ATLANTA ELIGIBLE METROPOLITAN AREA
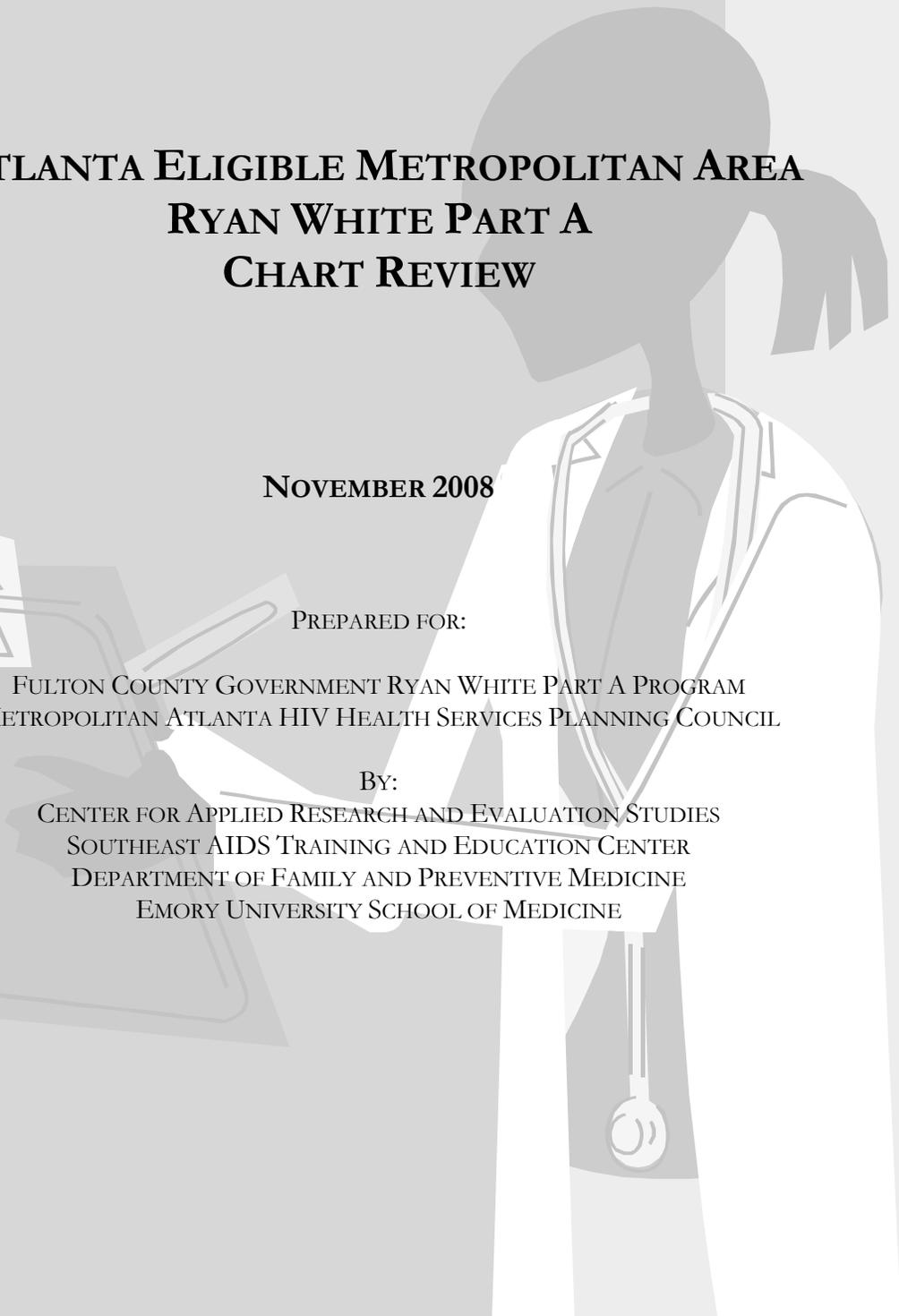# RYAN WHITE PART A
CHART REVIEW

NOVEMBER 2008

PREPARED FOR:

FULTON COUNTY GOVERNMENT RYAN WHITE PART A PROGRAM
METROPOLITAN ATLANTA HIV HEALTH SERVICES PLANNING COUNCIL

BY:
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ACKNOWLEDGEMENTS

RESEARCH TEAM

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Introduction

BACKGROUND

The 2007 Atlanta Eligible Metropolitan Area (EMA) Ryan White Part A primary care chart review was conducted by the Center for Applied Research and Evaluation Studies (CARES) at the Southeast AIDS Training and Education Center (SEATEC), Department of Family and Preventive Medicine at the Emory University School of Medicine. Consulting services were provided by Barbara J. Blake, RN, PhD and Gloria Ann Jones Taylor, DSN, RNc. This study was conducted on behalf of the Fulton County Government Ryan White Part A Program and the Metropolitan Atlanta HIV Health Services Planning Council (Planning Council).

The chart review is based on methods of quality improvement that focus on the processes and systems of care delivery rather than the performance of individual practitioners. Performance measurement data provide the foundation upon which systems can be analyzed and decisions to improve care can be made.[1]

> *"Quality of care is the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge."*
>
> *-Institute of Medicine[2]*

METHODOLOGY

Study planning was initiated at a meeting in the summer of 2007 attended by staff of Fulton County Government and CARES. At this meeting, the purpose and scope of the chart review were discussed and developed. The purpose of the chart review was to examine the extent to which Ryan White Part A funded primary care sites were providing care that meets quality of care indicators approved by the Planning Council and HRSA's Draft HIV Clinical Quality Performance Measures for Adult/Adolescent Clients. Since 2005, the Planning Council Quality Management Committee has been charged with developing and updating these indicators based on standards developed by the Planning Council's task forces and HRSA Performance Measures. The 2003-2004 Chart Review, the first in the Atlanta EMA and conducted by CARES, provided baseline quality of care measures for use in the development of primary care quality management standards and indicators in the EMA, based on Public Health Service Guidelines and acceptable clinicl practices. Given that the newly developed EMA standards and indicators and HRSA performance measures have not previously been measured in an EMA system-wide chart review, this quality study is intended to provide baseline measures for use in measuring performance and identifying areas for quality improvement in HIV primary care in the Atlanta EMA.

All 8 Part A funded primary care sites participated in this quality study. A total of 362 charts were reviewed across the 8 sites for documentation during the study time period July 1, 2006 to June 30, 2007 and back to initial diagnosis. The final sample was intended to be representative by gender of the client population served at each individual clinic. Demographic information such as race,

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[1] New York State Department of Health, AIDS Institute. Clinical Management of HIV Infection: Quality of Care Performance in New York State 1999-2001. October 2003.
[2] National Academy of Sciences, Institute of Medicine. Crossing the Quality Chasm: The IOM Health Care Quality Initiative. 2004. http://www.iom.edu/focuson.asp?id=8089

ethnicity, and age were collected because these factors could potentially impact the care and subsequently the health of the client.

DATA COLLECTION TOOL

An extensive literature review, examination of existing Public Health Service Guidelines, and analysis of existing quality management chart review tools used in other jurisdictions were conducted. The tool was then developed to meet the study scope and piloted in a Ryan White clinical setting; modifications were made as needed and the tool was finalized in October 2007. A copy of the tool can be found in the Appendices.

CHART REVIEW PROCESS

All charts were reviewed by registered nurse consultants that have a quality management background. The nurse consultants were trained by SEATEC staff on the protocol for chart selection and use of the chart review tool.

The HIVQUAL sampling methodology[3] used was a non-probability systematic sampling technique with a random start. Sample selection was stratified based on the gender composition of active clients at each clinic. While not a probability sample, this methodology was chosen to ensure that, to the extent possible given the structure of the clinics, the resulting data were representative of the clinic population. The study sample size was chosen based on determination of adequate size for a 95% degree of confidence that can be generalized to the study population.

For each chart pulled, reviewers determined whether the client met the study **selection criteria**:
- At least 18 years old
- Alive
- Has had at least two medical visits within the review period
- Has had at least one medical visit in the last 6 months of the review period
- The entire chart (if multiple volumes) was accessible

Once it was determined that the chart met the selection criteria, data for each chart were recorded directly onto the tool, which was returned to the SEATEC office within three days of the review. The data were then entered into a database in preparation for analysis. Reviews were conducted between October 2007 and December 2007.

DATA CONSIDERATIONS

The chart review conducted by CARES on behalf of the Fulton County Government Ryan White Part A Program and the Planning Council provides a snapshot of clinic practices. The data collected were not intended to capture the historical clinic-patient relationship, but to provide information on the clinic's documentation of current primary care practices for a representative sample of clients.

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[3] Sampling Methodology 2006 – Within NYS. The 2006 HIVQUAL Project Sampling Method (Instructions for Facilities within New York State. February 15, 2007.

Important considerations are that documentation may not reflect all clinical care provided to the clients. In addition, systematic factors such as services being provided off-site and/or documented at a separate location could impact the documentation completeness of reviewed services and therefore should be considered prior to making changes to the provision of clinical care at any site.

Charts were reviewed mainly for the study period of July 1, 2006 to June 30, 2007; however, for some indicators review goes back to the time of initial HIV diagnosis. Numerator and denominator criteria for the study indicators are defined in the Measures and Results sections. Clients at the individual clinics must meet the study selection criteria outlined on page 2 as well as specific denominator criteria for an indicator to be included in the population for that indicator. Due to the timing of the development of the chart review tool and study initiation, HRSA indicators are based on the draft *HAB HIV Clinical Quality Performance Measures: Adults and Adolescent Clients* document disseminated in August 2007. The EMA indicators are based on the final *Quality of Service Indicators - Ambulatory Outpatient Care* document approved by the Planning Council on September 15, 2005.

Specific exclusion criteria for each indicator are discussed in the separate sections of the report. It is important to note that if no clients at an individual clinic met the denominator criteria for a specific indicator, the indicator is not applicable to that site. In these cases, the clinic will not appear in the bar charts presented in the results. Also, in the bar charts, the average EMA bar line on each individual bar chart may not exactly match the overall averages in the text or in the results table in the Appendices. The analysis program calculates an average of the percentages of the clinics in creating the average bars in the charts as opposed to an average of the total individual numerator and denominator counts of the clinics.

Also, please make note of the following for indicators that specify date criteria. For indicators that refer to a primary care service received in the "last 12 months," this includes services on June 30, 2007, the last day of the study period, and the previous 12 months. Similarly, for an indicator that refers to "enrolled in care >3 months," the client's initial visit had to be prior to April 1, 2007, which is 3 months prior to the last day of the study period.

KEY FINDINGS

Table A reflects the overall results of the chart review. The current chart review cannot be compared to the 2003-2004 Chart Review to determine if an expected level of performance was met because newly established indicators are being measured in this study. These data may provide guidance to explore potential areas for improvements as the Atlanta EMA establishes threshold measures for primary medical care. More detailed discussion on each indicator can be found in the separate sections of the report.

Overall, the Part A funded primary care sites in the Atlanta EMA are providing high quality HIV primary care. Six out of 19 EMA measures are ≥90 percent compliant, 10 are ≥80 percent compliant and 14 are ≥70 percent compliant. Four out of 17 HRSA measures ≥90 percent compliant, 10 are ≥80 percent compliant and 11 are ≥70 percent compliant.

Table A: Percent Compliance by Indicator

Indicator	EMA Quality Indicators Compliance	HRSA Performance Measures Compliance	National Benchmarks: IHI Goal[4]
Adherence Counseling	67.0%	83.5%	90%
HAART	93.1%	92.9%	90%
ARV Therapy for Pregnant Women	80.0%	80.0%	none available
Oral Exam	n/a	27.6%	75%
Problem List	88.4%	n/a	none available
Allergies or No Known Allergies	70.7%	n/a	none available
Hepatitis A Screen	89.0%	n/a	none available
Hepatitis B Screen	90.6%	90.6%	none available
Hepatitis C Screen	95.3%	95.3%	95%
CD4 T-Cell Count	93.7%	93.7%	90%
Viral Load	46.6%	n/a	none available
Medical Visits	88.4%	88.4%	none available
Nutritional Counseling or Assessment	43.2%	n/a	none available
Assessment of Opportunistic Infections	98.6%	n/a	none available
MAC Prophylaxis	n/a	69.6%	none available
PCP Prophylaxis	78.1%	81.4%	none available
Pap Test	63.1%	62.0%	90%
TB Screening	64.8%	88.9%	none available
Risk Reduction Counseling	n/a	79.0%	none available
Alcohol Counseling for HIV/HCV Co-Infected	n/a	53.2%	none available
Chlamydia Screen	73.8%	55.8%	none available
Gonorrhea Screen	74.9%	56.4%	none available
Syphilis Screen	96.7%	80.1%	90%

REVIEWER OBSERVATIONS

There were site-specific issues impacting documentation that the reviewers noted during their examination of the site charts. These observations may assist in focusing efforts to enhance quality of care in needed areas. In some cases at the various sites:

- Charts had documented services that were missing initials
- Charts had inconsistent documentation
- Charts had unclear documentation
- Charts were difficult to read
- Charts were missing notes

REPORT FORMAT

The chart review results are presented in 12 sections by topic. Each section contains a background summary, discussion, specific numerator and denominator criteria, and results for both EMA and HRSA quality of care indicators, including the results for the system as a whole compared to

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[4] HIV/AIDS: Measures [Accessed November 2008]
(http://www.ihi.org/IHI/Topics/HIVAIDS/HIVDiseaseGeneral/Measures/)

individual clinics. Each clinic is identified by a randomly assigned number. Appendices include the results by site and the system as a whole, as well as a copy of the chart review tool. Questions regarding this study should be directed to the Project Director, Rebecca Culyba, MA, PhD at 404-727-4909 or rculyba@emory.edu.

Antiretroviral Therapy

BACKGROUND

Antiretroviral (ARV) combination therapy, since its advent in 1996, has significantly improved in the suppression of the HIV virus and in reducing replication of the HIV virus. Appropriate ARV management incorporating highly active antiretroviral therapy (HAART) improves patient quality of life, restores and/or preserves immune functions, limits the likelihood of viral resistance, reduces the incidence of opportunistic infections, and decreases HIV-related morbidity and mortality.[5] The effectiveness of ARV therapy is measured by changes in viral load and CD4 T-cell laboratory tests.

US Public Health Services Guidelines recommend ARV therapy for "all patients with a history of an AIDS-defining illness or severe symptoms of HIV infection regardless of CD4 T-cell count."[6] Clinical trials provide evidence of reduced disease progression and improved survival by treating symptomatic patients with a CD4 T-cell count <200 cell/mm^3.[6]

In pregnant women, ARV therapy can reduce perinatal HIV-1 transmission by nearly 70%.[7] US Public Health Service Guidelines state that the benefits of antiretroviral therapy for a pregnant woman must be weighed against the risk of adverse events to the woman, fetus, and newborn.[7] Evaluation of a pregnant woman should include an assessment of HIV-1 disease status and recommendations regarding antiretroviral treatment or alteration of her current antiretroviral regimen.[7]

"Antiretroviral adherence is a key determinant in the degree and duration of virologic suppression. Among studies reporting on the association between suboptimal adherence and virologic failure, nonadherence among patients on HAART was the strongest predictor for failure to achieve viral suppression below the level of detection."[8] Due to the adverse side effects reported with all ARVs, medication nonadherence is common among patients. According to US Public Health Service Guidelines, adherence counseling and assessment should be completed at each clinical encounter.[9]

MEASURES AND RESULTS

Three separate clinical practices were examined in this section: antiretroviral medication (ARV) adherence counseling, highly active antiretroviral therapy (HAART), and ARV therapy for pregnant women. Atlanta EMA and HRSA indicators have different criteria. Only 4 clinics had clients that met denominator criteria for ARV therapy for pregnant women for both the EMA and HRSA indicators. In order for a clinic to receive credit for appropriate treatment, each clinical practice had

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[5] Percent of Patients with Appropriate ARV Therapy Management
(http://www.ihi.org/IHI/Topics/HIVAIDS/HIVDiseaseGeneral/Measures/PercentofPatientswithAppropriateARVTherapyManagement.htm)
[6] ftp://ftp.hrsa.gov/hab/habGrp1PMs08.pdf
[7] Recommendations for Use of Antiretroviral Drugs in Pregnant HIV-1-Infected Women for Maternal Health and Interventions to Reduce Perinatal HIV-1 Transmission in the United States
(http://aidsinfo.nih.gov/ContentFiles/PerinatalGL.pdf)
[8] Guidelines for the Use of Antiretroviral Agents in HIV-1-Infected Adults and Adolescents
[April 7, 2005] (http://aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL04072005001.pdf)
[9] Guidelines for the Use of Antiretroviral Agents in HIV-1-Infected Adults and Adolescents [January 29, 2008] (http://aidsinfo.nih.gov/contentfiles/AdultandAdolescentGL.pdf)

to have been documented as completed within the recommended time frame. Across all sites, the EMA indicator average for: adherence counseling was 67%, HAART was 93%, and ARV therapy for pregnant women was 80%. Across all sites, the HRSA indicator average for: adherence counseling was 83%, HAART was 93%, and ARV therapy for pregnant women was 80%.

