

# **Ryan White Title I Medical Record Review 2000**

**Prepared for the Miami-Dade County  
Office of Management and Budget  
Ryan White Title I Program**

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# Ryan White Title I

## Results of the 2000 Medical Record Review

### Introduction

Title I of the Ryan White CARE Act, through Miami-Dade County, reimburses outpatient medical care; during 2000, 12 providers received payments. A review of medical records covering care provided June, 1999 through November, 2000 was conducted in November and December 2000 at provider locations. A chart review was done on a sample of the patients seen in the Ryan White Title I funded clinical sites.

The purpose of the review was to assess the care provided to people with HIV/AIDS whose care is reimbursed at least in part by Title I. Similar reviews were conducted with all Title I medical care providers in 1997 and 1999. The protocol used this year was based on the Ryan White Title III review, the New York State Department of Health review, last year's review, with revisions by the Medical Care Subcommittee of the HIV/AIDS Partnership. Williams, Stern & Associates managed the review and performed the analysis under contract to Miami-Dade County. Medical Systems Review, Inc. was engaged to conduct the reviews.

A total of 599 records were reviewed at 12 providers. Patients were divided into four categories for the purpose of analysis:

- ? undetectable level of disease
- ? detectable
- ? high risk
- ? very high risk

The major findings for the 2000 review included:

- ? 87 % of patients are on HAART. The percentage varied across providers, from 82% to 95%.
- ? 38% are on a strongly recommended therapy.
- ? Eighty-seven percent of patients had at least one viral load count.
- ? A high percentage of patients were screened for adherence, diet, nutrition and risk reduction.

Comparing the 2000 review with the 1999 review yielded the following major trends:

- ? There was a significant improvement in screening and assessments.
- ? Four providers significantly improved in TB screening and treatment.
- ? Five of 11 providers significantly improved immunization rates.

- ? Eight of 11 providers significantly improved the percentage of patients with lab work.
- ? A significantly larger number of providers use problem lists, medications lists and allergy lists.

## **Contents of the Report**

This report consists of a written summary and summary tables from the review. Comparisons with last year's findings are presented for all questions asked that are similar to those asked in 1999. Provider-specific information is also presented for the questions. In addition, the record review summaries and specific responses for each record reviewed was mailed on February 7, 2001, to the providers where the records were located.

Providers are urged to review their own scores on each question and to identify areas needing further internal evaluation. In addition to their own scores, they can review other providers' as well as summary scores as benchmarks for their own performance. The report should be viewed as a tool for learning where improvements are needed and for setting up a process for making those improvements.

Appendix I contains a list of major clinical guidelines in use, as well as some educational resources. Appendix II is the instrument used for the record review. Appendix III contains a letter from Mercy Hospital. Appendix IV contains tables of responses to each question for each provider separately. Appendix V is a table of recommended antiretroviral medicine regimens from the Public Health Service (PHS) Guidelines. Appendix VI lists the percentage of patients who were found to be on PHS recommended regimens and those who were found to be on combinations that PHS suggested should not be offered.

## **The Instrument**

The instrument was developed through a number of steps. The 1999 review was analyzed, as was a simple tool used by Title III. A draft was presented to the Medical Care Subcommittee of The Miami-Dade HIV/AIDS Partnership. Nurses from Medical Systems Review were also asked for suggestions for improving the instrument.

The Subcommittee decided to eliminate the section on documentation, though by the final draft, some such questions were included. The Subcommittee also reviewed the Title I Medical Care Guidelines developed locally for guidance on questions. The categories of questions included assessments and referrals, laboratory, therapies and interventions, documentation, and antiretroviral medications. A list of medications was developed, and included Reverse Transcriptase Inhibitors, Non-nucleoside Reverse Transcriptase Inhibitors, and Protease Inhibitors. Current and prior medications were collected. A copy of the instrument of the instrument is in Appendix II.

## **Review Process**

Four registered nurses, experienced in record review, were selected to participate in the study, including one nurse who performed the two previous reviews. A training session, given by Diana Travieso-Palow, MPH, MS, RN, of the University of Miami's T-PED program, at the Medical Systems Review offices assured cross-reviewer consistency. The reviews took place between November 10 and December 22, 2000. The record evaluation covered visits from January 10, 1999, through December 12, 2000, but only information from visits that occurred within 18 months of the client's last visit were reviewed. The data collected was recorded by nurses on scannable forms and this information was scanned into a database programmed for scoring and reporting.

The review nurses and the staff at MSR who had contact with the sites providing care to the Ryan White recipients all commented that the cooperation at the centers was very good.

Following the WSA review, Mercy Hospital conducted a review of the same records using the same tool or an adaptation of it. The findings from the SDIS review were highly consistent with the findings from the Title I review, validating the results of the earlier review. Appendix III contains a letter from Mercy Hospital explaining its findings.

## **Providers and Sites Reviewed**

Records were reviewed from 12 providers at 19 locations: Borinquen Health Clinic, Community Health of South Dade (CHI), Equal Opportunity Family Health Center (EOFHC), HIVUS, Inc, Liberty City Health Services Center, Mercy Hospital (Albert Canas, MD, Steinhart Medical Group, Jose Arocha, MD, Donna Jacobson, DO, Camillus Health Concern, MOVERS/Debbie Holmes, MD, Irma R. Rey, MD, Jose Hernandez, DO, and Drs. Piperato, King, & Wohlfeiler), North Dade Health Services, the Prevention, Education and Treatment (PET) Center, Stanley Myers Community Health Centers, South Shore Hospital Outpatient Services, and the University of Miami.

## **The Review Sample**

### ***Sample selection***

Table 1 shows the number of records reviewed for each provider compared with the number of Ryan White clients they served. The review sample was selected from a pool of 5,562 adult clients who had at least one medical office visit or consultation billed in the Ryan White Title I Service Delivery Information System (SDIS) between June 1999 and September 2000. The final number reviewed was 599, or nine percent of the number of the clients who received outpatient medical care during Year 09 (3/1/99 - 2/29/00). A sample of this size provided a confidence interval of plus or minus five percent with 99 percent certainty or plus or minus 3.8 percent with 95 percent certainty.

A stratified random sample was selected for the 2000 medical record review. The sample was roughly proportional to the number of patients served by each provider, however, small providers were over-sampled to ensure sufficient sample sizes for the analysis. In addition, for providers who had more than one service location, an attempt was made to select patients from each location. Once the number of records to be reviewed at each provider site was determined, clients were randomly selected from those served at that site. Williams, Stern & Associates provided Medical Systems Review (MSR) nurses with lists of identification numbers for patients to be reviewed at each medical provider.

	Sample		Ryan White	
	Number	Percent	Number	Percent
Borinquen	25	4%	119	2%
CARE Resource	20	3%	84	2%
CHI	40	7%	190	3%
EOFHC	40	7%	110	2%
HIVUS	25	4%	220	4%
Liberty City	30	5%	130	2%
Mercy	100	17%	750	13%
North Dade	40	7%	344	6%
PET Center	50	8%	419	8%
South Shore	80	13%	574	10%
Stanley Myers	40	7%	400	7%
UM	109	18%	2222	40%
Total	599	100%	5562	100%

***Characteristics of the Sample Population***

Table 2 compares the review sample with the Ryan White Title I population receiving medical care, the Ryan White Title I population as a whole, and the prevalence of HIV/AIDS in Miami-Dade County. One-sample Chi-square tests were used to compare the review sample to the Ryan White Title I outpatient medical care population.

