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October 22, 2012

TO: **All HIV/AIDS Service Providers and Stakeholders**

SUBJECT: **2009 Ryan White Program Part A Quality Report for Medical Outpatient Services**

The Division of HIV and STD Programs (DHSP) continuously obtains data on key performance measures to monitor the quality of care and services provided to Ryan White Program patients in Los Angeles County. DHSP's HIV performance measures for medical outpatient services are based on a combination of nationally vetted Health Resources and Services Administration HIV/AIDS Bureau and HIV-QUAL measures. Attached please find the **2009 Ryan White Part A Quality Report for Medical Outpatient Services.**

This report is divided into four sections. The first two sections provide an overview of the HIV epidemic and system of care in Los Angeles County and a description of DHSP's clinical quality management program and the methodology for measuring performance. The third and fourth sections include data on clinical performance measures and an analysis of overall performance for the year, in the last section.

Please note that the clinical performance measures that were used in 2009 are different from DHSP's current performance measures set. Some of the measures used in 2009 were eliminated based on several factors: (1) updated Department of Health and Human Services HIV treatment guidelines and HIV-QUAL performance measures, (2) consistently strong performance among Ryan White providers, (3) alternate mechanisms identified to monitor certain quality outcomes, and (4) extensive feedback from the provider community in Los Angeles through DHSP's Medical Advisory Committee.

For questions, comments or feedback about this report, please send email to morticke@ph.lacounty.gov. A copy of this report is available at http://ph.lacounty.gov/aids/.

Very truly yours,

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2009

Ryan White Program Part A Quality Report

Medical Outpatient Services

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Introduction

The Division of HIV and STD Programs (DHSP) is committed to continuously improving HIV/AIDS care and services in Los Angeles County. In this role, DHSP tracks and trends data on key clinical performance measures to monitor the quality of care provided and initiates collaborative performance improvement efforts in areas with identified gaps. It is with much pleasure that DHSP offers the **2009 Ryan White Program (Part A) Quality Report for Medical Outpatient Services**.

Reporting the quality of medical outpatient care provided is a vital component of DHSP's quality management program. This report underscores the importance of performance measurement and demonstrates the quality of HIV care delivered to Los Angeles County Ryan White Program Part A recipients consistent with key national performance indicators.

This report provides useful information to local, state and national leaders, providers, consumers, and the public at large to track trends in HIV/AIDS health care quality in Los Angeles County and for use in planning and implementing new programs or strengthening existing programs.

DHSP thanks the dedicated providers who continue to be important partners in the provision of quality HIV/AIDS care and services to our patients.

Section I: Overview of HIV Epidemic and System of Care in LA County

The HIV Epidemic in Los Angeles County

Los Angeles County is one of 58 counties in the State of California. The 2010 U.S. Census reported Los Angeles (LA) County had a population of about 9.8 million, making it the most populous county in the United States with residents living in just over 4,000 square miles. An estimated 62,000 people living with HIV/AIDS (PLWHA) reside in LA County, representing the second largest population of people living with AIDS and estimated HIV (non-AIDS) infections in the United States. Los Angeles County is home to 29% of California residents, yet 37% of living AIDS cases in California reside in LA County.

Local Epidemiology

As of December 2010, LA County has 25,545 people living with AIDS, 3,796 of whom were newly diagnosed with AIDS between 2008 and 2010. There are 16,524 HIV (non-AIDS) cases reported by name and 3,572 HIV (non-AIDS) cases reported by code in the HIV/AIDS Reporting System in LA County. The combined reported HIV cases are 20,096 with another 3,200 notification cases pending investigation. An additional 13,250 HIV cases are estimated to be undiagnosed, making the overall estimated HIV/AIDS prevalence in LA County to be 62,000 individuals.

Since 1997, more AIDS cases have been diagnosed among Latino/as than any other racial or ethnic group. In 2004, Latino/as (40%) eclipsed Whites (36%) as the highest proportion of *prevalent* (living) AIDS cases and remained the highest proportion of *incident* (new) AIDS cases in the last three years (45%). African Americans are the most disproportionately affected racial/ethnic group, having the highest rate of

HIV/AIDS prevalence (952 cases per 100,000 people, with 21% of living HIV/AIDS cases but only 9% of the population).

Surveillance data show continuing increases of AIDS cases in communities of color. Latino/as and African Americans comprise higher proportions of new AIDS cases than living AIDS cases (45% incident vs. 42% prevalent for Latino/as, and 24% incident vs. 20% prevalent for African Americans). Of new AIDS cases in LA County, men accounted for 88% in 2008-2010, and women comprised 12%.

The HIV epidemic in LA County disproportionately affects men who have sex with men (MSM). Population estimates for MSM range from 4-13%; yet more than 80% of people living with HIV/AIDS in LAC are MSM. Sexual transmission with an infected male remains the most common route of HIV infection for all racial and ethnic groups and genders.

In LA County, HIV also disproportionately affects the homeless, formerly incarcerated, and transgender individuals. Los Angeles City and County have the highest homeless count of any major city or county in the United States.[1] Homeless people represent less than 1% of the County's population but account for 10 % of the diagnosed cases of HIV and AIDS. An estimated 3.5% of all homeless persons in LA County are HIV positive. African Americans are notably over-represented (44%) in the homeless population.

The number of people released yearly from federal, state and local correctional facilities represents approximately 1.6% of LA County's adult population, yet PLWHA with history of incarceration account for 10% of HIV/AIDS cases. HIV seroprevalence for this group is estimated at 2.9%.[2]

Transgenders have one of the highest infection rates in the County, with approximately 21% of transgenders in LA County living with HIV or AIDS.[3] Co-morbidities of sexually transmitted infections, tuberculosis, mental illness, and substance abuse also impact the epidemic in LA County.

HIV/AIDS is most prevalent among areas most affected by poverty and a host of other health challenges, the combination of which makes delivering comprehensive HIV/AIDS services in the County extremely challenging and costly.

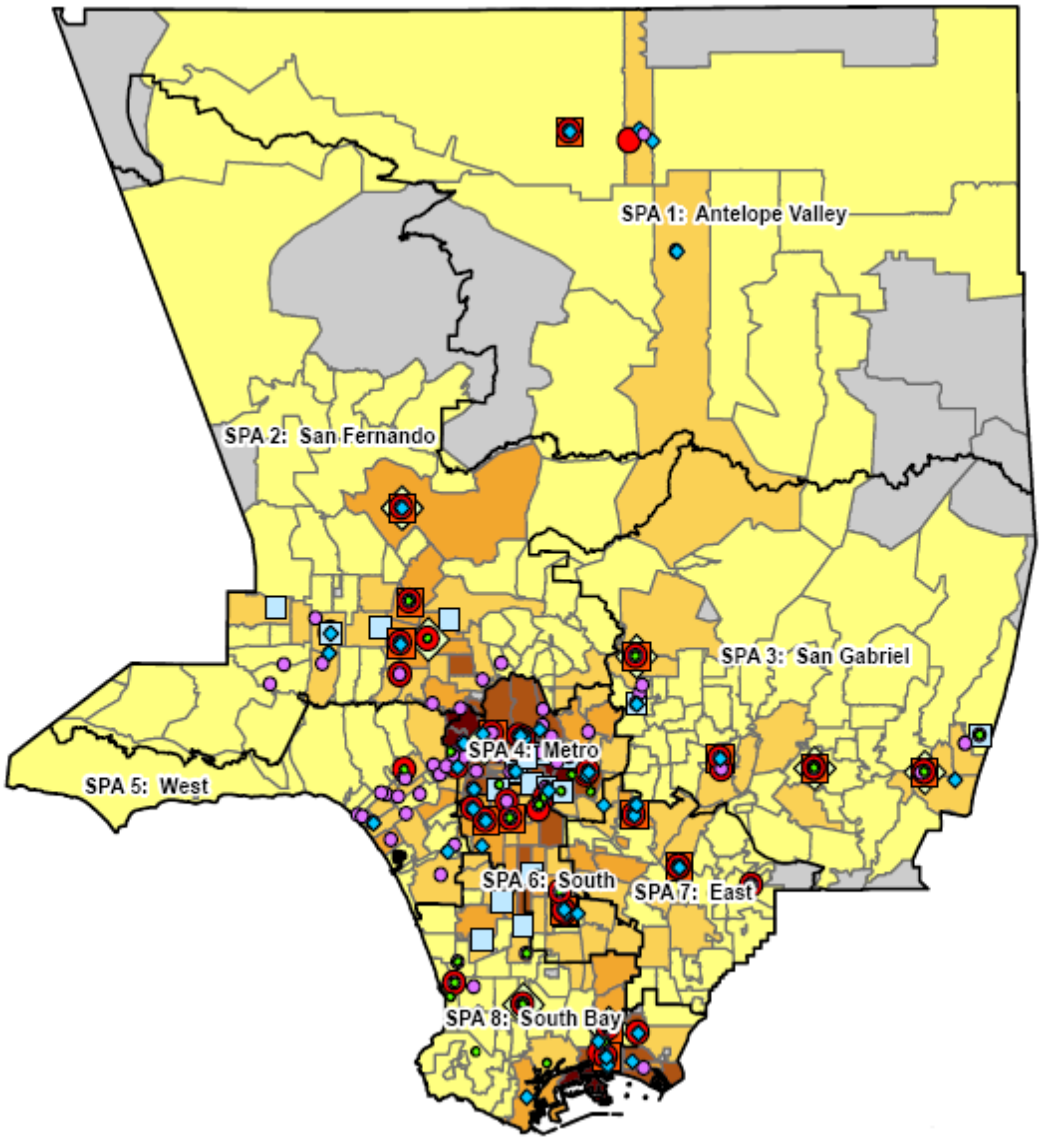
The distribution map of DHSP-funded HIV care and treatment service sites[4] and AIDS cases[5] within Los Angeles County by Service Planning Area (SPA) and zip code, is presented in Figure 1.

Areas Most Impacted by HIV Disease

LAC is divided into eight Service Planning Areas (SPAs) for efficiency in planning and delivery of care. Figure 1 below represents the eight (8) SPAs in LAC, the density of HIV/AIDS cases in 2009 and location of Ryan White Program services.

[1] Homeless Counts, National Alliance to End Homelessness, January 2009
[2] HIV Epidemiologic Profile, 2009
[3] Los Angeles Transgender Heath Study, 2001; HIV Epidemiologic Profile, 2009
[4] Casewatch FY2009 (March 2009 – February 2010)
[5] eHARS as of 12/31/2009, HIV Epidemiology Program

Figure 1. 2009 HIV/AIDS cases and Ryan White Program Services



Data Source: *Casewatch FY 2009 (March 2009 - February 2010
** eHARS as of 12/31/2009, HIV Epidemiology Program

The Ryan White Program

The Ryan White Program (RWP) is a federal program administered by the U.S. Department of Health and Human Services (HHS), Health Resources and Services Administration (HRSA), HIV/AIDS Bureau (HAB). Under various funding categories, funds are awarded to agencies around the country in order to provide HIV-related services to eligible PLWHAs who do not have sufficient health care coverage or financial resources for coping with HIV disease. RWP, as the funder of last resort, fills gaps in care not covered by other sources.[6] DHSP is the grantee for Ryan White Program (RWP) Part A and Minority AIDS Initiative (MAI) funds in LA County.

The RWP requires that a local planning council determines service priorities and allocations. In LAC, this task is performed by the Los Angeles County Commission on HIV (Commission). Table 3 below lists core medical services fundable by HRSA, prioritized and allocated by the Commission, and services funded by DHSP in FY2009. Table 4 shows the service coverage by Service Planning Area (SPA) for DHSP-funded service categories. Table 5 illustrates the distribution of service sites and living AIDS cases by service planning area.

Table 2. Core medical services fundable by HRSA and allocated by the Commission & services funded by DHSP in FY2009

HRSA Service Categories	Prioritized by Commission	Allocated by Commission with RWP Part A/B	Funded by DHSP
Core Medical Services			
• Outpatient medical care • AIDS drug assistance program (ADAP) • AIDS pharmaceutical assistance • Oral health care • Early intervention services • Health insurance premium and cost sharing assistance • Home health care • Home & community based health • Medical nutrition therapy • Medical case management (including treatment adherence) • Substance abuse services (outpatient)	• Medical outpatient • ADAP enrollment • Medical specialty • Local pharmacy assistance • Oral health care • Mental health, psychiatry • Mental health, psychotherapy • Case management, medical • Early intervention • Health insurance premium & cost sharing • Substance abuse treatment • Treatment education • Medical nutrition therapy	• Medical outpatient • Medical specialty • Oral health care • Mental health, Psychiatry • Mental health, Psychotherapy • Case management, medical • Treatment education • Medical nutrition therapy • Case Management, home-based • Hospice and skilled nursing services	• Medical outpatient • Medical specialty • Oral Health Care • Mental health, psychiatry • Mental health, psychotherapy • Case management, Medical • Treatment education • Medical nutrition therapy • Hospice and skilled nursing services • Case management, home based • Early intervention services

[6] http://hab.hrsa.gov/abouthab/aboutprogram.html. Accessed on 11/2/2011.

HRSA Service Categories	Prioritized by Commission	Allocated by Commission with RWP Part A/B	Funded by DHSP
	• Skilled nursing facility • Home health care • Hospice • HIV counseling and testing in care settings • Home based case management		

Table 3. Support services fundable by HRSA and allocated by the Commission & services funded by DHSP in FY 2009

HRSA Service Categories	Prioritized by Commission	Allocated by Commission with RWP Part A/B	Funded by DHSP
Support Services			
• Case management (non-medical) • Child care • Emergency financial assistance • Food bank/home- delivered meals • Health education/risk reduction • Housing • Legal services • Linguistic services • Medical transportation • Outreach • Psychosocial support • Referrals for health care supportive services • Rehabilitation • Substance abuse services (residential) • Treatment adherence counseling • Peer support	• Benefits specialty • Substance abuse, residential • Case management, psychosocial • Residential (transitional) • Transportation • Residential (permanent) • Nutrition support • Legal services • Case management, transitional • Direct emergency financial assistance • Case management, housing • Language • Child care • Workforce re-entry • Rehabilitation services • Health education/risk reduction • Outreach • Referral services • Peer support • Respite care • Permanency planning • Psychosocial support	• Benefits specialty • Substance abuse, residential • Case management, psychosocial • Transportation • Nutrition support • Case management, transitional	• Substance abuse, residential • Case management, psychosocial • Medical transportation • Nutrition support • Case management, transitional • Legal services* • Peer support* • Language services • Residential services *Indicates services that discontinued during FY 2009 in response to the State budget cuts

Table 4. Key Service Categories and Geographic Coverage, Fiscal Year 2009

Service Category	Coverage by Service Planning Area (SPA)							
	SPA 1	SPA 2	SPA 3	SPA 4	SPA 5	SPA 6	SPA 7	SPA 8
Hospice services and skilled nursing								◆
Medical case management	◆	◆	◆	◆	◆	◆	◆	◆
Medical nutrition therapy	◆	◆	◆	◆		◆	◆	◆
Medical outpatient	◆	◆	◆	◆	◆	◆	◆	◆
Mental health, psychiatry		◆	◆	◆	◆	◆	◆	◆
Mental health, psychotherapy	◆	◆	◆	◆	◆	◆	◆	◆
Nutrition support	◆	◆	◆	◆	◆	◆	◆	◆
Oral health care	◆	◆	◆	◆	◆	◆	◆	◆
Peer support	◆	◆	◆	◆		◆	◆	◆
Psychosocial case management	◆	◆	◆	◆	◆	◆	◆	◆
Residential transitional housing		◆		◆				
Substance abuse services, residential	◆	◆	◆	◆		◆	◆	◆
Treatment adherence	◆	◆	◆		◆	◆	◆	◆

Grantee Role

DHSP coordinates the overall response to HIV/AIDS in LA County. The overall HIV response is targeted in high-risk, high-prevalence geographic clusters using epidemiologic evidence. This targeted approach is based on geospatial analysis of multiple co-occurring health and socio-economic conditions to identify neighborhoods of heightened risk.

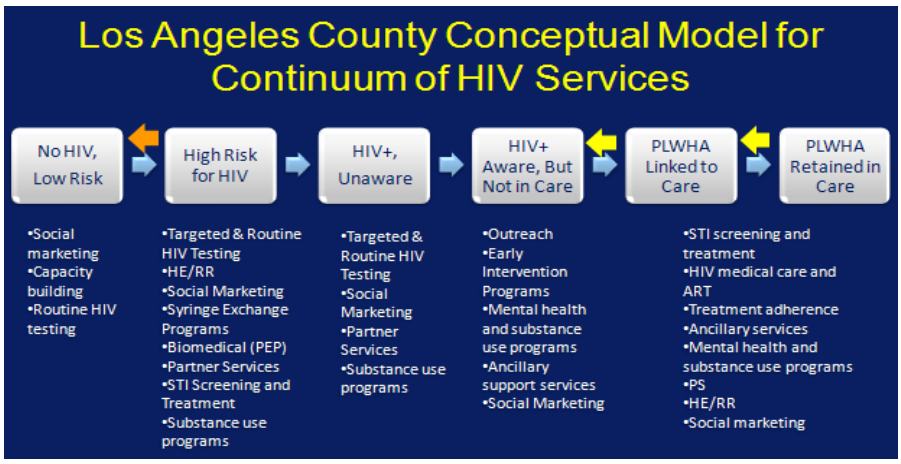
As part of its mandate, DHSP contracts with numerous service providers in various categories to provide high quality and cost-effective medical care, dental and support services to eligible HIV-positive residents of the County. DHSP contracts with both County operated and private medical outpatient clinics to provide comprehensive primary medical and medical specialty care to eligible individuals diagnosed with HIV/AIDS.

With a care system based on multiple points of entry, PLWHA receiving other services such as housing, nutrition support/food bank, substance abuse treatment, mental health treatment or case management services whether funded by the RW Program or other funding streams are connected to HIV primary care by active referrals and client tracking mechanisms.

HIV Continuum of Care

The HIV continuum of care in LAC (Figure 5) is a comprehensive path from HIV prevention to treatment for individual clients affected by HIV including those who are HIV-negative, those at risk for HIV, those who have HIV but are unaware, those who are aware but not receiving care, and those who are receiving care and adhering to care plans. The system of care is designed to promote awareness of and access to HIV prevention, care and treatment services to reduce HIV incidence, optimize health outcomes, and reduce health disparities.

Figure 5. Los Angeles County continuum of HIV services



Medical Outpatient Services

Significant funding is allocated to medical outpatient services to provide access to HIV care. In 2009, twenty-four medical outpatient providers at 34 sites throughout the County were contracted to offer comprehensive medical care to RWP clients. CD4, viral load, viral resistance testing, and STD screenings are part of the standard of care. The 34 HIV medical care provider sites are dispersed County-wide, forming interlocking hubs of service delivery that provide the foundations for building and maintaining systems of care in each area.

Overall Client Demographics (2009)

Table 6. Overall Demographics (Source: Casewatch YR 19 Service Utilization Report)

Characteristic	Clients Receiving Any RW Services N = 18,545		Clients Receiving Medical Services N = 14,875	
	n	%	n	%
New Client	1,779	9.6	1,198	8.1
Returning Client	1,124	6.1	744	5.0
Gender				
Male	15,505	83.6	12,525	84.2
Female	2,701	14.6	2,105	14.2
Transgender	336	1.8	243	1.6
Other/Unknown	3	0.0	2	0.0
Race/Ethnicity				
African-American	4,291	23.1	3,326	22.4

Characteristic	Clients Receiving Any RW Services N = 18,545		Clients Receiving Medical Services N = 14,875	
	n	%	n	%
Asian/Pacific-Islander	594	3.2	492	3.3
Latino/Hispanic	8,877	47.9	7,483	50.3
White/Caucasian	4,618	24.9	3,464	23.3
Native American/Alaskan Native	90	0.5	67	0.5
Other/Unknown	75	0.4	43	0.3
Age				
0-18	147	0.8	45	0.3
19-24	588	3.2	484	3.3
25-29	1,328	7.2	1,135	7.6
30-39	4,352	23.5	3,724	25.0
40-49	7,284	39.3	5,951	40.0
50+	4,846	26.1	3,536	23.8
HIV/AIDS Status				
CDC Defined AIDS	10,343	55.8	8,329	56.0
HIV+, Not AIDS	5,905	31.8	4,866	32.7
HIV+, AIDS Status Unknown	2,227	12.0	1,679	11.3
Unknown	70	0.4	1	0.0
Primary Insurance				
Private	1,006	5.4	549	3.7
Public	5,667	30.6	4,031	27.1
No Insurance	11,351	61.2	10,034	67.5
Other	322	1.7	187	1.3
Unknown	199	1.1	74	0.5
Income Level				
≤ Federal Poverty Level	11,945	64.4	9,752	65.6
101-200% of FPL	4,824	26.0	3,740	25.1
201-300% of FPL	1,106	6.0	868	5.8
301-400% of FPL	414	2.2	322	2.2
> 400% FPL	223	1.2	169	1.1
Unknown	33	0.2	24	0.2
Living Situation				
Permanent	15,829	85.4	12,982	87.3
Homeless/Transitional	1,152	6.2	856	5.8
Institution (residential/health care/correctional)	976	5.3	616	4.1
Other	302	1.6	225	1.5
Unknown	286	1.5	196	1.3
Incarceration History				
Incarcerated ≤ 24 mo.	1,795	9.7	1,280	8.6
Incarcerated > 2 yrs.	1,854	10.0	1,376	9.3

Characteristic	Clients Receiving Any RW Services N = 18,545		Clients Receiving Medical Services N = 14,875	
	n	%	n	%
Never Incarcerated	14,856	80.1	12,217	82.1
Unknown	40	0.2	2	0.0

Table 6 above illustrates the overall clients receiving any Ryan White Program Services and those receiving medical outpatient services in 2009.