ADHERENCE COUNSELING

EMA INDICATOR (n=273): 90% of HIV infected clients on ARV therapy will be assessed for adherence at least every four months
- Numerator: Number of HIV infected clients who received adherence counseling at least four months apart
- Denominator: Number of HIV infected clients who were prescribed ARV therapy
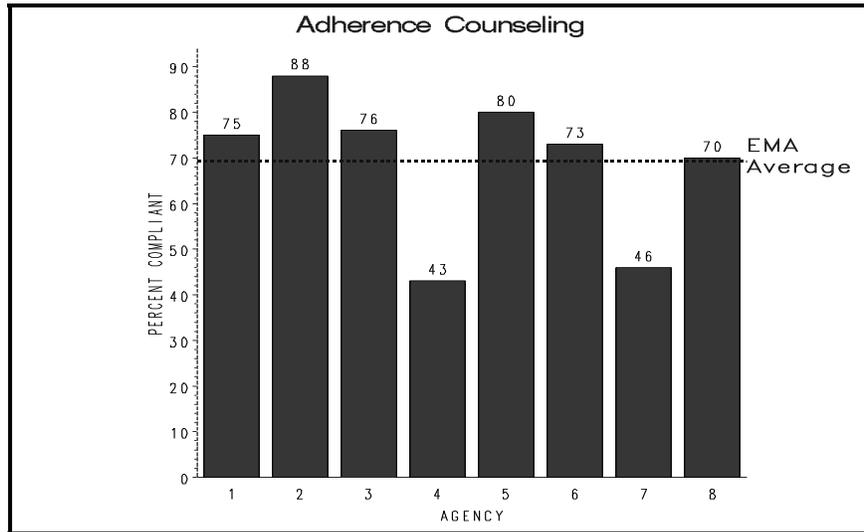
HRSA INDICATOR (n=248): Percentage of clients with HIV infection on ARVs who receive adherence counseling at least every 6 months
- Numerator: Number of clients who received adherence counseling during appointments 6 months (or less) apart
- Denominator: Number of clients with HIV infection on ARV therapy who: received care from the grantee for 6 months or more, were prescribed ARV, and were seen within the measurement year
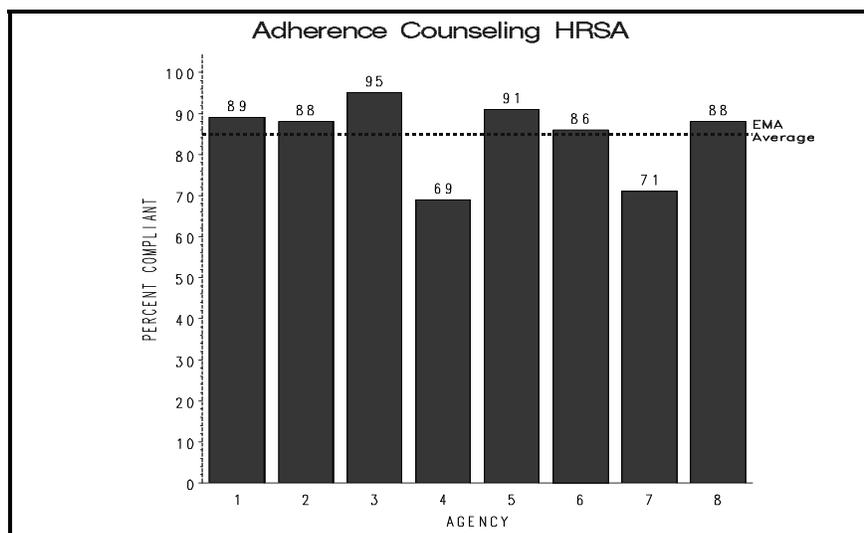
HAART

EMA INDICATOR (n=130): 95% of clients with AIDS (enrolled in care >3 months) will be prescribed HAART medication
- Numerator: Number of clients with AIDS prescribed HAART
- Denominator: Number of clients with AIDS enrolled in care >3 months
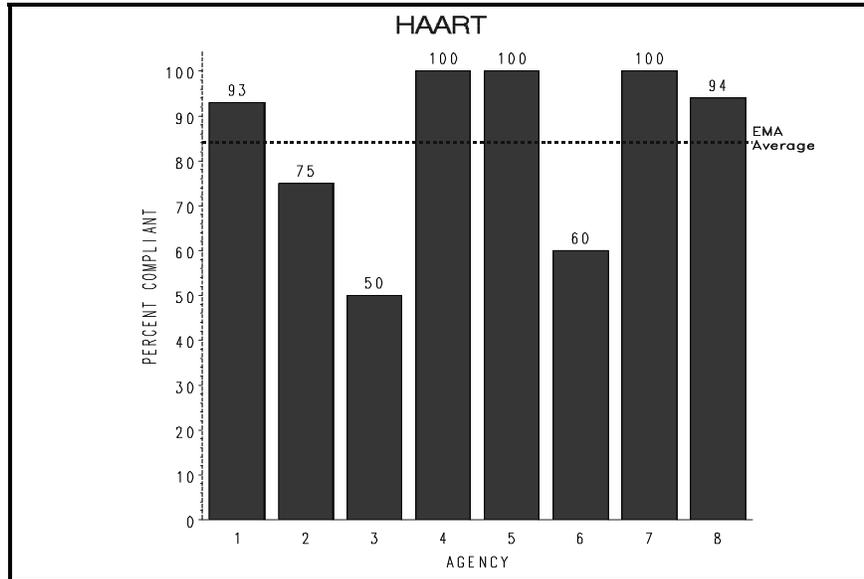
HRSA INDICATOR (n=140): Percentage of adolescent and adult clients with AIDS who are prescribed HAART
- Numerator: Number of clients who were prescribed a HAART regimen within the measurement year
- Denominator: Number of clients who: have a diagnosis of AIDS (history of a CD4+ count below 200/μL or other AIDS defining condition), and were seen within the measurement year
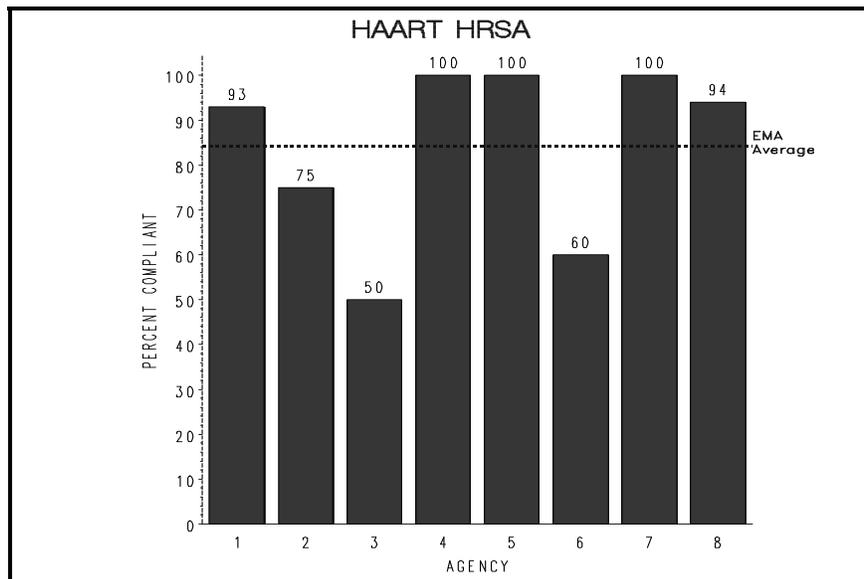
ARV THERAPY FOR PREGNANT WOMEN

EMA INDICATOR (n=5): 90% of pregnant women with HIV infection will be prescribed HAART (excluding those in the first trimester; those enrolled in care during the last 3 months of the measurement year; and those not presenting for prenatal care)
- Numerator: Number of HIV infected pregnant women who are prescribed antiretroviral therapy
- Denominator: Number of HIV infected pregnant women
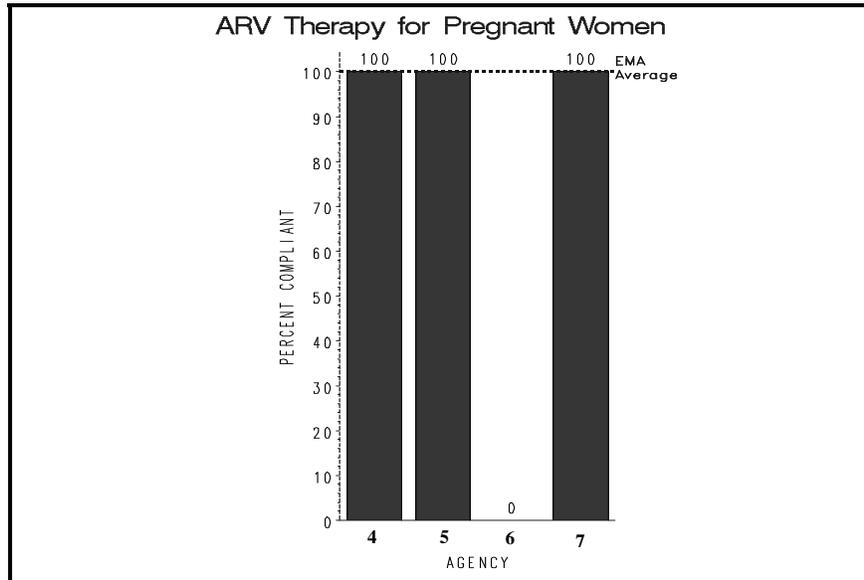
HRSA INDICATOR (n=5): Percentage of pregnant women with HIV infection who are on antiretroviral therapy
- Numerator: Number of pregnant clients who were placed on an appropriate antiretroviral therapy regimen during the antepartum period
- Denominator: Number of pregnant clients with HIV infection who were seen within the measurement year
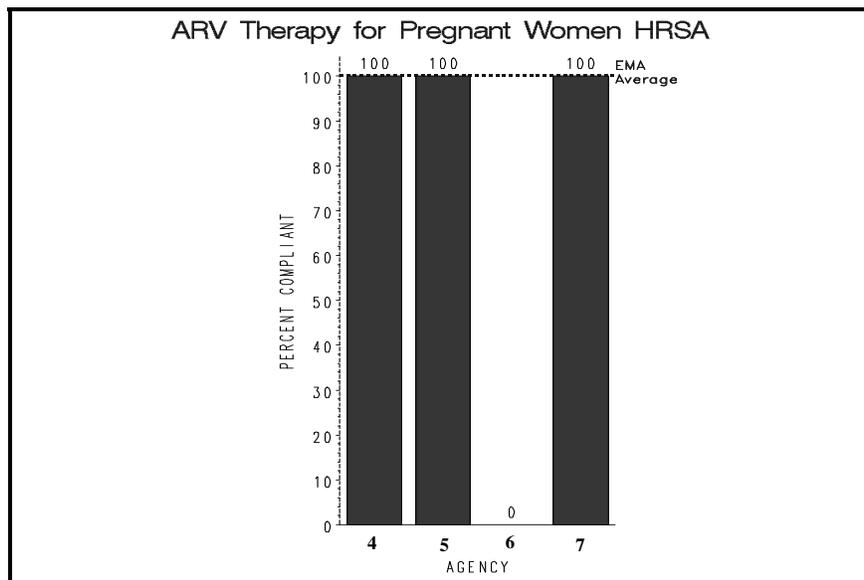
Assessments

BACKGROUND

Documentation of the client's clinical background including identified problems and known allergies is critical to HIV treatment. Problem oriented charts add a new dimension to HIV care. A problem list should be created at the patient's initial HIV care visit as a part of initial assessment. Problem areas that need to be documented in the problem list include: nutrition barriers, lifestyle, weight or body composition, physical problems, laboratory findings, gastrointestinal, poor diet, co-morbid conditions, medications, and supplements.[10]

Listing the patient's problems obtained during assessment gives obvious direction to the development of an appropriate HIV care plan that includes predictions and goals.[11] Adequate and accurate documentation of problems and allergies is essential in making patient care decisions and in developing appropriate treatment plans. Unknown problems and/or allergies may hinder clinical progress and interfere with ARV therapy.

MEASURES AND RESULTS

Two separate clinical practices were examined in this section: presence of a problem list and consistent allergy documentation. These are both Atlanta EMA indicators. In order for a clinic to receive credit for appropriate treatment, each practice had to have been documented as completed within the recommended time frame. Across all sites, the EMA indicator average for: problem list was 89% and allergies or no known allergies was 71%.
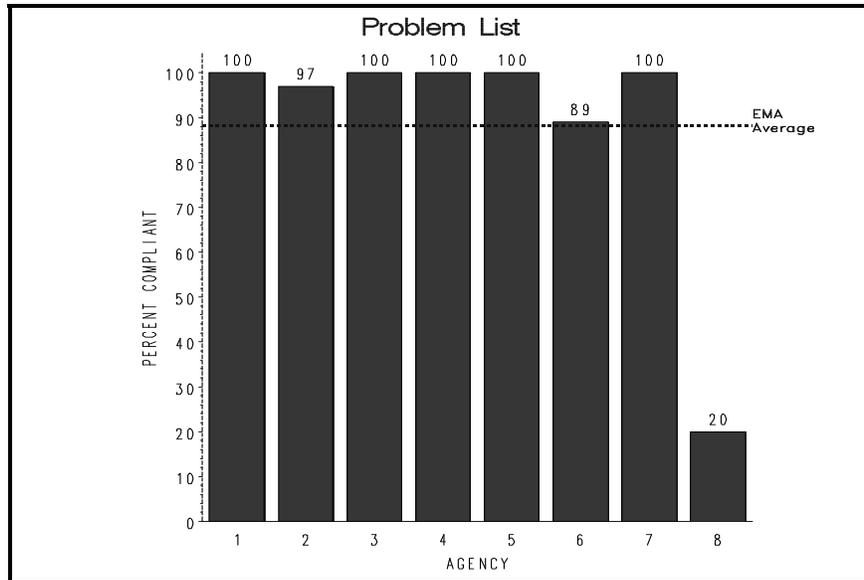
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[10] Clinical Manual for Management of the HIV Infected Adult [2006] (http://www.aidsetc.org/pdf/AETC-CM_071007.pdf)

[11] Judith T. Bloom, Joan Dressler, Michele Kenny, Doris M. Molbo and Geraldine P. Pardee *The American Journal of Nursing*, Vol. 71, No. 11 (Nov., 1971), pp. 2144-2148

PROBLEM LIST

EMA INDICATOR (n=362): 100% of HIV-infected clients' medical records will include a problem list
- Numerator: Number of HIV-infected clients with a problem list documented
- Denominator: Number of HIV-infected clients who meeting chart review selection criteria

Problem List

[Bar chart showing Percent Compliant by Agency. EMA Average line at approximately 88. Agency 1: 100, Agency 2: 97, Agency 3: 100, Agency 4: 100, Agency 5: 100, Agency 6: 89, Agency 7: 100, Agency 8: 20]

ALLERGIES OR NO KNOWN ALLERGIES

EMA INDICATOR (n=362): 100% of HIV infected clients' records will include documentation of known allergies
- Numerator: Number of HIV infected clients with consistent documentation of known allergies
- Denominator: Number of HIV infected clients meeting chart review selection criteria