There were no significant differences (all p values > .20) between the review sample and the Ryan White Title I outpatient medical care recipients in terms of race/ethnicity, gender, and HIV status, however, those whose outpatient medical care was paid for, wholly or partially, by Ryan White Title I did differ from the Ryan White Title I population as a whole and the Miami-Dade County HIV/AIDS population. The reasons for these differences are not within the purview of this report, but it is important to recognize that the medical record view findings apply only to those who receive outpatient medical care from a Ryan White Title I provider and can be generalized neither to all Ryan White clients nor to the broader population of persons with HIV or AIDS. However, record reviews provide a rather comprehensive view of care received regardless of who pays for it. No medical records of children or adolescents were reviewed, as clinical care guidelines for these groups differ from those for adults.

Table 2. Demographic Characteristics of Ryan White Title I Medical Care Clients								
			Figure 1 Current Stage of Disease					
Sample			Ryan White - Medical		Ryan White - Overall		Miami-Dade County	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>Race/Ethnicity</b>							Undetectable	
White	100	18%	776	15%	1,437	18%	3,437	16%
Black	200	35%	1,895	38%	11,122	57%		
Haitian	61	11%	596	12%				
Hispanic	203	36%	1,774	35%			2,660	27%
	564	100%	5,041	100%			5,199	100%
<b>Gender</b>							Very High Risk	
Male	372	70%	3,578	61%	19,822	71%		
Female	159	30%	1,584	31%	5,758	29%		
	531	100%	5,162	100%	19,580	100%	High Risk	
<b>Age</b>								
< 13 years	0	0%	202	4%	275	3%	204	1%
13 - 19 years	0	0%	73	1%	107	1%	124	1%
20 - 44 years	389	67%	3,179	61%	5,953	59%	13,659	70%
45+ years	188	33%	1,727	33%	3,721	37%	5,649	29%
	577	100%	5,181	100%	10,056	100%	19,636	100%
<b>HIV Status</b>								
HIV	241	45%	2,270	44%	3,596	37%	9,935	51%
HIV Symptomatic	49	9%	489	9%	997	10%	9,702	49%
AIDS	242	46%	2,405	47%	5,220	53%		
	532	100%	5,164	100%	9,813	100%	19,637	100%

Note. Categories do not always sum to the same number because of missing or incomplete data.

## Findings

### Frequency of Visits, CD4 and Viral Load Measurements

The time between the patient's last visit to their medical care provider and the date on which the record was reviewed was computed. Seventy percent of patients had visited their medical provider within three months, 80 percent within six months, and 95 percent within 12 months. We did not collect information on the frequency of outpatient medical care visits, but we did collect the dates of the last four CD4 and viral load counts.

The average time between successive CD4 and viral load counts was four months. There was, however, large variation in the time between measures. Some patients had more than one CD4 or viral load done within a month and others had not had a second CD4 or viral load for more than a year. At least one CD4 measure was recorded in the patient's files for 99 percent of patients, and 90 percent had two or more. The time between the two most frequent measures was within three months for 41 percent of patients, within six months for 82 percent, and within a year for 97 percent.

For viral loads, 13 percent of patients had no record of a viral load count and another 18 percent had only one recorded. Because viral loads have not been standard, for as long as CD4 counts, we examined the data to see if the missing viral loads were for patients who had not a recent visit. This was not the case: three-quarters of the patients with no recorded viral loads had seen a their physician within the last six months. Further, two-thirds had has a CD4 counted recorded within the last six months of review.

For the 70 percent of the sample who had more than one viral load recorded, the time between viral load measurements was within three months for 39 percent, within four months for 59 percent, within six months for 80 percent, and within one year for 97 percent. There was a significant relationship between provider and whether a viral load was in the medical record ( $\chi^2 = 130.7, p < .001$ ). CHAID, a statistical program that categorizes variables with similar characteristics, showed that Borinquen, North Dade, and Liberty City had the highest percent of patients with no viral loads recorded (24%, 28%, 30% respectively).

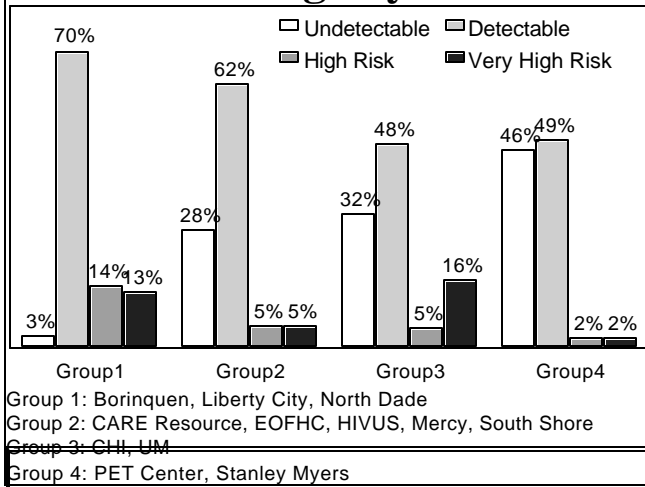
### ***Patient Characteristics - Disease Stage***

Patients were categorized in terms of risk of progression to a more serious stage of the illness in order to assess the care being given to prevent such progression. The categories were a viral load 400 or less (undetectable viral load); viral load greater than 400 but not in either of the very high risk categories (detectable viral load); viral load of 10,000-50,000 and CD4 count less than 200 (high risk); and viral load greater than 50,000 copies and CD4 count less than 200 (very high risk). Disease stage (i.e, risk for progression) could not be computed for 13 percent of the sample because of missing CD4 or viral load counts). Figure 1 shows the distribution of Ryan White Title I patients by their current stage of the disease.

Change in patients' viral loads between their last two measurements was calculated by converting the viral loads to logarithmic form and subtracting the base10 logs. Research has suggested that only a two- to threefold variation (0.3 to 0.5 log change) or more indicates true biological change. The amount of change in the two most recent viral load measures was examined by the patient's current disease stage (risk of progression to a more serious stage of the illness). There were significant differences among the groups ( $F = 19.6, p = .001$ ). The group with currently undetectable viral loads showed a significant reduction from the previous measure, with an average log change of minus 0.47. The group currently showing high risk of progression showed higher viral loads over the previous measure. in the most recent measure, those who were in the very high risk group had an average log change of plus 0.33. Those in the detectable and high risk groups had average changes below the biologically meaningful level (minus .04 and minus .07 log change respectively).

As can be seen in Table 3, considerable variation exists among providers in the stage of illness of their patients ( $\chi^2 = 79.2, p < .001$ ). CHAID, a statistical program that categorizes variables with similar characteristics, revealed four provider groups. As a whole, having a detectable viral load is the most frequent stage of illness, hence, groups differed primarily in the proportions of clients with undetectable viral loads compared to clients at high and very high risk for disease progression. Figure 2 displays the distribution of disease stage by group and lists the providers in each group.

**Figure 2  
Disease Stage by Provider**



Group1 (Borinquen, Liberty City, and North Dade) has a low percentage of clients with undetectable viral loads (3%) and the highest percentage of client at high or very high risk (28%); Group 2 (Care Resource, EOFHC, HIVUS, Mercy, and South Shore) has 28 percent undetectable and 11 percent at high or very high risk; Group 4 (PET Center and Stanley Myers) has 46 percent undetectable and five percent at high or very high risk; and Group 3 (CHI and UM) differs in the pattern of the other three groups being moderately high for both undetectable (32%) and high and very high risk (21%).