Section II: Clinical Quality Management

DHSP established its Clinical Quality Management (CQM) Program for HIV/AIDS services in 1998. The CQM Program is clinically guided under the direction of the Medical Director who is ultimately responsible for the facilitation and implementation of CQM activities. Program activities are supported by staff in the Quality Management Division (QMD) which includes a multidisciplinary team of registered nurses, health educators and administrative staff. QMD activities are focused on performance measurement and quality improvement activities including provider training and technical assistance for quality management. Particular emphasis is placed on assessing the system of care and ensuring that the range of HIV services provided is evidence based and consistent with the Public Health Services Guidelines (PHS)[7] and locally adopted standards of care[8].

CQM Program Goals

The purpose of DHSP's CQM Program is to promote the delivery of responsive, evidence based, high quality care to persons at risk for, living with, or affected by HIV in LA County. The CQM Program, guided by DHSP's CQM plan, facilitates ongoing, integrated performance improvement activities, uses data collected from clinical/performance indicator monitoring and other sources to guide and prioritize quality improvement activities, and provides capacity building for service providers through sharing of performance data and other quality resources.

The CQM plan establishes expectations for ongoing collaboration with contracted agencies, planning bodies, experts in the field and consumers in order to achieve goals of reducing the number of people who become infected with HIV, increasing access to care and optimizing health outcomes for people living with HIV, and reducing HIV-related health disparities.

Performance Measurement

DHSP continuously assesses the quality of services provided by its contracted service providers through a myriad of performance measurement activities designed to identify problems, risks, and opportunities for improvement. Performance measurement is a vital process for improving the quality of services that allows DHSP to determine whether the care that clients receive meets or

[7] http://www.aidsinfo.nih.gov/guidelines Accessed on 1/20/2012.
[8] http://hivcommission-la.info/soc.asp Accessed on 1/20/2012.

exceeds expectations that are stipulated in the service providers' contracts and established in the PHS Guidelines, as well as by local and national benchmarks.

In its grantee role, DHSP is responsible for monitoring all contracts with service providers. DHSP achieves this through annual on-site programmatic and/or clinical reviews conducted by program managers for each contracted agency. Program managers conduct site reviews throughout the year based on an established monitoring calendar.

As part of its contract monitoring program, DHSP program managers collect clinical measures data during annual medical outpatient on-site reviews. These program managers are Public Health Nurses (PHN) that are trained and adept in medical records review. A specific review tool is used for these audits and incorporates medical outpatient program (contract monitoring) requirements as well as selected clinical measures. Annual on-site audits which include intensive medical records review and/or electronic records review, take anywhere from one day to over 3 weeks depending on the number of clinic sites per contract.

The program managers are also responsible for completing the final monitoring report that is sent to each contractor. The monitoring report outlines areas of non-compliance and contractors are required to provide a plan of corrective action for every measure that falls below the expected compliance of 100%.

In the years prior to 2006, clinical measures data were collected using monitoring tools that promptly incorporated selected core measures recommended by HRSA's HIV AIDS Bureau[9] for adults and adolescents. However, methods for sampling, data aggregation and reporting on these clinical measures were not standardized. Monitoring reports were primarily narrative in format and were labor-intensive to prepare. Defining areas of excellence and target areas for improvement within a clinic or group of clinics providing the same services also required an abundance of resources to organize.

Performance-Based Contract Monitoring

Beginning in 2007, DHSP (then OAPP) implemented the Performance-Based Contract Monitoring (PBCM) model in an effort to effectively link contract monitoring to uniform, measureable performance standards. The PBCM model utilizes standardized tools and sampling methods, thus providing the ability to calculate a performance score for each measure, as well as clinic specific overall performance scores. Data collected during on-site reviews are entered into a newly designed Microsoft Excel tool that feeds data from multiple clinic sites into a master table from which reports are generated.

PBCM has been very useful in providing quantitative and qualitative data for programmatic reviews and has streamlined the contract monitoring process not only for medical services but across DHSP units, thus addressing historical, systemic contract monitoring challenges.

[9] http://hab.hrsa.gov/deliverhivaidscare/habperformmeasures.html. Accessed on 01/20/12.

Adopting the PBCM model in 2007 was essential for DHSP to measure and analyze clinical performance data for all contracted medical outpatient clinics. PBCM model key characteristics are defined in the following section.

Standardized Monitoring Methodology for Medical Outpatient Services

In 2009, under the PBCM model, DHSP adopted 27 HAB/HRSA's clinical performance measures for adults and adolescents to evaluate the quality of medical outpatient services provided at its 34 contracted sites in 2009. These measures are categorized under Core and Supplemental Measures[10] as reflected in Table 7 and Table 8. These measures are included in a newly designed electronic monitoring tool administered by DHSP program managers during clinic on-site reviews in addition to other review criteria.

Table 7. HIV Clinical Measures for Adults and Adolescents - Core Measures

Indicator	Measure
Antiretroviral therapy for pregnant women	Percentage of HIV infected pregnant women who are prescribed antiretroviral therapy (ART) during the measurement year
CD4 T-cell count	Percentage of patients with HIV-infection who had two or more CD4 T-cell counts performed in the measurement year
Viral load	Percentage of patients with HIV-infection who had two or more viral load tests performed in the measurement year
Antiretroviral therapy (ART)	Percentage of patients with HIV-infection and CD4 T-cell counts < or = 350 cells/mm^3 who are prescribed ART
Pneumocystis carinii pneumonia (PCP) prophylaxis	Percentage of patients with HIV-infection and a CD4 T-cell count < 200 cells/mm^3 who were prescribed PCP prophylaxis
Adherence assessment and counseling	Percentage of patients with HIV-infection on ART who were assessed for adherence (and counseled if suboptimal adherence) two or more times in the measurement year
Cervical cancer screening	Percentage of HIV infected women who have a PAP screening in the measurement year
Hepatitis C virus (HCV) screening	Percentage of patients for whom HCV screening was performed at least once since the diagnosis of HIV-infection
HIV risk counseling	Percentage of patients with HIV-infection who received HIV risk counseling within the measurement year
Lipid screening	Percentage of patients with HIV-infection on ART who had a lipid panel
Oral exam	Percentage of patients who received a referral to a dentist at least once during the measurement year
Syphilis screening	Percentage of adult patients with HIV-infection who had a test for syphilis performed within the measurement year
Tuberculosis screening	Percentage of patients with HIV-infection who received testing with results documented for latent tuberculosis infection (LTBI) in the measurement year
Mycobacterium Avium complex (MAC) prophylaxis	Percentage of patients with CD4 count < 50 cells/mm^3 who received MAC prophylaxis within measurement year

[10] DHSP HIV Core and Supplemental Measures for Medical Outpatient Services. See Appendix 2.

Table 8. HIV Clinical Measures for Adults and Adolescents - Supplemental Measures

Indicator	Measure
Ophthalmology screening	Percentage of patients with CD4 count < 50 cells/mm^3 with documented ophthalmology referral within the measurement year
Chlamydia screening	Percent of patients with HIV-infection who had a test for Chlamydia within the measurement year
Gonorrhea screening	Percent of adult patients with HIV-infection who had a test for gonorrhea within the measurement year
Substance use assessment	Percentage of patients with HIV-infection who have been assessed for substance use (alcohol and illicit substances) in the measurement year
Mental health assessment	Percentage of patients with HIV-infection who have had a mental health assessment
Hepatitis B virus (HBV) screening	Percentage of patients who have ever been tested for Hepatitis B and have documented Hepatitis B status in the medical record
Hepatitis B virus (HBV) vaccination	Percentage of patients with HIV-infection who completed the vaccination series for Hepatitis B
Toxoplasmosis screening	Percentage of patients who ever received screening for *Toxoplasma gondii* as documented in chart
Hepatitis A vaccination	Percentage of patients who have received complete dosing regimen (two doses) against Hepatitis A
Pneumococcal vaccination	Percentage of patients with HIV-infection who have ever received a pneumococcal vaccination
Influenza vaccination	Number of HIV-infected patients who received influenza vaccination within the measurement period
Hepatitis/HIV alcohol counseling	Percentage of patients with HIV and Hepatitis B virus (HBV) or Hepatitis C virus (HCV) infection who received alcohol counseling within the measurement year
Tobacco cessation counseling	Percentage of patients with HIV-infection who received tobacco cessation counseling within the measurement year

Sampling Methods

The review period consists of the twelve months prior to the scheduled clinic site (programmatic) audit. The patient record "pull list" is obtained from this review period. The HIVQUAL Project's stratified random sampling methodology[11] is used to determine the overall sample size. The eligible patient sample for each medical clinic was based on the clinic's unduplicated Ryan White Program clients that had at least two medical visits with a provider within the review period. For clinics providing care to pregnant women, the sample included all unduplicated pregnant females who had at least one visit with a provider for the review period. Appropriate adjustments were made for other gender specific measures.

[11] www.nationalqualitycenter.org/download_resource.cfm?fileID=16570 (HIVQUAL Group Learning Guide, p.81. Accessed on 1/20/2012)

Table 9. Minimum sample table (Bayesian estimation methodology)[12]

ELIGIBLE HIV+ POPULATION	RECORD SAMPLE FOR HIV+ MEN		RECORD SAMPLE FOR HIV+ WOMEN		MINIMUM TOTAL RECORDS
	Minimum Number	Charts to Pull*	Minimum Number	Charts to Pull*	
≤ 50	**11**	18	**19**	29	**30**
51-75	**12**	21	**22**	34	**34**
76-100	**13**	22	**23**	38	**36**
101-125	**13**	23	**25**	40	**38**
126-150	**14**	23	**25**	42	**39**
151-175	**14**	24	**26**	44	**40**
176-200	**14**	24	**27**	45	**41**
201-225	**14**	25	**27**	46	**41**
226-250	**14**	25	**27**	47	**41**
251-275	**14**	25	**28**	48	**42**
276-299	**14**	25	**29**	49	**43**
≥ 300	**15**	25	**30**	50	**45**

Table 9 above is used to determine how many male and female records to sample based on the total eligible patient sample for each clinic.

Once the minimum number of records for review is identified, a randomization tool is used to select the minimum number of male and female records required from the total eligible population. Review results are not risk adjusted to account for variation in patient acuity or other factors between clinical sites and are important to consider when comparing performance across clinics.

Calculation of Overall Performance Score for Clinical Sites

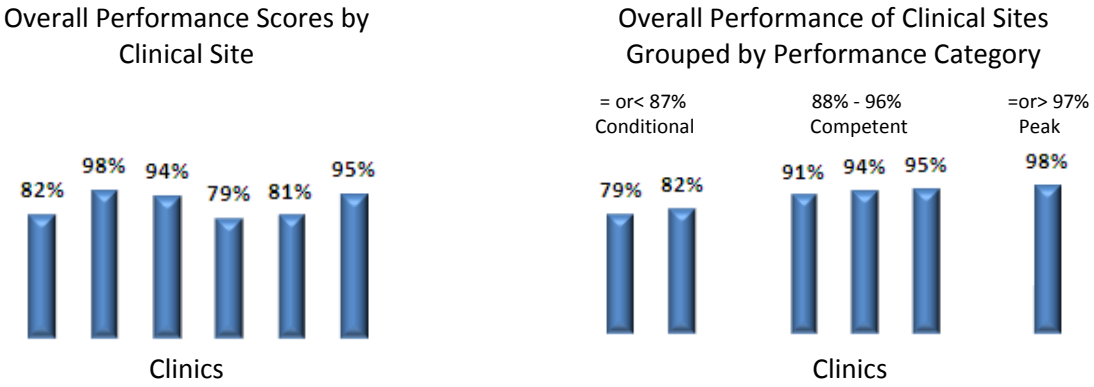
PBCM methodology efficiently provides an overall performance score for a given clinic following a standard scoring method. Compliance to each measure or criteria in the monitoring tool is presented as a percentage score between 0 to 100. A weighting factor (%)[13] is applied to each measure representing its significance or weight in comparison to other measures in the tool. Measures that were given more weight include ART, CD4 and viral load measurements and screening/prophylaxes for opportunistic infections. The rationale for assignment of a higher weight for a subset of these clinical measures is relative to the potential increase in patient morbidity and/or mortality when providers fail to adhere to the standards.

Once the overall performance score is calculated, the given clinic is then categorized in one of the following three categories:

Peak Performers: Clinics attaining an overall score of 97% or higher
Competent Performers: Clinics attaining an overall score of 88% to 96%
Conditional Performers: Clinics attaining an overall score of 87% or lower

[12] With sufficient historical data, 90% confidence interval has error width of 16% when using the minimum number of records.
[13] Weighted chart review tool. See Appendix 1.

Figure 10. Using site specific performance scores to identify performance category



In Figure 10 above, each of the six clinic sites reviewed is given an overall performance score which corresponds to one of three performance categories. Based on each of their overall performance scores, Clinics 3, 5 and 6 fall under the category of "Competent Performers", Clinic 2 falls under the category of "Peak Performers", while Clinics 1 and 4 fall under the category of "Conditional Performers". Individual clinic mean and median performance scores are also calculated and used as benchmarks for performance comparison.

In developing the PBCM model, it was critical to establish a range for each performance category in order to track, compare and measure clinical performance from year to year.

Operational Definitions

Operational definitions are established for each measure including descriptions of numerator, denominator, inclusion and exclusion criteria thus ensuring consistency in data collection and ability to compare with national benchmarks. These are included with each measure presented in Section III.

Threshold for Compliance

A threshold for compliance (TFC) is established for each measure. The TFC is a pre-established point of performance that if unmet requires further evaluation to determine if a problem or opportunity to improve care exists. Establishing the TFC allows the on-site review process to accommodate normal variations in care and is set as a percentage between 0-100 for each measure. Because it is primarily designed to accommodate for normal process variations, the value is generally set at less than 100%. In the PBCM model, TFCs in the majority of the measures were based on guidelines published in HIVQUAL[14], Institute for Healthcare Improvement[15], National Quality Center[16] and other HIV service quality focused organizations.

[14] http://hivqualus.org/ Accessed on 1/23/2012
[15] http://www.ihi.org Accessed on 1/23/2012.
[16] http://nationalqualitycenter.org Accessed on 1/23/2012

Local baseline performance scores were also considered in establishing TFCs, particularly for those measures that presented factors beyond the provider's control.

Using Data to Improve Services

With PBCM, data collected during on-site reviews are entered electronically into a Microsoft Excel tool (form) that feeds data from multiple clinic sites into a master table from which reports are ran. Using this electronic tool, clinic specific as well as aggregate reports are readily available and provide accurate information on areas of excellence and underperformance.

Clinic performance data are shared directly with service providers as part of the annual on-site programmatic review. Providers are presented with their performance reports using a numerical and graphical format that includes prior year's performance scores. This reporting format was not previously available prior to PBCM implementation. The pre-formatted reports immediately informs service providers of areas where there is a downtrend in performance as well as those areas where providers continue to meet and/or exceed expected thresholds for compliance. Service providers initiate corrective actions to improve underperformance or collaborate with DHSP to receive technical assistance customized to address areas of underperformance. Likewise, best practices identified by program managers from competent and peak performing clinics are shared with those clinics that may need assistance in improving their performance.

Aggregate clinical measures data is reviewed by the QM team, Care Services Division leadership and the Medical Director. Improvement projects are identified and implemented based on priorities. DHSP works directly with clinics and other departments and organizations to plan implement and evaluate performance improvement (PI) activities. Examples of current PI projects are detailed at the end of this report in the section on "Using CQM Data to Improve Services."

Section III: Clinical Performance Measures

(Agency Aggregates)

Since 2006, OAPP (now DHSP) has collected clinical performance measures recommended by HRSA/HAB for medical outpatient services. In 2009, DHSP collected data on 27 measures from the final HAB/HRSA clinical performance measures for adults and adolescents. Data collection is part of the required programmatic review conducted for each contracted service provider using PBCM methodology.

About the Data

Clinical performance data presented in this report was obtained from 2009 program monitoring data for funded HIV/AIDS medical outpatient clinics. There were 34 clinics reviewed and a sample size of 927 medical records. The number of clinic sites and records reviewed may vary for some measures due to gender specific measures and/or the addition of certain measures mid-cycle during the measurement year.

A description of each measure including, the numerator, denominator, exclusions (if any) and TFC is included for each clinical measure. Mean and median scores are calculated for each measure.

All clinic names are blinded in this report.

Core Measures

Antiretroviral Therapy for Pregnant Women

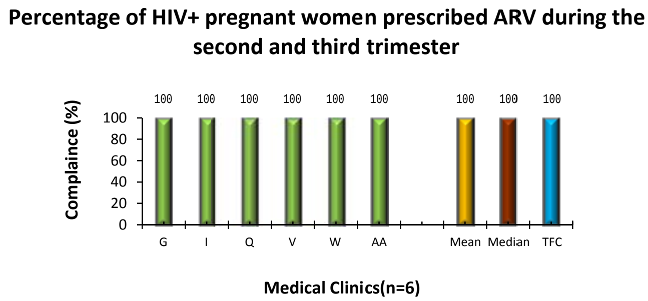
Description: Percentage of HIV infected pregnant women who are prescribed antiretroviral therapy (ART) during the measurement year.

Numerator: Number of HIV-infected pregnant women who were prescribed ART during the second and third trimester.

Denominator: Number of HIV-infected pregnant women who had a medical visit with a provider with prescribing privileges, at least twice in the measurement year.

Exclusions: Patients whose pregnancy is terminated by spontaneous or induced abortion, pregnant patients who are in the first trimester and newly enrolled in care during last three months of the measurement year, patients with documented referral to another perinatal HIV care program, and patients with documented refusal of ART offered by provider.

TFC: 100%.



Results: Of the 34 clinics in the sample, 2 clinics did not serve female patients. A total of 494 female records were reviewed from 32 clinics that served women. Of the 32 clinics, only 6 clinics served a total of 17 pregnant female patients. All 6 clinics (100%) who served pregnant women, met the 100% threshold for compliance for this measure.

CD4 T-Cell Count

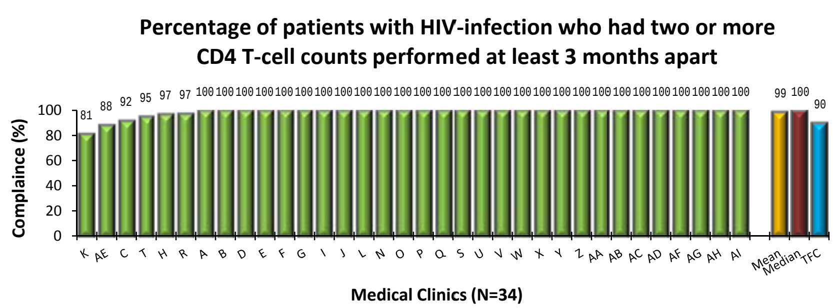
Description: Percentage of patients with HIV-infection who had two or more CD4 T-cell counts performed in the measurement year.

Numerator: Number of HIV-infected patients who had two or more CD4 T-cell counts performed at least three months apart during the measurement year.

Denominator: Number of HIV-infected patients who had two or more medical visits with a provider with prescribing privileges, at least three months apart in the measurement year.

Exclusions: Patients newly enrolled in care during last six months of the measurement year, and patient refusal of test.

TFC: 90%.



Results: The average compliance across all clinics is 99%, with a median of 100% and a range of 81% to 100%. The performance of 32 out of 34 clinics (94%) met

and/or exceeded the DHSP threshold for compliance set at 90% for this measure.

Viral Load

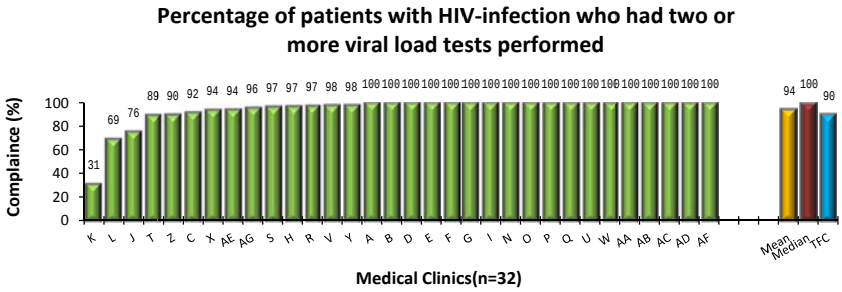
Description: Percentage of patients with HIV-infection who had two or more viral load tests performed in the measurement year.

Numerator: Number of HIV-infected patients who had two or more viral load tests performed at least three months apart during the measurement year.

Denominator: Number of HIV-infected patients who had two or more medical visits with a provider with prescribing privileges, at least three months apart in the measurement year.

Exclusions: Patients newly enrolled in care during last six months of the year, and patient refusal of test.

TFC: 90%.



Results: The average compliance across all clinics is 94%, with a median of 100% and a range of 31% to 100%. The performance of 28 out of 32 clinics (87%) met and/or exceeded the DHSP threshold for compliance set at 90% for this measure.

(Note: This measure was added to the monitoring tool after the 2009 monitoring cycle began; hence only 32 clinics had data on this measure instead of 34)

Antiretroviral Therapy (ART)

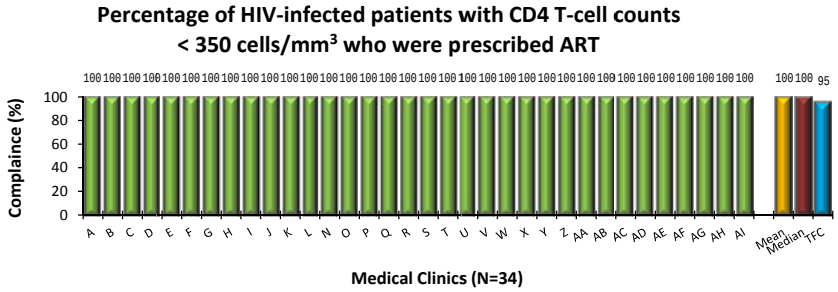
Description: Percentage of patients with HIV-infection and CD4 T-cell counts ≤ 350 cells/mm who were prescribed HAART.

Numerator: Number of HIV-infected patients with CD4 T-cell counts ≤ 350 cells/mm or an AIDS-defining condition who were prescribed a HAART regimen within the measurement year.