Allergies or No Known Allergies

[Bar chart showing Percent Compliant by Agency. EMA Average line at approximately 81. Agency 1: 75, Agency 2: 77, Agency 3: 97, Agency 4: 86, Agency 5: 60, Agency 6: 0, Agency 7: 97, Agency 8: 71]
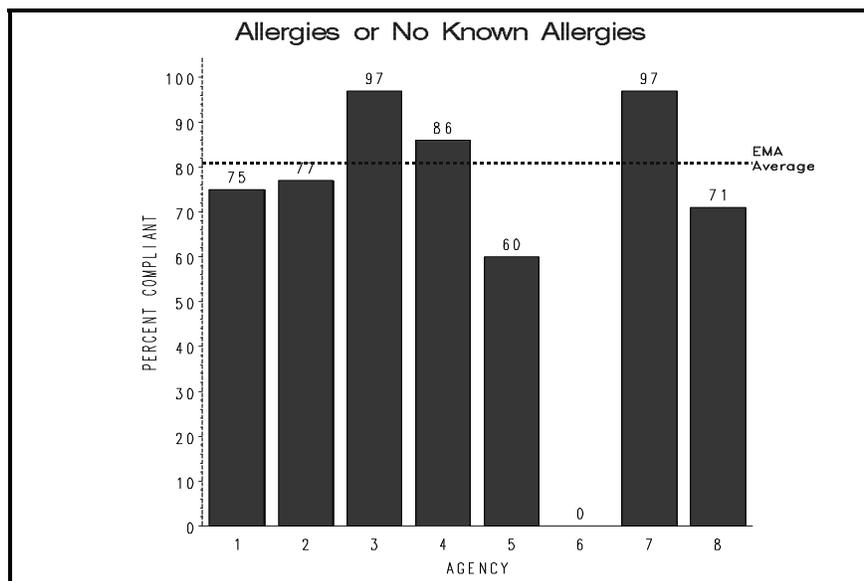
Dental Examination

BACKGROUND

Oral manifestations of HIV, which can affect patient quality of life and disease progression, have decreased with the use of HAART, but oral health care remains critical. Although the prevalence of HIV related oral health conditions has decreased, "life-threatening lesions are still present."[12] HIV infected patients are at higher risk of typical and atypical oral health problems, yet oral health utilization among this population remains low. Barriers to oral health care include: lack of willingness to treat HIV infected persons, lack of insurance, lack of transportation, stigma, provider availability, and geography.[12]

Annual dental exams provide opportunities for early detection and prevention of oral health problems and are integral to managing the oral health of HIV infected patients.[13] Painful oral health conditions can impact eating and medication consumption leading to poor nutrition and higher viral loads. "Inadequate oral health care can undermine the success of HAART by exacerbating existing medical conditions, compromising adherence to an antiretroviral treatment regimen, and diminishing quality of life."[13]

Primary care providers should exam the oral cavity at initial and routine medical visits.[14] Signs of oral lesions or other visible oral manifestations of HIV indicate the need for a dental referral. US Public Health Service Guidelines recommend that primary health care providers should make an initial dental referral for HIV/AIDS patients; and that oral health care providers should examine all patients on a semiannual basis for dental prophylaxis and other appropriate preventive care.[15]

MEASURE AND RESULTS

One clinical practice was examined in this section: oral health examination. This is a HRSA indicator. In order for a clinic to receive credit for appropriate treatment, the practice had to have been documented as completed within the recommended time frame. Across all sites, the HRSA indicator average for oral health exam was 28%.

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[12] Providing HIV/AIDS Care in a Changing Environment (http://hab.hrsa.gov/publications/april2002.htm)
[13] Percent of Patients Receiving an Annual Dental Exam [Accessed November 2008] (http://www.ihi.org/IHI/Topics/HIVAIDS/HIVDiseaseGeneral/Measures/PercentofPatientsReceivingan AnnualDentalExam.htm)
[14] Clinical Manual for Management of the HIV Infected Adult [2006] (http://www.aidsetc.org/pdf/AETC-CM_071007.pdf)
[15] New York State Dept of Health AIDS Institute *Oral Health Care for People With HIV Infection* [December 2001] (http://www.hivguidelines.org/Content.aspx?pageID=263)

ORAL EXAM

HRSA INDICATOR (n=362): Percent of clients with HIV infection who received an oral health exam at least once during the measurement year
- Numerator: Number of clients who had a dental exam during the measurement year, based on patient self report or other documentation
- Denominator: Number of clients with HIV infection who were seen for a medical visit within the measurement year

Oral Exam HRSA
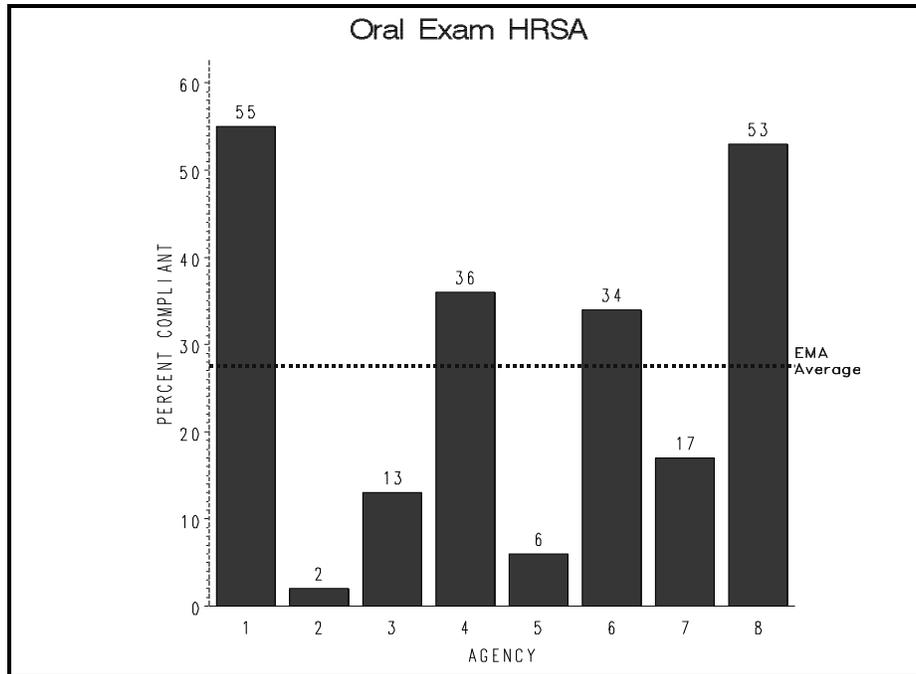
Hepatitis Screening

"Viral hepatitis, which can cause long-term liver problems, liver failure, and liver cancer, is considered to be a leading cause of death among HIV-positive people."[16] HIV and Hepatitis coinfection complicates HIV treatment. Antiretroviral agents can predispose co-infected patients to liver toxicity and Hepatitis treatment can "exacerbate the side effects of some ARV medications".[17] Hepatitis screenings are critical to providing prophylaxis treatment to negative patients, identifying co-infected patients, and developing appropriate treatment plans.

Individuals with HIV infection are at a higher risk of contracting Hepatitis A (HAV) on exposure. Although Hepatitis A is not a chronic infection, the infection is prolonged in individuals co-infected with HIV.[16] HAV can cause hepatic failure in people with chronic Hepatitis C.[18] Hepatitis A screening is essential in developing appropriate treatment plans for co-infected patients. To prevent hepatotoxicity, HIV treatment may need to be altered or stopped completely until Hepatitis A has run its course.

Hepatitis B virus (HBV) is the leading cause of chronic liver disease worldwide.[19] HIV infected patients are at higher risk of developing chronic HBV after exposure. HBV is transmitted primarily through sexual contact and injection-drug use. Although up to 90% of HIV infected persons have previous exposure to HBV, only approximately 10% develop chronic Hepatitis B.[19] Hepatitis B screenings are critical for HIV infected patients. According to US Public Health Service Guidelines, "several liver-associated complications that are ascribed to flares in HBV activity or toxicity of antiretroviral agents can affect the treatment of HIV in patients with HBV coinfection. Therefore, providers should know the HBV status of all patients with HIV. For patients who are HBV negative, prophylaxis is recommended."[20]

"Prevalence of the hepatitis C virus (HCV) may be as high as 30 percent among people living with HIV/AIDS (PLWHA) and as high as 90 percent among PLWHA who contracted HIV infection through injection drug use (IDU)."[18] Injection drug use is the leading cause of Hepatitis C virus (HCV) infection. Fifty to ninety percent of HIV infected injection drug users are also infected with HCV.[21] Chronic HCV infection is treatable in persons co-infected with HIV; however, it is

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[16]Hepatitis and HIV [November 2003] (http://www.aidsmeds.com/articles/HepAndHIV_4899.shtml)

[17] HAB HIV Core Clinical Performance Measures: Adult/Adolescent Clients Group 2 [2008] (ftp://ftp.hrsa.gov/hab/habGrp2PMs08.pdf)

[18] Hepatitis C and HIV Coinfection [April 2006] (http://hab.hrsa.gov/tools/coinfection/index.html)

[19] Clinical Manual for Management of the HIV Infected Adult [2006] (http://www.aidsetc.org/pdf/AETC-CM_071007.pdf)

[20]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)

[21] Coinfection with HIV and Hepatitis C Virus [November 2005] (http://www.cdc.gov/hiv/resources/factsheets/coinfection.htm)

unknown if "HCV adversely affects the rate of HIV progression."[22] Since many people infected with HCV show no signs or symptoms, US Public Health Service Guidelines recommend that "All HIV-infected patients should be screened for HCV infection."[23]
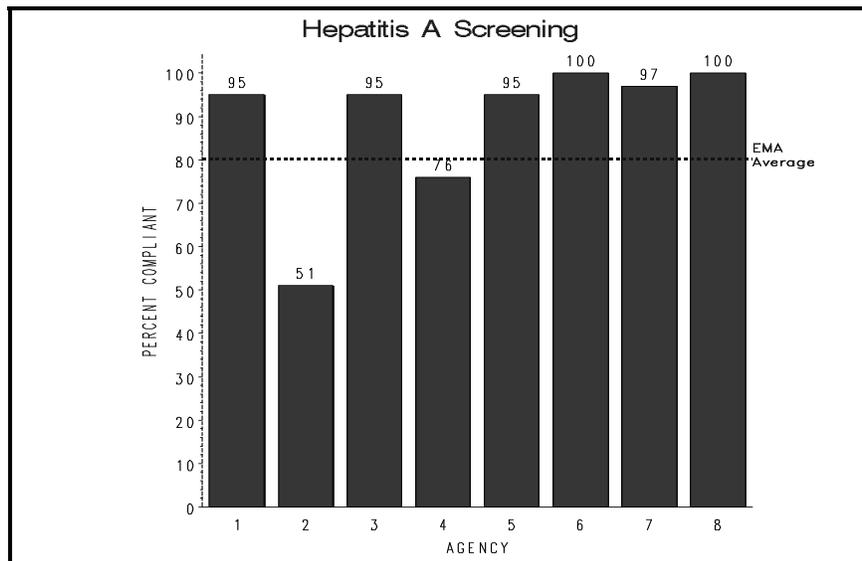
MEASURES AND RESULTS

Three separate clinical practices were examined in this section: Hepatitis A screening, Hepatitis B screening, and Hepatitis C screening. Hepatitis A is only an EMA indicator and Hepatitis B and Hepatitis C are EMA and HRSA indicators. Atlanta EMA and HRSA indicators have different criteria. In order for a clinic to receive credit for appropriate treatment, each practice had to have been documented as completed within the recommended time frame. Across all sites, the EMA indicator average for Hepatitis A was 89%. Across all sites, the EMA and HRSA indicator averages for: Hepatitis B was 91% and Hepatitis C was 95%.

HEPATITIS A

EMA INDICATOR (n=362): 100% of HIV infected clients will be screened for Hepatitis A, B and C at baseline or within 3 months of enrollment
- Numerator: Number of HIV infected clients who have documented Hepatitis A infection status in the chart
- Denominator: Number of HIV infected clients meeting chart review selection criteria

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[22] Guidelines for the Use of Antiretroviral Agents in HIV-1-Infected Adults and Adolescents [January 29, 2008] (http://aidsinfo.nih.gov/contentfiles/AdultandAdolescentGL.pdf)
[23] Centers for Disease Control and Prevention. Guidelines for Preventing Opportunistic Infections Among HIV-Infected Persons - 2002 Recommendations of the U.S. Public Health Service and the Infectious Diseases Society of America . MMWR 2002;51(No. RR-8) (http://www.cdc.gov/mmwr/PDF/rr/rr5108.pdf or http://aidsinfo.nih.gov/ContentFiles/OIpreventionGL.pdf)

HEPATITIS B

EMA INDICATOR (n=362): 100% of HIV infected clients will be screened for Hepatitis A, B and C at baseline or within 3 months of enrollment
- Numerator: Number of HIV infected clients who have documented Hepatitis B infection status in the chart
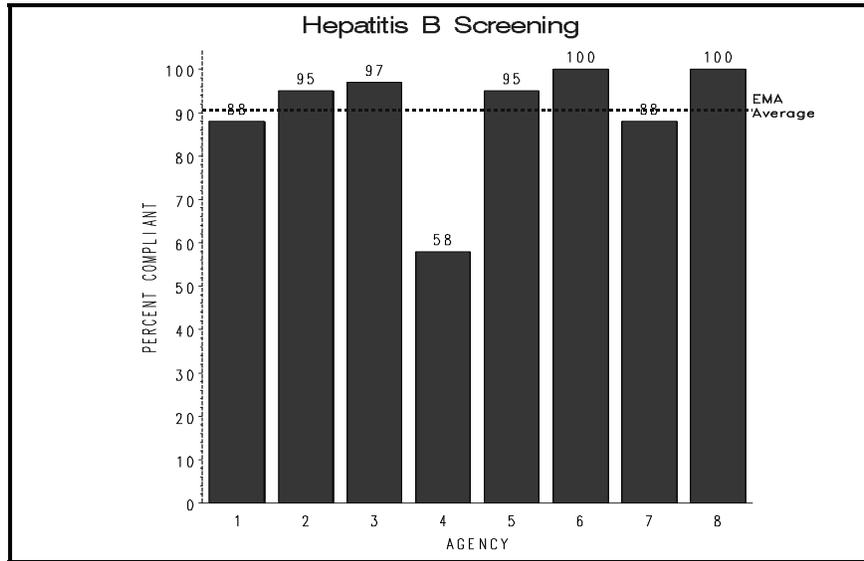- Denominator: Number of HIV infected clients meeting chart review selection criteria

HRSA INDICATOR (n=362): Percentage of clients with HIV infection who have been screened for Hepatitis B virus infection status
- Numerator: Number of clients who have documented Hepatitis B infection status in the chart
- Denominator: Number of clients with HIV infection who were seen within a measurement year
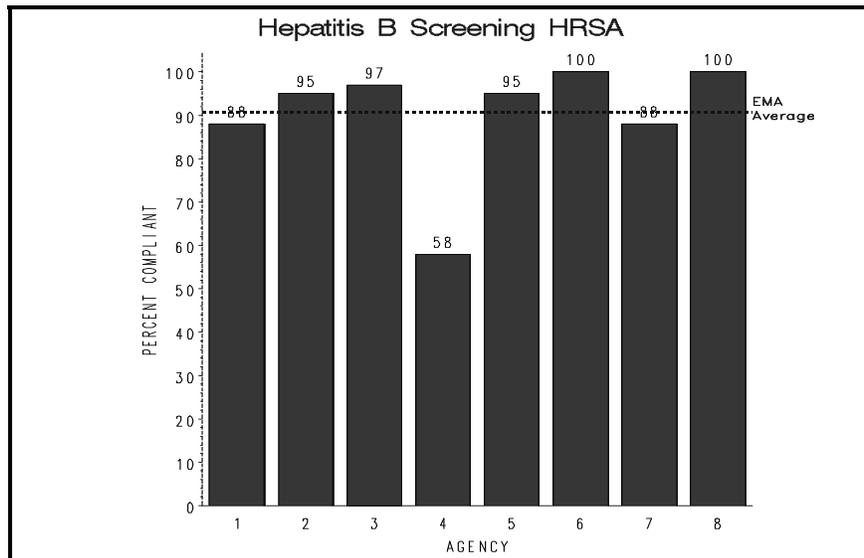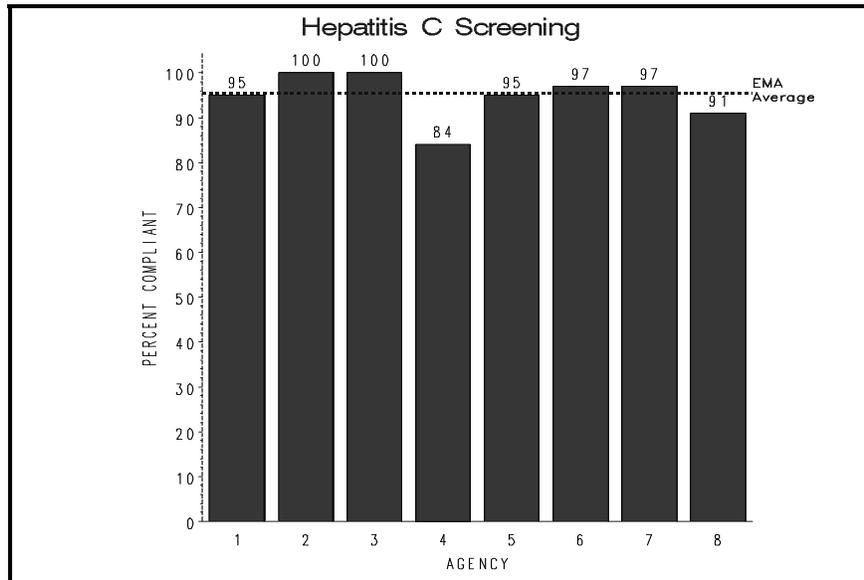
HEPATITIS C