**Table 3. Patients at Risk for Disease Progression by Provider**

Provider	Undetectable		Detectable		High risk		Very high risk	
	n	%	n	%	n	%	n	%
Borinquen	1	5%	15	79%	1	5%	2	11%
CARE Resource	4	20%	14	70%	0	0%	2	10%
CHI	13	35%	19	51%	1	3%	4	11%
EOFHC	10	28%	20	56%	3	8%	3	8%
HIVUS	8	33%	14	58%	2	8%	0	0%
Liberty City	0	0%	13	62%	3	14%	5	24%
Mercy Hospital	25	29%	56	64%	4	5%	2	2%
North Dade	1	3%	20	69%	6	21%	2	7%
PET Center	23	48%	21	44%	2	4%	2	4%
South Shore	20	26%	46	61%	4	5%	6	8%
Stanley C. Myers	15	44%	19	56%	0	0%	0	0%
University of Miami	28	30%	43	46%	5	5%	17	18%
Total	148	28%	300	57%	31	6%	45	9%

Reasons for this variation in stage of illness by provider are not completely clear, though it may be that some providers see patients later in the disease cycle, and some see them earlier. At least part of the variation may be due to ethnic differences in patterns of care. Clients of different race or ethnicity are not equally likely to receive their outpatient medical care from the same provider ( $\chi^2 = 79.2, p < .001$ ). For example, Blacks are more likely to go to Liberty City, HIVUS, and EOFHC, Hispanics to Stanley Myers, Borinquen, and Mercy, and so forth. In addition, there is a marginally significant difference in stage of illness by race/ethnicity (see below). It, therefore, is not surprising that Blacks and Haitians are over-represented at Group1 providers and under-represented at Group 4 providers. Likewise, Hispanics and whites are under-represented at Group1 providers and Hispanics are over-represented at Group 4 providers ( $\chi^2 = 64.2, p < .001$ ).

Risk levels were examined by gender and ethnicity. Tables 4 and 5 show the data. There was no significant difference in the distribution of stage of illness for males and females, there was, however,

a borderline significant difference ( $p = .058$ ) for race/ethnicity in terms of risk level. Non-Hispanic whites were more likely to have undetectable viral loads and Blacks and Haitians were more likely to be in the high or very high risk categories. Although the relation between race/ethnicity and stage of illness did not reach statistical significance it needs to be taken into consideration when interpreting any findings related to either variable. For example, the relation between medical provider site and the risk status for disease progression in their clients as discussed above.

<b>Table 4: Patients at Risk for Disease Progression by Gender</b>								
	Undetectable VL		Detectable VL		High Risk		Very High Risk	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Males	108	73%	204	68%	19	61%	25	57%
Females	40	27%	95	32%	12	39%	19	43%
OVERALL	148	100%	299	100%	31	100%	44	100%

<b>Table 5: Patients at Risk for Disease Progression by Race/Ethnicity</b>								
	Undetectable VL		Detectable VL		High Risk		Very High Risk	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
African American	43	30%	96	33%	10	37%	23	55%
Haitian	15	11%	33	11%	7	26%	3	7%
Hispanic	53	38%	108	38%	6	22%	12	29%
White	30	21%	50	17%	4	15%	4	10%
OVERALL	141	100%	287	100%	27	100%	42	100%

### **Overall Scores**

Table 6 is a question by question breakdown of the scores on each item across all providers. Results for individual providers are presented in Appendix IV. Because not all questions are applicable to all patients, the numbers reported may be confusing at first glance. “Number in Sample” is the number of client records that were reviewed; “Applicable Cases” is the number of persons to whom the question applies, for example, in Question 3, the applicable number of cases is 191 rather than 601 because gynecological examinations are applicable only to females; “Number Yes” is the number of positive responses to the question; “Percent in Compliance” refers to the percentage of applicable cases for whom the answer to the question was “Yes”, for example, 114 out of 191 is 60 percent. It is important to note that when the number of applicable cases is small, one or two cases will have a large effect on the percentage; care should be used in interpreting these. (Note: the number of records reported in the question by question tables is 601, but two patients who could not be linked back to their data in SDIS were dropped for all subsequent analyses.)

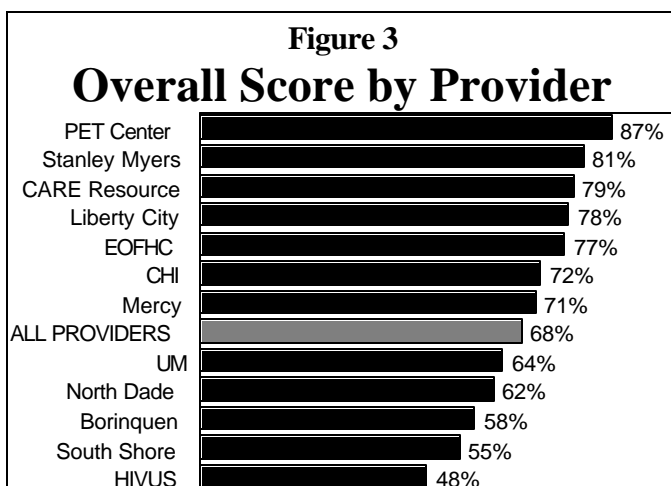
<b>Table 6. All Providers of Ryan White Title I Outpatient Medical Care</b>
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<b>Assessments and Referrals</b>	Number in Sample	Applicable Cases	Number "Yes"	Percent in Compliance
1. Comprehensive History and Physical done or updated in past year.	601	601	484	81%
2. Vital Signs, including weight, at least quarterly (past year, unless seen less frequently).	601	601	582	97%
3. GYN exam including Pap annually	601	191	114	60%
4. FTA testing for Syphilis initially	601	601	161	27%
5. RPR screening for Syphilis annually	601	601	327	54%
6. Gonorrhea/Chlamydia annually	601	601	101	17%
7a. Assess for annual review: Oral health care	601	601	476	79%
7b. Assess for annual review: Nutritional assessment/care	601	601	504	84%
7c. Assess for annual review: Mental Health assessment/care	601	601	501	83%
7d. Assess for annual review: Substance abuse assessment/care	601	601	495	82%
8a. Referred for care where problem was identified: Oral health care	601	216	203	94%
8b. Referred for care where problem was identified: Nutritional assessment/care	601	208	187	90%
8c. Referred for care where problem was identified: Mental health assessment/care	601	220	216	98%
8d. Referred for care where problem was identified: Substance abuse assessment/care	601	84	70	83%
9. TB skin test performed and read annually	601	542	206	38%
10. If PPD positive were they treated	601	100	59	59%
<b>Overall Assessments and Referrals Score</b>				<b>66%</b>
<b>Laboratory</b>				
11. CBC every six months	601	601	560	93%
12. Chemical profile every six months	601	601	524	87%
13. Lipid profile every six months	601	601	466	78%
14. Hepatitis A serology	601	595	453	76%
15. Hepatitis B serology	601	587	472	80%
16. Hepatitis C serology	601	598	469	78%
17. Urinalysis annually	601	600	302	50%