Denominator: Number of HIV-infected patients who have a CD4 T-cell count ≤ 350 cells/mm or an AIDS-defining condition, and at least two medical visits with a provider with prescribing privileges, in the measurement year.

Exclusions: Patients newly enrolled in care during last six months of the year, and patient refusal of test.

TFC: 95%.



Results: There were 927 patient records reviewed in the sample taken across 34 clinics. 516 of the 927 patients had a CD4 <350 and all 516 were on ART. The performance across all clinics met the DHSP threshold for compliance set at 100% for this measure.

Pneumocystis Carinii Pneumonia (PCP) Prophylaxis

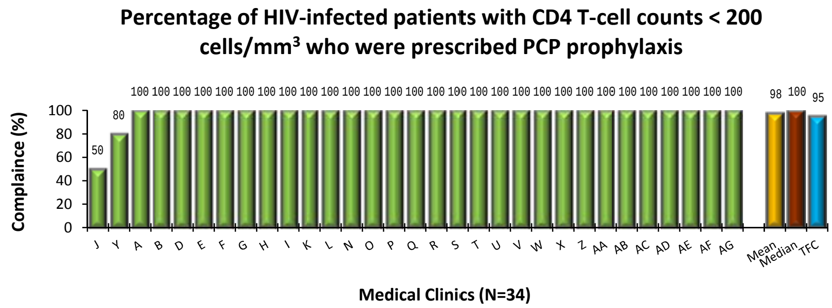
Description: Percentage of patients with HIV-infection and a CD4 T-cell count < 200 cells/mm who were prescribed PCP prophylaxis.

Numerator: Number of HIV-infected patients with CD4 T-cell count < 200 cells/mm^3 who were prescribed PCP prophylaxis.

Denominator: Number of HIV-infected patients who had a medical visit with a provider with prescribing privileges, at least twice in the measurement year, and had a CD4 T-cell count < 200 cells/mm.

Exclusions: Patients with CD4 T-cell count < 200 cells/mm repeated within three months and that rose above 200 cells/mm, patients newly enrolled in care during last three months of the measurement year, and patients with documented refusal to take PCP prophylaxis in medical record.

TFC: 95%.



Results: The average compliance across all clinics is 98%, with a median of 100% and a range of 50% to 100%. The performance of 32 out of 34 clinics (94%) met and/or exceeded the DHSP threshold for compliance set at 95% for this measure.

Adherence Assessment and Counseling

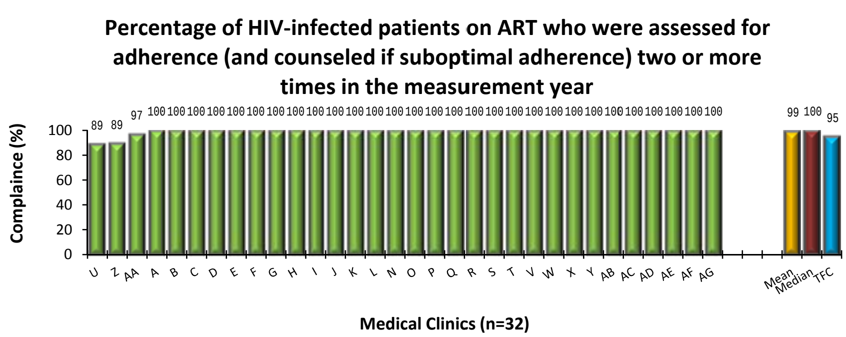
<u>Description</u>: Percentage of patients with HIV-infection on ART who were assessed for adherence (and counseled if suboptimal adherence) two or more times in the measurement year.

<u>Numerator</u>: Number of HIV-infected patients, as part of their primary care, who were assessed for adherence and counseled (if suboptimal adherence) two or more times in the measurement year.

<u>Denominator</u>: Number of HIV-infected patients on ART who had a medical visit with a provider with prescribing privileges at least twice in the measurement year.

<u>Exclusions</u>: Patients newly enrolled in care during the last six months of the measurement year and those who initiated ART during the last six months of the measurement year.

<u>TFC</u>: 95%.



Results: The average compliance across all clinics is 99%, with a median of 100% and a range of 89% to 100%. The performance of 30 out of 32 clinics (94%) met

and/or exceeded the DHSP threshold for compliance set at 95% for this measure.

(Note: This measure was added to the monitoring tool after the 2009 monitoring cycle began; hence only 32 clinics had data on this measure instead of 34)

Cervical Cancer Screening

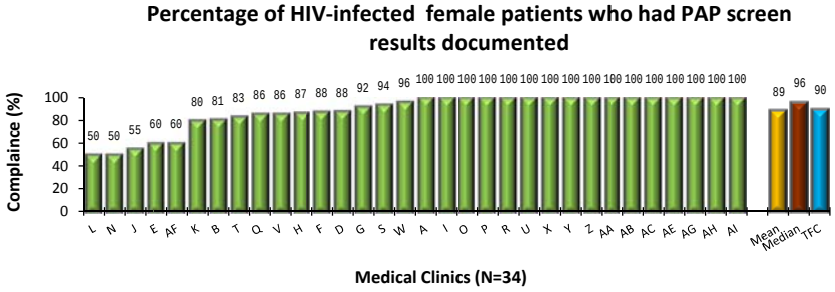
Description: Percentage of HIV-infected women who had a PAP screen in the measurement year.

Numerator: Number of HIV-infected female patients who had PAP screen results documented in the measurement year.

Denominator: Number of HIV-infected female patients who were ≥18 years old in the measurement year or reported having a history of sexual activity, and had a medical visit with a provider with prescribing privileges at least twice in the measurement year.

Exclusions: Patients who were < 18 years old and denied history of sexual activity, patients who have had a hysterectomy for non-dysplasia/non-malignant indications, and those with documented refusal of PAP in medical record.

TFC: 90%.



Results: The average compliance across all clinics is 89%, with a median of 96% and a range of 50% to 100%. The performance of 13 out of 34 clinics (62%) met and/or exceeded the DHSP threshold for compliance set at 90% for this measure.

Hepatitis C Virus (HCV) Screening

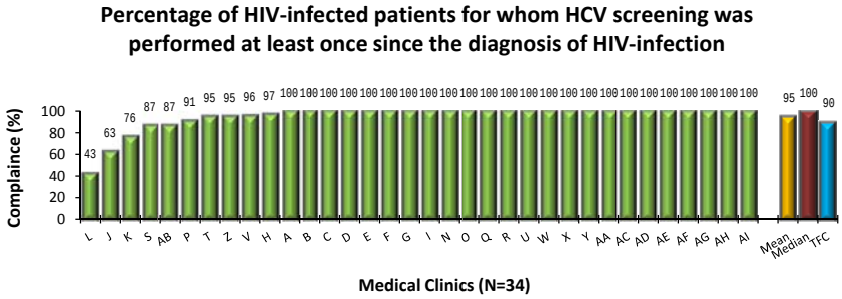
Description: Percentage of patients for whom HCV screening was performed at least once since the diagnosis of HIV-infection.

Numerator: Number of HIV-infected patients who have HCV status documented in chart since HIV diagnosis or initiation of care with provider.

Denominator: Number of HIV-infected patients who had a medical visit with a provider with prescribing privileges at least twice in the measurement year.

Exclusions: Patient refusal of test.

TFC: 90%.



Results: The average compliance across all clinics is 95%, with a median of 100% and a range of 43% to 100%. The performance of 29 out of 34 clinics (85%) met and/or exceeded the DHSP threshold for compliance set at 90% for this measure.

HIV Risk Counseling

Description: Percentage of patients with HIV-infection who received HIV risk counseling within the measurement year.

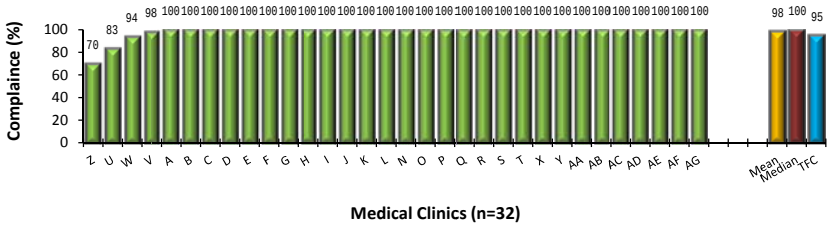
Numerator: Number of HIV-infected patients, as part of their primary care, who received HIV risk counseling.

Denominator: Number of HIV-infected patients who had a medical visit with a provider with prescribing privileges at least twice in the measurement year.

Exclusions: None.

TFC: 95%.

Percentage of HIV-infected patients with HIV infection who received HIV risk counseling within the measurement year



Medical Clinics (n=32)

Results: The average compliance across all clinics is 99%, with a median of 100% and a range of 70% to 100%. The performance of 29 out of 32 clinics (90%) met and/or exceeded the DHSP threshold for compliance set at 95% for this measure.

(Note: This measure was added to the monitoring tool after the 2009 monitoring cycle began; hence only 32 clinics had data on this measure instead of 34)

Lipid Screening

Description: Percentage of patients with HIV-infection on ART who had a lipid panel.

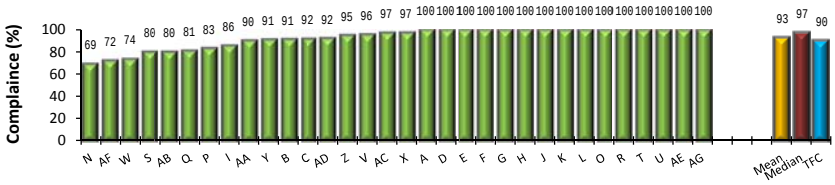
Numerator: Number of HIV-infected patients who were prescribed ART, and had a lipid panel in the measurement year.

Denominator: Number of HIV-infected patients who are on ART and who had a medical visit with a provider with prescribing privileges at least twice in the measurement year.

Exclusions: Patient refusal of test.

TFC: 90%.

Percentage of HIV-infected patients with HIV infection on ART who had a lipid panel



Medical Clinics (n=32)

Results: The average compliance across all clinics is 93%, with a median of 97% and a range of 69% to 100%. The performance of 24 out of 32 clinics (75%) met and/or exceeded the DHSP threshold for compliance set at 90% for this measure.

(Note: This measure was added to the monitoring tool after the 2009 monitoring cycle began; hence only 32 clinics had data on this measure instead of 34)

Oral Exam

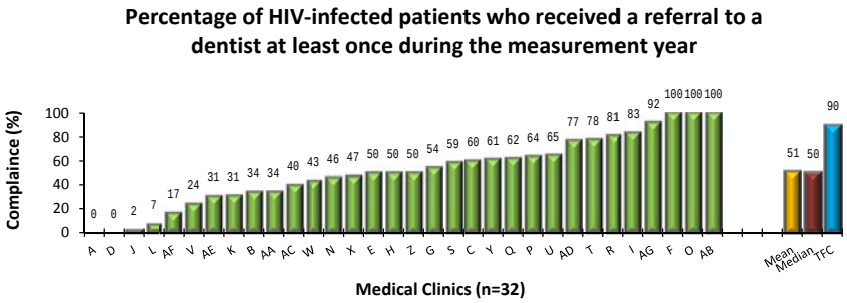
Description: Percentage of patients who received a referral to a dentist at least once during the measurement year.

Numerator: Number of patients who had a referral to the dentist during the measurement year, based on medical record documentation.

Denominator: Number of patients with HIV-infection who had a medical visit with a provider with prescribing privileges at least twice in the measurement year.

Exclusions: Patients with refusal of dental referral documented in medical record.

TFC: 90%.



Results: The mean compliance across all clinics is 51%, with a median of 50% and a range of 0% to 100%. Only 4 out of 32 clinics (12%) met and/or exceeded the DHSP threshold for compliance set at 90% for this measure.

(Note: This measure was added to the monitoring tool after the 2009 monitoring cycle began; hence only 32 clinics had data on this measure instead of 34)

Syphilis Screening

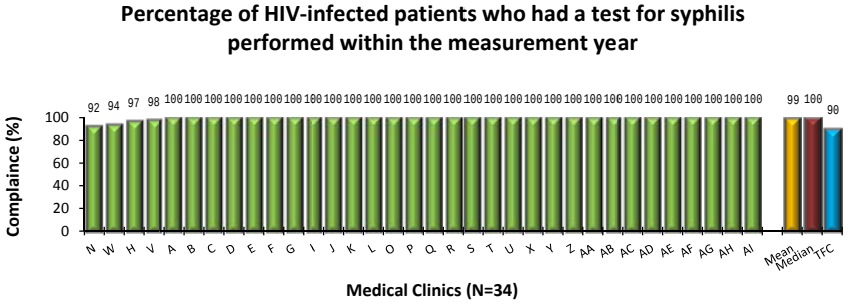
Description: Percentage of adult patients with HIV-infection who had a test for syphilis performed within the measurement year.

Numerator: Number of HIV-infected patients who had a serologic test for syphilis performed at least once during the measurement year.

Denominator: Number of HIV-infected patients who were ≥18 years old in the measurement year or had a history of sexual activity < 18 years, and had a medical visit with a provider with prescribing privileges at least twice in the measurement year.

Exclusions: Patients who were < 18 years old and denied a history of sexual activity, and refusal of test.

TFC: 90%.



Results: The average compliance across all clinics is 99%, with a median of 100% and a range of 92% to 100%. All 34 clinics (100%) met and exceeded the DHSP threshold for compliance set at 90% for this measure.

Tuberculosis Screening

Description: Percentage of patients with HIV-infection who received testing with results documented for latent tuberculosis infection (LTBI) in the measurement year.

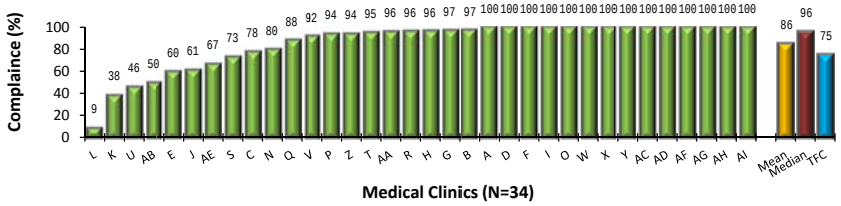
Numerator: Number of patients who received documented testing for LTBI with any approved test (tuberculin skin test [TST] or interferon gamma release assay [IGRA]) since HIV diagnosis.

Denominator: Number of HIV-infected patients who do not have a history of previous documented culture-positive TB disease or previous documented positive TST or IGRA and had a medical visit with a provider with prescribing privileges at least twice in the measurement year.

Exclusions: Patient refusal of test or IGRA.

TFC: 75%.

Percentage of patients with HIV-infection who received testing with results documented for latent tuberculosis infection (LTBI)



Results: The average compliance across all clinics is 86%, with a median of 96% and a range of 9% to 100%. The performance of 26 out of 34 clinics (77%) met and exceeded the DHSP threshold for compliance set at 75% for this measure.

Mycobacterium Avium Complex (MAC) Prophylaxis

Description: Percentage of patients with CD4 count < 50 cells/mm who received MAC prophylaxis within measurement year.

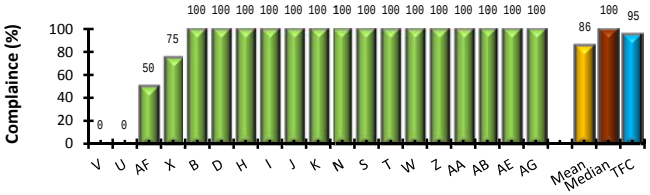
Numerator: Number of patients who were prescribed MAC prophylaxis at the time of the CD4+ count below 50 cells/mm.

Denominator: Number of patients with HIV-infection who had a medical visit with a provider with prescribing privileges at least twice in the measurement year; and had a CD4 count < 50 cells/mm.

Exclusions: Patients with documented refusal to take MAC prophylaxis in medical record

TFC: 95%.

Percentage of patients with CD4 count < 50 cells/mm^3 who received MAC prophylaxis



Results: The average compliance across all clinics is 86%, with a median of 100% and a range of 0% to 100%. The performance of 16 out of 19 clinics (84%) met and/or exceeded the DHSP threshold for compliance set at 95% for this measure.

(Note: Patients whose CD4+ count fell below 50 cells/mm were identified only in 19 out of the 34 clinics in the sample; hence the total number of clinics used for this measure is 19 instead of 34)

Supplemental Measures

Ophthalmology Referrals

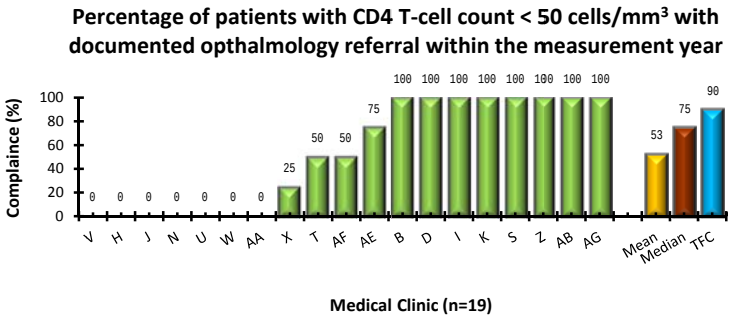
Description: Percentage of patients with CD4 count < 50 cells/mm with documented ophthalmology referral within the measurement year.

Numerator: Number of patients who received an ophthalmology referral in the measurement year.

Denominator: Number of patients with HIV-infection who had a medical visit with a provider with prescribing privileges at least twice in the measurement year; and had a CD4 count < 50 cells/mm during the measurement year.

Exclusions: Patient refusal of ophthalmology referral documented in medical record.

TFC: 90%.



Results: The average compliance across all clinics is 53%, with a median of 75% and a range of 0% to 100%. Only 8 out of 19 clinics (42%) met and/or exceeded the DHSP threshold for compliance set at 90% for this measure.

(Note: Patients whose CD4+ count fell below 50 cells/mm were identified only in 19 out of the 34 clinics in the sample; hence the total number of clinics used for this measure is 19 instead of 34)

Chlamydia Screening

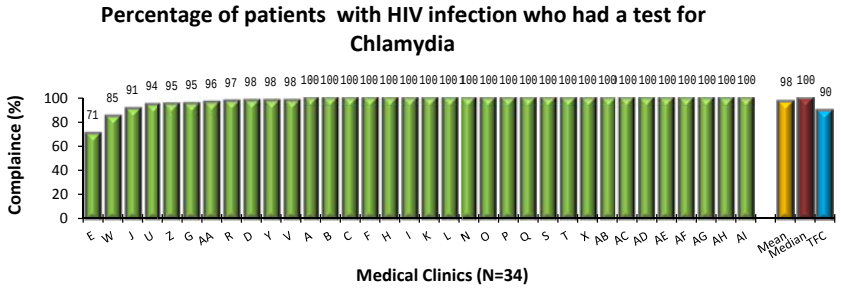
Description: Percentage of patients with HIV-infection who had a test for Chlamydia within the measurement year.

Numerator: Number of HIV-infected patients who received a test for Chlamydia in the measurement year.

Denominator: Number of patients with HIV-infection who had a medical visit with a provider with prescribing privileges at least twice in the measurement year.

Exclusions: Patient refusal of test, documented in medical record, and patients who are <18 yrs of age and deny a history of sexual activity.

TFC: 90%.



Results: The average compliance across all clinics is 98%, with a median of 100% and a range of 71% to 100%. The performance of 32 out of 34 clinics (94%) met and exceeded the DHSP threshold for compliance set at 90% for this measure.

Gonorrhea Screening

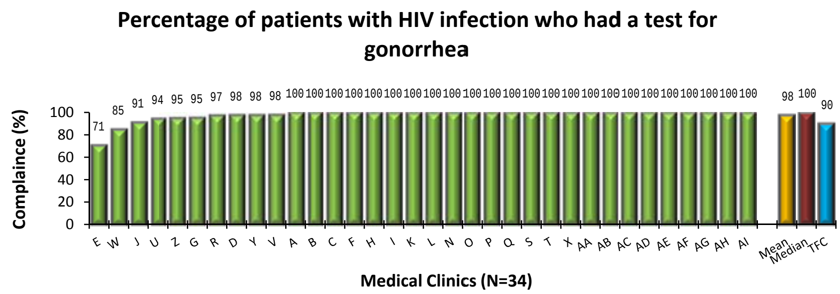
Description: Percentage of adult patients with HIV-infection who had a test for gonorrhea within the measurement year.

Numerator: Number of HIV-infected patients who received a test for gonorrhea in the measurement year.

Denominator: Number of patients with HIV-infection who had a medical visit with a provider with prescribing privileges at least twice in the measurement year.

Exclusions: Patient refusal of test, documented in medical record; and patients who are <18 years of age and deny a history of sexual activity.

TFC: 90%.



Results: The average compliance across all clinics is 98%, with a median of 100% and a range of 71% to 100%. The performance of 32 out of 34 clinics (94%) met and/or exceeded the DHSP threshold for compliance set at 90% for this measure.

Substance Use Assessment

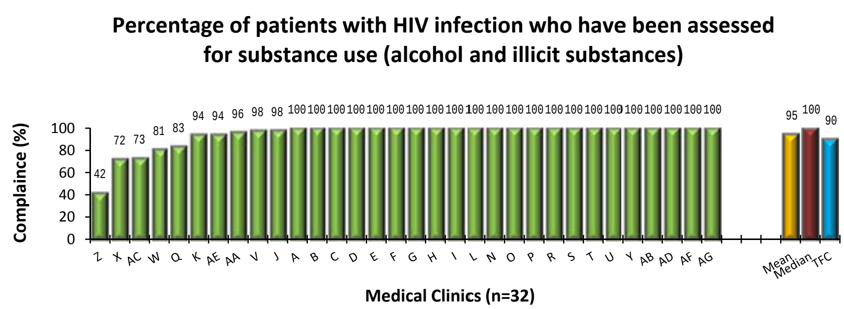
Description: Percentage of patients with who have been assessed for substance use (alcohol and illicit substances) in the measurement year.

Numerator: Number of patients with HIV-infection who were assessed for substance use within the measurement year.