EMA INDICATOR (n=362): 100% of HIV infected clients will be screened for Hepatitis A, B and C at baseline or within 3 months of enrollment

- Numerator: Number of HIV infected clients who have documented Hepatitis C infection status in the chart
- Denominator: Number of HIV infected clients meeting chart review selection criteria

HRSA INDICATOR (n=362): Percentage of clients with HIV infection who have been screened for Hepatitis C virus infection

- Numerator: Number of clients who have documented HCV status in chart
- Denominator: Number of clients with HIV infection who were seen within the measurement year

Immunological and Virological Measures
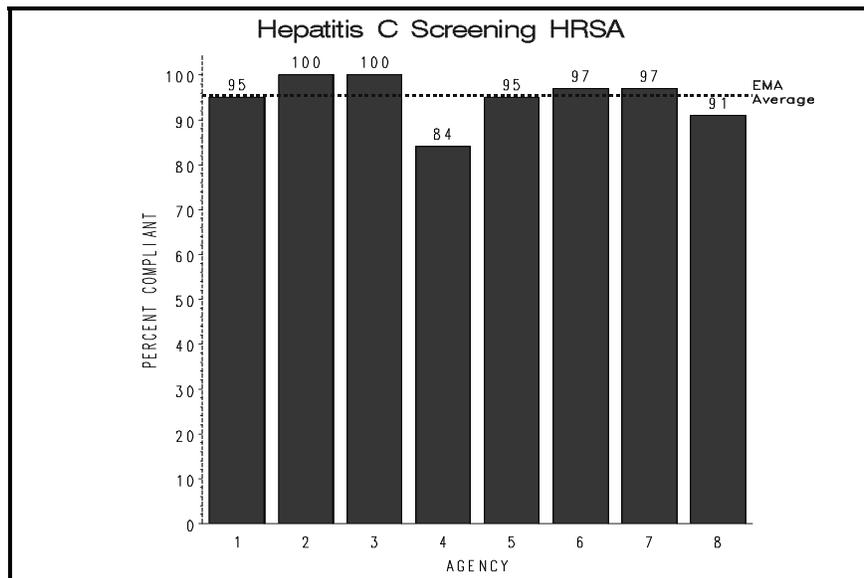
BACKGROUND

Quantitative HIV Plasma RNA, or viral load measurement, and CD4 t-cell count are two critical laboratory tests performed to monitor the status of HIV infection. Viral Load tests estimate the level of HIV replication, monitor the effectiveness of HAART, and are used to diagnosis HIV.[24] CD4 Counts are critical in HIV staging and prognosis, initiation and adjustment of HAART, monitoring immune reconstitution, and guiding the initiation of opportunistic infection prophylaxis.[24]

The most recent CD4 count is the strongest predictor of disease progression and survival.[25] US Public Health Service Guidelines recommend that HIV infected patients should have a CD4 t-cell count every 3 to 6 months to determine ARV initiation, assess immunologic response to ARV therapy, and assess the need for initiation of opportunistic infection prophylaxis.[24] More frequent medical visits are recommended when the patient's CD4 t-cell count is <200 cells/mm^3.

"In untreated HIV infection, replication usually produces billions of new viral copies daily."[24] Viral load tests, when used in conjunction with CD4 t-cell count, provide prognostic information for HIV infected clients who are naive to ART.[24] Higher viral loads are indicative of the risk of progression to AIDS. Viral loads can also be important in the decision to initiate or alter HAART. US Public Health Service Guidelines recommend that patients in early stages of HIV are seen every 3 months to monitor viral load.

MEASURES AND RESULTS

Two separate clinical practices were examined in this section: CD4 t-cell count measurements and viral load measurements. Atlanta EMA and HRSA indicators have different criteria for the CD4 t-cell count measure. Viral load is an EMA indicator. In order for a clinic to receive credit for appropriate treatment, each practice had to have been documented as completed within the recommended time frame. Across all sites, the EMA and HRSA indicator averages for CD4 t-cell count was 94%. Across all sites, the EMA indicator average for viral load was 47%.

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[24] Clinical Manual for Management of the HIV Infected Adult [2006] (http://www.aidsetc.org/pdf/AETC-CM_071007.pdf)
[25] HAB HIV Core Clinical Performance Measures: Adult/Adolescent Clients Group 1 (ftp://ftp.hrsa.gov/hab/habGrp1PMs08.pdf)

CD4 T-CELL COUNTS

EMA INDICATOR (n=319): 90% of HIV infected clients (who have been in care ≥6 months) will have two or more CD4 T-cell counts performed in a 12 month period
- Numerator: Number of HIV infected clients who had two or more CD4 T-cell counts during the measurement year
- Denominator: Number of HIV infected clients meeting chart review selection criteria who have been in care ≥6 months

CD4 T—Cell Count
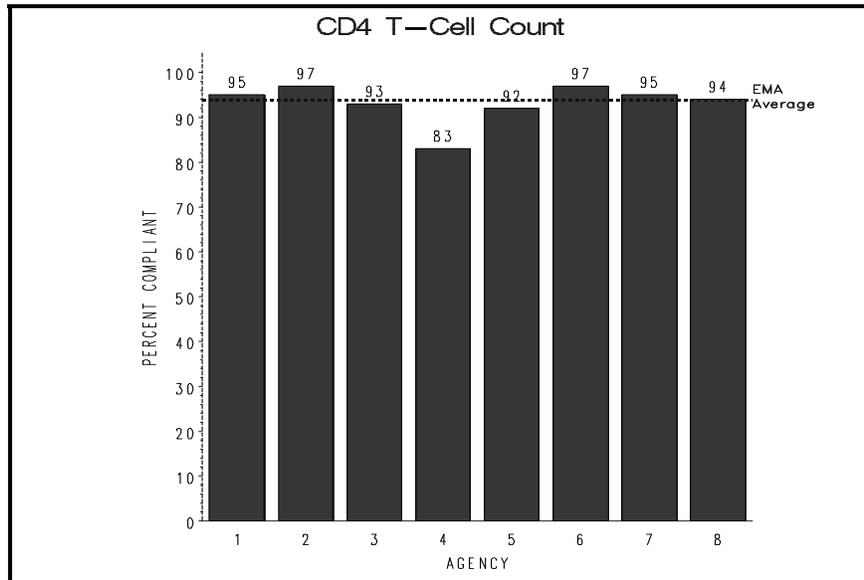
HRSA INDICATOR (n=319): Percentage of clients with HIV infection who have a CD4+ test done at least every 6 months
- Numerator: Number of clients who had CD4+ counts measured at least twice in the measurement year, <6 months apart
- Denominator: Number of clients with HIV infection who were seen within the measurement year (excluding patients enrolled within the last 6 months)

CD4 T—Cell Count HRSA
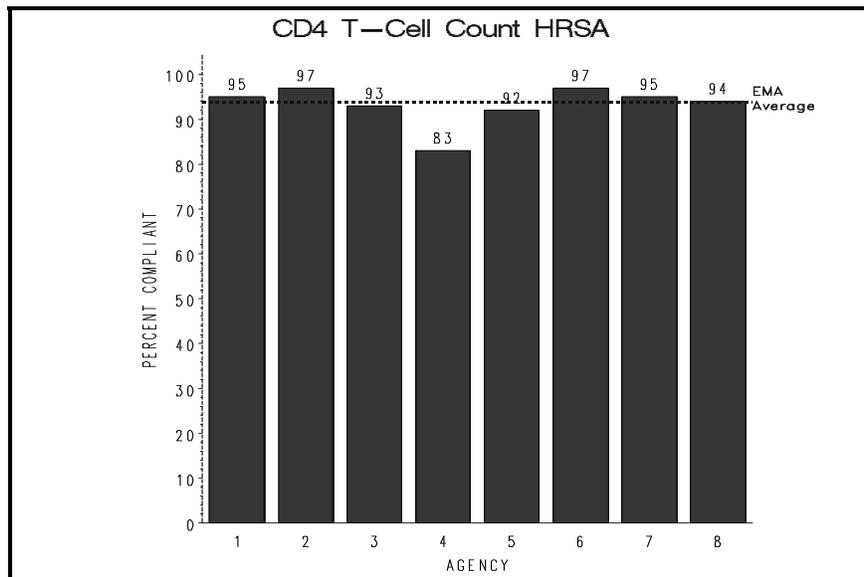
VIRAL LOAD

EMA INDICATOR (n=362): 85% of HIV infected clients will have a viral load test at least every four months
- Numerator: Number of HIV infected clients who had had a viral load test every four months
- Denominator: Number of HIV infected clients meeting chart review selection criteria

Viral Load

PERCENT COMPLIANT vs AGENCY

Agency	Percent Compliant
1	64
2	64
3	48
4	32
5	35
6	41
7	44
8	40

EMA Average
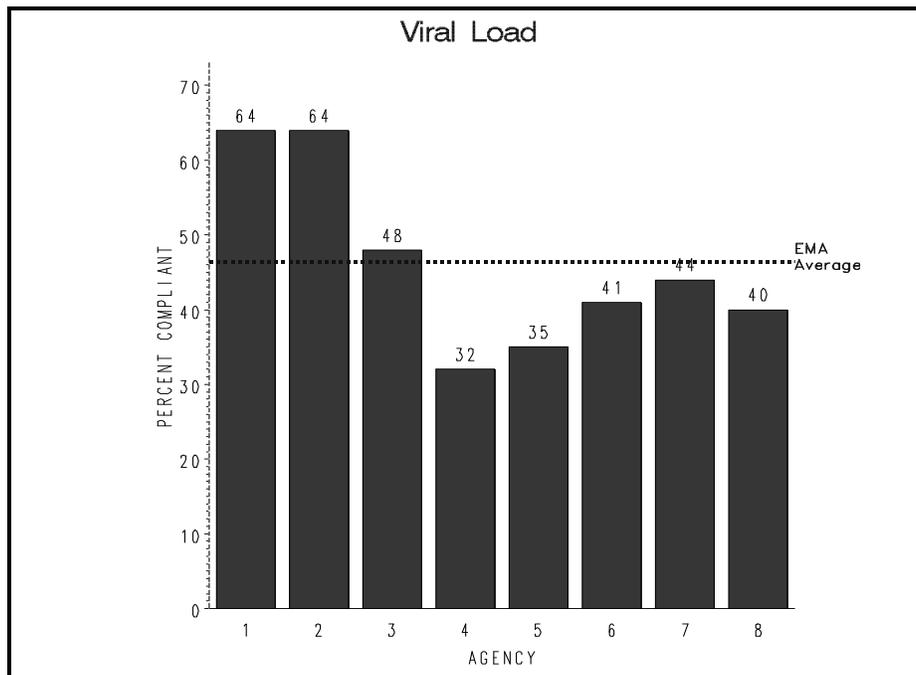
Initial Encounter and Monitoring

BACKGROUND

Frequent medical visits are crucial in HIV patient management. An HIV infected client's initial visit is the best opportunity for a care provider to get a complete picture of the patient's HIV disease status and physical and emotional condition.[26] It is also important for a care provider to establish a strong basis for an ongoing relationship with the patient at the initial visit.[26] Conducting a thorough initial assessment allows the care provider to implement preventive measures and develop an appropriate treatment plan.

"The information gathered through the initial history and physical examination will provide a comprehensive standardized database for the assessment and treatment of HIV-related problems, including acute intervention and ongoing supportive care."[26] The initial evaluation should include, but is not limited to, baseline laboratory tests including an HIV confirmatory test, compiling problem and medication lists, referrals to social, nutrition, and mental health services, PPD testing, immunizations, and prevention counseling.[26] The initial physical should include examination of the eyes, ears, nose, oral cavity, lymph nodes, endocrine system, skin, lungs, heart, breasts, abdomen, genitalia, cervix, testes, rectum, musculoskeletal system, fat loss or accumulation, neurologic system, and psychiatric condition.[26]

The frequency of medical visits significantly impacts HIV mortality. Following the initial visit, clinically stable patients should be monitored with a medical visit every four months.[27] Unstable patients require more frequent medical visits. According to US Public Health Service Guidelines, patients with early stage HIV disease should be "seen at 3-month intervals to undergo routine medical evaluation and monitoring of CD4 t-cell count, viral load and CBC."[27] More frequent medical visits are required for patients on initial therapy and for patients with CD4 t-cell counts <200 cells/mm^3.[27]

MEASURES AND RESULTS

Four separate clinical practices were examined in this section: a completed history, a completed physical, an HIV confirmatory test, and medical visits. Completed history, completed physical, and HIV confirmatory test are not Atlanta EMA or HRSA indicators; however, they were analyzed for local purposes. For the medical visits indicator, Atlanta EMA and HRSA indicators have different criteria. In order for a clinic to receive credit for appropriate treatment, each practice had to have been documented as completed within the recommended time frame. Across all sites, the indicator average for: completed history was 91%, completed physical was 99%, and HIV confirmatory test was 70%. Across all sites, the EMA and HRSA indicator averages for medical visits was 88%.

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[26] Clinical Manual for Management of the HIV Infected Adult [2006] (http://www.aidsetc.org/pdf/AETC-CM_071007.pdf)

[27] HAB HIV Core Clinical Performance Measures: Adult/Adolescent Clients Group 1 (ftp://ftp.hrsa.gov/hab/habGrp1PMs08.pdf)

COMPLETED HISTORY (n=362)

- Numerator: Number of HIV infected clients who have a completed initial history
- Denominator: Number of HIV infected clients meeting chart review selection criteria

Completed History
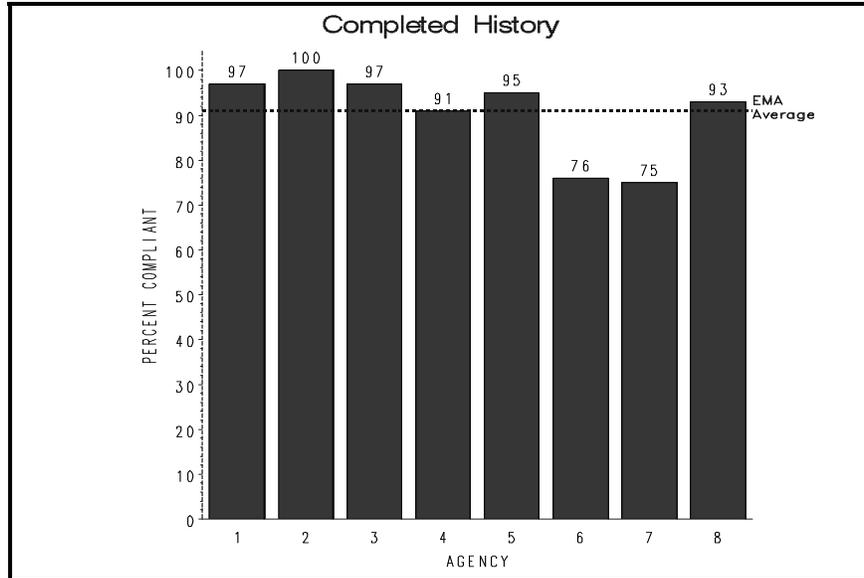
COMPLETED PHYSICAL (n=362)

- Numerator: Number of HIV infected clients who had a physical within the last 12 months
- Denominator: Number of HIV infected clients meeting chart review selection criteria