18. Baseline Toxo antibody titer	601	601	305	51%
19. CMV screening for CD4<50	601	139	99	71%
<b>Overall Laboratory Score</b>				<b>74%</b>
<b>Therapy/Interventions</b>				
20. Influenza vaccine given in 1999 or to date	601	590	144	24%
21. Pneumovax given	601	592	207	35%
22. Hepatitis B vaccine series given once	601	456	147	32%
23. Tetanus/Diphtheria is up to date	601	585	212	36%
24. Reason for not immunizing are documented	601	561	174	31%
25. HAART offered	601	597	557	93%
26. On HAART	601	590	514	87%
27. Failed medication regimen & plan for treatment change is documented	601	265	232	88%
28. Resistance testing performed	601	309	55	18%
29. On PCP prophylaxis (CD<200) ever	601	159	137	86%
30. On MAC prophylaxis (CD4<50)	601	65	45	69%
31a. Patient education documented: Adherence to medications	601	548	459	84%
31b. Patient education documented: Diet	601	574	458	80%
31c. Patient education documented: Nutrition	601	575	442	77%
31d. Patient education documented: Risk Reduction	601	575	428	74%
32a. Documentation: Presence of: Problem list	601	601	574	96%
32b. Documentation: Presence of: Medications list	601	601	565	94%
32c. Documentation: Presence of: Allergies list	601	601	545	91%
33. There is a documentation of reason for med change, if change is made	601	294	244	83%
<b>Overall Therapy / Intervention Score</b>				<b>67%</b>
<b>Overall Score</b>				<b>68%</b>

An overall score was computed for all providers and for each provider by summing the number of questions that were answered “Yes” and calculating an average. The overall score for all providers was 68 percent, however, there is much variation, not only among providers, but also among different categories of questions, for example, the “Percent in Compliance” for laboratory tests is more than twice as high as it is for immunizations.

Figure 3 presents the aggregate score by provider. There were significant differences among providers ( $F = 42.8, p < .001$ ); the range of scores showed a high of 87 percent and a low of 48 percent. CHAID was used to categorize providers that significantly differed from each other. Five groups emerged: (1) the PET Center, (2) Stanley Myers, Care Resource, Liberty City, and EOFHC, (3) CHI and Mercy, (4) UM and North Dade, and (5) Borinquen, South Shore, and HIVUS. The groups that are identified statistically differ from one another, but the providers that make up the group do not differ from each other. For example, Mercy and CHI differ statistically from all other providers, that is, their overall scores were higher or lower, but overall scores of Mercy and CHI do not differ from each other.



For example, Mercy and CHI differ statistically from all other providers, that is, their overall scores were higher or lower, but overall scores of Mercy and CHI do not differ from each other.

Differences in the overall score also were reviewed by patient characteristics. There was a significant difference in overall score by disease stage ( $F = 3.6, p = .01$ ). Patients who had “Undetectable” viral loads had higher overall scores than those in other stages of disease progression (72% vs. 68%). Males had higher total scores than females (69% vs. 67%,  $F = 3.8, p = .05$ ). There were no differences by race/ethnicity ( $F = 1.2, p = .33$ ) nor by age ( $r = -.03, p = .44$ ). The gender difference in score mirrors the gender difference in documentation that was reported in the 1999 medical review.

Across providers and patient characteristics, there appears to be opportunity for improvement in documentation of care. Many activities might occur during a visit that are not recorded in the patient’s file. However, the only way to measure whether something was done is if it is documented. Documentation also can affect the quality and continuity of care provided to patients without a regular provider. For example, documenting a problem list can be very helpful for transient patients without a single, complete medical history or chart.

The lack of documentation makes assessments of care more difficult. However, most quality assurance reviewers state that if a procedure is not documented it is not considered done. Indeed, this is the generally recognized standard of measurement in medical care and many other services.

### **Category Scores**

In addition to the overall score, which summed across all items, categories of similar items were formed and examined. These included:

- Screening and Assessments - Questions 1 through 6
- Assessments and Referrals for Other Services - Questions 7a through 8d
- TB Screening and Treatment - Questions 9 and 10
- Laboratory Tests - Questions 11 through 19
- Immunizations - Questions 20 through 24

- Therapy/Interventions - Questions 25 through 27, Questions 29 and 30, and Question 33
- Patient Education - Questions 31a through 31d
- Problem, Medication, and Allergy Lists - Questions 32a through 32c

As stated earlier there was much variation in the “Percent of Compliance” among these categories. This is shown in Figure 4.

**Screening and Assessments.** The subscore for the screening and assessments category was 55 percent. Scores and ranges are shown in Table 7. Compliance for having a comprehensive annual physical and for have having periodic checks of vital signs within the year were good, 81 and 97 percent. Gynecological examinations for women were less than optimal, but much improved over previous years. The lowest score was for gonorrhea/chlamydia screening. An examination of this item by gender revealed that four percent of males had been screened for gonorrhea, while 44 percent of females had been screened for gonorrhea and chlamydia. Sixty-two percent of patients had received either a FTA test or RPR screen for syphilis and 19 percent had both. A third of the providers used the FTA test rarely or not at all. There were no significant difference in syphilis testing by gender.

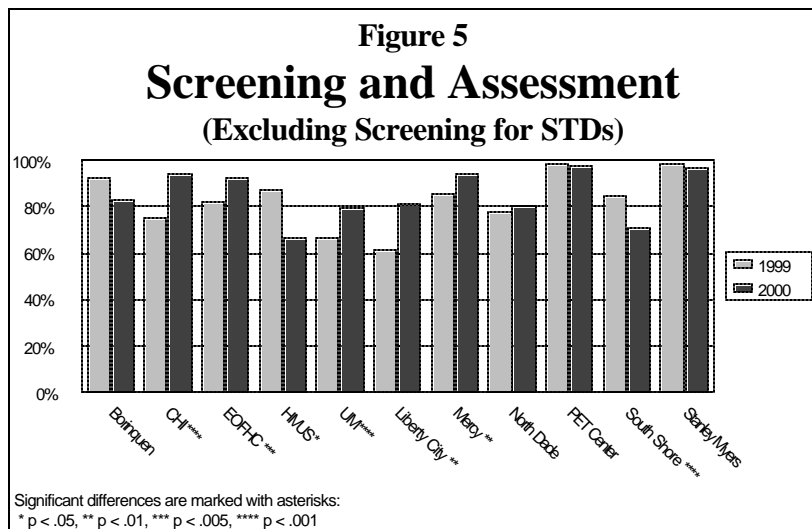
Table 7: Screening and Assessments																						
	Range among Providers	Average Score																				
Comprehensive history and physical	45% to 100%	81%																				
Vital signs, including weight	76% to 100%	97%																				
GYN exam including Pap annually	25% to 100%	60%																				
FTA for Syphilis initially	0% to 88%	27%																				
RPR screening for Syphilis annually	20% to 97%	54%																				
Gonorrhea/Chlamydia annually																						
TOTAL																						
	<div style="text-align: center;"> <p><b>Figure 4 Scores by Category</b></p> <table border="1"> <thead> <tr> <th>Category</th> <th>Average Score</th> </tr> </thead> <tbody> <tr> <td>Screening and Assessments</td> <td>55%</td> </tr> <tr> <td>Comprehensive history and physical</td> <td>83%</td> </tr> <tr> <td>GYN exam including Pap annually</td> <td>37%</td> </tr> <tr> <td>TB Screening and Referrals</td> <td>74%</td> </tr> <tr> <td>Laboratory Tests</td> <td>33%</td> </tr> <tr> <td>Immunizations</td> <td>83%</td> </tr> <tr> <td>Therapy/Interventions</td> <td>79%</td> </tr> <tr> <td>Patient Education</td> <td>93%</td> </tr> <tr> <td>Problem, Medication &amp; Allergy Lists</td> <td>93%</td> </tr> </tbody> </table> </div>		Category	Average Score	Screening and Assessments	55%	Comprehensive history and physical	83%	GYN exam including Pap annually	37%	TB Screening and Referrals	74%	Laboratory Tests	33%	Immunizations	83%	Therapy/Interventions	79%	Patient Education	93%	Problem, Medication & Allergy Lists	93%
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There were significant differences among providers on the screening and assessments categories which ranged from 39 percent to 79 percent ( $F = 18.3, p < .001$ ). CHAID was used to identify groups of providers who significantly differed from one another on this measure. The groups that emerged were (1) the PET Center (79%), (2) CARE Resource and CHI (70%), (3) EOFHC, Liberty City, and Stanley Myers (57%), (4) UM, Mercy and North Dade (52%), and (5) Borinquen, HIVUS, and South Shore (43%). Percentages for individual items overall and by provider are shown in Appendix IV.