Denominator: Number of patients with HIV-infection who had a medical visit with a provider with prescribing privileges at least twice in the measurement year.

Exclusions: None.

TFC: 90%.



Results: The average compliance across all clinics is 95%, with a median of 100% and a range of 42% to 100%. The performance of 27 out of 32 clinics (84%) met and/or exceeded the DHSP threshold for compliance set at 90% for this measure.

(Note: This measure was added to the monitoring tool after the 2009 monitoring cycle began; hence only 32 clinics had data on this measure instead of 34)

Mental Health Assessment

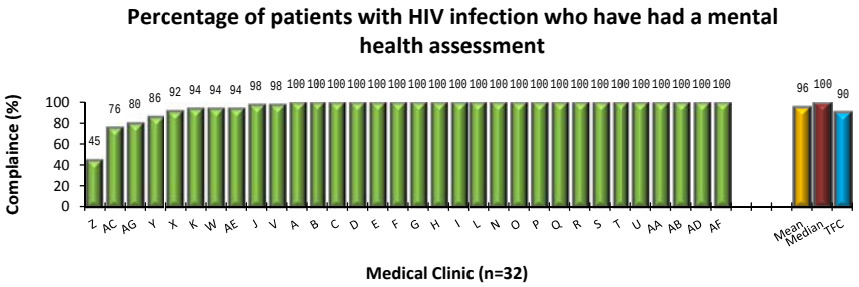
Description: Percentage of patients who have had a mental health assessment.

Numerator: Number of patients who received a mental health assessment in the measurement year.

Denominator: Number of patients who had a medical visit with a provider with prescribing privileges at least twice in the measurement year.

Exclusions: None.

TFC: 90%.



Results: The average compliance across all clinics is 96%, with a median of 100% and a range of 45% to 100%. The performance of 28 out of 32 clinics (87%) met and/or exceeded the DHSP threshold for compliance set at 90% for this measure.

(Note: This measure was added to the monitoring tool after the 2009 monitoring cycle began; hence only 32 clinics had data on this measure instead of 34)

Hepatitis B Virus (HBV) Screening

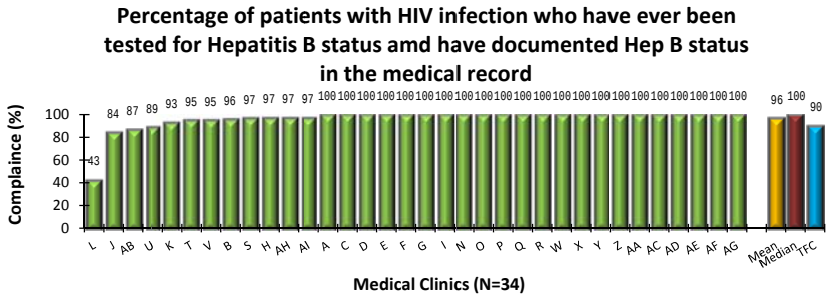
Description: Percentage of patients who have ever been tested for HBV and have documented HBV status in the medical record.

Numerator: Number of patients who have documentation of HBV status in the medical record.

Denominator: Number of patients who had a medical visit with a provider with prescribing privileges at least twice in the measurement year.

Exclusions: Patient refusal of test.

TFC: 90%.



Results: The average compliance across all clinics is 96%, with a median of 100% and a range of 43% to 100%. The performance of 30 out of 34 clinics (88%) met and/or exceeded the DHSP threshold for compliance set at 90% for this measure.

Hepatitis B Virus (HBV) Vaccination

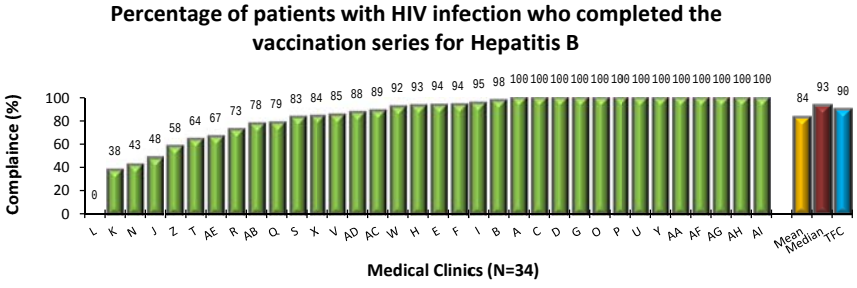
Description: Percentage of patients with HIV-infection who completed the vaccination series for Hepatitis B (Hep B).

Numerator: Number of HIV-infected patients with documentation of having ever completed the vaccination series for Hep B.

Denominator: Number of HIV-infected patients who had a medical visit with a provider with prescribing privileges at least twice in the measurement year.

Exclusions: Patients newly enrolled in care during the measurement year; patients with evidence of current HBV infection (Hep B Surface Antigen, Hep B e Antigen, Hep B e Antibody, or Hep B DNA); patients with evidence of past HBV immunity (Hep B Surface Antibody); and patients with documented refusal of Hepatitis B vaccine in medical record.

TFC: 90%.



Results: The average compliance across all clinics is 84%, with a median of 93% and a range of 0% to 100%. 19 out of 34 clinics (56%) met and/or exceeded the DHSP threshold for compliance set at 90% for this measure.

Toxoplasmosis Screening

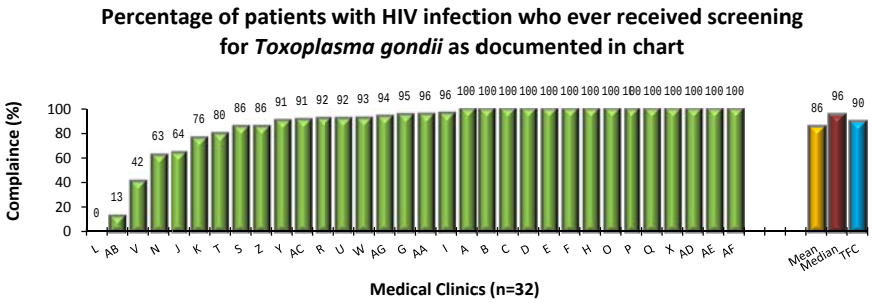
Description: Percentage of patients who ever received screening for *Toxoplasma gondii* as documented in chart.

Numerator: Number of HIV-infected patients who have documented Toxoplasma status in medical record.

Denominator: Number of HIV-infected patients who had a medical visit with a provider with prescribing privileges at least twice in the measurement year.

Exclusions: Patients with known toxoplasmosis (i.e *T. gondii* encephalitis), and patient refusal of test.

TFC: 90%.



Results: The average compliance across all clinics is 86%, with a median of 96% and a range of 0% to 100%. 23 out of 32 clinics (72%) met and/or exceeded the DHSP threshold for compliance set at 90% for this measure.

(Note: This measure was added to the monitoring tool after the 2009 monitoring cycle began; hence only 32 clinics had data on this measure instead of 34)

Hepatitis A Virus (HAV) Vaccination

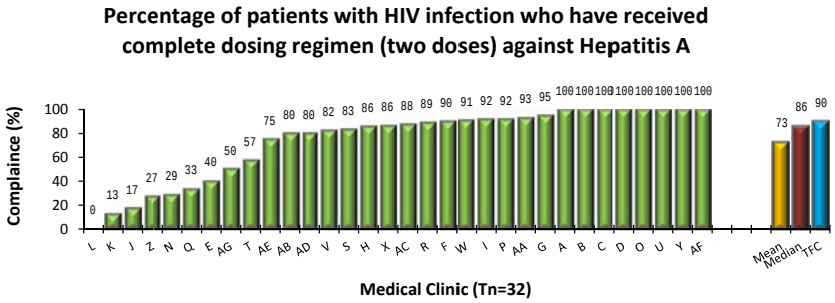
Description: Percentage of patients who have received complete dosing regimen (two doses) against Hepatitis A.

Numerator: Number of HIV-infected patients who ever completed the vaccination series for Hepatitis A.

Denominator: Number of HIV-infected patients who had a medical visit with a provider with prescribing privileges at least twice in the measurement year.

Exclusions: Patients newly enrolled in measurement year, patients with documented immunity to Hepatitis A (Hepatitis A IgG Antibody), patients with documented refusal of Hepatitis A vaccination, and patients with hypersensitivity to Hepatitis A vaccine or its components.

TFC: 90%.



Results: The average compliance across all clinics is 73%, with a median of 86% and a range of 0% to 100%. The performance of 14 out of 32 clinics (44%) met and exceeded the DHSP threshold for compliance set at 90% for this measure.

(Note: This measure was added to the monitoring tool after the 2009 monitoring cycle began; hence only 32 clinics had data on this measure instead of 34)

Pneumococcal Vaccination

Description: Percentage of patients with HIV-infection who have ever received a pneumococcal vaccination.

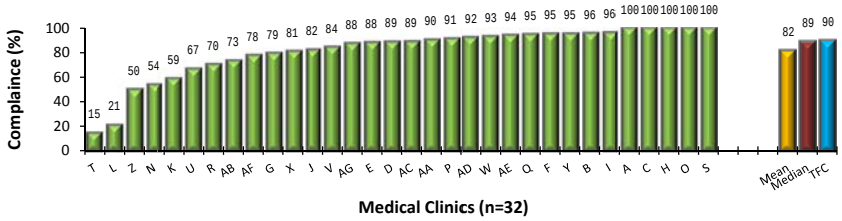
Numerator: Number of patients who ever received a pneumococcal vaccination.

Denominator: Number of HIV-infected patients who had a medical visit with a provider with prescribing privileges at least twice in the measurement year.

Exclusions: Patients with documented refusal of pneumococcal vaccine, and patients with hypersensitivity to pneumococcal vaccine or its components.

TFC: 90%.

Percentage of patients with HIV infection who have ever received a pneumococcal vaccination



Medical Clinics (n=32)

Results: The average compliance across all clinics is 82%, with a median of 89% and a range of 15% to 100%. The performance of 15 out of 32 clinics (47%) met and/or exceeded the DHSP threshold for compliance set at 90% for this measure.

(Note: This measure was added to the monitoring tool after the 2009 monitoring cycle began; hence only 32 clinics had data on this measure instead of 34)

Influenza Vaccination

Description: Percentage of HIV-infected patients who received influenza vaccination within the measurement period.

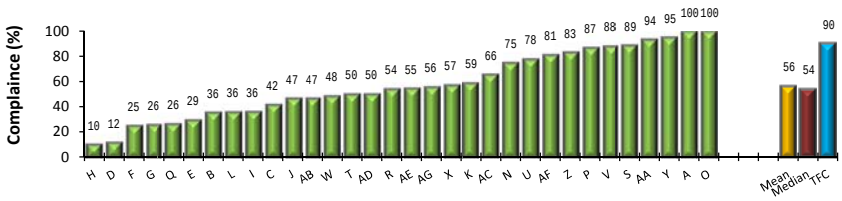
Numerator: Number of HIV-infected patients who received influenza vaccination within the measurement period.

Denominator: Number of HIV-infected patients who had a medical visit with a provider with prescribing privileges at least twice in the measurement period.

Exclusions: Patient refusal of influenza vaccine documented in the chart; hypersensitivity to influenza vaccine or allergy to its components including thimerosal, chicken protein, and egg protein; and previous diagnosis of Guillain-Barre Syndrome.

TFC: 90%.

Percentage of patients HIV infection who received influenza vaccination



Medical Clinics (n=32)

Results: The average compliance across all clinics is 56%, with a median of 54% and a range of 10% to 100%. Only 4 out of 32 clinics (12%) met and/or exceeded the DHSP threshold for compliance set at 90% for this measure.

(Note: This measure was added to the monitoring tool after the 2009 monitoring cycle began; hence only 32 clinics had data on this measure instead of 34)

Hepatitis/HIV Alcohol Counseling

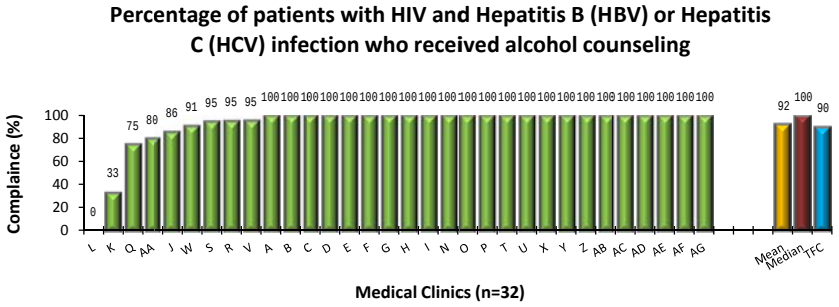
Description: Percentage of patients with HIV and Hepatitis B (HBV) or Hepatitis C (HCV) infection who received alcohol counseling within the measurement year.

Numerator: Number of HIV-infected patients who are co-infected with HBV or HCV who received alcohol counseling within the measurement year.

Denominator: Number of HIV-infected patients who are co-infected with HBV or HCV, and had a medical visit with a provider with prescribing privileges twice within the measurement year.

Exclusions: None.

TFC: 90%.



Results: The average compliance across all clinics is 92%, with a median of 100% and a range of 0% to 100%. The performance of 28 out of 32 clinics (87%) met and/or exceeded the DHSP threshold for compliance set at 90% for this measure.

(Note: This measure was added to the monitoring tool after the 2009 monitoring cycle began; hence only 32 clinics had data on this measure instead of 34)

Tobacco Cessation Counseling

Description: Percentage of patients with HIV-infection who received tobacco cessation counseling within the measurement year.

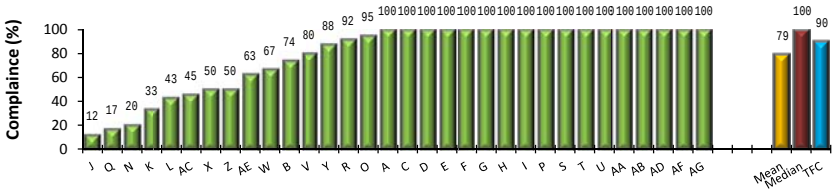
Numerator: Number of HIV-infected patients who received tobacco cessation counseling within the measurement year.

Denominator: Number of HIV-infected patients who used tobacco products within the measurement year, and had a medical visit with a provider with prescribing privileges twice within the measurement year.

Exclusions: Patients who deny tobacco use throughout the measurement year.

TFC: 90%.

Percentage of patients with HIV infection who received tobacco cessation counseling within the measurement year



Medical Clinics (n=32)

Results: The average compliance across all clinics is 79%, with a median of 100% and a range of 12% to 100%. The performance of 19 out of 32 clinics (59%) met and/or exceeded the DHSP threshold for compliance set at 90% for this measure.

(Note: This measure was added to the monitoring tool after the 2009 monitoring cycle began; hence only 32 clinics had data on this measure instead of 34)

Section IV: Conclusions

Overall Performance for Year 19

In 2009, 59% of contracted medical outpatient providers were Peak Performers, 26% were Competent Performers and 15% were Conditional Performers.

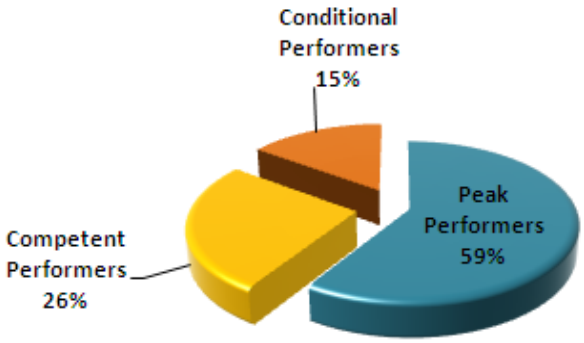


Figure 11. Overall Performance of Medical Outpatient Clinics in 2009

Areas of Excellence

LAC contracted RWP medical outpatient providers excelled in the following areas:

- HAART management
- STD screening
- Counseling for ART adherence and HIV risk
- CD4 monitoring
- PCP prophylaxis

Medical providers also performed well in:

- Cervical cancer screening
- HBV and HCV screening
- Mental health and substance use assessments
- Lipid panel monitoring
- ARV management for pregnant women
- MAC prophylaxis
- Counseling for alcohol use in patients with Hepatitis

Areas for Improvement

LAC providers performed below established thresholds in the following areas:

- Screening for toxoplasmosis and tuberculosis (LTBI)
- Ophthalmology referrals
- Hepatitis A & B, influeza and pneumonia vaccinations
- Tobacco cessation counseling

Various factors at both the clinic and system levels were reviewed to better understand their contribution to the low performance of specific indicators. Two factors that are consistently identified as contributing to overall performance are (1) the challenge of engaging patients with multiple unmet psychosocial needs in regular medical care; and (2) the existing geographic disparities in available services across LA County, which is compounded by challenges in securing consistent transportation.

Using CQM Data to Improve Services

Based on the aggregate medical outpatient performance data collected and reviewed in 2009, DHSP implemented two performance improvement initiatives focused on improving rates for LTBI screening and tobacco cessation counseling. Low screening rates for LTBI were thought to be due to the burden that tuberculin skin tests (TST) impose, with clients having to return to clinic within 3 days for interpretation of test results.

Beginning in 2010, DHSP worked with various stakeholders from the LAC Tuberculosis Control Program and the Public Health Laboratory to implement QuantiFERON® TB Gold In-Tube (QFT-GIT) testing. QFT-GIT testing is a blood test that addresses the main barriers of TST because only clients that test positive are called back to the clinic for further medical evaluation and proper treatment as needed. A pilot was implemented successfully in one medical outpatient clinic, followed by implementation in other clinics.

The other quality improvement initiative addresses low rates for tobacco cessation counseling, based on PBCM data showing that 48% of patients receiving services at DHSP funded medical outpatient clinics used tobacco in the last 12 months. DHSP collaborated with the local Tobacco Control Program to increase providers' access to resources to help clients quit tobacco use, including free nicotine patches from the California Smoker's Helpline. Tobacco cessation program trainings are regularly offered to providers to strengthen their knowledge base about tobacco addiction and smoking cessation interventions and techniques.

Implementation of the above PI activities to improve LTBI screening rates and tobacco cessation counseling will continue through 2012 and will be evaluated for effectiveness in meeting the following goals:

- By the end of 2012, all medical outpatient clinics under contract with DHSP will be using QFT-GIT testing to screen RWP clients for LTBI.
- By the end of 2012, average compliance for tobacco cessation counseling across all medical outpatient clinics will increase to 90%. Eight clinics whose compliance is $\leq$ 50% will improve their scores to 75% or more.

Appendices

I Chart Review Tool (Weighted)

II DHSP Core and Supplemental Clinical Measures for Medical Outpatient Services

Weighting Assignments for Performance Measures

Indicator	% Weight
Antiretroviral therapy for pregnant women	4%
CD4 T-cell count	4%
Viral load	4%
Antiretroviral therapy (ART)	4%
Pneumocystis pneumonia carinii (PCP) prophylaxis	4%
Adherence assessment and counseling	4%
Cervical cancer screening	4%
Hepatitis C virus (HCV) screening	4%
HIV risk counseling	4%
Lipid screening	3%
Oral exam	4%
Syphilis screening	3%
Tuberculosis screening	4%
MAC prophylaxis	4%
Ophthalmology screening	4%
Chlamydia screening	3%
Gonorrhea screening	3%
Substance use assessment	3%
Mental health assessment	3%
Hepatitis B virus (HBV) screening	4%
Hepatitis B virus (HBV) vaccination	4%
Toxoplasmosis screening	4%
Hepatitis A virus vaccination	4%
Pneumococcal vaccination	4%
Influenza vaccination	4%
Hepatitis/HIV alcohol counseling	3%
Tobacco cessation counseling	3%
	100%

HIV Medical Outpatient Clinical Performance Measures for Adult /Adolescent Patients

COUNTY OF LOS ANGELES
Public Health
Division of HIV and STD Programs

Core Measures

Performance Measure 1.1: Antiretroviral Therapy (ART) for Pregnant Women [HIV/AIDS Bureau (HAB) Group 1)	
Percentage of pregnant women with Human Immunodeficiency Virus (HIV) infection who are prescribed ART.	
Numerator:	Number of HIV-infected pregnant women who were prescribed ART during the second and third trimester
Denominator:	Number of HIV-infected pregnant women who had a medical visit with a provider with prescribing privileges,[1] at least twice in the measurement year
Patient Exclusions:	1. Patients[2] whose pregnancy is terminated by spontaneous or induced abortion 2. Pregnant patients who are in the first trimester and newly enrolled in care during last three months of the measurement year 3. Patients with documented referral to another perinatal HIV care program 4. Patients with documented refusal of ART offered by provider
Data Element:	1. Is the patient HIV-infected? (Y/N) a. If yes, is the patient female? (Y/N) i. If yes, was she pregnant during the reporting period? (Y/N) 1. If yes, was she on ART 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:	No national benchmarks available at this time. Division of HIV and STD Programs (DHSP) Threshold for Compliance (TFC) = 100%
Outcome Measures for Consideration:	o Rate of perinatal transmission in the measurement year o Number of events of perinatal transmission in the measurement year
Basis for Selection and Placement in HAB 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. ART can reduce perinatal HIV-1 transmission by nearly 70%.[3] 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 ART 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.[3]

References/Notes:

[1]A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ART, i.e. MD, PA, NP.

[2] "Patients" include all patients aged 13 years or older.

[3] Recommendations for Use of Antiretroviral Drugs in Pregnant HIV-1-Infected Women for Maternal Health and Interventions to Reduce Perinatal HIV Transmission in the United States. July 8, 2008. http://aidsinfo.nih.gov/ContentFiles/PerinatalGL.pdf.