Completed Physical
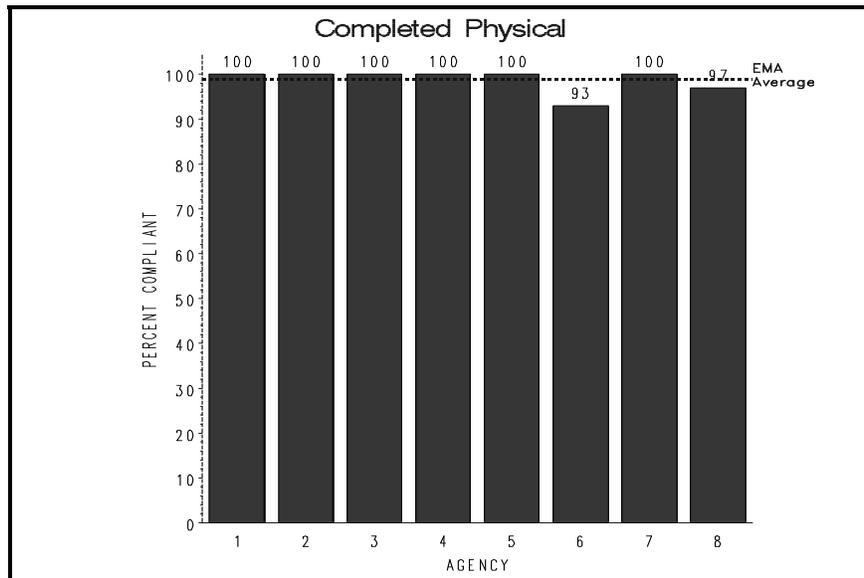
HIV CONFIRMATORY TEST (n=362)

- Numerator: Number of HIV infected clients who have documentation of a Western Blot HIV confirmatory test
- Denominator: Number of HIV infected clients meeting chart review selection criteria
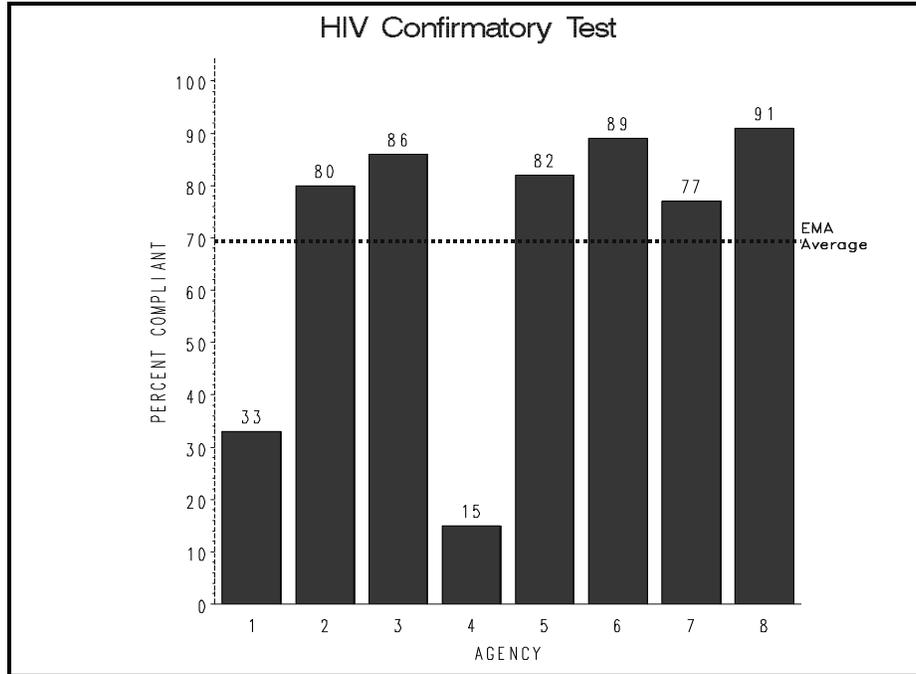
MEDICAL VISITS

EMA INDICATOR (n=292): 85% of HIV infected clients (enrolled in care ≥6 months) will have two or more medical visits in a HIV care setting in a 12 month period
- Numerator: Number of HIV infected clients who had medical visits at least every six months during the review period
- Denominator: Number of HIV infected clients meeting chart review selection criteria who have been in care ≥6 months
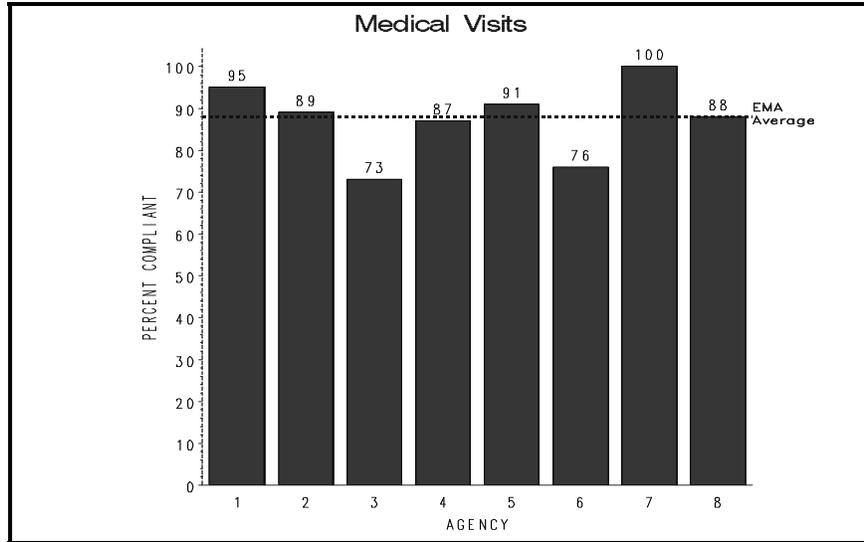
HRSA INDICATOR (n=294): Percentage of clients with HIV infection who have a medical visit in an HIV care setting at least every 6 months
- Numerator: Number of clients who were seen by an MD, PA or advanced practice nurse in an HIV care setting at least twice in the measurement year, <6 months apart
- Denominator: Number of clients with HIV infection who were seen within the measurement year
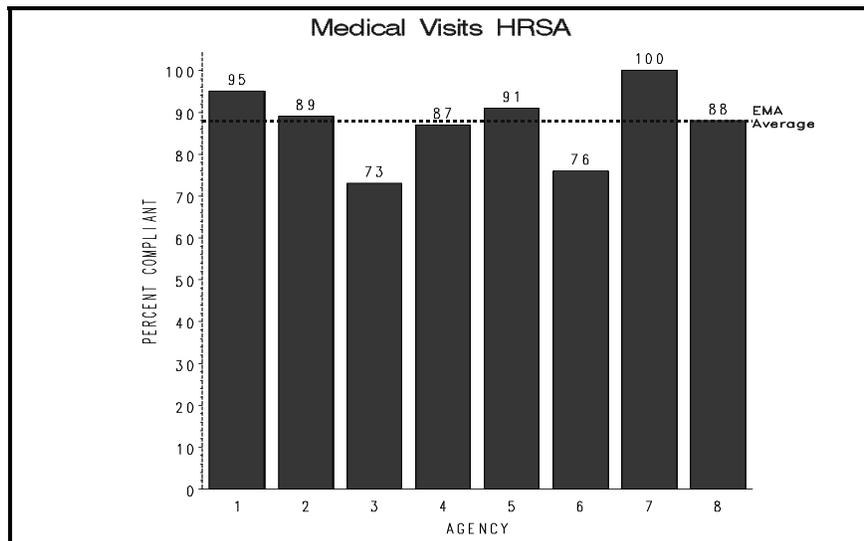
Nutritional Education

Adequate nutrition is essential in maintaining immune function in HIV infected clients. "Many HIV related conditions affect and are affected by the body's nutritional status."[28] Antiretroviral therapy also affects nutritional status in HIV infected patients as a result of adverse side effects. Factors that cause inadequate nutrition in patients include nausea, vomiting, anorexia, diarrheal infections, systemic illnesses (including HIV), and psychological conditions.[28]

Comprehensive HIV care incorporates nutritional screenings to "identify and treat nutritional problems" as a part of an overall assessment.[28] Once problems are identified counseling and education are essential in assisting patients in improving their dietary condition. Patients should be educated on how to modify their dietary habits and develop strategies to prevent weight loss.[28] Any recommendations should consider the patient's financial resources and lifestyle and promote the use of available resources.[28] Counselors should also assist clients in developing a nutrition plan to maximize immune status, nutritional status, and treatment.[28]

Care providers should make routine referrals for nutrition assessment and screenings. Nutritional services are ideally administered by registered dietitians with HIV/AIDS experience. An adequate nutritional assessment will include screenings such as a physical examination, body composition testing, and laboratory testing.[28] Nutritional assessments should be conducted annually in order to update the patient's nutrition plan based on evolving health status and needs.

MEASURES AND RESULTS

Three clinical practices were examined in this section: nutrition screening and nutrition counseling or assessment. Nutrition screening is not an Atlanta EMA or HRSA indicator; however, it was analyzed for local purposes. Nutrition counseling or assessment is an Atlanta EMA indicator. In order for a clinic to receive credit for appropriate treatment, each practice had to have been documented as completed within the recommended time frame. Across all sites, the indicator average for nutrition screening was 66%. Across all sites, the EMA indicator average for nutrition counseling or assessment was 43%.

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[28] Clinical Manual for Management of the HIV Infected Adult [2006] (http://www.aidsetc.org/pdf/AETC-CM_071007.pdf)

NUTRITION SCREENING (n=362)

- Numerator: Number of HIV infected clients who were screened for nutrition education within the last 12 months
- Denominator: Number of HIV infected clients meeting chart review selection criteria

Nutrition Screening
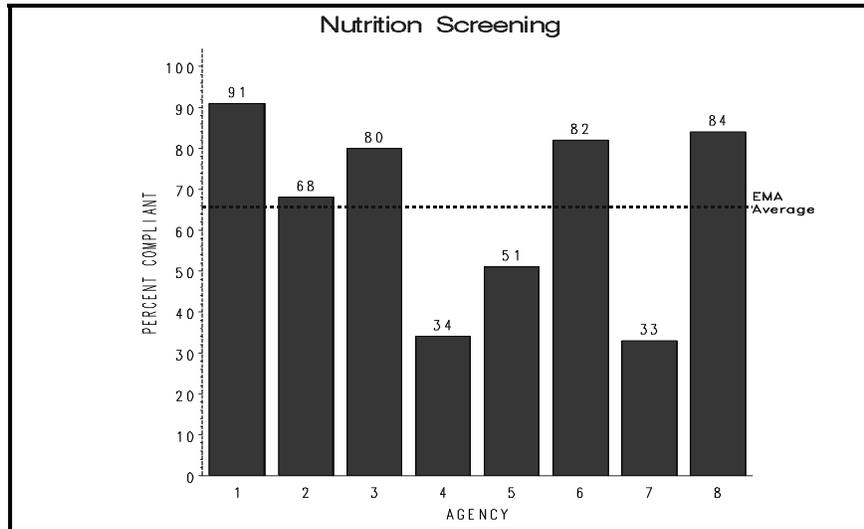
NUTRITION COUNSELING OR ASSESSMENT

EMA INDICATOR (n=88): 90% of HIV infected clients referred for nutrition counseling and/or assessment received services provided by a registered dietitian within 30 days of referral
- Numerator: Number of HIV infected clients who received nutrition counseling and/or assessment within 30 days of referral in the last 12 months
- Denominator: Number of HIV infected clients who met chart review selection criteria who received nutrition assessment in the last 12 months

Nutrition Counseling or Assessment
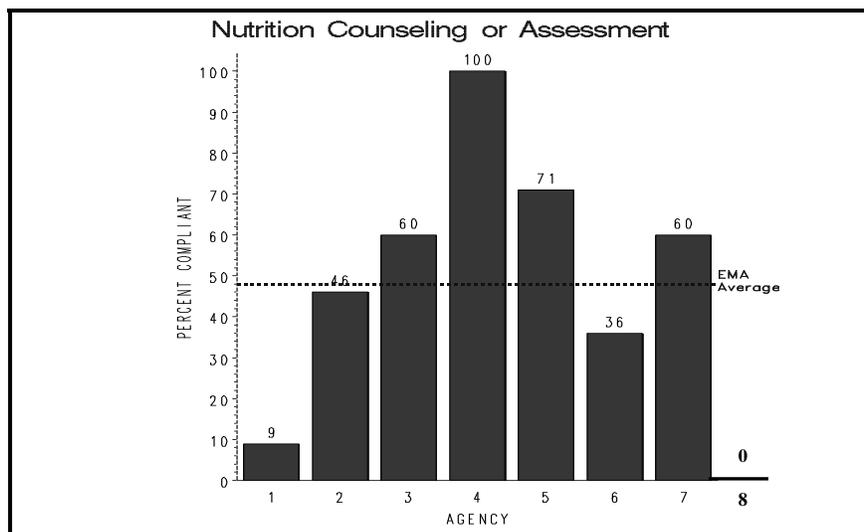
Opportunistic Infections

Individuals who are infected with HIV are more susceptible to specific infections caused by opportunistic pathogens. Awareness and prophylactic treatment are significant in reducing the incidence of opportunistic infections (OIs). Patients should be educated on the potential dangers of associated with opportunistic infections.[29] CD4 t-cell counts and viral loads require routine monitoring to assess the need for prophylactic treatment for opportunistic infections. HIV infected people with CD4 t-cell counts <200 cells/mm3 are at greatest risk for opportunistic infections.

"Pneumocystis pneumonia (PCP) is the most common opportunistic infection in people with HIV. Without treatment, over 85% of people with HIV would eventually develop PCP. It is a major cause of mortality among persons with HIV infection, yet is almost entirely preventable and treatable."[29] US Public Health Service Guidelines recommend that HIV infected people, including patients on HAART and pregnant women, with a CD4 count<200 cells/mm3 or a CD4 percentage <14% receive PCP prophylaxis.[29]

Mycobacterium avium complex (MAC) is a common OI amongst HIV infected people. A CD4 count of <50 cells/mm3 is indicative of the need for MAC prophylaxis, but active MAC infection must be ruled out first.[29] HIV infected patients with latent MAC are candidates for tuberculosis (TB) prophylactic treatment. Immune Reconstitution Syndrome, an inflammatory disease, is another potential consequence that could occur in response MAC or TB.

MEASURES AND RESULTS

Three separate clinical practices were examined in this section: assessment of opportunistic infections, MAC prophylaxis, and PCP prophylaxis. Assessment of opportunistic infections is only an Atlanta EMA indicator. MAC prophylaxis is only a HRSA indicator. Only 6 clinics had clients that met the denominator criteria for MAC prophylaxis. For PCP prophylaxis, Atlanta EMA and HRSA indicators have different criteria. For the EMA PCP indicator, only 6 clinics had clients that met the denominator criteria. For the HRSA PCP indicator, only 7 clinics had clients that met the denominator criteria. In order for a clinic to receive credit for appropriate treatment, each practice had to have been documented as completed within the recommended time frame or not medically indicated. Across all sites, the EMA indicator average for assessment of opportunistic infections was 99%. Across all sites, the HRSA indicator average for MAC prophylaxis was 70%. Across all sites, the EMA indicator average for PCP prophylaxis was 78%. Across all sites, the HRSA indicator average for PCP prophylaxis was 81%.