In order to assess change, items that were equivalent in the 1999 and 2000 Medical Record Reviews were averaged and compared. Because there were no items that looked at screening for STDs in the 1999 review, these were excluded from the comparison. As Figure 5 shows, there was significant improvement in the items that looked at whether patients received comprehensive physical examinations including medical and social history and whether women got gynecological examinations and Pap smears ( $F = 11.9, p = .001$ ). Five of the eleven providers who were reviewed last year improved and two got worse. Of those who showed no change, two had scored near the maximum leaving little room for improvement.

**Assessments and Referrals for Other Services.** Overall, compliance for this category was 83 percent. Table 8 shows average scores and ranges by category. Seventy-one of the patients in the sample had been assessed on all four areas of interest, and 92 percent had received at least one. Of those who were identified as needing another service, 94 percent had been referred.

There were significant differences among providers on the percentage of assessments and referrals to other services that were accomplished ( $F = 20.4, p < .001$ ). CHAID identified five distinct groups: (1) Care Resource, EOFHC, and Stanley Myers (100%); (2) CHI, Mercy, and the PET Center (94%); (3) Borinquen, Liberty City, and North Dade (84%); (4) UM (74%); and (5) HIVUS and South Shore (53%). Percentages for individual items by provider are in Appendix IV.



<b>Table 8: Assessments and Referrals for Other Services</b>		
	Range among Providers	Average Score

Annual oral health care assessment	48% to 100%	79%
Oral health care referral, if needed	67% to 100%	94%
Annual nutritional assessment	46% to 100%	84%
Nutritional referral, if needed	20% to 100%	90%
Annual mental health assessment	36% to 100%	83%
Mental health referral, if needed	86% to 100%	98%
Annual substance abuse assessment	56% to 100%	82%
Substance abuse referral, if needed	50% to 100%	83%
TOTAL	50% to 100%	83%

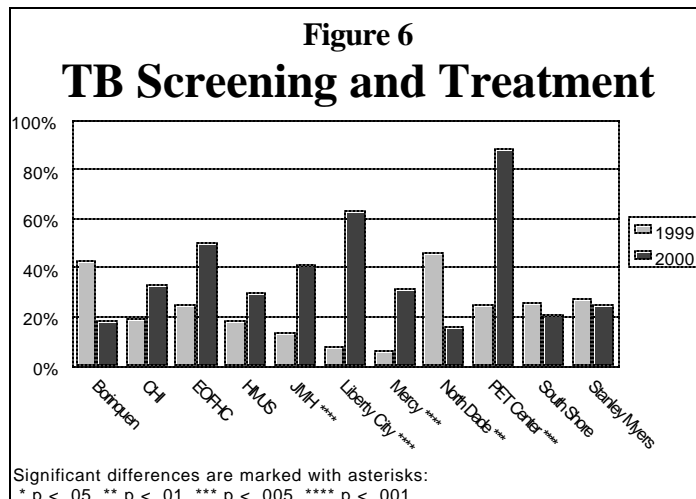
**Tuberculosis Screening and Treatment.** A little over one third of clients (38%) who were eligible for a PPD, i.e., not known positive, not being currently treated for TB or immunized with BCG, had evidence of a PPD being placed and read in the last 18 months. Table 9 provides scores and ranges for testing and treating. Of those with a positive PPD (either identified at the time of current testing or previously), 59 percent received treatment. There were significant differences among providers in their rates of PPD screening ( $F = 9.4, p < .001$ ) and treatment of those with a positive PPD ( $F = 11.0, p < .001$ ). Of those who received a PPD during the review period, only 19 (10%) had a positive PPD. This is down from last year when 26 percent of those who had received a PPD were positive.

For tuberculosis screening and treatment examined together, CHAID identified four distinct groups: (1) the PET Center (88%); (2) CARE Resource, EOFHC, Liberty City, and UM (53%); (3) CHI, Mercy, and South Shore (33%); and (4) Borinquen, HIVUS, North Dade, and Stanley Myers (20%). Percentages for individual items overall and by provider are in Appendix IV.

	Range among Providers	Average Score
PPD in last 18 Months *	16% to 88%	38%
Positive PPD treated	0% to 100%	59%
TOTAL	13% to 88%	41%

\* If PPD placed but not read it is scored as not done.

Tuberculosis screening and treatment during 2000 was compared to the findings in the 1999 record review. Even though four of the eleven providers who were reviewed last year had significant increases in compliance on these items, the overall compliance on these items still remains relatively low. This is in spite of the fact that percentages were computed only for those patients for whom screening was appropriate. This can be seen in Figure 6.



**Laboratory Tests.** Across all providers nearly three-quarters of the patients (74%)

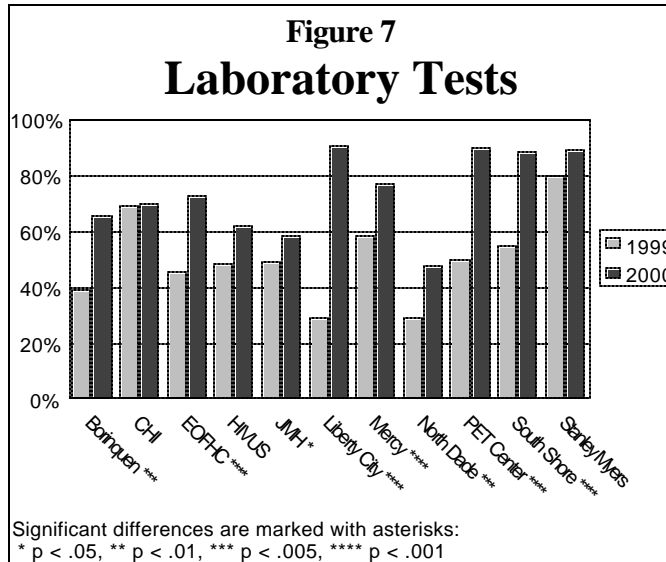
had received the recommended laboratory tests, shown in Table 10. There were significant differences among providers ( $F = 24.1, p < .001$ ). CHAID revealed three groups of providers that differed from each other: (1) Care Resource, Liberty City, the PET Center, South Shore, and Stanley Myers (89%), (2) CHI, EOFHC, and Mercy (74%), and (3) HIVUS, North Dade, and UM (57%). Percentages for individual items overall and by provider are in Appendix IV.

Although at least a quarter of patients are not receiving the laboratory and diagnostic tests that are recommended for the management of HIV-infected adults, there were significant increases over what was observed in the 1999 Medical Record Review, as shown in Figure 7. All providers

	Range among Providers	Average Score
CBC every six months	68% to 100%	93%
Chemical profile every six months	45% to 100%	87%
Lipid profile every six months	4% to 100%	78%
Hepatitis A serology	35% to 100%	76%
Hepatitis B serology	53% to 100%	80%
Hepatitis C serology	53% to 100%	78%
Urinalysis annually	15% to 98%	50%
Baseline Toxo antibody titer	8% to 95%	51%
CMV screening for CD4 < 50	6% to 100%	71%
TOTAL	44% to 93%	74%

increased the percentage of their patients receiving recommended laboratory tests, and the amount of increase was statistically significant for eight out of the 11 providers reviewed last year.