Core Measures

<table>
<tr><td colspan="2">Performance Measure 1.2: CD4 T-Cell Count (HAB Group 1)</td></tr>
<tr><td colspan="2">Percentage of patients[1] with HIV-infection who had two or more CD4 T-cell counts performed in the measurement year.</td></tr>
<tr><td>Numerator:</td><td>Number of HIV-infected patients who had two or more CD4 T-cell counts performed at least three months apart during the measurement year</td></tr>
<tr><td>Denominator:</td><td>Number of HIV-infected patients who had two or more medical visits with a provider with prescribing privileges,[2] at least three months apart in the measurement year</td></tr>
<tr><td>Patient Exclusions:</td><td>1. Patients newly enrolled in care during last six months of the measurement year
2. Patient refusal of test</td></tr>
<tr><td>Data Element:</td><td>1. Is the patient HIV-infected? (Y/N)
a. If yes, did the patient have a CD4 count test conducted during the reporting period? (Y/N)
i. If yes, list the dates of these tests</td></tr>
<tr><td>Data Sources:</td><td>• 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>DHSP TFC: 90%
Institute for Healthcare Improvement (IHI) Goal: 90%[3]
National HIVQUAL Data: [4]
<table>
<tr><td></td><td>2003</td><td>2004</td><td>2005</td><td>2006</td></tr>
<tr><td>Top 10%</td><td>87.2%</td><td>87.7%</td><td>90.3%</td><td>87.5%</td></tr>
<tr><td>Top 25%</td><td>74.2%</td><td>78.0%</td><td>76.6%</td><td>78.8%</td></tr>
<tr><td>Median*</td><td>61.0%</td><td>62.7%</td><td>63.9%</td><td>62.5%</td></tr>
</table>
*from HAB data base</td></tr>
<tr><td>Outcome Measures for Consideration</td><td>o Rate of opportunistic infections in the measurement year
o Rate of patients with progression to AIDS in the measurement year
o Mortality rates</td></tr>
<tr><td colspan="2">Basis for Selection and Placement in HAB Group 1:</td></tr>
<tr><td colspan="2">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 ART.[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.</td></tr>
<tr><td colspan="2">US Public Health Service Guidelines:</td></tr>
<tr><td colspan="2">"In general, CD4 counts should be determined every 3–4 months to (1) determine when to start antiretroviral therapy in patients not being treated; (2) assess immunologic response to antiretroviral</td></tr>
</table>

therapy; and (3) assess the need for initiation or discontinuation of prophylaxis for opportunistic infections **(AI)**. For those patients who are adherent to therapy with sustained viral suppression and stable clinical status for more than 2–3 years, the frequency of CD4 count monitoring may be extended to every 6 months **(BIII)**."[5]
References/Notes:
Guidelines state that CD4 T-cell counts should be measured at least every three to four months depending on the stage of the disease. The timeframe of six 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]"Patients" include all patients aged 13 years or older. [2]A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ART, i.e. MD, PA, NP. [3] IHI Measure reads, "Percent of Patients/Patients with a CD4 Count Test in the Past 4 Months." http://www.ihi.org/IHI/Topics/HIVAIDS/HIVDiseaseGeneral/Measures/Percentof+patientswithaCD4counttestinthepast4months.htm. [4] National HIVQUAL data looks at the percent of patients 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. [5] 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. November 3, 2008. Available at http://aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf.

Core Measures

<table>
<tr><td colspan="2">Performance Measure 1.3: Viral Load</td></tr>
<tr><td colspan="2">Percentage of patients[1] with HIV-infection who had two or more viral load tests performed in the measurement year.</td></tr>
<tr><td>Numerator:</td><td>Number of HIV-infected patients who had two or more viral load tests performed at least three months apart during the measurement year</td></tr>
<tr><td>Denominator:</td><td>Number of HIV-infected patients who had two or more medical visits with a provider with prescribing privileges,[2] at least three months apart in the measurement year</td></tr>
<tr><td>Patient Exclusions:</td><td>1. Patients newly enrolled in care during last six months of the year
2. Patient refusal of test</td></tr>
<tr><td>Data Element:</td><td>1. Is the patient HIV-infected? (Y/N)
a. If yes, did the patient have a viral load test conducted during the reporting period? (Y/N)
i. If yes, list the dates of these tests</td></tr>
<tr><td>Data Sources:</td><td>• 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>DHSP TFC: 90%
IHI Goal: 90%[3]
National HIVQUAL Data: [4]
<table>
<tr><td></td><td>2003</td><td>2004</td><td>2005</td></tr>
<tr><td>Top 10%</td><td>86.0%</td><td>88.9%</td><td>87.6%</td></tr>
<tr><td>Top 25%</td><td>75.3%</td><td>77.8%</td><td>78.2%</td></tr>
<tr><td>Median*</td><td>61.0%</td><td>62.7%</td><td>63.9%</td></tr>
</table>
*from HAB data base</td></tr>
<tr><td>Outcome Measures for Consideration</td><td>o Rate of opportunistic infections in the measurement year
o Rate of patients with progression to AIDS in the measurement year
o Mortality rates</td></tr>
<tr><td colspan="2">Basis for Selection:</td></tr>
<tr><td colspan="2">The 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 as viral load is the most important indicator of response to ART. Viral load testing serves as a surrogate marker for treatment response and can be useful in predicting clinical progression. One key goal of treatment is suppression of viral load to below the limits of detection (below 40-75 copies/mL by most commercially available assays). For most individuals who are adherent to their antiretroviral regimens and who do not harbor resistant mutations to the prescribed drugs, viral suppression is generally achieved in 16-24 weeks.[5]
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">Guidelines for the Use of Antiretroviral Agents in HIV-1 Infected Adults and Adolescents:</td></tr>
<tr><td colspan="2">At Initiation or Change in Therapy. Plasma viral load should be measured before initiation of therapy and preferably within two to four weeks, and not more than eight weeks, after treatment</td></tr>
</table>

initiation or after treatment modification. Repeat viral load measurement should be performed at four to eight week intervals until the level falls below the assay's limit of detection.

In Patients Who Have Viral Suppression but Therapy Was Modified Due to Drug Toxicity or Regimen Simplification. Viral load measurement should be performed within two to eight weeks after changing therapy. The purpose of viral load monitoring at this point is to confirm potency of the new regimen.

In Patients on a Stable Antiretroviral Regimen. Viral load should be repeated every three to four months or as clinically indicated. In adherent patients who have suppressed viral loads for more than two to three years and who are at stable clinical and immunological status, some clinicians may extend the interval to every six months.

Monitoring in Patients with Suboptimal Response. In addition to viral load monitoring, a number of additional factors should be assessed, such as nonadherence, altered pharmacology, or drug interactions. Patients who fail to achieve viral suppression should undergo resistance testing to aid in the selection of an alternative regimen.[5]

References/Notes:

Guidelines state that viral load should be measured at least every three to four months depending on the stage of the disease. The timeframe of six 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]"Patients" include all patients aged 13 years or older.

[2]A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ART, i.e. MD, PA, NP.

[3]IHI Measure reads, "Percent of Patients/Patients with a Viral Load Test in the Past 4 Months." http://www.ihi.org/IHI/Topics/HIVAIDS/HIVDiseaseGeneral/Measures/Percentofpatientswithviralloadtestinthepast4months.htm.

[4]National HIVQUAL data looks at the percent of patients who have a viral load done every four months, not every six months. http://www.hivguidelines.org/admin/files/qoc/hivqual/proj%20info/HQNatlAggScrs3Yrs.pdf.

[5] 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. November 3, 2008. Available at http://aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf.

Core Measures

<table>
<tr><td colspan="2">Performance Measure 1.4: ART (HAB Group 1)</td></tr>
<tr><td colspan="2">Percentage of patients[1] with HIV-infection and CD4 T-cell counts <350 cells/mm^3 who are prescribed ART.</td></tr>
<tr><td>Numerator:</td><td>Number of HIV-infected patients with CD4 T-cell counts <350 cells/mm^{3}or and AIDS-defining condition who were prescribed an ART regimen[2] within the measurement year</td></tr>
<tr><td>Denominator:</td><td>Number of HIV-infected patients who have:
• A CD4 T-cell count < 350 cells/mm^3 or an AIDS-defining condition,[2] and
• At least two medical visits with a provider with prescribing privileges,[3] in the measurement year</td></tr>
<tr><td>Patient Exclusions:</td><td>1. Patients newly enrolled in care during last three months of the measurement year
2. Patients with documented refusal to take ART in medical record</td></tr>
<tr><td>Data Element:</td><td>1. Is the patient HIV-infected (Y/N)
a. If yes, is the patient diagnosed with CDC-defined AIDS? (Y/N)
i. If yes, was the patient prescribed ART during the reporting period? (Y/N)
1. If yes, does the patient have two or more CD4 counts < 350 cells/mm^3? (Y/N)
A. If yes, was the patient prescribed ART during the reporting period? (Y/N)</td></tr>
<tr><td>Data Sources:</td><td>• 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</td></tr>
<tr><td>National Goals, Targets, or Benchmarks for Comparison</td><td>DHSP TFC: 95%
IHI Goal: 90%[4]
CDC and HIVRN data consistent that 80% of those in care “eligible for ART’s” [4,5,6]
National HIVQUAL Data:[7,8]
<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>100%</td><td>88.9%</td><td>95.7%</td><td>100%</td></tr>
</table>
*from HAB data base</td></tr>
<tr><td>Outcome Measures for Consideration:</td><td>o Rate of opportunistic infections in the measurement year
o Rate of HIV-related hospitalizations in the measurement year
o Mortality rates</td></tr>
<tr><td colspan="2">Basis for Selection and Placement in HAB Group 1:</td></tr>
</table>

Randomized clinical trials provide strong evidence of improved survival and reduced disease progression by treating patients with AIDS-defining conditions and patients with CD4 T-cells <350 cells/mm^3.[2]
Measure reflects important aspect of care that significantly impacts survival, mortality, and transmission. Data collection is currently feasible and measure has a strong evidence base supporting the use.

US Public Health Service Guidelines:

"Antiretroviral therapy should be initiated in patients with a history of an AIDS-defining illness or with a CD4 T-cell count <350 cells/mm^3."[2]

References/Notes:

[1]"Patients" include all patients aged 13 years or older.
[2]"The most extensively studied combination antiretroviral regimens for treatment-naïve patients generally consist of two NRTIs plus either one NNRTI or a PI (with or without ritonavir boosting). A list of Panel-recommended components for initial therapy in treatment-naïve patients can be found in **Table 6**. Potential advantages and disadvantages of the components recommended as initial therapy for treatment-naïve patients are listed in **Table 7** to guide prescribers in choosing the regimen best suited for an individual patient. A list of agents or components not recommended for initial treatment can be found in **Table 8**. Some agents or components that are not recommended for use because of lack of potency or potential serious safety concerns are listed in **Table 9**."

ART should be initiated in patients with a history of an AIDS-defining illness or with a CD4 T-cell count <350 cells/mm^3. The data supporting this recommendation are stronger for those with a CD4 T-cell count <200 cells/mm^3 and with a history of AIDS, than for those with CD4 T-cell counts between 200 and 350 cells/mm^3. ART should also be initiated in the following groups of patients regardless of CD4 T-cell count:

a. Pregnant women (AI evidence);
b. Patients with HIV-associated nephropathy (AI evidence);
c. Patients co-infected with HBV when treatment is indicated (BIII evidence).

The optimal time to initiate therapy in asymptomatic patients with CD4 count >350 cells/mm^3 is not well defined. Patient scenarios and comorbidities should be taken into consideration.

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. November 3, 2008. Available at http://aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf.
[3]A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ART, i.e. MD, PA, NP.
[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.

Core Measures

<table>
<tr><td colspan="2">Performance Measure 1.5: Pneumocystis pneumonia (PCP) Prophylaxis (HAB Group 1)</td></tr>
<tr><td colspan="2">Percentage of patients[1] with HIV-infection and a CD4 T-cell count < 200 cells/mm^3 who were prescribed PCP prophylaxis.</td></tr>
<tr><td>Numerator:</td><td>Number of HIV-infected patients with CD4 T-cell count < 200 cells/mm^3 who were prescribed PCP prophylaxis[2,3]</td></tr>
<tr><td>Denominator:</td><td>Number of HIV-infected patients who:
• had a medical visit with a provider with prescribing privileges,[4] at least twice in the measurement year, and
• had a CD4 T-cell count < 200 cells/mm^3</td></tr>
<tr><td>Patient Exclusions:</td><td>1. Patients with CD4 T-cell count < 200 cells/mm^3 repeated within three months rose above 200 cells/mm^3
2. Patients newly enrolled in care during last three months of the measurement year
3. Patients with documented refusal to take PCP prophylaxis in medical record</td></tr>
<tr><td>Data Element:</td><td>1. Is the patient 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 three months? (Y/N)
A. If yes, did it remain < 200 cells/mm^3? (Y/N)
I. If yes, was PCP prophylaxis prescribed? (Y/N)</td></tr>
<tr><td>Data Sources:</td><td>• 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>DHSP TFC: 95%
IHI Goal: 95%[5]
National HIVQUAL Data: [6]
<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>o Rate of PCP in the measurement year
o Mortality rates
o Cost effectiveness</td></tr>
<tr><td colspan="2">Basis for Selection and Placement in HAB Group 1:</td></tr>
<tr><td colspan="2">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 < 200 cells/mm^{3}are at greatest risk</td></tr>
</table>

of developing PCP.[2]
Before the widespread use of primary PCP prophylaxis and effective ART, PCP occurred in 70%-80% of patients with AIDS.[7] 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.[8,9] 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 ART, should receive chemoprophylaxis against PCP if they have a CD4 T-cell count <200 cells/mm^3.[2]

References/Notes:

[1]"Patients" include all patients aged 13 years or older.

[2] Centers for Disease Control and Prevention. Guidelines for Prevention and Treatment of Opportunistic Infections in HIV-Infected Adults and Adolescents —Recommendations from CDC, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America. MMWR. March 24, 2009. Volume 58.
http://www.aidsinfo.nih.gov/Guidelines/GuidelineDetail.aspx?MenuItem=Guidelines&Search=Off&GuidelineID=211&ClassID=4.

[3] PCP prophylactic recommended in US PHS guidelines: TMP-SMX (preferred regimen at 1 DS QD, however tolerability may improve with 1 SS QD, 1 DS 3x a week), alternative regimens (in case of TMP-SMX intolerability) include: 1) dapsone + pyrimethamine + leukovorin; 2) atovaquone; 3) aerosolized pentamadine; 4) oral pyrimethamine + sulfaxodoxine (if sulfonamide hypersensitivity).

[4]A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ART, i.e. MD, PA, NP.

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

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

[7] Phair J, Munoz A, Detels R, et al. The risk of Pneumocystis carinii pneumonia among men infected with human immunodeficiency virus type 1. Multicenter AIDS Cohort Study Group. N Engl J Med 1990;322:161–5.

[8] Kaplan JE, Hanson DL, Navin TR, Jones JL. Risk factors for primary Pneumocystis carinii pneumonia in human immunodeficiency virus- infected adolescents and adults in the United States: reassessment of indications for chemoprophylaxis. J Infect Dis 1998;178:1126–32.

[9] Kaplan JE, Hanson DL, Jones JL, Dworkin MS. Viral load as an independent risk factor for opportunistic infections in HIV-infected adults and adolescents. AIDS 2001;15:1831–6.

Core Measures

<table>
<tr><td colspan="2">Performance Measure 1.6: Adherence Assessment and Counseling (HAB Group 2)</td></tr>
<tr><td colspan="2">Percentage of patients[1] with HIV-infection on ART who were assessed for adherence (and counseled if suboptimal adherence) two or more times in the measurement year.</td></tr>
<tr><td>Numerator:</td><td>Number of HIV-infected patients, as part of their primary care, who were assessed for adherence and counseled (if suboptimal adherence)[2,3] two or more times in the measurement year</td></tr>
<tr><td>Denominator:</td><td>Number of HIV-infected patients on ART who had a medical visit with a provider with prescribing privileges[4] at least twice in the measurement year</td></tr>
<tr><td>Patient Exclusions:</td><td>1. Patients newly enrolled in care during the last six months of the measurement year
2. Patients who initiated ART during the last six months of the measurement year</td></tr>
<tr><td>Data Element:</td><td>1. Is the patient HIV-infected? (Y/N)
a. If yes, was the patient on ART? (Y/N)
i. If the patient was on ART, did he/she receive adherence counseling during the measurement year? (Y/N)
1. If yes, list the dates of these visits</td></tr>
<tr><td>Data Sources:</td><td>• 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>DHSP TFC: 95%
IHI Goal: 90%[5]
National HIVQUAL Performance Data:[6]
<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>Median*</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>o Percent of undetectable viral loads among patients on ART in the measurement year
o Percent of patients with ART-resistance developed during therapy in the measurement year
o Mortality rates
o Incidence of HIV-related hospitalizations in the clinic population
o Incidence of patients with progression to AIDS in the clinic population</td></tr>
<tr><td colspan="2">Basis for Selection and Placement in HAB Group 2:</td></tr>
<tr><td colspan="2">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 ART 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</td></tr>
</table>

correlated with high rates of adherence to ART.[7]
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."[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 ART are important to begin prior to initiation of treatment, there is no standard of care for discussions to occur every six months for patients who may be years away from antiretroviral treatment.

US Public Health Guidelines:

"...adherence counseling and assessment should be done at each clinical encounter"[7]

References/Notes:

[1]"Patients" include all patients aged 13 years or older.
[2]Assessment of adherence includes: 1) patient reports of adherence by: a) quantifiable scales, e.g. missed three out of ten doses; b) qualitative scale, e.g. Likert scale; or 2) quantification such as pharmacy dispensing records, pill counts, or direct observation therapy.
[3]Adherence assessment should be provided by the provider with prescribing privileges. Adherence counseling should be performed for patients who report suboptimal adherence (less than 100% no missed doses). Counseling can be provided 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 ART, i.e. MD, PA, NP.
[5] IHI Measure reads, "Percent of Patients/Patients Assessed for Adherence to Antiretroviral (ARV) Therapy in the Past 4 Months."
http://www.ihi.org/IHI/Topics/HIVAIDS/HIVDiseaseGeneral/Measures/PercentofPatientsPatientsAssessedforAdherencetoAntiretroviralARVTherapyinthePast4Months.htm.
[6] http://www.hivguidelines.org/admin/files/qoc/hivqual/proj%20info/HQNatlAggScrs3Yrs.pdf.
[7] 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. November 3, 2008. Available at http://aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf.

Core Measures

<table>
<tr><td colspan="2">Performance Measure 1.7: Cervical Cancer Screening (HAB Group 2)</td></tr>
<tr><td colspan="2">Percentage of women with HIV-infection who have a PAP screening in the measurement year.</td></tr>
<tr><td>Numerator:</td><td>Number of HIV-infected female patients[1] who had PAP screen results documented in the measurement year</td></tr>
<tr><td>Denominator:</td><td>Number of HIV-infected female patients who:
• were ≥18 years old[2] in the measurement year or reported having a history of sexual activity, and
• had a medical visit with a provider with prescribing privileges[3] at least twice in the measurement year</td></tr>
<tr><td>Patient Exclusions:</td><td>1. Patients who were < 18 years old and denied history of sexual activity
2. Patients who have had a hysterectomy for non-dysplasia/non-malignant indications
3. Patients with documented refusal of PAP in medical record</td></tr>
<tr><td>Data Element:</td><td>1. Is the patient HIV-infected? (Y/N)
a. If yes, is the patient female? (Y/N)
i. If yes, is she ≥ 18 years or reports having a history of sexual activity? (Y/N)
2. If yes, was the PAP screening completed during the measurement year?</td></tr>
<tr><td>Data Sources:</td><td>• Ryan White Program Data Report, Section 5, Items 42 and 52 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>DHSP TFC: 90%
IHI Goal: 90%[4]
National HIVQUAL 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>100%</td><td>100%</td><td>100%</td><td>100%</td></tr>
<tr><td>Top 25%</td><td>84.3%</td><td>86.7%</td><td>87.0%</td><td>89.2%</td></tr>
<tr><td>Median*</td><td>70.5%</td><td>67.7%</td><td>71.8%</td><td>70.8%</td></tr>
</table>
*from HAB data base</td></tr>
<tr><td>Outcome Measures for Consideration</td><td>o Incidence of cervical cancer in HIV-positive women in clinic population</td></tr>
<tr><td colspan="2">Basis for Selection and Placement in HAB Group 2:</td></tr>
<tr><td colspan="2">Human Papillomavirus (HPV) is a common infection in the general population. Current evidence suggests that over 50% of sexually active adults have been infected with one or more HPV types. According to population-based prospective studies, HPV precedes the development of cervical cancer.[6]</td></tr>
</table>

Cervical cancer may be the most common AIDS-related malignancy in women. Although not a common diagnosis in women in the general population, according to New York City AIDS Surveillance data from 1990 to 1995, the observed cervical cancer cases in HIV-positive women were two to three times higher than the expected number of cases.[7,8] Findings such as these resulted in the inclusion of cervical cancer in the Centers for Disease Control and Prevention (CDC) expanded definition of AIDS.[9]

When compared with HIV-negative women, HIV-positive women with invasive cervical cancer present at more advanced stages and with cancer metastasizing to unusual locations. HIV- positive women have poorer responses to standard therapy and have higher recurrences and death rates, as well as shorter intervals to recurrence or death.[10,11]

The CDC currently recommends that HIV-positive women have a complete gynecologic evaluation, including a PAP smear, as part of their initial HIV evaluations, or upon entry to prenatal care, and another PAP smear six months later. If both PAP smears are negative, annual screening is recommended thereafter in asymptomatic women. The CDC further recommends more frequent screenings (every six months) for women with symptomatic HIV-infection, prior abnormal PAP smears, or signs of HPV infection. [12,13]

Cervical cancer can often be prevented or detected in its earliest stages through effective screening with a PAP smear and avoidance of known risk factors. This accentuates the importance of routine gynecological care, which includes PAP smears for HIV-infected women.[14]

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:

"The Pap test should be obtained twice during the first year after diagnosis of HIV-infection and, if the results are normal, annually thereafter (AII). If the results of the Pap test are abnormal, care should be provided according to the Guidelines for Management of Women with Abnormal Cervical Cancer Screening Tests by ASCCP." [15]

References/Notes:

[1] "Patients" include all patients aged 13 years or older.

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

[3] A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ART, i.e. MD, PA, NP.

