 1239-1246.

[5]HIV Research Network (HIVRN) data includes patients on at least 1 ART drug in CY2009 whose viral load was undetectable. Available at: https://cds.johnshopkins.edu/hivrn/index.cfm?do=sens.content&page=data_reports.html

[6]Panel on Antiretroviral Guidelines for Adults and Adolescents. Guidelines for the use of antiretroviral agents in HIV-1-infected adults and adolescents. Department of Health and Human Services. January 10, 2011; pp. 9, 27-28. http://www.aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf

Corresponding National Quality Forum (NQF) Endorsed Measure:

NQF #: 0407
Title: HIV RNA control after six months of potent antiretroviral therapy
Description: Percentage of patients with viral load below limits of quantification OR patients with viral load not below limits of quantification who have a documented plan of care
Status: Endorsed (Original Endorsement Date: July 31, 2008)
Available at: http://www.qualityforum.org/Measures_List.aspx

Accessibility

If you need an alternative means of access to any information above please contact us at comments@hrsa.gov. Let us know the nature of your accessibility problem and the Web address of the requested information.

HAB HIV Performance Measures: Medical Case Management

Performance Measure: Medical Case Management: Medical Visits	
Percentage of HIV-infected medical case management clients[1] who had two or more medical visits in an HIV care setting in the measurement year.	
Numerator:	Number of HIV-infected medical case management clients who had a medical visit with a provider with prescribing privileges[2] two or more times at least three months apart in the measurement year that is documented in the medical case management record[3].
Denominator:	Number of HIV-infected medical case management clients who had at least one medical case management encounter in the measurement year.
Patient Exclusions:	1. Medical case management clients who initiated medical case management services in the last six months of the measurement year. 2. Medical case management clients who were discharged from medical case management services prior to six months of service in the measurement year.
Data Element:	1. Is the client HIV-infected? (Y/N) a. If yes, did the client have a medical case management encounter in the measurement year? (Y/N) i. If yes, did the medical case manager document in the medical case management record[3] that the client had two or more medical visits at least three months apart in an HIV care setting in the measurement year? (Y/N) 1. If yes, list the dates of these medical visits.
Data Sources:	Data reports required by HRSA/HAB, such as the Ryan White Data Report (RDR) and Ryan White HIV/AIDS Program Services Report (RSR), may provide useful data regarding the number of clients identified as receiving medical case management. Electronic databases, such as CAREWare, Provide, ARIES, Lab Tracker, Electronic Medical Record/Electronic Health Record Medical case management record[3] chart abstraction by grantee of a sample of records.
National Goals, Targets, or Benchmarks for Comparison	None available at this time.
Outcome Measures for Consideration	Percent of patients who are retained in medical care in the measurement year. Percent of patients on antiretroviral therapy for whom it is indicated in the measurement year. Percent of patients who are adherent to their treatment regimen in the measurement year.
Basis for Selection:	
The Ryan White HIV/AIDS Treatment and Modernization Act of 2006 (P.L. 109-415) indicates that medical case management is a core service. Additionally, medical case management services increase access to and retention in medical care. Definition: "Medical Case management services (including treatment adherence) are a range of client-	

Performance Measure: Medical Case Management: Medical Visits

centered services that link clients with health care, psychosocial, and other services. The coordination and follow-up of medical treatments is a component of medical case management. These services ensure timely and coordinated access to medically appropriate levels of health and support services and continuity of care, through ongoing assessment of the client's and other key family members' needs and personal support systems. Medical case management includes the provision of treatment adherence counseling to ensure readiness for, and adherence to, complex HIV/AIDS treatments. Key activities include (1) initial assessment of service needs; (2) development of a comprehensive, individualized service plan; (3) coordination of services required to implement the plan; (4) client monitoring to assess the efficacy of the plan; and (5) periodic re-evaluation and adaptation of the plan as necessary over the life of the client. It includes client-specific advocacy and/or review of utilization of services." [4]

Case Management is beneficial in dealing with complex needs of people living with HIV/AIDS:

Reduce cost of care by decreasing hospitalization[5]

Clients enrolled in case management are 1.5 times more likely to follow drug regimens[6]

Improve chances of newly diagnosed HIV-infected persons entering care.[6]

US Public Health Service Guidelines:

None

References / Notes:

[1]"Clients" includes all medical case management clients regardless of age.