**Immunizations.** Poor compliance scores were found for immunizations. Only about one-third of patients had received the immunizations that were recommended in the Miami-Dade HIV/AIDS

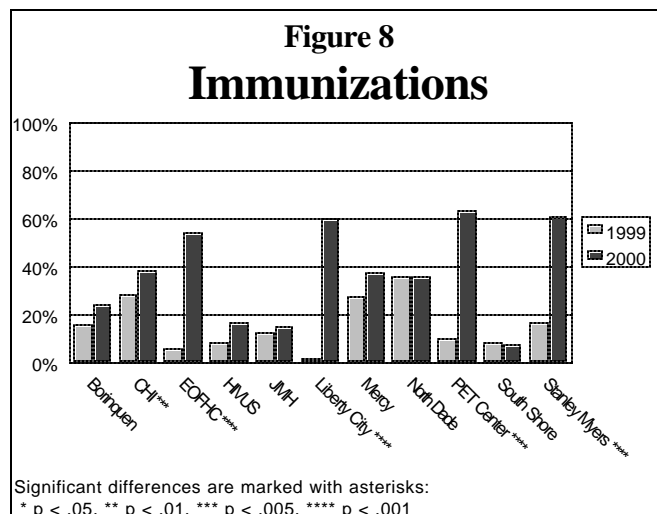


Guidelines. Patients who were offered the vaccine and refused it were not used in the computation, so refusal by the patient was not counted against the provider. There is wide variation among sites in the immunization rates ( $F = 24.2, p < .001$ ). CHAID identified four groups of providers who differed in their rates of immunization: (1) EOFHC, Liberty City, PET Center, and Stanley Myers (60%); (2) CHI, CARE Resource, Mercy, and North Dade (36%); (3) Borinquen, HIVUS and UM (12%), and (4) South Shore (8%). Table 11 summarizes average scores and range by category.

	Range among Providers	Average Score
Influenza	5% to 38%	24%
Pneumovax	10% to 79%	35%
Hepatitis B	3% to 51%	32%
Tetanus/diphtheria	0% to 92%	36%
Reasons documented	0% to 78%	31%
TOTAL	8% to 63%	33%

The rates of immunization were compared to those reported in the 1999 Medical Report Review. Five of the 11 providers funded during the earlier period had significant increases in their immunization rates and for four of these the increases were four to five-fold, but in spite of this immunization rates for adult HIV infected patients are still low. Figure 8 shows the changes in combined immunization rates.

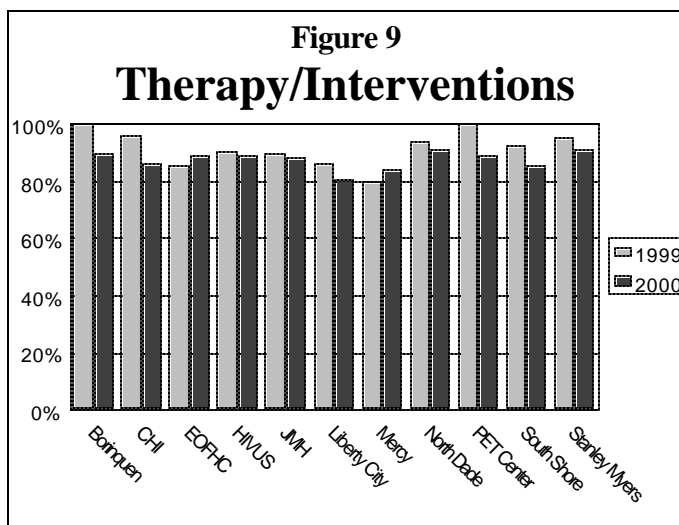
**Therapy and Interventions.** The category was formed by summing and averaging the number of clients who were offered and/or were on medication regimens, had documentation for medication related decisions, and were on therapy for opportunistic infection, if appropriate. Table 12 summarizes the scores. The overall compliance in these areas was 87 percent. There was little variation overall among providers (the statistical tests showed no



significant differences). Differences in medication regimens are discussed in a later section. Figure 9 shows there was little change in the provision of medications and therapies for opportunistic infection between that reported in the 1999 Medical Record Review and those reported here.

	Range among Providers	Average Score
HAART offered	88% to 100%	93%
On HAART	75% to 100%	87%
Treatment change documented	0% to 100%	88%
On PCP prophylaxis (CD4 < 200)	0% to 100%	86%
On MAC prophylaxis (CD4 < 50)	0% to 100%	69%
Document medication change	30% to 100%	84%
TOTAL	76% to 91%	87%

**Resistance Testing.** Although they are newly offered tests, resistance testing was looked at as a data gathering activity and was not included in scoring. Forty-eight patients had genotype assays and seven had phenotype assays. Most patients (82%) who had resistance testing had evidence of a medication regimen change. Two of the seven patients who had phenotype testing also had genotype testing. There was a significant association between having had genotype testing and current disease stage ( $\chi^2 = 22.5, p < .001$ ).



Twenty-four percent of patients who were at very high risk for disease progression had a genotype assay, ten percent of those who were at high risk or detectable, and two percent of those who were undetectable. There were no significant associations between gender or race/ethnicity and genotype testing. There was significant variation in whether a provider had used genotype testing ( $\chi^2 = 61.5, p < .001$ ). CHAID showed three distinct groups: (1) HIVUS, North Dade, Stanley Myers, and UM (18%), (2) CHI, EOFHC, PET Center, and Mercy (4%), and (3) Borinquen, CARE Resource, Liberty City, and South Shore (0%). There were too few patients with phenotype testing to permit

analysis.

**Patient Education.** A high percentage of patients are reported to have received various types of patient education, although there was wide variation among providers ( $\chi^2 = 62.5, p < .001$ ). CHAID identified three groups of providers who different in whether they provided patient education: (1) Liberty City, North Dade, and UM (86%); (2) CARE Resource, CHI, EOFHC, Mercy, PET Center, and Stanley Myers (79%); and Borinquen, HIVUS, and South Shore (30%). Information on patient

education was not collected in previous medical record reviews, so no comparison was made. Table 13 shows the ranges and average scores.

<b>Table 13: Patient Education</b>		
	Range among Providers	Average Score
Adherence to medications	24% to 100%	84%
Diet	19% to 100%	80%
Nutrition	15% to 100%	77%
Risk reduction	12% to 100%	74%
TOTAL	24% to 100%	79%

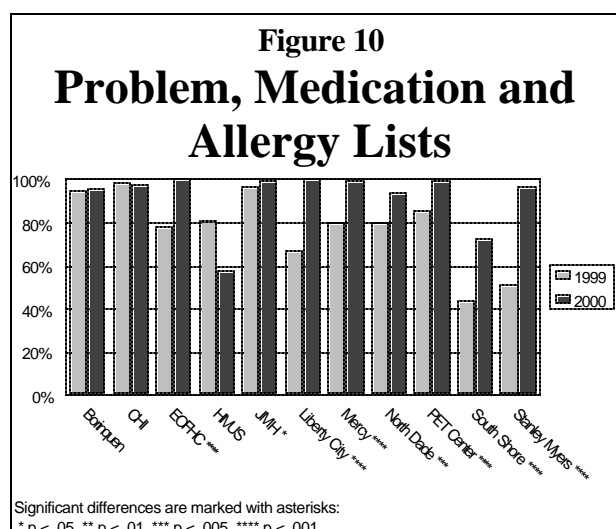
**Problem, Education, and Allergy Lists.** Virtually all patients (93%) had problem, education, and allergy lists in their medical records. All but two providers had percentages of compliance of at least 95 percent. HIVUS has 68 percent compliance and South Shore 73 percent. These provider differences were significant ( $\chi^2 = 24.5, p < .001$ ). Table 14 provides ranges and average scores.