[4] IHI Measure reads, "Percent of Female Patients/Patients with an Annual Papanicolaou (Pap) Test" (http://www.ihi.org/IHI/Topics/HIVAIDS/HIVDiseaseGeneral/Measures/PercentofPatientswithPAPSmearinLastSixMonths.htm)

[5] National HIVQUAL data looks at the percent of patients who have an annual pelvic exam. (http://www.hivguidelines.org/admin/files/qoc/hivqual/proj%20info/HQNatlAggScrs3Yrs.pdf)
(http://www.hivguidelines.org/admin/files/qoc/hivqual/proj%20info/HQNatlAggScrs3Yrs.pdf)

[6] Davis, AT. Cervical dysplasia in women infected with the human immunodeficiency virus (HIV): A correlation with HIV viral load and CD4 count. Gynecologic Oncology. 2001; 80(3):350–354.

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

[8] Chiasson, MA. Declining AIDS mortality in New York City. New York City Department of Health. Bull NY Acad. Med. 1997; 74:151–152.

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

[10] Ibid.

[11] U.S. Department of Health and Human Services. Anderson, JA, editor. Guide to the Clinical Care of Women with HIV; 2005.

[12] http://www.niaid.nih.gov/factsheets/womenhiv.htm.

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

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

[15] Centers for Disease Control and Prevention. Guidelines for Prevention and Treatment of Opportunistic Infections in HIV-Infected Adults and Adolescents —Recommendations from CDC, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America. MMWR. March 24, 2009. Volume 58. http://www.aidsinfo.nih.gov/Guidelines/GuidelineDetail.aspx?MenuItem=Guidelines&Search=Off&GuidelineID=211&ClassID=4.

Core Measures

<table>
<tr><td colspan="2">Performance Measure 1.8: Hepatitis C (HCV) Screening (HAB Group 2)</td></tr>
<tr><td colspan="2">Percentage of patients[1] for whom HCV screening was performed at least once since the diagnosis of HIV-infection.</td></tr>
<tr><td>Numerator:</td><td>Number of HIV-infected patients who have HCV status documented in chart since HIV diagnosis or initiation of care with provider[2]</td></tr>
<tr><td>Denominator:</td><td>Number of HIV-infected patients who had a medical visit with a provider with prescribing privileges[3] at least twice in the measurement year</td></tr>
<tr><td>Patient Exclusions:</td><td>1. Patient refusal of test</td></tr>
<tr><td>Data Element:</td><td>1. Is the patient HIV-infected? (Y/N)
a. If yes, is there documentation of the patient's Hepatitis C status (Hepatitis C Antibody positive or negative) in the medical record? (Y/N)</td></tr>
<tr><td>Data Sources:</td><td>• Ryan White Program Data Report, Section 5, Items 42 and 48 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>DHSP TFC: 90%
IHI Goal: 95%[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>100%</td><td>100%</td><td>100%</td><td>100%</td></tr>
<tr><td>Top 25%</td><td>94.4%</td><td>100%</td><td>100%</td><td>100%</td></tr>
<tr><td>Median*</td><td>86.2%</td><td>88.8%</td><td>90.5%</td><td>90.9%</td></tr>
</table>
*from HAB data base</td></tr>
<tr><td>Outcome Measures for Consideration:</td><td>o Hepatitis C- related mortality rates in the clinic population</td></tr>
<tr><td colspan="2">Basis for Selection and Placement in HAB Group 2:</td></tr>
<tr><td colspan="2">Chronic hepatitis C infection is common in persons with HIV-infection, and although it is a source of substantial morbidity and mortality, it may be amenable to treatment. HIV/ hepatitis C co-infection may predispose HIV-infected patients to liver toxicity from ART[6] and HCV treatment may exacerbate the side effects of some antiretroviral medications.[7]
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.</td></tr>
<tr><td colspan="2">US Public Health Guidelines:</td></tr>
<tr><td colspan="2">"HIV-infected patients should be tested routinely for evidence of chronic HCV infection"[8] (3/29/09)</td></tr>
</table>

References/Notes:

[1]"Patients" include all patients aged 13 years or older.

[2] Unless there is concern about ongoing exposure (e.g., via active injection drug use or sexual exposure), guidelines do not consistently recommend annual re-screening.

[3] A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ART, i.e. MD, PA, NP.

[4] IHI Measure reads, "Percent of Patients/Patients with Known Hepatitis C Status" http://www.ihi.org/IHI/Topics/HIVAIDS/HIVDiseaseGeneral/Measures/PercentofPatientsPatientswithKnownHepatitisCStatus.htm.

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

[6]AIDS Institute, New York State Department of Health. Criteria for the Medical Care of Adults with HIV-infection, Hepatitis C Virus Updated September 2004 *[Text taken from the NYSDOH AI publication - "Criteria for the Medical Care of Adults with HIV-infection"].* http://www.hivguidelines.org/public_html/hep-c/hepc.pdf.

[7] 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. November 3, 2008. Available at http://aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf.

[8] Centers for Disease Control and Prevention. Guidelines for Prevention and Treatment of Opportunistic Infections in HIV-Infected Adults and Adolescents —Recommendations from CDC, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America. MMWR. March 24, 2009. Volume 58. http://www.aidsinfo.nih.gov/Guidelines/GuidelineDetail.aspx?MenuItem=Guidelines&Search=Off&GuidelineID=211&ClassID=4.

Core Measures

Performance Measure 1.9: HIV Risk Counseling (HAB Group 2)	
Percentage of patients[1] with HIV-infection who received HIV risk counseling[2] within the measurement year.	
Numerator:	Number of HIV-infected patients, as part of their primary care, who received HIV risk counseling
Denominator:	Number of HIV-infected patients who had a medical visit with a provider with prescribing privileges[3] at least twice in the measurement year
Patient Exclusions:	None
Data Element:	1. Is the patient HIV-infected? (Y/N) a. If yes, did the patient receive HIV risk counseling at least once during the measurement year with appropriate feedback to the provider?(Y/N)
Data Sources:	• Electronic Medical Record/Electronic Health Record • CARE Ware, 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:	DHSP TFC: 95% None available at this time
Outcome Measures for Consideration:	o Incidence of new HIV-infection o Incidence of STD cases in clinic population o Rates of substance abuse counseling and referrals
Basis for Selection and Placement in HAB Group 2:	
Reducing transmission of HIV in the United States requires new strategies, including emphasis on prevention of transmission by HIV-infected persons. Through ongoing attention to prevention, risky sexual and needle sharing behaviors among persons with HIV-infection can be reduced, and transmission of HIV-infection prevented. Medical care providers can substantially affect HIV transmission by screening their HIV-infected patients for risk behaviors; communicating prevention messages; discussing sexual and drug-use behavior; positively reinforcing changes to safer behavior; referring patients for services such as substance abuse treatment; facilitating partner notification, counseling, and testing; and identifying and treating other sexually transmitted diseases.[4] 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 its use.	
US Public Health Guidelines:	
"HIV-infected patients should be screened for behaviors associated with HIV transmission by using a straightforward, nonjudgmental approach. This should be done at the initial visit and subsequent routine visits or periodically, as the clinician feels necessary, but at a minimum of yearly. Any indication of risky behavior should prompt a more thorough assessment of HIV transmission risks."[4,5]	
References/Notes:	
[1]"Patients" include all patients aged 13 years or older.	

[2] HIV risk counseling includes assessment of risk, counseling, and as necessary, referrals. Counseling occurs in the context of comprehensive medical care and can be provided by any member of the multidisciplinary primary care team.

[3] A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ART, i.e. MD, PA, NP.

[4] Centers for Disease Control and Prevention. Incorporating HIV prevention into the medical care of persons living with HIV: recommendations of CDC, the Health Resources and Services Administration, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America. MMWR 2003;52 (No. RR-12). http://www.cdc.gov/mmwr/PDF/rr/rr5212.pdf or http://aidsinfo.nih.gov/ContentFiles/HIVPreventionInMedCare_TB.pdf.

[5] 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. November 3, 2008. Available at http://aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf.

Core Measures

Performance Measure 1.10: Lipid Screening (HAB Group 2)

Percentage of patients[1] with HIV-infection on ART who had a lipid panel[2] during the measurement year.

Numerator:
Number of HIV-infected patients who:
- were prescribed ART, and
- had a lipid panel in the measurement year

Denominator:
Number of HIV-infected patients who are on ART and who had a medical visit with a provider with prescribing privileges[3] at least twice in the measurement year

Patient Exclusions:
1. Patient refusal of test

Data Element:
1. Is the patient HIV-infected? (Y/N)
   a. If yes, was the patient on ART?(Y/N)
      i. If the patient was on ART, did he/she have a lipid panel 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:
DHSP TFC: 90%
National HIVQUAL Data:[4]

	2003	2004	2005	2006
Top 10%	100%	100%	100%	100%
Top 25%	94.4%	100%	97.9%	100%
Median*	80.7%	79.1%	80.2%	84.7%

*From HAB database

Outcome Measures for Consideration:
- Incidence of cardiovascular events in clinic population
- Incidence of metabolic syndrome in the clinic population

Basis for Selection and Placement in HAB Group 2:

Changes in body shape, fat distribution, and metabolism occur with frequency among HIV-infected patients, particularly those prescribed ART. Metabolic changes that have been observed include hypertriglyceridemia, low high-density lipoprotein (HDL) cholesterol and changes in low-density lipoprotein (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 ART,[5] where metabolic syndrome is defined as the presence of at least three of the following: hypertriglyceridemia, low HDL cholesterol, hypertension, abdominal obesity, or high serum glucose.[6]

All patients should receive a lipid profile at least once a year in order to monitor general health. For patients on ART, lipid level monitoring is important to detect side effects and to identify patients who are at increased cardiovascular risk and may require treatment for hyperlipidemia.

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 its 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)…"[7]
References/Notes:
[1]"Patients" include all patients aged 13 years or older. [2]A lipid panel consists of fasting cholesterol, HDL, calculated LDL, and triglycerides. [3]A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ART, i.e. MD, PA, NP. [4] http://www.hivguidelines.org/admin/files/qoc/hivqual/proj%20info/HQNatlAggScrs3Yrs.pdf. The HIVQUAL indicator includes all patients on ARV therapy. [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] 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. [7] 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. November 3, 2008. Available at http://aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf.

Core Measures

Performance Measure 1.11: Oral Exam (HAB Group 2)

Percent of patients[1] with HIV-infection who received a referral to a dentist at least once during the measurement year.

Numerator:	Number of patients who had a referral to the dentist during the measurement year, based on medical record documentation
Denominator:	Number of patients with HIV-infection who had a medical visit with a provider with prescribing privileges[2] at least twice in the measurement year
Patient Exclusions:	1. Patients with refusal of dental referral documented in medical record
Data Element:	1. Is the patient HIV-infected? (Y/N) a. If yes, did the patient receive a referral to a dentist during the measurement year?(Y/N)
Data Sources:	• Ryan White Program Data Report, Section 3, Item 33c may provide data useful in establishing a baseline for this performance measure[3] • 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	DHSP TFC: 90% IHI Goal for oral exam by dentist: 75%[4] National HIVQUAL Data for oral exam by dentist:[5]

	2003	2004	2005	2006
Top 10%	66.7%	78.5%	66.7%	77.4%
Top 25%	46.7%	62.2%	53.6%	56.4%
Median*	34.6%	39.7%	37.3%	39.4%

*from HAB data base

Outcome Measures for Consideration:	Rates of dental disease and oral pathology.

Basis for Selection and Placement in HAB Group 2:

Oral health care is an important component of the management of patients with HIV-infection. A poorly functioning dentition can adversely affect the quality of life, complicate the management of medical conditions, and create or exacerbate nutritional and psychosocial problems.[6] When the oral cavity is compromised by the presence of pain or discomfort, maintaining adherence to complicated ART regimens becomes more difficult.[7]

There is limited evidence on the risks of oral procedures among persons with HIV/AIDS. Evidence for the utility of selected oral lesions as markers for seroconversion is limited to a single study of a single oral condition—candidiasis.[8] In the later stages of HIV disease, greater numbers of oral lesions and aggressive periodontal breakdown are more likely; therefore, oral health care visits should be scheduled more frequently.[9]

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

US Public Health Guidelines:

Primary health care providers should make an initial dental referral for every HIV/AIDS patient under their care. Oral health care providers should examine all patients on an annual basis for dental prophylaxis and other appropriate preventive care. As HIV-related medications may affect dental treatment and cause adverse effects, the patient's oral health care provider should review all medications being used by the patient and should understand the potential for these medications to affect oral health care.[10]

References/Notes:

[1]"Patients" include all patients aged 13 years or older.

[2]A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ART, i.e. MD, PA, NP.

[3] Ryan White Data Report does not provide number of dental exams, preventive, curative treatments, and/or surgeries. It only provides information on the number of patients and number of visits in the "Oral health care" service category.

[4]IHI Measure reads, "Percent of Patients Receiving an Annual Dental Exam." http://www.ihi.org/IHI/Topics/HIVAIDS/HIVDiseaseGeneral/Measures/PercentofPatientsReceivinganAnnualDentalExam.htm.

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

[6]US Department of Health and Human Services Oral Health in America: A Report of the Surgeon General http://www2.nidcr.nih.gov/sgr/sgrohweb/welcome.htm

[7] http://www.hivguidelines.org/public_html/center/clinical-guidelines/oral_care_guidelines/oral_health_book/oral_health_supp_pages/oral_health_chap1.htm#references

[8] http://www.ahrq.gov/clinic/epcsums/denthivsum.htm

[9] http://www.hivguidelines.org/public_html/center/clinical-guidelines/adult_hiv_guidelines/supplemental_pages/oral_health_adults/pdf/adults_oral_health.pdf

[10]New York State Dept of Health AIDS Institute *Oral Health Care for People With HIV-infection* http://www.hivguidelines.org/Content.aspx?pageID=263

Core Measures

<table>
<tr><td colspan="2">Performance Measure 1.12: Syphilis Screening (HAB Group 2)</td></tr>
<tr><td colspan="2">Percentage of adult patients[1] with HIV-infection who had a test for syphilis performed within the measurement year.</td></tr>
<tr><td>Numerator:</td><td>Number of HIV-infected patients who had a serologic test for syphilis performed at least once during the measurement year</td></tr>
<tr><td>Denominator:</td><td>Number of HIV-infected patients who:
• were ≥18 years old in the measurement year[2] or had a history of sexual activity < 18 years, and
• had a medical visit with a provider with prescribing privileges[3] at least twice in the measurement year</td></tr>
<tr><td>Patient Exclusions:</td><td>1. Patients who were < 18 years old and denied a history of sexual activity
2. Patient refusal of test</td></tr>
<tr><td>Data Element:</td><td>1. Is the patient HIV-infected? (Y/N)
a. If yes, is the patient ≥ 18 years or reports having a history of sexual activity? (Y/N)
i. If yes, was the patient screened for syphilis with Nontreponemal test (RPR, VDRL) during the measurement year?
ii. If Nontreponemal test was positive, was confirmatory Treponemal test performed (Treponemal tests include: fluorescent Treponemal antibody absorption (FTA-ABS) test, the microhemagglutination test for antibodies to Treponema pallidum (MHA-TP), or the Treponema pallidum particle agglutination assay (TPPA).</td></tr>
<tr><td>Data Sources:</td><td>• Ryan White Program Data Report, Section 5, Items 42 and 48 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>DHSP TFC: 90%
IHI Goal: 90%[4]
National HIVQUAL 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>99.0%</td><td>100%</td><td>100%</td><td>100%</td></tr>
<tr><td>Top 25%</td><td>90.4%</td><td>92.2%</td><td>95.7%</td><td>95.6%</td></tr>
<tr><td>Median*</td><td>73.7%</td><td>78.5%</td><td>82.1%</td><td>80.0%</td></tr>
</table>
*from HAB data base</td></tr>
<tr><td>Outcome Measures for Consideration</td><td>o Incidence of syphilis in the clinic population</td></tr>
</table>

Basis for Selection and Placement in HAB Group 2:
HIV-1 infection appears to alter the diagnosis, natural history, management, and outcome of *T. pallidum* infection. Measure reflects important aspect of care that impacts HIV-related morbidity and focuses on treatment decisions that affect a sizable population. Measure has a strong evidence base supporting its use.
US Public Health Guidelines:
"HIV-infected patients should be screened for behaviors associated with HIV transmission by using a straightforward, nonjudgmental approach. This should be done at the initial visit and subsequent routine visits or periodically, as the clinician feels necessary, but at a minimum of yearly. Any indication of risky behavior should prompt a more thorough assessment of HIV transmission risks. Screening for STDs should be repeated periodically (i.e., at least annually) if the patient is sexually active or if earlier screening revealed STDs. Screening should be done more frequently (e.g., at 3–6-month intervals) for asymptomatic persons at higher risk."[6] (7/18/03)
References/Notes:
[1]"Patients" include all patients aged 13 years or older. [2] Onset of sexual activity is not reliably reported or recorded. The lower age bracket of 18 years is selected for performance measurement purposes only and should not be interpreted as a recommendation about the age at which screening should begin to occur. [3] A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ART, i.e. MD, PA, NP. [4] IHI Measure reads, "Percent of Patients with Annual Syphilis Screen" (http://www.ihi.org/IHI/Topics/HIVAIDS/HIVDiseaseGeneral/Measures/PercentofPatientswithAnnualSyphilisScreen.htm) [5] (http://www.hivguidelines.org/public_html/center/quality-of-care/hivqual-project/hivqual-workshop/03-04-natl-score-top10-25.pdf) [6]Centers for Disease Control and Prevention. Incorporating HIV prevention into the medical care of persons living with HIV: recommendations of CDC, the Health Resources and Services Administration, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America. MMWR 2003; 52 (No. RR-12) (http://aidsinfo.nih.gov/ContentFiles/HIVPreventionInMedCare_TB.pdf or http://aidsinfo.nih.gov/ContentFiles/HIVPreventionInMedCare_TB.pdf)

Core Measures

<table>
<tr><td colspan="2">Performance Measure 1.13: TB Screening (HAB Group 2)</td></tr>
<tr><td colspan="2">Percentage of patients[1] with HIV-infection who received testing with results documented for latent tuberculosis infection (LTBI) in the measurement year.</td></tr>
<tr><td>Numerator:</td><td>Number of patients 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>Number of HIV-infected patients who:
• do not have a history of previous documented culture-positive TB disease or previous documented positive TST or IGRA[2]; and
• had a medical visit with a provider with prescribing privileges[3] at least twice in the measurement year.</td></tr>
<tr><td>Patient Exclusions</td><td>1. Patient refusal of TST or IGRA[4]</td></tr>
<tr><td>Data Element:</td><td>1. Is the patient HIV-infected? (Y/N)
a. If yes, has the patient ever had previous documented culture-positive TB disease or previous documented positive TST or IGRA? (Y/N)
i. If no, has the patient been tested for LTBI with a TST or IGRA in the measurement year? (Y/N)
1. If yes, are the results documented? (Y/N)</td></tr>
<tr><td>Data Sources:</td><td>• 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>DHSP TFC: 75%
National HIVQUAL 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>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>Median*</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>o Incidence of TB disease in the clinic population</td></tr>
<tr><td colspan="2">Basis for Selection and Placement in HAB Group 2:</td></tr>
<tr><td colspan="2">HIV is the most important known risk factor for progression to TB disease from LTBI after exposure to infectious TB patients. There is a 2% to 8% TB risk per year within five years after LTBI for HIV-infected adults[6,7] versus an 8% TB risk over 60 years for adults with LTBI but not HIV.[8] The TB risk for HIV-infected persons remains higher than for HIV-uninfected persons, even for HIV-infected persons who are taking antiretroviral medications.[9,10] TB disease is an AIDS-defining opportunistic</td></tr>
</table>

condition that can be deadly. McCombs found a three-times adjusted odds of being diagnosed with TB at death and a five times adjusted odds of dying during TB treatment for HIV-infected TB patients compared with other patients from 1993 through 2001.[11]

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.[12]
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 two to three 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.[13]
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 its use.

US Public Health Guidelines:

Guidelines for TB services for HIV-infected persons, such as those jointly published by the PHS and the Infectious Diseases Society of America[14] or by the Centers for Disease Control and Prevention (CDC)[15] call for:

- provision of a TST or IGRA when HIV-infection is first recognized,
- annual TST or IGRA 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/IGRA or for those who are recent contacts of persons with infectious active TB.[16]

References/Notes:

[1] "Patients" include all patients aged 13 years or older.

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

[3] A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ART, i.e. MD, PA, NP.

[4] History of receiving BCG is NOT an exclusion to receiving TST. See: Targeted Tuberculin Testing and Treatment of Latent Tuberculosis Infection. MMWR, 2000/49(RR06);1-64.

[5] "PPD screening."
http://www.hivguidelines.org/admin/files/qoc/hivqual/proj%20info/HQNatlAggScrs3Yrs.pdf

[6] 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.

[7] 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.

[8]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.

[9]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.

[10] 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.

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

[12] 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 1998 Oct 30; 47(RR-20):1-58.

[13]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

[14] Centers for Disease Control and Prevention. Guidelines for Prevention and Treatment of Opportunistic Infections in HIV-Infected Adults and Adolescents —Recommendations from CDC, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America. MMWR. March 24, 2009. Volume 58.
http://www.aidsinfo.nih.gov/Guidelines/GuidelineDetail.aspx?MenuItem=Guidelines&Search=Off&GuidelineID=211&ClassID=4.

[15] 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 1998 Oct 30; 47(RR-20):1-58.

[16] 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.