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

[3] The client's medical record may be used if case management documentation is located in the client's medical record.

[4] "Ryan White HIV/AIDS Program Services Report Instruction Manual, Version 1.3, page 6.

[5] Cruise, P.L. & Liou, K.T. (1993). AIDS Case management: a study of an innovative health service program in Palm Beach County, Florida. Journal of Health & Human Resources Administration, 16, 96-110.

[6] Gardner, L.I. Metsch, L.R., Anderson-Mahoney, P., Loughlin, A.M. Et al. Efficacy of a brief case management intervention to link recently diagnosed HIV-infected persons to care. AIDS 2005 Mar 4; 19(4): 423-31.

HAB HIV Performance Measures: Systems-Level

Performance Measure: System Level: Disease status at time of entry into care	
Percentage of individuals with an AIDS diagnosis at time of initial outpatient/ambulatory medical care visit[1] in the measurement year	
Numerator:	Number of patients in the system/network meeting the CDC-AIDS diagnostic criteria[2] within 30 days of the initial outpatient/ambulatory medical care visit[1] in the measurement year
Denominator:	Number of patients in the system/network initiating outpatient/ambulatory medical care[3] in the measurement year
Patient Exclusions:	1. Patients who previously received HIV-related outpatient/ambulatory medical care at another organization, regardless of geographic area and/or payor 2. Patients who are less than thirteen years of age
Data Element:	*For each agency:* 1. Did the patient have an initial outpatient/ambulatory medical care visit[1] during the measurement year? (Y/N). a. If yes, did the patient meet the CDC AIDS-diagnostic criteria[2] within 30 days of the initial outpatient/ambulatory medical care visit? (Y/N) i. If yes, list the date of initial visit and date of AIDS diagnosis, if applicable. *For the system:* 1. For all agencies, how many patients had an initial outpatient/ambulatory medical care visit[1] during the measurement year? a. Of those patients, how many met the CDC AIDS diagnostic criteria[2] within 30 days of the initial medical visit?
Data Sources:	• Data reports required by HRSA/HAB, such as the Ryan White Data Report (RDR) and Ryan White HIV/AIDS Program Services Report (RSR), may provide useful data regarding the number of patients identified with AIDS within 30 days of their initial visit. • Electronic databases, such as CAREWare, Lab Tracker, PEMS, Electronic Medical Record/Electronic Health Record • State surveillance records • Provider patient rosters
National Goals, Targets, or Benchmarks for Comparison:	Part C data (historical) indicates 40% of new patients had an AIDS diagnosis [HAB data]
Outcome Measures for Consideration:	• Percent of patients with opportunistic infections in the measurement year • Percent of patients with HIV-related hospitalizations in the measurement year • Rate of HIV-related mortality in the measurement year

Basis for Selection:

"Advances in HIV care have resulted in dramatic reductions in HIV-associated morbidity and mortality. To benefit optimally from antiretroviral and prophylactic medications, HIV-infected persons must know their HIV status, access care early in the course of disease, and remain engaged in care."[4]

"To maximally benefit from HAART, persons with HIV infection must receive a diagnosis before an advanced stage of immunosuppression and then enter quality HIV care"[5] The proportion of persons presenting with an AIDS-defining condition at time of diagnosis of HIV infection "has been 25%-to 50% in selected rural and urban jurisdictions from which data have been reported."[6] A multi-year study in an urban clinic found that despite efforts to increase HIV testing and early entry into care "patients are presenting later for care than in earlier years, with lower CD4+ cell counts, a small increase of those who have AIDS, and no improvement in time between HIV diagnosis and presentation for care"[7]