<b>Table 14: Problem, Education, and Allergy Lists</b>		
	Range among Providers	Average Score
Problem list	80% to 100%	96%
Medications list	52% to 100%	94%
Allergies list	41% to 100%	91%
TOTAL	68% to 100%	94%

There was a significant increase in the presence of this type of documentation over what was seen in the 1999 Medical Record Review. As Figure 10 shows, eight of the eleven providers who had been reviewed in 1999 significantly increased their percentage of patients who had this type of information in their records.

### **Medication Regimens**

Information on antiretroviral medications was collected. All medications the patient was on at their last visit was noted, as well as all medications the patient had been taking immediately prior to their current medication regimen. Drug combinations were categorized in several ways. First, was the patient on any kind of antiretroviral drug regardless of the kind, number, or combination of drugs. Second, in the judgement of the professional reviewers, was the patient on HAART (highly active antiretroviral therapy). Third, was the current medication regimen one of four groups



identified in the 2000 PHS Guidelines for Antiretroviral Therapy in Adults and Adolescents. (See Appendix V). These groups included strongly recommended, recommended as an alternative, no recommendation; insufficient data, and not recommended (should not be offered, including monotherapy). Finally, the patients' antiretroviral medications were grouped by various combinations. New guidelines were issued by PHS on April 23, 2001 and should serve as the standard of treatment in the future.

**Antiretroviral Medication.** Overall, 87 percent of patients were on some type of antiretroviral medication. Of the 13 percent of patients who currently were on no antiretroviral medication, 62 percent had no record of having been on a prior medication regimen. Provider differences in the whether or not patients were on any kind of antiretroviral medication were examined and found to be significant ( $\chi^2 = 29.8, p = .002$ ). CHAID identified two distinct groups of providers: Borinquen, EOFHC, Liberty City, North Dade, PET Center, and South Shore (95 percent of the patients at these providers were on an antiretroviral medication); and CARE Resource, CHI, HIVUS, Mercy, Stanley Myers, and UM (with an average of 81 percent).

There were some differences in the provision of antiretroviral medication compared to the findings in the 1999 review. For patients with a CD4 count less than 500 and a viral load greater than 10,000, 82 percent were on one or more antiretroviral drugs. This is lower than the 94 percent reported for that group in 1999 ( $\chi^2 = 14.9, p < .001$ ). Of those who currently were on antiretroviral medication, regardless of CD4 count or viral load, 96 percent were on combination therapy, i.e., receiving two or more medications. This is a significant increase over the 1999 finding of 91 percent ( $\chi^2 = 14.9, p < .001$ ).

The most frequently prescribed antiretroviral medication was Combivir with 42 percent of patients currently taking that medication either alone or in combination with another medication. Table 15 shows the number and percentage of patients who were on any of the drugs recorded for this report.

**HAART.** The findings for being on HAART were virtually identical to those for being on any antiretroviral medication. This is most likely due to the fact that 96 percent of patients who were on any medication were on a combination. Provider specific data on the number of patients who are on or were offered HAART may be found in Appendix VI.

**Recommendations from the PHS Guidelines.** The PHS Guidelines specifically recommend for and against certain combinations of medications for initial treatment of individuals with established HIV. These combinations were examined for all patients in our sample. There

**Table 15. Number and Percentage of Patients Prescribed Antiretroviral Medications**

	Number	Percent
Combivir	253	42%
D4T	211	35%
3TC	152	25%
Viramine	132	22%
Ziagen	124	21%
Crixivan	99	17%
Sustiva	95	16%
Viracept	94	16%
Norvir	73	12%
DDI	63	11%
Fortovase	30	5%
Agenerase	26	4%
AAT	16	3%
DDC	9	2%
Lopinavir	9	2%
Hydroxyurea	7	1%
Rescriptor	6	1%

was some duplication both within and between categories, for example, five patients who were currently on a strongly recommended combination of drugs were also on a not recommended combination that “should not be offered”. Appendix VI shows the percentage of patients who received the various medication combinations. (Because of duplication within categories the numbers do not sum to the total and the percentages do not sum to 100 percent.)

Thirty-nine percent of patients were on a strongly recommended combinations of antiretroviral medications. There were significant differences among providers ( $\chi^2 = 34.3, p < .001$ ). CHAID identified three significantly different groups in usage of strongly recommended combinations of antiretroviral medications: (1) Borinquen, South Shore, Stanley Myers, and UM (52% of patients), (2) CARE Resource, CHI, EOFHC, Liberty City, and North Dade (36%), (3) HIVUS, Mercy, and PET Center (25% of patients).

Two percent of patients were on monotherapy or a not recommended combination. No patient who was on monotherapy was a pregnant woman receiving AZT. There were no significant provider differences in having a patient on monotherapy or a not recommended combination, i.e., this was as likely to happen at any of the sites reviewed.

**Antiretroviral Medication Combinations.**

Because less than half of patients were on one of the combinations that were specifically recommended in the PHS Guidelines, the drugs were also classified by the various combinations of types of antiretroviral medications. For this analysis whether the combination was recommended or not by the PHS was not taken into consideration. The results of this analysis are presented in Table 16.

None	78	13%
Monotherapy	4	1%
NRTI only (2 or more)	76	13%
NRTI(s) and PI(s)	210	35%
Non-NRTI(s) and PI(s)	6	1%
NRTI(s) and Non-NRTI(s)	191	32%
NRTI(s), Non-NRTI(s) and PI(s)	34	6%
TOTAL	599	100%

**Patient Characteristics and Receipt of Antiretroviral Medication.** Since recent national studies have found that race/ethnicity and gender appear to influence receipt of antiretroviral medications, medication regimens were examined by these and disease stage. The results can be seen in Table 17.

There were significant differences in the medication regimens by each of the patient characteristic examined. For being on an antiretroviral medication, on HAART, or on a strongly recommended combination, the pattern was the same: those who are have a detectable viral load were less likely to be on the regimen than those who are at high risk, very high risk, or undetectable (all the Chi-squares were significant at the .01 level or less). There were ethnic differences in whether the patient was on an antiretroviral medication or on HAART, but no significant difference in whether the patient was

on a strongly recommended regimen. Hispanics and Haitians were more likely to be on antiretroviral medication and HAART than non-Haitian blacks and non-Hispanic whites (both Chi-squares were significant at the .05 level). There were no gender differences in whether a patient was on a medication, HAART, or strongly recommended regimen.

<b>Table 17. Patient Characteristics and Receipt of Antiretroviral Medication</b>			
Disease Stage	On an Antiretroviral	On HAART	Strongly Recommended
Undetectable	95%	97%	47%
Detectable	80%	80%	32%
High Risk	97%	97%	45%
Very High Risk	89%	87%	47%
<b>Ethnicity</b>			
Black	84%	83%	35%
Haitian	89%	91%	43%
Hispanic	91%	92%	44%
White	81%	81%	38%
<b>Gender</b>			
Female	87%	87%	35%
Male	87%	87%	41%

For the stage of disease and ethnicity there were no significant differences in being on a monotherapy or not recommended combination, but there was a significance difference between males and females (4% versus 9%,  $\chi^2 = 4.0$ ,  $p = .05$ ). It is not clear why women are twice as likely to be on a not-recommended combination or monotherapy, but the reason is not because pregnant females are receiving AZT monotherapy.