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[29] Clinical Manual for Management of the HIV Infected Adult [2006] (http://www.aidsetc.org/pdf/AETC-CM_071007.pdf)

ASSESSMENT OF OPPORTUNISTIC INFECTIONS

EMA INDICATOR (n=362): 100% of HIV infected clients will be assessed for opportunistic infections at each primary care visit
- Numerator: Number of HIV infected clients with a discussion of an OI or previous OIs, a list of previous OIs, current treatment of an OI, or no history of OIs documented in chart
- Denominator: Number of HIV infected clients who met chart review selection criteria
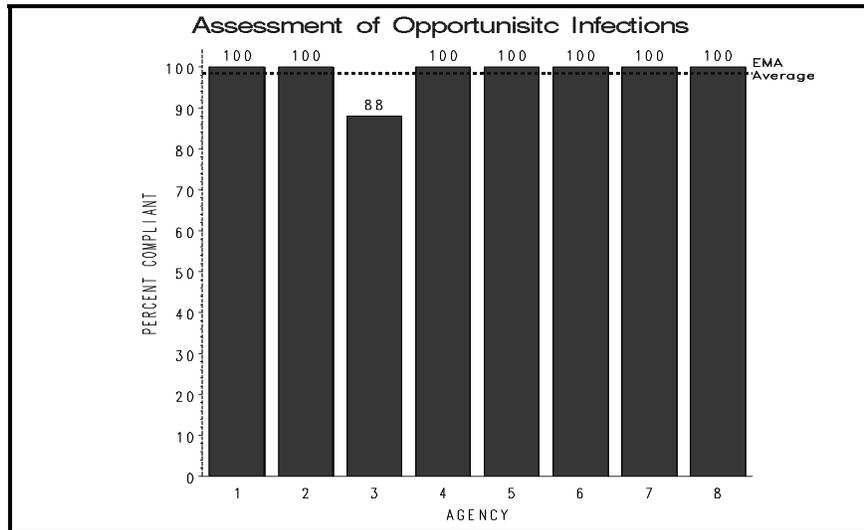
MAC PROPHYLAXIS

HRSA INDICATOR (n=23): Percent of clients with HIV infection with CD4 count < 50 cells/mm3 who received MAC prophylaxis within measurement year
- Numerator: Number of clients who were prescribed MAC prophylaxis (rifabutin, clarithromycin, azithromycin or other) at the time of the CD4+ count below 50 cells/mm3
- Denominator: Number of clients with HIV infection who: were seen for a medical visit within the measurement year; and had a CD4 count < 50 cells/mm3
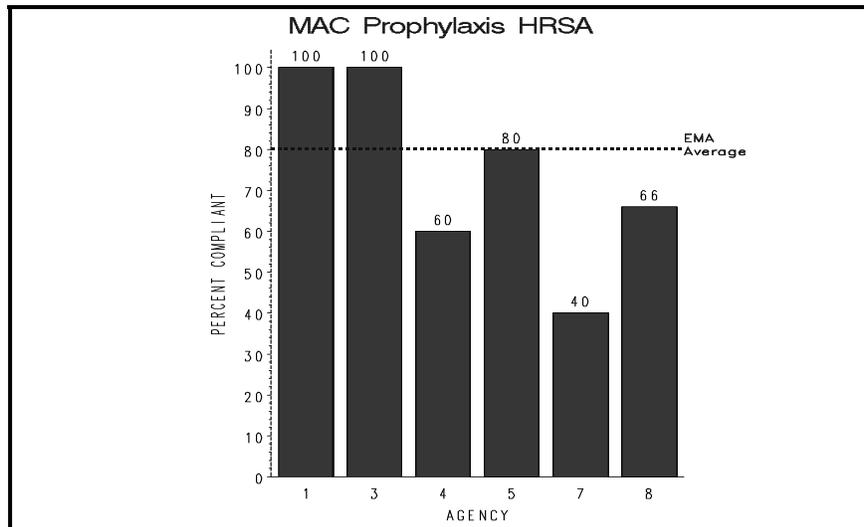
PCP PROPHYLAXIS

EMA INDICATOR (n=50): 95% HIV infected clients with a CD4 count <200 cells/mm^3 (enrolled in care >3 months) will be prescribed PCP prophylaxis
- Numerator: Number of HIV infected clients prescribed PCP prophylaxis
- Denominator: Number of HIV infected clients meeting chart review criteria and had a CD4 count <200 cells/mm^3 and were enrolled in care >3 months
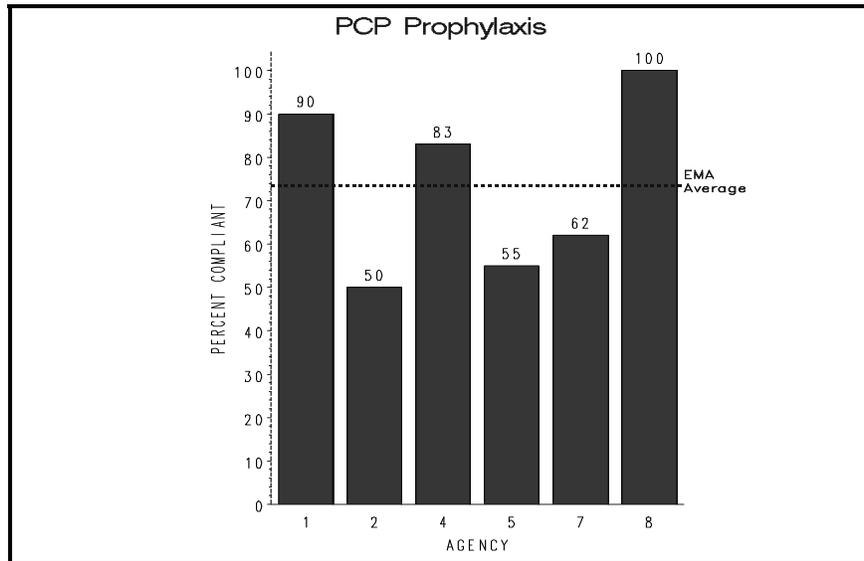
HRSA INDICATOR (n=59): Percentage of clients with HIV infection and a CD4+ count below 200/μL who were prescribed PCP prophylaxis
- Numerator: Number of clients who were prescribed PCP prophylaxis at the time when the CD4+ count was below 200/μL
- Denominator: Number of clients with HIV infection who: were seen within the measurement year, and had a CD4+ count below 200/μL
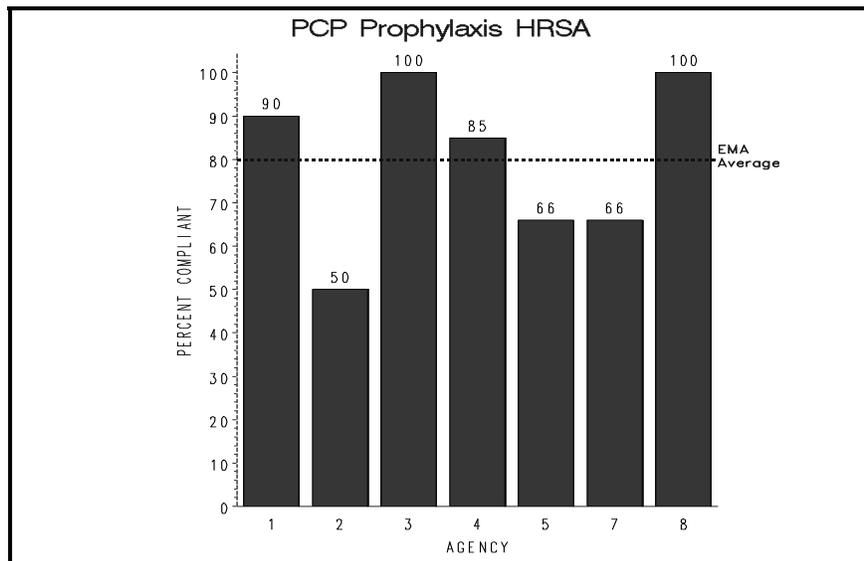
Papanicolaou (Pap) Test for HIV Positive Women

BACKGROUND

A large proportion of sexually active adults are infected with Human Papillomavirus (HPV). There is a strong association between HPV and cervical dysplasia and cancer. Evidence supports that "HPV precedes the development of cervical cancer."[30] HPV is more prevalent among HIV infected females. As a result, HIV infected women have a higher risk of invasive cervical cancer than women who are not infected with HIV. They "are five times more likely to develop cervical dysplasia or squamous intraepithelial lesion, precursors to cancer."[31] The risk is also higher in women who have progressed to AIDS than in women with HIV non AIDS.

Cervical cancer can be prevented with regular screenings/Pap tests that identify cervical dysplasia before progression to invasive cancer. Non invasive cervical dysplasia is typically asymptomatic and can only be identified via testing. When lesions are identified, high grade lesions require intervention and low grade lesions require frequent monitoring. The risk for high grade lesions is higher in women with lower CD4 t-cell counts.[31] Not only do "HIV-positive women with invasive cervical cancer present at more advanced stages and with cancer metastasizing to unusual locations," but they also "have poorer responses to standard therapy and have higher recurrences and death rates, as well as shorter intervals to recurrence or death."[30]

The current CDC recommendation is "that HIV-positive women have a complete gynecologic including a Pap smear, as part of their initial HIV evaluations, or upon entry to prenatal care, and another Pap smear six months later. If both smears are negative, annual screening is recommended thereafter in asymptomatic women. The CDC further recommends more frequent screenings (every six months) for women with symptomatic HIV infection, prior abnormal Pap smears, or signs of HPV infection."[30] Similarly, US Public Health Service Guidelines "in accordance with the recommendation of the Agency for Health Care Policy and Research," recommend that a Pap test "should be obtained twice during the first year after diagnosis of HIV infection and, if the results are normal, annually thereafter."[32]

MEASURE AND RESULTS

One clinical practice was examined in this section: Pap test. Atlanta EMA and HRSA indicators have different criteria. In order for a clinic to receive credit for appropriate treatment, the practice had to have been documented as completed within the recommended time frame. Across all sites, the EMA indicator average for Pap test was 63%. Across all sites, the HRSA indicator average for Pap test was 62%.

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[30] HAB HIV Core Clinical Performance Measures: Adult/Adolescent Clients Group 2 (ftp://ftp.hrsa.gov/hab/habGrp2PMs08.pdf)
[31] Clinical Manual for Management of the HIV Infected Adult [2006] (http://www.aidsetc.org/pdf/AETC-CM_071007.pdf)
[32] Centers for Disease Control and Prevention. Guidelines for Preventing Opportunistic Infections Among HIV-Infected Persons - 2002 Recommendations of the U.S. Public Health Service and the Infectious Diseases Society of America . MMWR 2002;51(No. RR-8) (http://www.cdc.gov/mmwr/PDF/rr/rr5108.pdf or http://aidsinfo.nih.gov/ContentFiles/OIpreventionGL.pdf)

PAP TEST

EMA INDICATOR (n=233): 80% of HIV infected female clients 18 years and older will have an annual PAP test
- Numerator: Number of HIV infected clients receiving a PAP test
- Denominator: Number of HIV infected female clients 18 years of age and older meeting chart review criteria (exclude NMI, client refused, and other reason for not receiving a PAP test)

PAP Test

A bar chart titled "PAP Test" with y-axis "PERCENT COMPLIANT" from 0 to 90 and x-axis "AGENCY" showing agencies 1-8. Values: Agency 1: 90, Agency 2: 73, Agency 3: 70, Agency 4: 57, Agency 5: 63, Agency 6: 29, Agency 7: 56, Agency 8: 60. A dotted line labeled "EMA Average" at approximately 60.
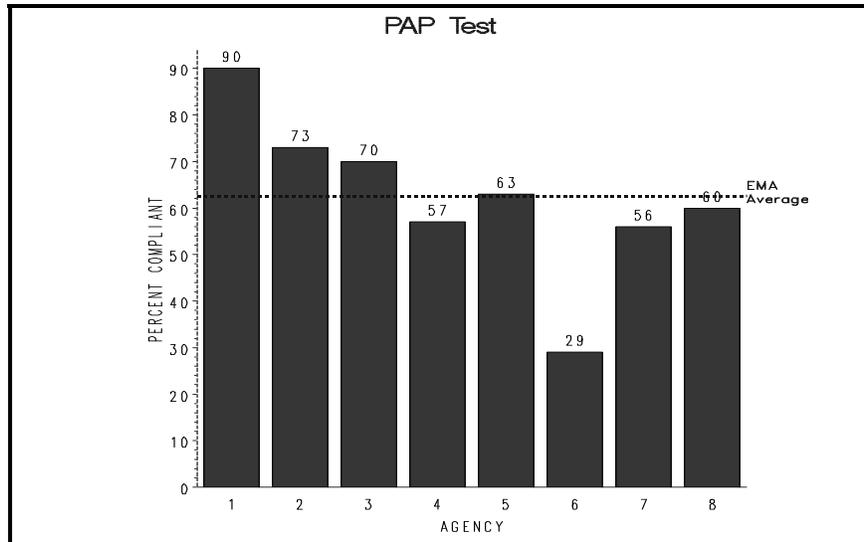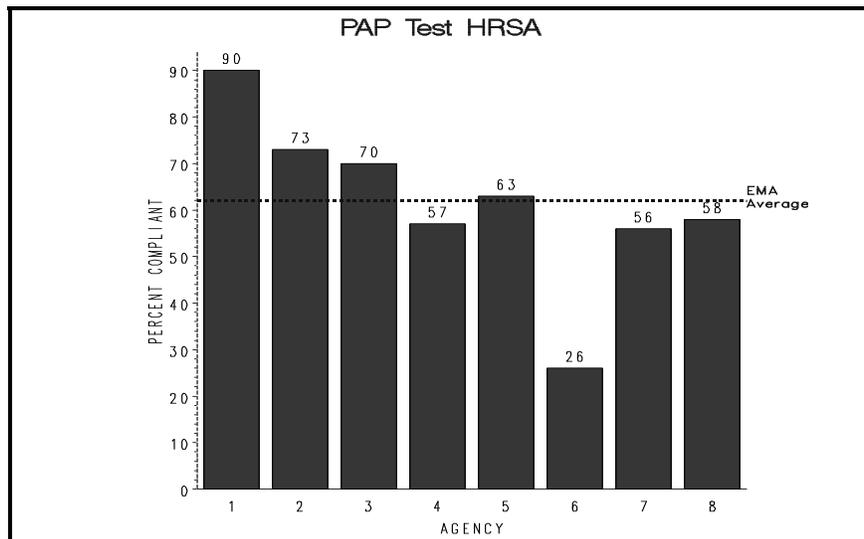
HRSA INDICATOR (n=237): Percentage of women with HIV infection who have a PAP screening in the measurement year of interest
- Numerator: Number of female clients who had PAP screen results documented within the measurement year
- Denominator: Number of female clients with HIV infection who: were >18 years old in the measurement year, and were seen within the measurement year

PAP Test HRSA

A bar chart titled "PAP Test HRSA" with y-axis "PERCENT COMPLIANT" from 0 to 90 and x-axis "AGENCY" showing agencies 1-8. Values: Agency 1: 90, Agency 2: 73, Agency 3: 70, Agency 4: 57, Agency 5: 63, Agency 6: 26, Agency 7: 56, Agency 8: 58. A dotted line labeled "EMA Average" at approximately 60.

Purified Protein Derivative (PPD) Screening

BACKGROUND

Tuberculosis and HIV cause the largest number of deaths than any other infectious diseases worldwide.[33] *Mycobacterium tuberculosis* organisms cause tuberculosis (TB) infection in humans. Tuberculosis, a respiratory pathogen, is transmitted in the air by persons infected with active TB.[33] While immunologically healthy individuals typically become infected with latent/inactive TB infection (LTBI), HIV infected individuals are at higher risk of becoming infected with active TB. "Persons with HIV infection have much higher rates of active TB and develop active disease at a rate approximating 10% per year."[33] HIV and TB are biologically collaborative. "HIV induced immunosuppression increases susceptibility to TB infection, and active TB infection enhances HIV replication through immunologic stimulation."[33]

Treatment is required for TB and LTBI in HIV infected persons. Purified protein derivative (PPD) screening can identify TB. A persistent cough is the most common symptom of TB infection. HIV infected persons should have initial and routine PPD screenings. "Early identification and treatment of TB disease improves outcomes and reduces the risk of transmission."[34] HIV infected patients with LTBI should be treated to prevent progression to active TB. LTBI treatment reduces risk of progression to active TB disease by 70 to 90 percent.[34] Both US Public Health Service Guidelines and CDC recommend a PPD screening at initial diagnosis of HIV infection, annual PPD screening for HIV infected persons who are PPD negative but at high risk for TB exposure, chest radiographs for patients who are PPD positive or PPD negative and symptomatic, and treatment for HIV infected persons with LTBI or who have been exposed to active TB.[34]

MEASURE AND RESULTS

One clinical practice was examined in this section: TB screening. Atlanta EMA and HRSA indicators have different criteria. In order for a clinic to receive credit for appropriate treatment, the practice had to have been documented as completed within the recommended time frame. Across all sites, the EMA indicator average for TB screening was 65%. Across all sites, the HRSA indicator average for TB screening was 89%.