This measure reflects important aspect of care that significantly has an impact on morbidity and mortality; data collection appears to be currently feasible and measure has a strong evidence base for its use across a geographic area. The Ryan White HIV/AIDS Treatment Extension Act of 2009 (P.L. 111-87) further emphasized the importance of identifying individuals with HIV/AIDS who do not know their HIV status, making them aware of their status, and referring them into treatment and care. [8]

US Public Health Service Guidelines:

This measure addresses the intent of HHS Treatment Guidelines for the use of antiretroviral agents and the prevention and treatment of opportunistic infections in HIV infected individuals. [9-10]

References/Notes:

[1] The type of visit for patient enrollment in outpatient/ambulatory medical care can be determined by each outpatient/ambulatory medical care providers in the system/network, but should be consistently defined at each data collection point. The type of appointment scheduled to enroll in outpatient/ambulatory medical care may vary among agencies within the system/network. For example, at one agency, to enroll in care, a new patient may first have an appointment to have routine laboratory tests and an initial health history taken by a nurse to then be followed by a subsequent appointment with a provider with prescribing privileges at the agency (i.e., MD, PA, NP), while at another agency, a new patient may first have an appointment with physician. Other examples of types of appointment to enroll in outpatient/ambulatory medical care may include an initial appointment with a case manager, social worker, patient navigator, peer advocate, clergy, or other designated staff.

[2] AIDS Defining conditions are noted in CDC. 1993 Revised classification system for HIV infection and expanded surveillance case definition for AIDS among adolescents and adults. MMWR 1992;41(no. RR-17). (http://www.cdc.gov/mmwr/preview/mmwrhtml/00018871.htm)

[3] "Initiating outpatient medical care" refers to patients enrolling in medical care for the first time within the system or network. [4] Giordano, et. al. Retention in Care: A Challenge to Survival with HIV Infection. *Clinical Infectious Diseases.* 2007.44:1493-9.

[5] Brooks JT, Kaplan J, et al. "HIV Associated Opportunistic Infections—Going, Going, But Not Gone: The Continued Need for Prevention and Treatment Guidelines." Clinical Infectious Diseases. 2009;48:609-11.

[6] Keruly and Moore. Immune Status at Presentation to Care Did Not Improve among Antiretroviral-Naïve Persons from 1990 to 2006. *Clinical Infectious Diseases.* 2007: 45:1369-74.

[7]"Ryan White HIV/AIDS Treatment Extension Act of 2009". (P.L. 111-87), 42 USC 201.
[8] Panel on Antiretroviral Guidelines for Adults and Adolescents. Guidelines for the use of antiretroviral agents in HIV-1-infected adults and adolescents. Department of Health and Human Services. December 1, 2009; 1-161. Available at http://www.aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf. Accessed December 7, 2009.
[9] Centers for Disease Control and Prevention. Guidelines for Prevention and Treatment of Opportunistic Infections in HIV-Infected Adults and Adolescents. MMWR 2009;58 (No. RR-4): 1-216. Available at: http://www.cdc.gov/mmwr/pdf/rr/rr5804.pdf. Accessed September 9, 2009.
[10] Perinatal HIV Guidelines Working Group. Public Health Service Task Force Recommendations for Use of Antiretroviral Drugs in Pregnant HIV-Infected Women for Maternal Health and Interventions to Reduce Perinatal HIV Transmission in the United States. April 29, 2009; pp 1-90. Available at http://aidsinfo.nih.gov/ContentFiles/PerinatalGL.pdf. Accessed September 9, 2009.