Core Measures

<table>
<tr><td colspan="2">Performance Measure 1.14: MAC Prophylaxis (HAB Group 3)</td></tr>
<tr><td colspan="2">Percent of patients[1] with HIV-infection with CD4 count < 50 cells/mm^3 who received MAC prophylaxis within measurement year.</td></tr>
<tr><td>Numerator:</td><td>Number of patients who were prescribed MAC prophylaxis at the time of the CD4+ count below 50 cells/mm^3</td></tr>
<tr><td>Denominator:</td><td>Number of patients with HIV-infection who:
• had a medical visit with a provider with prescribing privileges[2] at least twice in the measurement year; and
• had a CD4 count < 50 cells/mm^3</td></tr>
<tr><td>Patient Exclusions:</td><td>1. Patients with documented refusal to take MAC prophylaxis in medical record</td></tr>
<tr><td>Data Element:</td><td>1. Is the patient HIV-positive? (Y/N)
a. If yes, was the CD4 count < 50 cells/mm^3 (Y/N)
i. If yes, list the dates and results of CD4 test counts performed during the reporting period
2. List the date on which MAC prophylaxis was prescribed (preferred: azithromycin or clarithromycin, alternative: rifabutin).[3]</td></tr>
<tr><td>Data Sources:</td><td>• Electronic Medical Record/Electronic Health Record
• CAREWare, Lab Tracker or other electronic
• 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>DHSP TFC = 95%
National HIVQUAL Data:[4]
<table>
<tr><td></td><td>2003</td><td>2004</td><td>2005</td></tr>
<tr><td>Top 10%</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></tr>
<tr><td>Median*</td><td>100%</td><td>100%</td><td>100%</td></tr>
</table>
*from HAB data base</td></tr>
<tr><td colspan="2">Basis for Selection and Placement in HAB Group 3:</td></tr>
<tr><td colspan="2">MAC complex 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]</td></tr>
<tr><td colspan="2">US Public Health Guidelines:</td></tr>
<tr><td colspan="2">“Adults and adolescents who have HIV-infection should receive chemoprophylaxis against disseminated
MAC disease if they have CD4 count < 50 cells/mm^3 (AI).”[6]</td></tr>
<tr><td colspan="2">References/Notes:</td></tr>
<tr><td colspan="2">[1]“Patients” include all patients aged 13 years or older.</td></tr>
</table>

[2] A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ART, i.e. MD, PA, NP.

[3] MAC Prophylaxis preferred regimens: Azithromycin or Clarithromycin. Alternative regimen in preferred regimens not tolerated: Rifabutin.
Centers for Disease Control and Prevention. Guidelines for Prevention and Treatment of Opportunistic Infections in HIV-Infected Adults and Adolescents —Recommendations from CDC, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America. MMWR. March 24, 2009. Volume 58.
http://www.aidsinfo.nih.gov/Guidelines/GuidelineDetail.aspx?MenuItem=Guidelines&Search=Off&GuidelineID=211&ClassID=4.

[4] MAC Prophylaxis HIVQUAL Indicator.
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 —Recommendations from CDC, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America. MMWR. March 24, 2009. Volume 58.
http://www.aidsinfo.nih.gov/Guidelines/GuidelineDetail.aspx?MenuItem=Guidelines&Search=Off&GuidelineID=211&ClassID=4.

Supplemental Measures

<table>
<tr><td colspan="2">Performance Measure 2.1: Ophthalmology Screen</td></tr>
<tr><td colspan="2">Percent of patients[1] with HIV-infection with CD4 count < 50 cells/mm^3 with documented ophthalmology referral within the measurement year.</td></tr>
<tr><td>Numerator:</td><td>Number of patients who received an ophthalmology referral in the measurement year</td></tr>
<tr><td>Denominator:</td><td>Number of patients with HIV-infection who:
had a medical visit with a provider with prescribing privileges[2] at least twice in the measurement year; and
had a CD4 count < 50 cells/mm^3 during the measurement year</td></tr>
<tr><td>Patient Exclusions:</td><td>1. Patient refusal of ophthalmology referral documented in medical record</td></tr>
<tr><td>Data Element:</td><td>1. Is the patient HIV-positive? (Y/N)
a. If yes, did the patient have a CD4 count performed during the reporting period? (Y/N)
i. If yes, was the patient's CD4 count < 50 cells/mm^3 at any point? (Y/N)
1. If yes, did the patient receive an ophthalmology referral? (Y/N)</td></tr>
<tr><td>Data Sources:</td><td>Electronic Medical Record/Electronic Health Record
CAREWare, Lab Tracker, or other electronic
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>Office of AIDS Programs and Policy (OAPP) Threshold For Compliance (TFC) = 90%
National HIVQUAL Data:[3]
<table>
<tr><td></td><td>2003</td><td>2004</td><td>2005</td></tr>
<tr><td>Top 10%</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></tr>
</table>
*from HAB data base</td></tr>
<tr><td>Outcome Measures for Consideration</td><td>o Incidence of CMV retinitis in clinic population</td></tr>
<tr><td colspan="2">Basis for Selection and Placement in HAB Draft Group 3:</td></tr>
<tr><td colspan="2">Immunosuppression caused by HIV-infection increases the incidence of eye infections; however, serious eye problems associated with advanced immunosuppression are less common in patients treated with ART. More severely immunocompromised patients, CD4 count < 100 cells/mm^3, may experience</td></tr>
</table>

CMV retinitis, *Toxoplasma* retinochoriditis, cryptococcal chorioretinitis, and other conditions.[4,5] Drug induced ocular toxicity can be caused by rifabutin, ethambutol, cidofovir, and less often by high-dose didanosine, intravenous ganciclovir, intravenous acyclovir, and atovaquone. While the Public Health Service (PHS) Guidelines do not define the frequency of ophthalmology screens, it is considered a best practice to screen patients every 12 months if CD4 counts are < 50 cells/mm^3.
US Public Health Guidelines:
Regular fundoscopic examinations performed by an ophthalmologist are recommended by certain specialists for patients with low CD4 counts (< 50 cells/mm^3)"[5]
References/Notes:
[1]"Patients" include all patients aged 13 years or older. [2]A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ART, i.e. MD, PA, NP. [3] http://www.hivguidelines.org/admin/files/qoc/hivqual/proj%20info/HQNatlAggScrs3Yrs.pdf. [4] National AIDS Education & Training Centers (2006). Clinical Manual for Management of the HIVInfected Adult. [5] Centers for Disease Control and Prevention. Guidelines for Prevention and Treatment of Opportunistic Infections in HIV-Infected Adults and Adolescents —Recommendations from CDC, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America. MMWR. March 24, 2009. Volume 58. http://www.aidsinfo.nih.gov/Guidelines/GuidelineDetail.aspx?MenuItem=Guidelines&Search=Off&GuidelineID=211&ClassID=4.

Supplemental Measures

Performance Measure 2.2: Chlamydia Screen (HAB Group 3)	
Percent of patients[1] with HIV-infection who had a test for Chlamydia within the measurement year.	
Numerator:	Number of HIV-infected patients who received a test for Chlamydia[2] in the measurement year
Denominator:	Number of patients with HIV-infection who had a medical visit with a provider with prescribing privileges[3] at least twice in the measurement year
Patient Exclusions:	1. Patient refusal of test, documented in medical record 2. Patients who are <18 yrs of age[4] and deny a history of sexual activity
Data Element:	1. Is the patient HIV-positive? (Y/N) a. If yes, is the patient > 18 years or sexually active? (Y/N) i. If yes, was the patient tested for Chlamydia during the reporting period? (Y/N)
Data Sources:	• Electronic Medical Record/Electronic Health Record • CAREWare, Lab Tracker, or other electronic • Medical record data abstraction by grantee of a sample of records.
National Goals, Targets, or Benchmarks for Comparison:	OAPP TFC: 90% None available at this time.
Outcome Measures for Consideration	o Incidence of Chlamydia in the clinic population o Incidence of pelvic inflammatory disease in the clinic population

Basis for Selection and Placement in HAB Group 3:

Early detection and treatment of STDs may reduce the risk for STD and HIV transmission. Providers should screen for STD's to treat infections and decrease HIV transmission to sexual partners. Many STD's increase the number of HIV-infected white blood cells in the genital area and increase the risk of transmitting HIV-infection.[5] STD's can also enhance the risk of transmitting HIV by increasing the viral burden in genital secretions.[6,7]

STD infections in seronegative partners increase the risk for acquiring HIV because they increase of the volume of white blood cells, including those that are targeted by HIV, in the genital region, and may cause ulcerative lesions, increasing the likelihood of infection.[8] Susceptibility to transmission may therefore be enhanced. Chlamydia infection in women may often be asymptomatic but like other STD's can also increase the risk for HIV transmission and enhance transmission susceptibility. Providers should test women for Chlamydia infection at least annually to treat infections and to decrease the risk of Chlamydia and HIV transmission. Identification and treatment of STD's can reduce the potential for spread of these infections among high-risk groups (i.e., sex or drug-using networks).[7]

The measure focuses on similar aspects of care (STD marker) previously captured in measures listed in HAB Groups 1 and 2. There are currently no guidelines that delineate annual testing.

US Public Health Guidelines:

"During the first visit, consider testing all patients for urogenital chlamydial infection. For subsequent routine visits, repeated tests periodically (i.e. at least annually) for all patients who are sexually active. More frequent periodic screening (e.g. at 3-month to 6-month intervals) may be indicated for asymptomatic persons at higher risk."[7]
References/Notes:
[1]"Patients" include all patients aged 13 years or older. [2] Preferred Chlamydia screening test is urine NAAT, however if other sites are needed rectal swabs and cervical swabs with NAAT, or other testing methods with comparable sensitivity/specificity, are also appropriate. [3] A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ART, i.e. MD, PA, NP. [4] Onset of sexual activity is not reliably reported or recorded. The lower age bracket of 18 years is selected for performance measurement purposes only and should not be interpreted as a recommendation about the age at which screening should begin to occur. [5] Cohen MS. Sexually transmitted diseases enhance HIV transmission: no longer a hypothesis. Lancet 1998;351(suppl 3):5--7 [6] Buchacz K, Patel P, Taylor M, et al. Syphilis increases HIV viral load and decreases CD4 cell counts in HIV-infected patients with new syphilis infections. *AIDS*. 2004 Oct 21;18(15):2075-9 [7] CDC. Recommendations and Reports: "Incorporating HIV Prevention into the Medical Care of Persons Living with HIV". July 18, 2003/52(RR12);1-24 [8] DT Fleming and JN Wasserheit, From epidemiological synergy to public health policy and practice: the contribution of other sexually transmitted diseases to sexual transmission of HIV-infection, *Sex Transm Infect* **75** (1999), pp. 3–17.

Supplemental Measures

Performance Measure 2.3: Gonorrhea Screen (HAB Group 3)	
Percent of adult patients[1] with HIV-infection who had a test for gonorrhea within the measurement year.	
Numerator:	Number of HIV-infected patients who received a test for Gonorrhea[2] in the measurement year
Denominator:	Number of patients with HIV-infection who had a medical visit with a provider with prescribing privileges[3] at least twice in the measurement year
Patient Exclusions:	1. Patient refusal of test, documented in medical record 2. Patients who are <18 yrs of age[4] and deny a history of sexual activity
Data Element:	1. Is the patient HIV-positive? (Y/N) a. If yes, is the patient >18 years or sexually active? (Y/N) i. If yes, was the patient screened for gonorrhea during the reporting period? (Y/N)
Data Sources:	• Electronic Medical Record/Electronic Health Record • CAREWare, Lab Tracker, or other electronic • Medical record data abstraction by grantee of a sample of records.
National Goals, Targets, or Benchmarks for Comparison:	OAPP TFC: 90% None available at this time.
Outcome Measures for Consideration	o Incidence of gonorrhea in the clinic population o Incidence of pelvic inflammatory disease in the clinic population

Basis for Selection and Placement in HAB Group 3:

Early detection and treatment of STDs may reduce the risk for STD and HIV transmission. Providers should screen for STDs to treat infections and decrease HIV transmission to sexual partners. Many STDs increase the number of HIV-infected white blood cells in the genital area and increase the risk of transmitting HIV-infection.[5] STDs can also enhance the risk of transmitting HIV by increasing the viral burden in genital secretions.[6]

STD infections in seronegative partners increase the risk for acquiring HIV because they increase the volume of white blood cells, including those that are targeted by HIV, in the genital region, and may cause ulcerative lesions, increasing the likelihood of infection.[6] Susceptibility to transmission may therefore be enhanced.

Identification and treatment of STDs can reduce the potential for spread of these infections among high-risk groups (i.e., sex or drug-using networks.[7] There are currently no guidelines that delineate annual testing.

US Public Health Guidelines:

"During the first visit, consider testing all patients for urogenital gonorrhea. For subsequent routine visits, repeated tests periodically (i.e. at least annually) for all patients who are sexually active. More frequent periodic screening (e.g. at 3-month to 6-month intervals) may be indicated for asymptomatic persons at higher risk."[8]

References/Notes:

[1]"Patients" include all patients aged 13 years or older.

[2] Preferred gonorrhea screening test is urine NAAT, however if other sites are needed rectal swabs and cervical swabs with NAAT, or other testing methods with comparable sensitivity/specificity, are also appropriate.

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

[4] A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ART, i.e. MD, PA, NP.

[5] Cohen MS. Sexually transmitted diseases enhance HIV transmission: no longer a hypothesis. Lancet 1998;351(suppl 3):5--7

[6] Buchacz K, Patel P, Taylor M, et al. Syphilis increases HIV viral load and decreases CD4 cell counts in HIV-infected patients with new syphilis infections. *AIDS*. 2004 Oct 21;18(15):2075-9

[7] DT Fleming and JN Wasserheit, From epidemiological synergy to public health policy and practice: the contribution of other sexually transmitted diseases to sexual transmission of HIV-infection, *Sex Transm Infect***75** (1999), pp. 3–17.

[8] CDC. Recommendations and Reports: "Incorporating HIV Prevention into the Medical Care of Persons Living with HIV". July 18, 2003/52(RR12);1-24.

Supplemental Measures

<table>
<tr><td colspan="2">Performance Measure 2.4: Substance Use Assessment (HAB Group 3)</td></tr>
<tr><td colspan="2">Percentage of patients[1] with HIV-infection who have been assessed for substance use (alcohol and illicit substances) in the measurement year.</td></tr>
<tr><td>Numerator:</td><td>Number of patients with HIV-infection who were assessed for substance use[2] within the measurement year</td></tr>
<tr><td>Denominator:</td><td>Number of patients with HIV-infection who had a medical visit with a provider with prescribing privileges[3] at least twice in the measurement year</td></tr>
<tr><td>Patient Exclusions:</td><td>None</td></tr>
<tr><td>Data Element:</td><td>1. Is the patient HIV-positive? (Y/N)
a. If yes, was the patient assessed for substance use during the reporting period with documentation in medical record? (Y/N)</td></tr>
<tr><td>Data Sources:</td><td>o Electronic Medical Record/Electronic Health Record
o CAREWare, Lab Tracker, or other electronic data base.
o HIVQUAL reports on this measure for grantee under review
o Medical record data abstraction by grantee of a sample of records.</td></tr>
<tr><td>National Goals, Targets, or Benchmarks for Comparison:</td><td>OAPP TFC: 90%
IHI Goal: 90%[4,5]
National HIVQUAL Performance Data:[4]
<table>
<tr><td></td><td>2003</td><td>2004</td><td>2005</td></tr>
<tr><td>Top 10%</td><td>100%</td><td>100%</td><td>100%</td></tr>
<tr><td>Top 25%</td><td>92.3%</td><td>100%</td><td>100%</td></tr>
<tr><td>Median*</td><td>74.4%</td><td>86.4%</td><td>92.7%</td></tr>
</table>
*from HAB data base</td></tr>
<tr><td>Outcome Measures for Consideration</td><td>o Substance use-related mortality rates
o Rate of substance use-related hospitalizations
o Rate of substance use referrals</td></tr>
<tr><td colspan="2">Basis for Selection and Placement in HAB Group 3:</td></tr>
<tr><td colspan="2">Patients living with HIV-infection must often cope with multiple social, psychiatric, and medical issues. It is important to identify co-morbid illness such as substance use, which may complicate ongoing HIV treatment.</td></tr>
<tr><td colspan="2">US Public Health Guidelines:</td></tr>
<tr><td colspan="2">“The chronic and relapsing nature of substance abuse as a biologic and medical disease, compounded by the high rate of mental illness, additionally complicates the relationship between health care workers and IDU. The first step in provision of care and treatment for these individuals is the recognition of the existence of a substance abuse problem. Whereas this is often open and obvious, patients may hide such behaviors from clinicians. Assessment of the patient for the presence of substance abuse should be part of routine medical history taking and should be done in a clinical, straightforward, and nonjudgmental manner”[6]</td></tr>
<tr><td colspan="2">References/Notes:</td></tr>
<tr><td colspan="2">[1]“Patients” include all patients aged 13 years or older.</td></tr>
</table>

[2] Substance abuse assessment: prior history of substance use and abuse, prior substance abuse treatment, current use/abuse of substances. If patient has no history of substance abuse, annual monitoring for changes in substance use patterns is indicated.

[3] A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ART, i.e. MD, PA, NP.

[4] IHI Measure reads, "Percent of Patients/Patients Assessed for Substance Use and/or Tobacco Use in the Past 12 Months."
http://www.ihi.org/IHI/Topics/HIVAIDS/HIVDiseaseGeneral/Measures/PercentofPatientsPatientsAssessedforSubstanceUseandorTobaccoUseinthePast12Months.htm.

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

[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. November 3, 2008. Available at http://aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf.

Supplemental Measures

<table>
<tr><td colspan="2">Performance Measure 2.5: Mental Health Assessment (HAB Group 3)</td></tr>
<tr><td colspan="2">Percentage of patients[1] with HIV-infection who have had a mental health assessment.</td></tr>
<tr><td>Numerator:</td><td>Number of patients who received a mental health assessment[2] in the measurement year</td></tr>
<tr><td>Denominator:</td><td>Number of patients who had a medical visit with a provider with prescribing privileges[3] at least twice in the measurement year</td></tr>
<tr><td>Patient Exclusions:</td><td>None</td></tr>
<tr><td>Data Element:</td><td>1. Is the patient HIV-positive? (Y/N)
a. If yes, did the patient receive a mental health assessment during the reporting period? (Y/N)</td></tr>
<tr><td>Data Sources:</td><td>o Electronic Medical Record/Electronic Health Record
o CAREWare, Lab Tracker, or other electronic data base.
o HIVQUAL reports on this measure for grantee under review
o Medical record data abstraction by grantee of a sample of records.</td></tr>
<tr><td>National Goals, Targets, or Benchmarks for Comparison:</td><td>OAPP TFC: 90%
National HIVQUAL Data:[4]
<table>
<tr><td></td><td>2003</td><td>2004</td><td>2005</td></tr>
<tr><td>Top 10%</td><td>100%</td><td>100%</td><td>80.6%</td></tr>
<tr><td>Top 25%</td><td>93.0%</td><td>89.5%</td><td>35.1%</td></tr>
<tr><td>Median*</td><td>72.9%</td><td>66.7%</td><td>2.2%</td></tr>
</table>
*from HAB data base</td></tr>
<tr><td>Outcome Measures for Consideration</td><td>o Rate of mental health referrals
o Mental health-related hospitalizations
o Rate of suicide in the clinic population
o Rate of mental health disorders being treated in the clinic population</td></tr>
<tr><td colspan="2">Basis for Selection and Placement in HAB Group 3:</td></tr>
<tr><td colspan="2">Patients living with HIV-infection must often cope with multiple social, psychiatric, and medical issues. Mental health is an important predictor of ART adherence, and therefore may play a substantial role in a patient's ability to attain viral suppression on HIV medication.[5]</td></tr>
<tr><td colspan="2">US Public Health Guidelines:</td></tr>
<tr><td colspan="2">"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 alter outcomes. Once evaluated, these factors should be managed accordingly."[6]</td></tr>
<tr><td colspan="2">References/Notes:</td></tr>
<tr><td colspan="2">[1]"Patients" include all patients aged 13 years or older.
[2] Mental health screen: documentation of prior mental illness, prior treatment of mental illness, documentation of any current mental health symptoms. If patient has no history of prior mental illness, annual monitoring for symptoms of mental illness (i.e. depression/anxiety) is indicated.</td></tr>
</table>

[3] A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ART, i.e. MD, PA, NP.

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

[5] Mellins CA, Havens JF, McDonnell C, et. al AIDS Care. 2009 Feb;21(2):168-77.

[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. November 3, 2008. Available at http://aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf.

Supplemental Measures

Performance Measure 2.6: Hepatitis B Status (HAB Group 3)	
Percentage of patients[1] with HIV-infection who have ever been tested for Hepatitis B status.	
Numerator:	Number of patients who have documentation of Hepatitis B status[2] in the medical record
Denominator:	Number of patients who had a medical visit with a provider with prescribing privileges[3] at least twice in the measurement year
Patient Exclusions:	1. Patient refusal of test
Data Element:	1. Is the patient HIV-positive? (Y/N) a. If yes, is their documentation of Hepatitis B serologic status in the medical record? (Y/N)
Data Sources:	o Electronic Medical Record/Electronic Health Record o CAREWare, Lab Tracker, or other electronic data base o Medical record data abstraction by grantee of a sample of records.
National Goals, Targets, or Benchmarks for Comparison:	OAPP TFC: 90% None available at this time.
Outcome Measures for Consideration	o Incidence of Hepatitis B in clinic population o Hepatitis B-related morbidity and mortality in the clinic population

Basis for Selection and Placement in HAB Group 3:

Hepatitis B virus (HBV) is the leading cause of chronic liver disease worldwide. In developed countries,
HBV is transmitted primarily through sexual contact and injection-drug use. Even though risk factors are similar, HBV is transmitted more efficiently than HIV-1. Although up to 90% of HIV-1–infected persons have at least one serum marker of previous exposure to HBV, only approximately 10% have chronic Hepatitis B, as evidenced by the detection of Hepatitis B surface antigen (HBsAg) in the serum persisting for a minimum of six months.[4]
HIV-1 infection is associated with an increased risk for the development of chronic Hepatitis B after HBV exposure. Limited data indicate that co-infected patients with chronic Hepatitis B infection have higher HBV DNA levels and are more likely to have detectable Hepatitis B e antigen (HBeAg), accelerated loss of protective hepatitis B surface antibody (anti-HBs), and increased risk for liver-related mortality and morbidity.[4]
Co-infection with HIV and HBV can complicate the care and treatment of HIV, and guide the selection of medications for ART. The measure focuses on similar aspects of care (HCV) previously captured in measures listed in HAB Group 1.