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[33] Clinical Manual for Management of the HIV Infected Adult [2006] (http://www.aidsetc.org/pdf/AETC-CM_071007.pdf)
[34] HAB HIV Core Clinical Performance Measures: Adult/Adolescent Clients Group 2 (ftp://ftp.hrsa.gov/hab/habGrp2PMs08.pdf)

TB SCREENING

EMA INDICATOR (n=324): 100% HIV infected clients will have TB screening documentation in the past 12 months
- Numerator: Number of HIV infected clients with documented placement of PPD test within the last 12 months
- Denominator: Number of HIV infected clients meeting chart review selection criteria
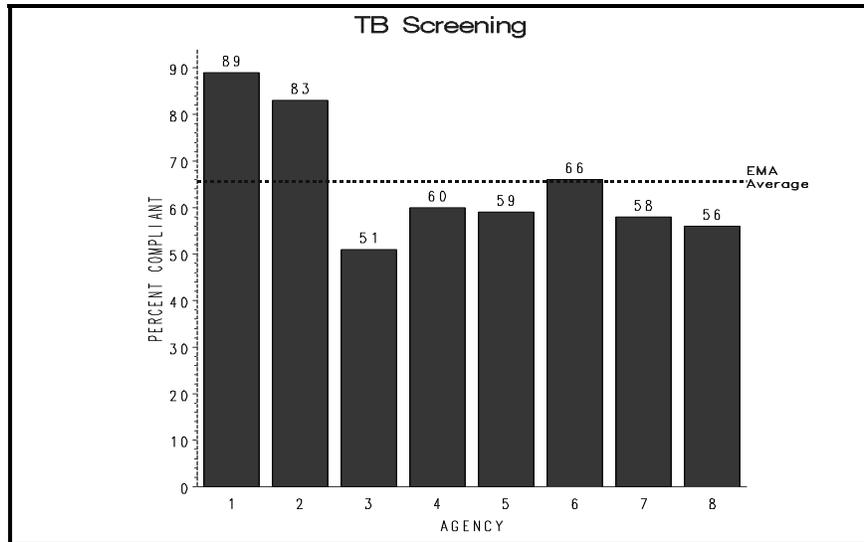
HRSA INDICATOR (n=324): Percent of clients with HIV infection without previous treatment for TB or a previous positive PPD screen, who have been screened for TB since HIV diagnosis
- Numerator: Number of clients who received documented screening for latent TB with any approved test since HIV diagnosis
- Denominator: Number of clients with HIV infection who: have a history of active tuberculosis or positive PPD; and were seen for a medical visit within the measurement year
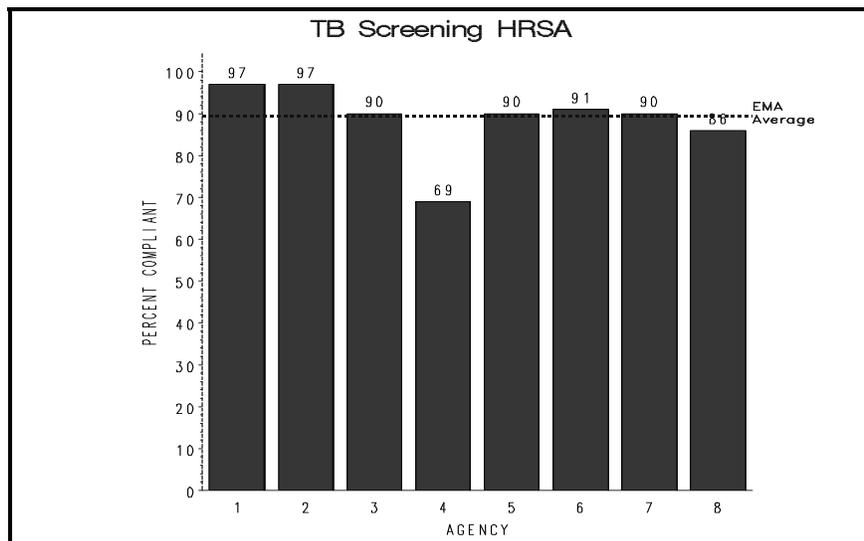
Risk Reduction Counseling

In 2006, there were an estimated 56,300 new cases of HIV infection in the United States alone.[35] Reducing transmission of HIV infection can be achieved by implementing prevention strategies focused on HIV infected persons. Prevention strategies including counseling and education focused specifically on HIV infected persons engaging in risky sexual behaviors and needle sharing can reduce the incidence of new HIV infections. "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."[36]

US Public Health Service Guidelines recommend that "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."[37]

Alcohol consumption significantly impacts HIV/HCV co-infected patient outcomes and care providers should counsel and educate these patients on associated risks. Counseling also provides the clinician the opportunity to make referrals to substance and alcohol treatment centers. A study of HIV positive veterans showed that hazardous drinking and alcohol diagnoses were associated with HIV disease progression and/or hepatic co-morbidity and anemia.[38] Studies indicate that approximately 33% of individuals with HCV infection progress to cirrhosis in less than 20 years.[39] Care providers should counsel patients that alcohol use in conjunction with co-morbid HIV/HCV infection significantly increases the rate of progression to cirrhosis of the liver. US Public Health Service Guidelines recommend that "patients with HCV/HIV coinfection should be advised to avoid or limit alcohol consumption."[39]

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[35] HIV Incidence (http://www.cdc.gov/hiv/topics/surveillance/incidence.htm)
[36] HAB HIV Core Clinical Performance Measures: Adult/Adolescent Clients Group 2 (ftp://ftp.hrsa.gov/hab/habGrp2PMs08.pdf)
[37] 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)
[38] 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.
[39] Guidelines for the Use of Antiretroviral Agents in HIV-1-Infected Adults and Adolescents [January 29, 2008] (http://aidsinfo.nih.gov/contentfiles/AdultandAdolescentGL.pdf)

Two clinical practices were examined in this section: risk reduction counseling and alcohol counseling for HIV/HCV co-infected. These are HRSA indicators. In order for a clinic to receive credit for appropriate treatment, each practice had to have been documented as completed within the recommended time frame. Across all sites, the HRSA indicator average for: risk reduction counseling was 79% and alcohol counseling for HIV/HCV coinfected was 53%.

RISK REDUCTION COUNSELING (n=362)

HRSA INDICATOR: Percentage of clients with HIV infection who received risk reduction counseling within the measurement year
- Numerator: Number of clients who received risk reduction counseling during appointments
- Denominator: Number of clients with HIV infection who were seen in the measurement year
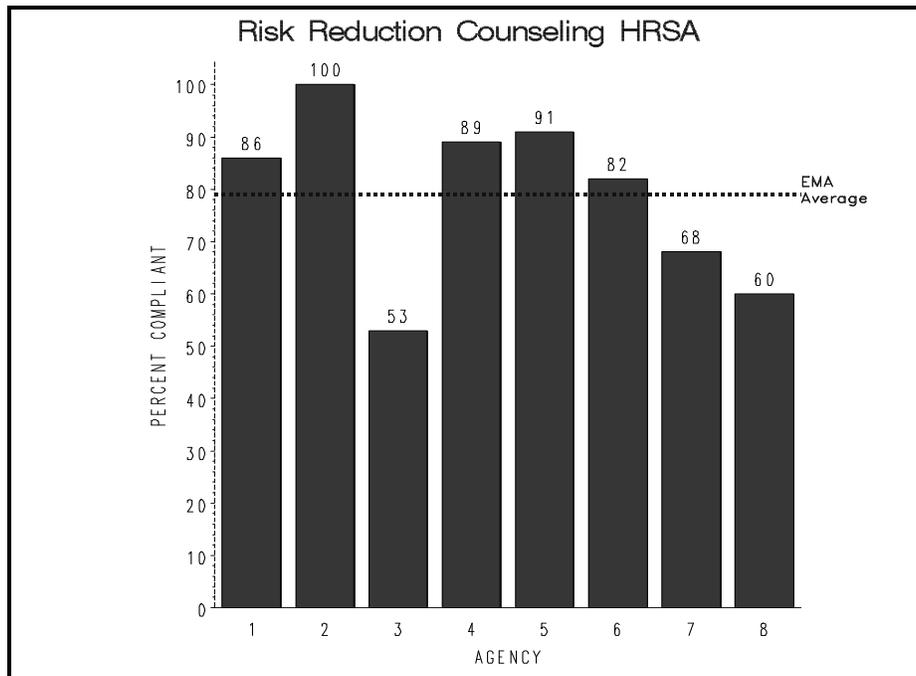
ALCOHOL COUNSELING FOR HIV/HCV CO-INFECTED CLIENTS

HRSA INDICATOR (n=47): Percentage of clients with HIV and HCV infection who received alcohol counseling within the measurement year
- Numerator: Number of clients who received alcohol counseling
- Denominator: Number of clients who: were co-infected with HIV and HCV; and were seen within the measurement year

Alcohol Counseling for HIV/HCV Co—Infected Clients HRSA
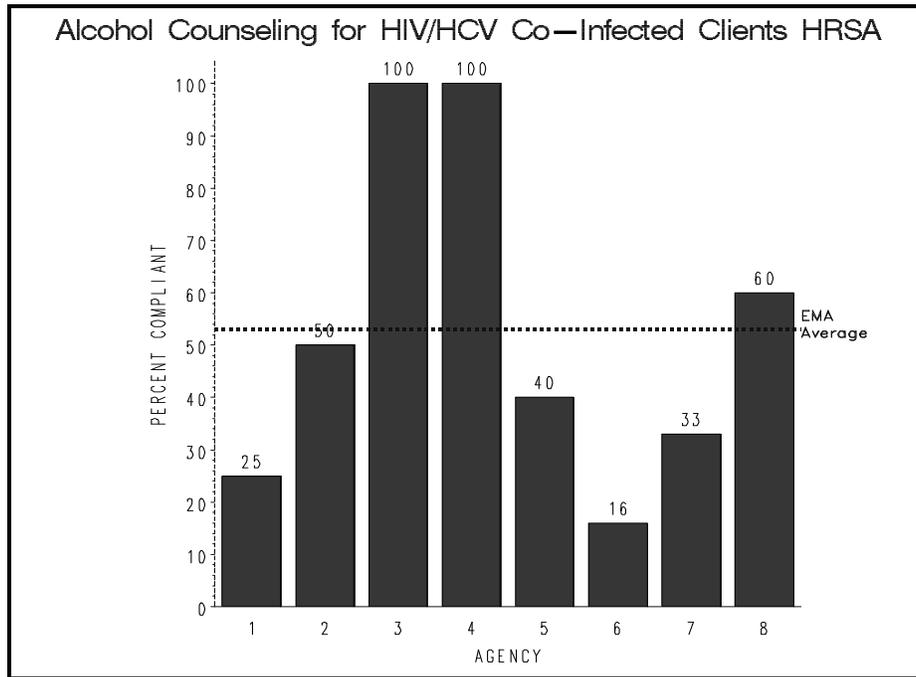
Sexually Transmitted Diseases

BACKGROUND

The Centers for Disease Control estimates there are 19 million new infections of STDs that occur in the United States every year.[40] "Individuals who are infected with STDs are at least two to five times more likely than uninfected individuals to acquire HIV infection if they are exposed to the virus through sexual contact. In addition, if an HIV-infected individual is also infected with another STD, that person is more likely to transmit HIV through sexual contact than other HIV-infected persons" (Wasserheit, 1992).[40] HIV infection and other STDs frequently occur concurrently or in tandem. In 2006, there were 170 HIV/Primary and Secondary Syphilis co-infected cases in Georgia.[41] HIV infected persons are more likely to produce and shed the virus when co-infected with another STD leading to a higher transmission risk.[42]

Chlamydia, Gonorrhea, and Syphilis are frequently occurring STDs that can be transmitted during oral, vaginal, or anal sex. In many cases, patients infected with Chlamydia, Gonorrhea, or Syphilis are asymptomatic. As a part of routine care, HIV infected persons that are sexually active should have routine screenings for all STDs. HIV infection can complicate the natural occurrence of other STDs. Specifically, "HIV infection may alter the natural history and management of syphilis, causing a more rapid course of illness, higher risk of neurologic complications, and greater risk of treatment failure with standard regimens."[43]

US Public Health Service Guidelines recommend that "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."[44]

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[40]STD Facts (http://www.cdc.gov/STD/hiv/STDFact-STD&HIV.htm)

[41] Georgia STD 2006 Annual Report
(http://health.state.ga.us/pdfs/epi/hivstd/2006%20STD%20Annual%20Report.pdf)

[42] Cohen, MS. Sexually Transmitted Diseases Enhance HIV Transmission: no Longer a Hypothesis. Lancet 1998;351(3S):5SIII-7SIII.

[43] Clinical Manual for Management of the HIV Infected Adult [2006] (http://www.aidsetc.org/pdf/AETC-CM_071007.pdf)

[44] 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)

Three separate clinical practices were examined in this section: Chlamydia screening, Gonorrhea screening, and Syphilis screening. Atlanta EMA and HRSA indicators have different criteria. In order for a clinic to receive credit for appropriate treatment, each practice had to have been documented as completed within the recommended time. Across all sites, the EMA indicator average for: Chlamydia screening was 74%, Gonorrhea screening was 75%, and Syphilis screening was 97%. Across all sites, the HRSA indicator average for: Chlamydia screening was 56%, Gonorrhea screening was 56%, and Syphilis screening was 80%
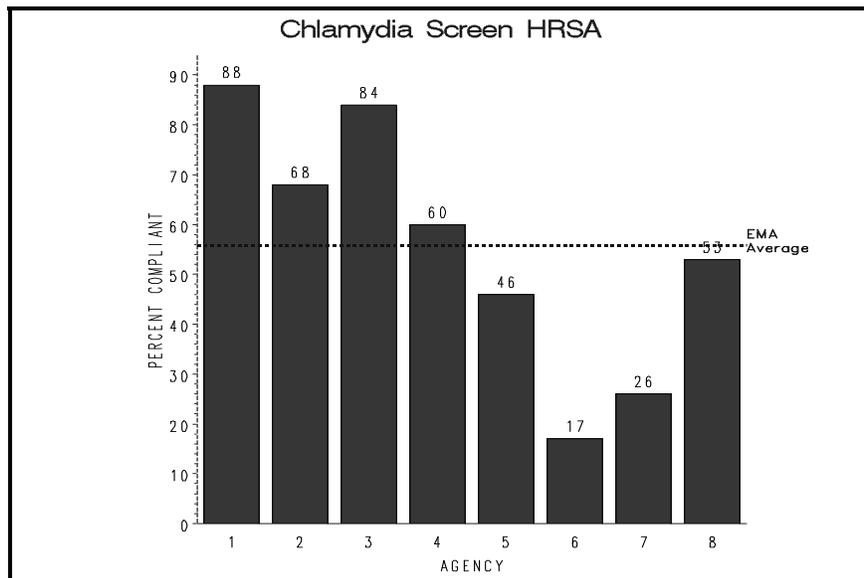
CHLAMYDIA SCREEN

EMA INDICATOR (n=362): 100% of HIV infected clients will be screened for Gonorrhea and Chlamydia at enrollment
  ▪ Numerator: Number of HIV infected clients who received documented screening for Chlamydia since HIV diagnosis
  ▪ Denominator: Number of HIV infected clients meeting chart review selection criteria
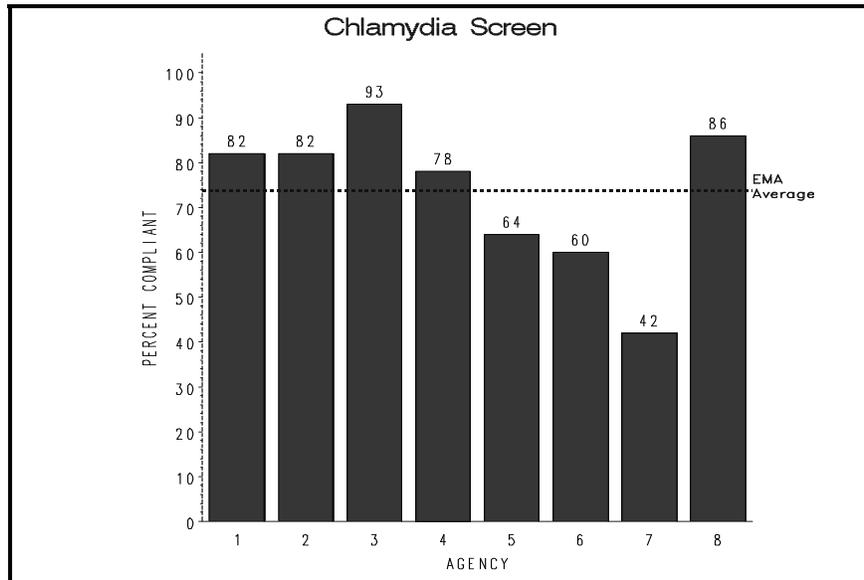
HRSA INDICATOR (n=362): Percent of adult clients with HIV infection who had a test for Chlamydia within the measurement year
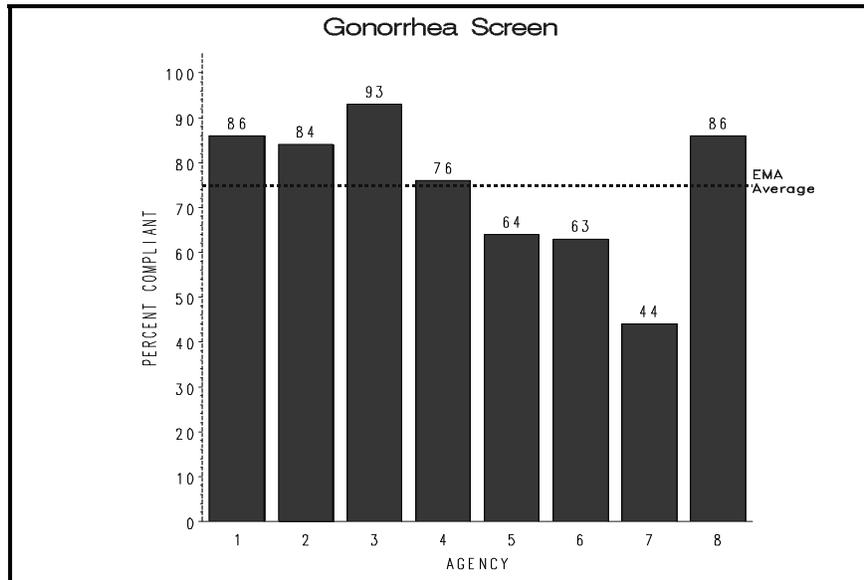 ▪ Numerator: Number of adult clients who received a test for Chlamydia
  ▪ Denominator: Number of clients with HIV infection who were: >18 years old in the measurement year, and seen for a medical visit within the measurement year
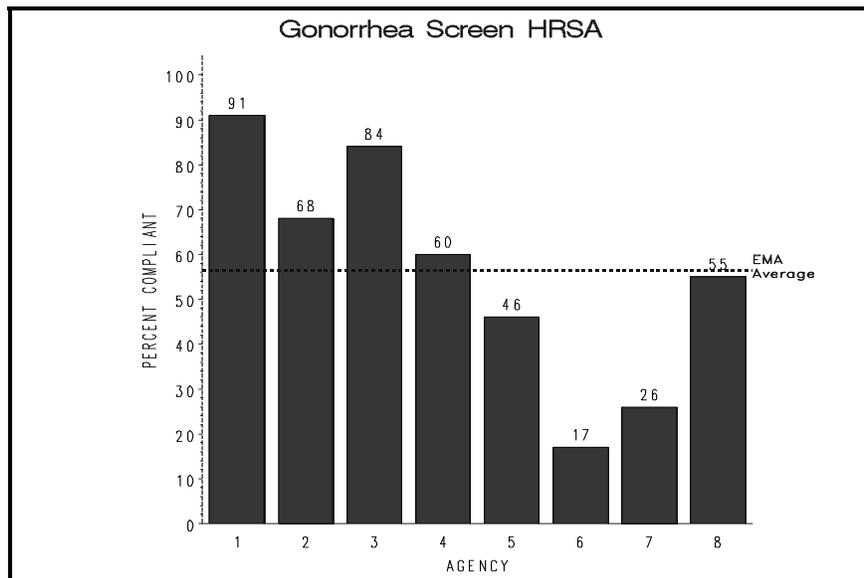
GONORRHEA SCREEN