HAB HIV Performance Measures: Systems-Level

Performance Measure: System Level: Quality management program	
Percentage of Ryan White Program-funded clinical organizations with an HIV-specific quality management program[1] in the measurement year	
Numerator:	Number of Ryan White Program-funded clinical organizations in the system/network with an HIV-specific clinical quality management program[1] in the measurement year
Denominator:	Number of Ryan White Program-funded clinical organizations in the system/network in the measurement year
Exclusions:	1. Organizations funded by the Ryan White Program to only provide services other than ambulatory outpatient medical services
Data Element:	*For each agency:* 1. Is the clinical organization Ryan White Program-funded? (Y/N) a. If yes, did the clinical organization have an HIV-specific clinical quality management program[1] during the measurement year? (Y/N) *For the system:* 1. How many clinical organizations are funded by the Ryan White Program? a. Of those organizations, how many have an HIV-specific quality management program[1] during the measurement year?
Data Sources:	• Data reports required by HRSA/HAB, such as the Ryan White Data Report (RDR) and Ryan White HIV/AIDS Program Services Report (RSR), may provide useful data regarding the number clinical organizations and the number of quality management programs. • Ryan White grantee contract language and contract monitoring • Quality management program documentation
National Goals, Targets, or Benchmarks for Comparison:	92.3% 2008 Ryan White Program Data Report Goal: 100% [legislative requirement]
Basis for Selection:	
Quality management requirements were first introduced in 2000 reauthorization of "Ryan White CARE Act." "Ryan White Treatment and Modernization Act of 2006" and "Ryan White HIV/AIDS Treatment Extension Act of 2009" further delineated these requirements. All RWTMA grantees are required to establish clinical quality management programs to: • Assess the extent to which HIV health services are consistent with the most recent Public Health Service guidelines for the treatment of HIV disease and related opportunistic infections; and • Develop strategies for ensuring that such services are consistent with the guidelines for improvement in the access to and quality of HIV services. [2,3] A quality management program is defined by HRSA/HAB as:	

a systematic process with identified leadership, accountability, and dedicated resources and uses data and measurable outcomes to determine progress toward relevant, evidence-based benchmarks. Quality management programs should also focus on linkages, efficiencies, and provider and patient expectations in addressing outcome improvement and be adaptive to change. The process is continuous and should fit within the framework of other programmatic quality assurance and quality improvement activities, such as [The Joint Commission] and Medicaid. Data collected as part of this process should be fed back into the quality management process to assure that goals are accomplished and improved outcomes are realized.[4]

US Public Health Service Guidelines:

None

References/Notes:

[1] An "HIV-specific quality management program" is a quality management program operated by the Ryan White Program that includes a written quality management plan and that identifies quality indicators and/or quality goals which are specific to HIV care, for example, HAB HIV/AIDS Core Clinical Performance Measures (available at: http://hab.hrsa.gov/special/habmeasures.htm).

[2] Public Law 109-415, Ryan White HIV/AIDS Treatment Modernization Act of 2006, 42 USC 201.

[3] Public Law 111-187, Ryan White HIV/AIDS Treatment Extension Act of 2009, 42 USC 201.

[4] HRSA/HAB, "HRSA Quality Management Technical Assistance Manual", 2003. Available at: http://hab.hrsa.gov/tools/QM/.

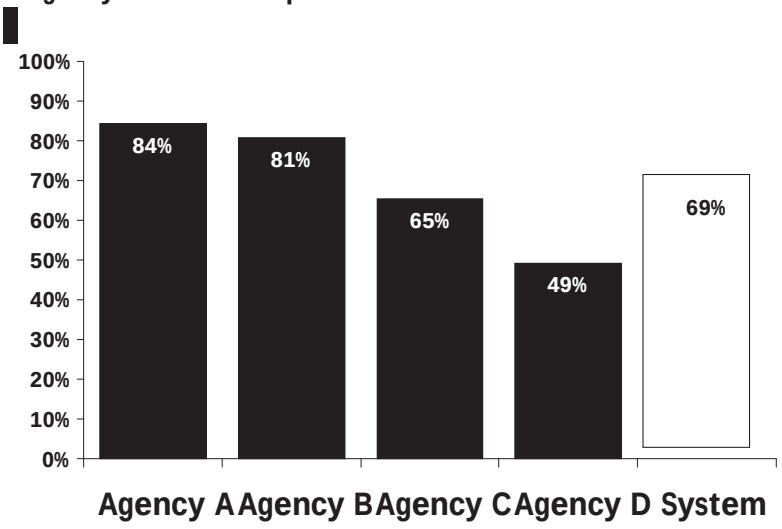
HAB HIV Performance Measures: Systems-Level