US Public Health Guidelines:

"It is not clear that treatment of hepatitis B virus (HBV) improves the course of HIV, nor is there evidence that treatment of HIV alters the course of HBV. However several liver-associated complications that are ascribed to flares in HBV activity or toxicity of antiretroviral agents can affect the treatment of HIV in patients with HBV co-infection. Therefore, providers should know the HBV

status of all patients with HIV. This also will guide the choice of medications for HIV treatment in the context of any possible HBV treatment. For patients who are HBV negative, prophylaxis is recommended. This consists [of] 3 doses of vaccine for "all susceptible patients (i.e., antihepatitis B core antigen-negative)."[4,5]

References/Notes:

[1] "Patients" include all patients aged 13 years or older.

[2] Serologic tests to evaluate for Hepatitis B immunity and chronic Hepatitis B include:

- Hep B Surface Antigen (+/-)
- Hep B Surface Antibody (+/-)
- Additional markers: Hep B Core Antibody (IgG or IgM), Hep B e Antigen

[3] A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ART, i.e. MD, PA, NP.

[4] Centers for Disease Control and Prevention. Guidelines for Prevention and Treatment of Opportunistic Infections in HIV-Infected Adults and Adolescents —Recommendations from CDC, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America. MMWR. March 24, 2009. Volume 58. http://www.aidsinfo.nih.gov/Guidelines/GuidelineDetail.aspx?MenuItem=Guidelines&Search=Off&GuidelineID=211&ClassID=4.

[5] 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. November 3, 2008. Available at http://aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf.

Supplemental Measures

Performance Measure 2.7: Hepatitis B Vaccination (HAB Group 2)	
Percentage of patients[1] with HIV-infection who completed the vaccination series for Hepatitis B.	
Numerator:	Number of HIV-infected patients with documentation of having ever completed the vaccination series for Hepatitis B[2,3]
Denominator:	Number of HIV-infected patients who had a medical visit with a provider with prescribing privileges[4] at least twice in the measurement year
Patient Exclusions:	1. Patients newly enrolled in care during the measurement year 2. Patients with evidence of current HBV infection (Hep B Surface Antigen, Hep B e Antigen, Hep B e Antibody, or Hep B DNA) 3. Patients with evidence of past HBV immunity (Hep B Surface Antibody) 4. Patients with documented refusal of Hepatitis B vaccine in medical record
Data Element:	1. Is the patient HIV-infected? (Y/N) a. If yes, does the patient have documentation of Hepatitis B immunity or HBV-infection? (Y/N) i. If no, is there documentation that the patient has completed the vaccine series for Hepatitis B?(Y/N) ii. Documentation includes dated records (e.g., personal, school, physician, or immunization registry) as evidence of vaccination, or documentation of administration of vaccine dose(s) in medical record, or combination of outside records and medical records to achieve three doses of vaccine
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
National Goals, Targets, or Benchmarks for Comparison:	OAPP TFC = 90% Published data from the HIV Outpatient Study (HOPS) reports 17% of patients with HIV-infection who were eligible for vaccination received at least three doses of vaccine.[5] "Hepatitis B vaccination coverage among adults at high risk…[was] 45% in 2004."[6]
Outcome Measures for Consideration:	o Incidence of Hepatitis B infection in the clinic population
Basis for Selection and Placement in HAB Group 2:	
HBV is the leading cause of chronic liver disease worldwide. In developed countries, HBV is transmitted primarily through sexual contact and injection-drug use. Even though risk factors are similar, HBV is transmitted more efficiently than HIV-1. Although up to 90% of HIV-1–infected persons have at least one serum marker of previous exposure to HBV, only approximately 10% have chronic Hepatitis B, as evidenced by the detection of HBsAg in the serum persisting for a minimum of	

six months.[3]
HIV-1 infection is associated with an increased risk for the development of chronic Hepatitis B after HBV exposure. Limited data indicate that co-infected patients with chronic Hepatitis B infection have higher HBV DNA levels and are more likely to have detectable HBeAg, accelerated loss of anti-HBs, and an increased risk for liver-related mortality and morbidity.[3,7]
There is a protective antibody response in approximately 30% to 55% of healthy adults aged ≤40 years after the first dose of vaccine. After age 40, the proportion of persons with a protective antibody response after a three-dose vaccination regimen declines. In addition to age, other host factors (e.g., smoking, obesity, genetic factors, and immune suppression) contribute to decreased vaccine response. Response to Hepatitis B vaccination also is reduced in other immunocompromised persons (e.g., HIV-infected persons, hematopoietic stem-cell transplant recipients, and patients undergoing chemotherapy).
Measure reflects important aspect of care that impacts HIV-related morbidity and focuses on treatment decisions that affect a sizable population. Measure has a strong evidence base supporting its use.

US Public Health Guidelines:

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

References/Notes:

[1]"Patients" include all patients aged 13 years or older.
[2] Patients in the middle of the vaccination series on 12/31/x would not be captured in the numerator in year x. They would, if the series was completed on schedule, be captured in year x+1.
[3] Centers for Disease Control and Prevention. Guidelines for Prevention and Treatment of Opportunistic Infections in HIV-Infected Adults and Adolescents —Recommendations from CDC, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America. MMWR. March 24, 2009. Volume 58. http://www.aidsinfo.nih.gov/Guidelines/GuidelineDetail.aspx?MenuItem=Guidelines&Search=Off&GuidelineID=211&ClassID=4.
[4]A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ART, i.e. MD, PA, NP.
[5] Tedaldi EM, Baker RK, Moorman AC, Wood KC, Fuhrer J, McCabe RE, Holmberg SD; HIV Outpatient Study (HOPS) Investigators. Hepatitis A and B vaccination practices for ambulatory patients infected with HIV. Clinical Infectious Diseases. 2004 May 15;38(10):1478-84. (http://www.journals.uchicago.edu/CID/journal/issues/v38n10/32448/32448.web.pdf)
[6] Centers for Disease Control and Prevention. Hepatitis B Vaccination Coverage Among Adults — United States, 2004. MMWR 2006;55:509-11 (http://www.cdc.gov/mmwr/PDF/wk/mm5518.pdf)
[7] 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. November 3, 2008. Available at http://aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf.

Supplemental Measures

Performance Measure 2.8: Toxoplasmosis screen (HAB Group 3)	
Percent of patients[1] with HIV-infection who ever received screening for *Toxoplasma gondii*	
Numerator:	Number of HIV-infected patients who have documented Toxoplasma status in medical record
Denominator:	Number of HIV-infected patients who had a medical visit with a provider with prescribing privileges[2] at least twice in the measurement year
Patient Exclusions:	1. Patients with known toxoplasmosis (i.e *T. gondii* encephalitis) 2. Patient refusal of test
Data Element:	1. Is the patient HIV-positive? (Y/N) a. If yes, is there documentation of patient's Toxoplasma status in the medical record (Toxoplasma IgG antibody)? (Y/N)
Data Sources:	o Electronic Medical Record/Electronic Health Record o CAREWare, Lab Tracker, or other electronic o Medical record data abstraction by grantee of a sample of records.
National Goals, Targets, or Benchmarks for Comparison:	OAPP TFC: 90% None available at this time
Outcome Measures for Consideration	o Toxoplasmosis-related mortality rates in the clinic population o Incidence of Toxoplasmosis in the clinic population
Basis for Selection and Placement in HAB Group 3:	
Clinical disease is rare among patients with CD4 counts >200 cells/mm^3. The greatest risk is among patients with a CD4 cell count < 50/*u*l. HIV-infected patients with TE are almost uniformly seropositive for antitoxoplasma IgG antibodies.[2] The measure overlaps and focuses on similar aspects of care (prophylaxis) previously captured in measures listed in HAB Group 1.	
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 (BIII)"[3] "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 T lymphocyte counts decline to <100/*u*l to determine whether they have seroconverted and are therefore at risk for TE (CIII)"[3]	
References/Notes:	
[1]"Patients" include all patients aged 13 years or older. [2] A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ART, i.e. MD, PA, NP. [3] Centers for Disease Control and Prevention. Guidelines for Prevention and Treatment of Opportunistic Infections in HIV-Infected Adults and Adolescents —Recommendations from CDC, the	

National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America. MMWR. March 24, 2009. Volume 58. http://www.aidsinfo.nih.gov/Guidelines/GuidelineDetail.aspx?MenuItem=Guidelines&Search=Off&GuidelineID=211&ClassID=4.

Supplemental Measures

Performance Measure 2.9: Hepatitis A Vaccination	
Percentage of patients[1] with HIV-infection who have received complete dosing regimen (two doses) against Hepatitis A.	
Numerator:	Number of HIV-infected patients who ever completed the vaccination series for Hepatitis A
Denominator:	Number of HIV-infected patients who had a medical visit with a provider with prescribing privileges[2] at least twice in the measurement year
Patient Exclusions:	1. Patients newly enrolled in measurement year 2. Patients with documented immunity to Hepatitis A (Hepatitis A IgG Antibody) 3. Patients with documented refusal of Hepatitis A vaccination 4. Patients with hypersensitivity to Hepatitis A vaccine or its components
Data Element:	1. Is the patient HIV-positive? (Y/N) a. If yes, is their documentation that the patient has completed the regimen (two doses) for Hepatitis A virus in the medical record? (Y/N) b. Includes dated records (e.g., personal, school, physician, or immunization registry) as evidence of vaccination, or documentation of administration of Hepatitis A vaccine dose(s) in medical record, or combination of outside records and medical records to achieve two doses of Hepatitis A vaccine.
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
National Goals, Targets, or Benchmarks for Comparison:	OAPP TFC = 90% None available at this time
Outcome Measures for Consideration	o Incidence of acute Hepatitis A infection in clinic population
Basis for Selection and Placement in HAB Draft Group 3:	
Between 1980 and1995, approximately 22,000 to 36,000 cases of hepatitis A were reported annually in the United States, representing an average of 271,000 infections per year.[3] As with other individuals infected with hepatitis B and C, HIV-infected patients are at risk of decompensation of their underlying liver disease if they encounter hepatitis A. The US PHS, Infection Disease Society of America (IDSA), and Advisory Committee on Immunization Practices (ACIP) guidelines recommend immunization of all susceptible HIV-infected patients who have chronic liver disease or are at increased risk for hepatitis A infection.[3,4] These patients include: • Patients with chronic hepatitis B or C • Injection drug users	

- MSM
- Hemophiliacs

The measure overlaps and focuses on similar aspects of care (vaccination) previously captured in measures listed in HAB Groups 1 and 2.

US Public Health Guidelines:

"Because fulminant hepatic failure from hepatitis A virus (HAV) infection occurs at increased frequency in person with chronic liver disease, persons susceptible to HAV should receive two doses of HAV vaccine (BIII). HAV vaccine should be administered before the CD4 T-lymphocyte count declines to 200 cells/uL because the response will probably be better.[4]

"All patients with HBV should receive hepatitis A vaccine, if found not be immune at baseline (i.e. absence of hepatitis A antibody)"[5]

References/Notes:

[1]"Patients" include all patients aged 13 years or older.

[2] A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ART, i.e. MD, PA, NP.

[3] Centers for Disease Control and Prevention. Prevention of hepatitis A through active or passive immunization: recommendations of the Advisory Committee on Immunization Practices (ACIP), MMWR 2006;55(No. RR-07). http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5507a1.htm."

Centers for Disease Control and Prevention. Guidelines for Prevention and Treatment of Opportunistic Infections in HIV-Infected Adults and Adolescents —Recommendations from CDC, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America. MMWR. March 24, 2009. Volume 58. http://www.aidsinfo.nih.gov/Guidelines/GuidelineDetail.aspx?MenuItem=Guidelines&Search=Off&GuidelineID=211&ClassID=4.

[5] 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. November 3, 2008. Available at http://aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf.

Supplemental Measures

<table>
<tr><td colspan="2">Performance Measure 2.10: Pneumococcal Vaccination (HAB Group 3)</td></tr>
<tr><td colspan="2">Percentage of patients[1] with HIV-infection who have ever received a pneumococcal vaccination.</td></tr>
<tr><td>Numerator:</td><td>Number of patients who ever received a pneumococcal vaccination</td></tr>
<tr><td>Denominator:</td><td>Number of HIV-infected patients who had a medical visit with a provider with prescribing privileges[2] at least twice in the measurement year</td></tr>
<tr><td>Patient Exclusion:</td><td>1. Patients with documented refusal of pneumococcal vaccine
2. Patients with hypersensitivity to pneumococcal vaccine or its components</td></tr>
<tr><td>Data Element:</td><td>1. Is the patient HIV-positive? (Y/N)
a. If yes, is there documentation in the chart that the patient received the pneumococcal vaccine within the past five years? (Y/N)
b. Includes dated records (e.g., personal, school, physician, or immunization registry) as evidence of vaccination, or documentation of administration of pneumococcal vaccine in medical record in past five years</td></tr>
<tr><td>Data Sources:</td><td>• 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>OAPP TFC: 90%
National HIVQUAL Data:[3]
<table>
<tr><td></td><td>2003</td><td>2004</td><td>2005</td></tr>
<tr><td>Top 10%</td><td>97.7%</td><td>95.8%</td><td>97.5%</td></tr>
<tr><td>Top 25%</td><td>92.4%</td><td>90.1%</td><td>93.0%</td></tr>
</table>
*from HAB data base</td></tr>
<tr><td>Outcome Measures for Consideration</td><td>o Incidence of pneumococcal infection in clinical population</td></tr>
<tr><td colspan="2">Basis for Selection and Placement in HAB Group 3:</td></tr>
<tr><td colspan="2">Bacterial pneumonia is a common cause of HIV-1 related morbidity. Incidence of approximately 100 cases per 1,000 HIV-1 infected persons per year have been reported, a rate much higher than in the non-infected population. The most consistent predictor of bacterial infections is CD4 cell count.[4]
The measure overlaps and focuses on similar aspects of care (vaccination) previously captured in measures listed in HAB Group 2.</td></tr>
<tr><td colspan="2">US Public Health Guidelines:</td></tr>
<tr><td colspan="2">“Adults and adolescents who have a CD4+ T-lymphocyte count of > 200 cells/uL should be administered a single does of 23-valent polysaccharide pneumococcal vaccine (PPV) if they have not received this vaccine during the previous five years (BII)”. Revaccination can be considered for patients who were initially immunized when their CD4+ T-lymphocyte counts were < 200 cells/uL in response to ART (CIII).[5]
“If earlier vaccination status is unknown, patients in this group [immunocompromised, including HIV]</td></tr>
</table>

should be administered pneumococcal vaccine."[6]

References/Notes:

[1] "Patients" include all patients aged 13 years or older.

[2] A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ART, i.e. MD, PA, NP.

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

[4] 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).

[5] Centers for Disease Control and Prevention. Guidelines for Prevention and Treatment of Opportunistic Infections in HIV-Infected Adults and Adolescents —Recommendations from CDC, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America. MMWR. March 24, 2009. Volume 58. http://www.aidsinfo.nih.gov/Guidelines/GuidelineDetail.aspx?MenuItem=Guidelines&Search=Off&GuidelineID=211&ClassID=4.

[6] Centers for Disease Control and Prevention. Prevention of Pneumococcal Disease: Recommendations of the Advisory Committee on Immunization Practices (ACIP) – MMWR April 4, 1997, Vol 46, No. RR-8.

Supplemental Measures

Performance Measure 2.11: Influenza Vaccination (HAB Group 3)	
Number of HIV-infected patients[1] who received influenza vaccination within the measurement period[2].	
Numerator:	Number of HIV-infected patients who received influenza vaccination within the measurement period
Denominator:	Number of HIV-infected patients who had a medical visit with a provider with prescribing privileges[3] at least twice in the measurement period
Patient Exclusions:	1. Patient refusal of influenza vaccine documented in the chart 2. Hypersensitivity to influenza vaccine or allergy to its components including thimerosal, chicken protein, and egg protein 3. Previous diagnosis of Guillain-Barre Syndrome
Data Element:	1. Is the patient HIV-infected? (Y/N) 2. If yes, is there documentation in the chart that the patient received influenza vaccine in the past 12 months? (Y/N) a. Includes dated records (e.g., personal, school, physician, or immunization registry) as evidence of vaccination, or documentation of administration of Influenza vaccine in medical record in measurement year
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:	OAPP TFC: 90% None available at this time
Outcome Measures for Consideration	o Mortality rates from influenza and pneumonia in the clinical population
Basis for Selection and Placement in HAB 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 > 65 years, children less than two years, and persons of any age who have medical conditions that place them at increased risk for complications of influenza, including HIV.[4] Influenza vaccination is the primary method for preventing influenza and its severe complications.[4] 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.[3] The measure overlaps and focuses on similar aspects of care (vaccination) previously captured in measures listed in HAB Group 2. Given the timeframe involved, the data collection process is complicated.	
US Public Health Guidelines:	

"As indicated in this report from the Advisory Committee on Immunization Practices (ACIP), annual influenza vaccination is now recommended for….adults and children who have required regular medical follow-up or hospitalization during the preceding year because of …immunodeficiency (including…human immunodeficiency virus)."[4] "Because influenza can result in serious illness and because vaccination with inactivated influenza vaccine might result in the production of protective antibody titers, vaccination might benefit HIV-infected persons, including HIV-infected pregnant women. Therefore, influenza vaccination is recommended." [4]
References/Notes:
[1]"Patients" include all patients aged 13 years or older. [2] Due to the unique nature of this measure and Influenza season/vaccine administration, 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 ART, i.e. MD, PA, NP. [4] Centers for Disease Control and Prevention. Prevention and Control of Influenza: Recommendations from the Advisory committee on Immunization Practices (ACIP). MMWR 6006; 55(early release); pp 1-41.

Supplemental Measures

Performance Measure 2.12: Hepatitis /HIV Alcohol Counseling (HAB Group 3)	
Percentage of patients[1] with HIV and Hepatitis B (HBV) or Hepatitis C (HCV) infection who received alcohol counseling within the measurement year.	
Numerator:	Number of HIV-infected patients who are co-infected with HBV[2] or HCV who received alcohol counseling within the measurement year
Denominator:	Number of HIV-infected patients who • Are co-infected with HBV or HCV • had a medical visit with a provider with prescribing privileges[3] twice within the measurement year
Patient Exclusions	None
Data Element:	1. Is the patient HIV-positive? (Y/N) a. If yes, is the patient HBV or HCV-positive? (Y/N) i. If yes, did the patient receive alcohol counseling that was documented in the medical record during the reporting period? (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
National Goals, Targets, or Benchmarks for Comparison:	OAPP TFC: 90% None available at this time.
Outcome Measures for Consideration	o Hepatitis-related mortality rates in the clinical population
Basis for Selection and Placement in HAB Group 3:	
Discussion of substance use allows the clinician to 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 comorbidity and anemia. It also concluded that alcohol problems are often missed by providers thus increasing the need for routine screening.[4] Long-term studies of patients with chronic HCV infection show that between 2% to 20% develop cirrhosis in 20 years. This rate of progression increases with older age, alcoholism, and HIV-infection.[4] The definition of "counseling" varies considerably, which 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…"[5]	
References/Notes:	
[1]"Patients" include all patients aged 13 years or older. [2] Markers of Hepatitis B infection include Hep B Surface Antigen, Hep B e Antigen, Hep B e Antibody	

or Hep B DNA.

[3] A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ART, i.e. MD, PA, NP.

[4] 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? JAIDS Journal of Acquired Immune Deficiency Syndromes 33:521–525.

[5] 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. November 3, 2008. Available at http://aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf.

Supplemental Measures

<table>
<tr><td colspan="2">Performance Measure 2.13: Tobacco Cessation (HAB Group 3)</td></tr>
<tr><td colspan="2">Percentage of patients[1] with HIV-infection who received tobacco cessation counseling within the measurement year.</td></tr>
<tr><td>Numerator:</td><td>Number of HIV-infected patients who received tobacco cessation counseling within the measurement year</td></tr>
<tr><td>Denominator:</td><td>Number of HIV-infected patients who:
• Used tobacco products within the measurement year, and
• had a medical visit with a provider with prescribing privileges[2] twice within the measurement year</td></tr>
<tr><td>Patient Exclusions:</td><td>1. Patients who deny tobacco use throughout the measurement year</td></tr>
<tr><td>Data Element:</td><td>1. Is the patient HIV-positive? (Y/N)
a. If yes, did the patient use tobacco during the reporting period? (Y/N)
i. If yes, did the patient receive tobacco cessation counseling documented in the medical record during the reporting period? (Y/N)</td></tr>
<tr><td>Data Sources:</td><td>• 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>OAPP TFC: 90%
National HIVQUAL Data:[3]
<table>
<tr><td></td><td>2003</td><td>2004</td><td>2005</td></tr>
<tr><td>Top 10%</td><td>100%</td><td>100%</td><td>100%</td></tr>
<tr><td>Top 25%</td><td>93.3%</td><td>97.8%</td><td>98.4%</td></tr>
<tr><td>Median*</td><td>75.8%</td><td>90.0%</td><td>88.2%</td></tr>
</table>
*from HAB data base</td></tr>
<tr><td>Outcome Measures for Consideration</td><td>o Rate of head and neck, and lung cancer
o Rate of tobacco use in the clinical population</td></tr>
<tr><td colspan="2">Basis for Selection and Placement in HAB Group 3:</td></tr>
<tr><td colspan="2">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.</td></tr>
<tr><td colspan="2">US Public Health Guidelines:</td></tr>
</table>

"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]"Patients" include all patients aged 13 years or older. [2]A "provider with prescribing privileges" is a health care professional who is certified in their jurisdiction to prescribe ART, i.e. MD, PA, NP. [3] http://www.hivguidelines.org/admin/files/qoc/hivqual/proj%20info/HQNatlAggScrs3Yrs.pdf) [4] Phillips, Abstract #8, CROI, Boston, MA 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.