## Conclusions and Recommendations

The 2000 reviews demonstrated a standard of treatment that is generally good and consistent, particularly in HIV-specific treatments. Eighty-seven percent of patients whose records were reviewed were on HAART. While several national studies have identified racial, ethnic and gender disparities in the provision of antiretroviral therapy, no gender differences were identified in whether people are on a medication, on HAART, or on a strongly recommended regimen. However, females were more likely to be on non-recommended therapies. This bears further examination during the next review. Hispanics and Haitians were more likely to have received antiretroviral therapy and HAART than were Blacks and non-Hispanic whites. The reasons for this finding are not clear.

Some areas identified in the 1997 and 1999 reviews have improved, though not always as significantly as hoped. Areas where continuing improvement is needed include primary care and documentation. There have been significant improvements in screening and assessments and the use of lists for problems, medications and allergies. Patient education is documented in a high percentage of records.

Also improved, but still low, are annual gynecological exams with Pap smears, immunizations, and TB screening and treatment.

Provider performance varies considerably. Some providers appear to have undertaken major improvement efforts, while others have demonstrated level results. Documentation has improved at most providers, while others continue to experience difficulties in this area. In addition, several providers do not appear to have significantly changed their treatment patterns, even though the need for improvement was noted in the prior review(s).

### **1. *Medical treatments should be optimized.***

A significant portion of Ryan White patients appear to be at risk for progression to a more severe form of the disease, and even death. There may be many reasons for this, including drug resistance, patients seeking care at the end stage, or patient inability to follow a regimen. Providers who have patients at high risk for progression (high viral loads and low CD4 counts) may wish to review the care of individual patients to see if there are means for optimizing treatments.

Eighty-seven percent of patients are on antiretroviral therapy, and 39 percent are on what PHS considered optimal therapy in 2000. There was little change from the previous review. Providers should be encouraged to review their records and educate physicians about the guidelines for offering antiretroviral therapy. Records should also be reviewed internally to determine who might be on a non-recommended therapy. The analysis of antiretroviral therapy is complicated by the large number of permutations and the fact that prescribing them is still not a clear-cut choice from a menu but is influenced by many other factors.

### **2. *Providers should know and utilize clinical guidelines***

As was highlighted in last year's report, and is reiterated here, although there has been improvement, much remains. Many physicians are tapping the resources in the Public Health Service Guidelines and other sources (see Appendix I for a partial list of resources). All physicians and their staffs should be familiar with and routinely use guidelines for providing treatment to their patients.

The Ryan White CARE Act requires that patients whose care is funded by Title I receive a standard of care that at the least is consistent with the Public Health Services guidelines. Thus it becomes difficult to justify care that is below a consensus standard.

### **3. *Documentation of care needs improvement.***

Documentation of care is critically important to the quality of care rendered and to the continuity of care. The patient record is an important means of communication among providers and of patient care follow-up. Quality assurance activities teach that "if it isn't documented it isn't done." In most programs, including Ryan White Title I, reimbursement depends on being able to demonstrate that things were done. Providers, including the administrators of organizations serving Ryan White clients, should find ways to improve the level of documentation in their patient records and monitor the documentation. Then they can monitor their own care.

**4. Continued provider education is needed to optimize treatment.**

In order to improve documentation, increase certain treatments and optimize antiretroviral therapy, ongoing provider education regarding medication compliance and the prevention of drug resistance is needed. Providers, particularly administrators, should find ways to encourage medical staff to obtain continuing education on the latest treatment protocols, particularly in the fast-moving area of drug therapies. Use of guidelines, particularly those that are updated on the Internet, would be of benefit as well.

**5. Quality assurance and improvement activities should be integral in the organization.**

Physicians and other providers, as well as administrators, should utilize various means of monitoring and improving quality. Self-review within the organization is essential. Patient records, or at least a sample, should be routinely reviewed for documentation and quality of care (i.e. state-of-the-art therapies and treatments). Organizations may create their own record review protocols based on clinical practice guidelines and standards, or they may use a pre-existing instrument.

Peer review and self-review are necessary components of medical care quality maintenance and improvement and are recommended. However the reviews are conducted, feedback and problem-solving sessions are critical to being able to utilize the information collected. These should not be seen as punitive activities, but ways to optimize patient care.

## Appendix I: Resources

### Clinical Guidelines

Guidelines for the Use of Antiretroviral Agents in HIV-Infected Adults and Adolescents. USPHS. January 28, 2000.

A Guide to The Clinical Care of Women With HIV: 2001 - First Edition HIV-AIDS Bureau, Health Resources and Services Administration.

E-mail: [womencare@hrsa.gov](mailto:womencare@hrsa.gov)

Fax to the attention of "Womencare": 301-443-0791 (USA)

Postal address: Womencare Parklawn Building, Room 11A-33 5600 Fishers Lane  
Rockville, Maryland 20857

Guidelines for the Use of Antiretroviral Agents Pediatric HIV Infection. USPHS. January 7, 2000.

Guidelines for the Prevention of Opportunistic Infections in Persons Infected with Human Immunodeficiency Virus. USPHS/IDSA. Draft #5, May 4, 1999.

U.S. Public Health Service Task Force Recommendations for Use of Antiretroviral Drugs During Pregnancy for Maternal Health and Reduction of Perinatal Transmission of Human Immunodeficiency Virus Type 1 in the United States.

AIDS Institute, New York State Department of Health: Criteria for the Medical Care of Adults With HIV Infection.

AIDS Institute, New York State Department of Health: Criteria for the Medical Care of Children and Adolescents With HIV Infection.

New York State Department of Health Guidelines available from

Director, HIV Educational Materials

AIDS Institute at New York State Department of Health

5 Penn Plaza, First Floor

New York, NY 10001

Fax: 212 613-4996

University of Florida. HIV/AIDS Primary Care Guide, 1999 Edition.

Florida AIDS Education and Training Center

University of Florida

P.O. Box 100177

Gainesville, FL 32610-0177

Phone 352-395-8037 Email [AIDS@hpe.ufl.edu](mailto:AIDS@hpe.ufl.edu)

John G. Bartlett, M.D. 1999 Medical Management of HIV Infection

Ordering: 1-800-787-1254

## **Adherence**

North Dade Health Center/Jackson Memorial Hospital: [AIDS Drug Assistance Program/Ryan White Adherence Program](#).

Phone 305- 620-3736 Fax 305-624-5296

AIDS Institute, New York State Department of Health: [Treatment Adherence for People with HIV Infection](#).

Ordering: See above under Treatment Guidelines

## **Websites**

USDHHS website for clinical guidelines updates, other information: [HIVATIS](#).

University of California at San Francisco website for guidelines, other information: [HIVInSite](#)

The Johns Hopkins University: [www.hopkins-aids.edu](http://www.hopkins-aids.edu)

Miami-Dade County HIV/AIDS Partnership: [AIDSNET.org](http://AIDSNET.org)

## **Educational Resources**

Florida AIDS Education and Training Center  
Shed Boren, Mercy Hospital SIS 305- 285-2994  
Corklin Steinhart, M.D., Ph.D., Medical Director

University of Miami Targeted Provider Education Demonstration Program  
Training for non-clinical personnel

Diana Travieso-Palow. M.P.H., M.S., R.N.  
Phone 305-243-2846 Fax 305-243-2905 E-mail [SFLTEPD@med.miami.edu](mailto:SFLTEPD@med.miami.edu)