Performance Measure: System-Level Performance
Rate of achievement (percentage of patients) of the performance measurement of interest* in the system/network in the measurement year
Use of Measure:
Grantees that provide systems or networks of care, or that fund multiple organizations or providers to deliver services must look at the quality of these services across the system of care. This performance measure serves as a guide on how to use HAB performance measures at the system-level. The system-level rate provides the average likelihood of a patient receiving the quality component within the system (answering the question: "How well is the system doing on this measure?"), while the agency-level rates provides the likelihood of a patient receiving the quality component within each of the system's agency (answering the question: "How well is each agency doing on this measure?"). These rates (system and agency-level) can be used by the system to help establish quality goals and benchmarks, identify quality improvement efforts and best practices.
Example:

HAB Performance Measure: Medical Visits:
Percentage of patients with HIV infection who had two or more medical visits in an HIV care setting in the measurement year.

	Agency A	Agency B	Agency C	Agency D	System-Level Performance
Numerator	64	365	924	55	***1,408***
Denominator	76	452	1,412	112	***2,052***
Performance Rate	**84%**	**81%**	**65%**	**49%**	***69%***

Graph of System and agency-level rate of performance: HAB Performance Measure: Medical Visits:



HAB HIV Performance Measures: Systems-Level

Example:

System A, which has four (4) outpatient/ambulatory medical care organizations, selected the Medical Visits[1] performance measure to examine. Each agency collected and reported to the System A administrator the data for all patients which met the HAB performance measure inclusion and exclusion criteria for the defined measurement year. The table below shows the reported data. The performance rate for each of the four agencies is separately calculated (bottom row). The performance rate for the entire system is also calculated by summing the numerators and denominators for the four agencies. (Note: See the FAQs for questions regarding calculation of this measure if a representative sampling methodology is used.)

Basis for Selection:

Quality management requirements were first introduced in 2000 reauthorization of "Ryan White CARE Act." "Ryan White Treatment and Modernization Act of 2006" (P.L. 109-415) and "Ryan White HIV/AIDS Treatment Extension Act of 2009" further delineated these requirements. All RW Program grantees are required to establish clinical quality management programs to:

- Assess the extent to which HIV health services are consistent with the most recent Public Health Service guidelines for the treatment of HIV disease and related opportunistic infections; and
- Develop strategies for ensuring that such services are consistent with the guidelines for improvement in the access to and quality of HIV services. [2,3]

The HAB HIV Performance Measures "represent key clinical decision points and should be included as part of a quality management program for those providing services to the HIV-infected population. While data are not required to be submitted to HAB at this time, grantees are strongly encouraged to track and trend data on these measures to monitor the quality of care provided. Grantees are encouraged to identify areas for improvement and to include these in their quality management plan. This type of information provides rich discussion opportunities with their Project Officers."[4]

US Public Health Service Guidelines:

See corresponding HAB HIV Performance Measures.*

References / Notes:

*Systems/network grantees should select from the HAB HIV performance measures available at: http://hab.hrsa.gov/special/habmeasures.htm

[1]Medical Visit performance measure: Percentage of clients with HIV infection who had two or more medical visits in an HIV care setting in the measurement year. Available at http://www.hab.hrsa.gov/special/performance/measureMedVisits.htm.

[2] Public Law 109-415, Ryan White HIV/AIDS Treatment Modernization Act of 2006, 42 USC 201.

[3]Public Law 111-187, Ryan White HIV/AIDS Treatment Extension Act of 2009, 42 USC 201.

[4] "Quality of Care: HAB Performance Measures Companion Guide ", accessed at: http://hab.hrsa.gov/special/performance/faqData09.htm#data1 on 3 February 2010.