EMA INDICATOR (n=362): 100% of HIV infected clients will be screened for Gonorrhea and Chlamydia at enrollment
- Numerator: Number of HIV infected clients who received documented screening for Gonorrhea since HIV diagnosis
- Denominator: Number of HIV infected clients meeting chart review selection criteria

HRSA INDICATOR (n=362): Percent of adult clients with HIV infection who had a test for Gonorrhea within the measurement year
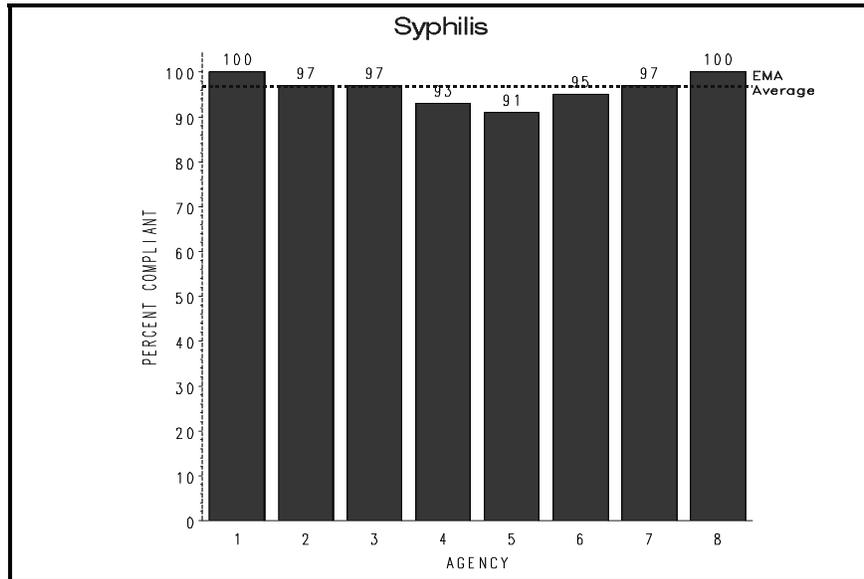- Numerator: Number of adult clients who received a test for Gonorrhea
- Denominator: Number of clients with HIV infection who were: >18 years old in the measurement year; and seen for a medical visit within the measurement year

SYPHILIS SCREEN

EMA INDICATOR (n=362): 100% of HIV infected clients will be screened for Syphilis at enrollment
- Numerator: Number of HIV infected clients who received documented screening for Syphilis since HIV diagnosis
- Denominator: Number of HIV infected clients meeting chart review selection criteria

HRSA INDICATOR (n=362): Percentage adult clients with HIV infection who had a test for Syphilis within the measurement year
- Numerator: Number of clients who had a serologic test for Syphilis at least once in the measurement year
- Denominator: Number of clients with HIV infection who were: >18 years old in the measurement year; and seen for a medical visit within the measurement year
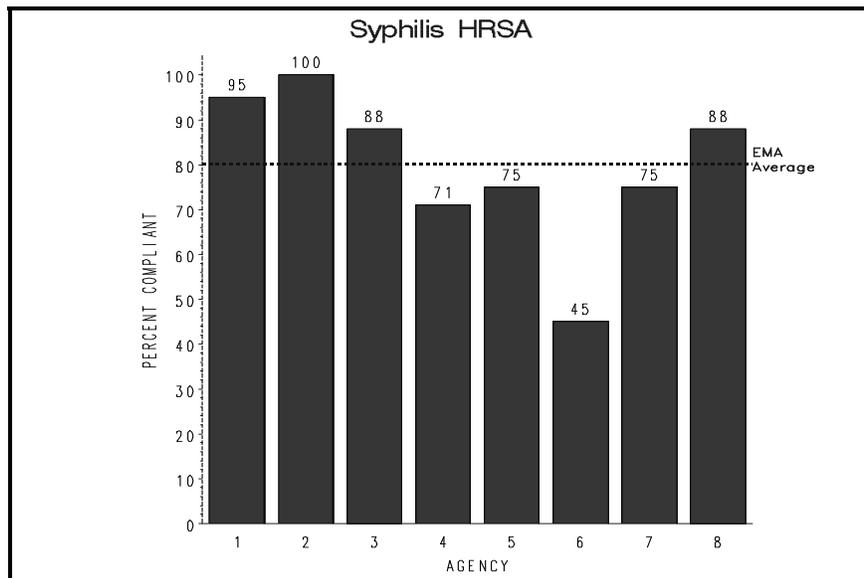
Appendices

CHART REVIEW TOOL

Fulton County Ryan White Program
Chart Review Tool (Page 1)

1. Chart has met eligibility requirements   ○ Yes   ○ No   2. Agency _____

3. Reviewer _____   4. Review Date _____

Client Demographics

5. Date of Birth _____   6. Sex   ○ Female   ○ Male   ○ Transgender   ○ Unknown/Missing

7. Hispanic/Latino/a Background   ○ No ○ Yes ○ Not Documented/Unknown

8. Race   ☐ African American/Black   ☐ White   ☐ Asian
☐ American Indian/Alaska Native   ☐ Native Hawaiian/Pacific Islander   ☐ Other

9. AIDS Diagnosis   ○ Yes, AIDS on problem list ○ CD4 count ever below 200 ○ Any OI ever
○ Documented elsewhere   ○ No AIDS Diagnosis

Charting/Monitoring	Yes	No	N/A	Comments
10. Date of first medical visit _____				
11. Client had a medical visit at least every 6 months during the review period?.............................	○	○	○	
12. Initial History Completed.......................................	○	○		
13. Date of initial history _____				
14. Physical exam within last 12 months......................	○	○		
15. Date of most recent physical _____				
16. Assessment of Opportunistic Infection...................	○	○		
17. Dates of last two OI Assessments _____ _____				
18. Problem list documented.......................................	○	○		
19. Documentation of known allergies...........................	○	○		
20. Documentation of known allergies is consistent........	○	○		
21. Risk Reduction counseling in last 12 months...........	○	○		
22. Oral exam in last 12 months..................................	○	○		
23. Western Blot confirmatory test...............................	○	○		
24. Date of Western Blot test _____				

Screenings/Labs

25. PPD test within last 12 months

○ Yes, positive result   ○ Yes, negative result   ○ Yes, did not return for reading
○ No, NMI   ○ Client refused   ○ Not documented/Unknown

26. Date of last PPD test _____

SE/TEC

Fulton County Ryan White Program
Chart Review Tool (Page 2)

Screenings/Labs (cont'd)	Yes	No	N/A	Comments
27. Hepatitis A total antibody (HAVAb) or IgG.............	O	O		
28. Date of most recent Hepatitis A screen _____				
29. Hepatitis B core antibody (HBcAb) total or IgG.........	O	O		
30. Hepatitis B surface antibody (HBsAb)......................	O	O		
31. Hepatitis B surface antigen (HBsAB).......................	O	O		
32. Date of most recent Heptitis B screen _____				
33. Hepatitis C antibody (HCVAb)................................	O	O		
34. Date of most recent Hepatitis C screen _____				

35. If the client is HCV+, was alcohol counseling and
HCV education provided within the last 12 months?.......   O   O   O

If NO, why?   1=Not documented/Unknown
2=Not medically indicated
3=Client refused
4=Lab pending
5=Other

	Yes	No		If NO, why?
36. Baseline syphilis screening (RPR).........................	O	O		[▼]
37. Syphilis screening (RPR) within last 12 months.......	O	O		[▼]
38. Baseline chlamydia screening................................	O	O		[▼]
39. Chlamydia screening within last 12 months?............	O	O		[▼]
40. Baseline gonorrhea screening................................	O	O		[▼]
41. Gonorrhea screening within last 12 months?.............	O	O		[▼]
42. PAP smear within last 12 months (women only)..........	O	O	O	[▼]

43. Date of most recent PAP test _____

Viral Load and CD4 Tests

	Yes	No
44. Viral load ordered every 4 months.............................	O	O
45. CD4 test ordered every 6 months.............................	O	O

Last four viral load tests:

1. Date_____ Result _____

2. Date_____ Result _____

3. Date_____ Result _____

4. Date_____ Result _____

Last four CD4 tests:

1. Date_____ Result _____

2. Date_____ Result _____

3. Date_____ Result _____

4. Date_____ Result _____

Fulton County Ryan White Program
Chart Review Tool (Page 3)

ARV Therapy & Counseling	Yes	No	N/A	Comments
46. ARV prescribed within the last 12 months...............	O	O		

Select all ARVs currently prescribed to client:

- [ ] Aptivus (tipranavir)
- [ ] Crixivan (indinavir)
- [ ] Invirase (saquinavir)
- [ ] Kaletra (lopinavir + ritonavir)
- [ ] Lexiva (fosamprenavir)
- [ ] Norvir (ritonavir)
- [ ] Prezista (darunavir)
- [ ] Reyataz (atazanavir)
- [ ] Viracept (nelfinavir)
- [ ] Agenerase (amprenavir)

- [ ] Atripla (Sustiva + Viread + Emtriva)
- [ ] Combivir (Retrovir + Epivir)
- [ ] Emtriva (emtricitabine)
- [ ] Epivir (lamivudine; 3TC)
- [ ] Epzicom (Ziagen + Epivir)
- [ ] Retrovir (zidovudine; AZT)
- [ ] Trizivir (Retrovir + Epivir + Ziagen)
- [ ] Truvada (Viread + Emtriva)
- [ ] Videx (didanosine; ddI): buffered versions
- [ ] Videx EC (didanosine; ddI): delayed-release capsules
- [ ] Viread (tenofovir DF)
- [ ] Zerit (stavudine; d4T)
- [ ] Ziagen (abacavir)
- [ ] Zalcitabine (Hivid, ddC)

- [ ] Rescriptor (delavirdine)
- [ ] Sustiva (efavirenz)
- [ ] Viramune (nevirapine)

- [ ] Fuzeon (T-20)
- [ ] Selzentry (maraviroc)

	Yes	No	N/A	
47. If pregnant, client prescribed ARV therapy...	O	O	O	
48. ARV adherence counseling within the past 12 months..	O	O	O	
49. Dates of last two adherence counseling sessions				
50. Client screened for nutrition education within last 12 months...	O	O		
51. Client refferred for nutritional assessment and/or counseling within last 12 months.............................	O	O	O	
52. Date of referral for nutritional services _____				
53. Nutritional Assessment Performed.......................	O	O	O	
54. Date of Nutritional Assessment _____				
55. Nutritional counseling received within last 12 months	O	O	O	
56. Date of nutritional counseling _____				

Opportunistic Infection Prophylaxis

If NO, why?
1=Not documented/Unknown
2=Not medically indicated
3=Client refused
4=Lab pending
5=Other

	Yes	No	If NO, why?
57. Patient prescribed PCP prophylaxis...........................	O	O	▼
58. Patient prescribed toxo prophylaxis.........................	O	O	▼
59. Patient prescribed MAC prophylaxis.......................	O	O	▼

SEATEC

CHART REVIEW RESULTS

This section presents the overall results in percentage by indicator and site.

Indicator	Data Collection Sites								
	All	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8
Adherence Counseling	67	75	88	76	43	80	73	46	71
Adherence Counseling HRSA	83	90	88	95	69	92	86	71	88
HAART	93	94	75	50	100	100	60	100	94
HAART HRSA	93	94	75	50	100	100	60	100	95
ARV Therapy for Pregnant Women	80	n/a	n/a	n/a	100	100	0	100	n/a
ARV Therapy for Pregnant Women HRSA	80	n/a	n/a	n/a	100	100	0	100	n/a
Problem List	88	100	97	100	100	100	89	100	20
Allergies or No Known Allergies	71	76	78	98	87	60	0	98	71
Oral Exam HRSA	28	56	2	13	37	7	35	18	53
Hepatitis A Screen	89	96	51	96	76	96	100	98	100
Hepatitis B Screen	91	89	96	98	59	96	100	89	100
Hepatitis B Screen HRSA	91	89	96	98	59	96	100	89	100
Hepatitis C Screen	95	96	100	100	85	96	98	98	91
Hepatitis C Screen HRSA	95	96	100	100	85	96	98	98	91
CD4 T-Cell Count	94	95	98	94	83	93	98	95	95
CD4 T-Cell Count HRSA	94	95	98	94	83	93	98	95	95
Viral Load	47	64	64	49	33	36	41	44	40
Completed History	91	98	100	98	91	96	80	76	93
Completed Physical	99	100	100	100	100	100	93	100	98
HIV Confirmatory Test	69	33	80	87	15	82	89	78	91
Medical Visits	88	95	89	73	88	92	76	100	89
Medical Visits HRSA	88	95	89	73	88	92	77	100	89
Nutrition Screening	66	91	69	80	35	51	83	33	84
Nutrition Counseling or Assessment	43	9	47	60	100	71	36	60	0
Assessment of Opportunistic Infections	99	100	100	89	100	100	100	100	100
MAC Prophylaxis	70	100	n/a	100	60	80	n/a	40	67
PCP Prophylaxis	78	90	50	n/a	83	56	n/a	63	100
PCP Prophylaxis HRSA	81	90	50	100	86	67	n/a	67	100
Pap Test	63	90	73	70	57	63	30	57	61
Pap Test HRSA	62	90	73	70	57	63	27	57	59
TB Screening	65	89	83	51	60	60	67	58	57
TB Screening HRSA	89	97	97	91	70	90	92	91	86
Risk Reduction Counseling	79	87	100	53	89	91	83	69	60
Alcohol Counseling for HIV/HCV Co-Infected	53	25	50	100	100	40	17	33	60
Chlamydia Screen	74	82	82	93	78	64	61	42	87
Chlamydia Screen HRSA	56	89	69	84	61	47	17	27	53
Gonorrhea Screen	75	87	84	93	76	64	63	44	87
Gonorrhea Screen HSRA	56	91	69	84	61	47	17	27	56
Syphilis Screen	97	100	98	98	93	91	96	98	100
Syphilis Screen HRSA	80	96	100	89	72	76	46	76	89