




JSI Research & Training Institute, Inc.

# **Minority AIDS Initiative**

## **Outcomes Measurement Summary Annual Report FY 2010**

A grayscale map of a city grid, showing streets and building footprints, positioned on the left side of the cover.

**Year-End FY 2008 — Year-End FY 2010  
(February 2009 – February 2011)**

Laureen Kunches  
Mira Levinson  
Joseph Musolino  
Allison Power  
Amy Flynn  
Diana Zuskov

**Ryan White HIV/AIDS Treatment  
Extension Act of 2009  
Boston EMA Part A Programs**

**September 2011**

## TABLE OF CONTENTS

<b><u>Introduction</u></b> .....	3
<b><u>Methods</u></b> .....	4
Data Collection.....	4
Data Analysis.....	4
Limitations.....	5
<b><u>Results</u></b> .....	7
Data Summary.....	7
Demographic and Descriptive Characteristics of Clients with Outcome Reports.....	9
Outcome Score Data for All MAI Clients.....	15
Health Outcome Distribution for All MAI Clients.....	20
Demographic and Descriptive Characteristics of Continuous Clients.....	23
Outcome Score Data for Continuous Clients .....	24
Health Outcome Score Distribution for Continuous Clients.....	26
Change in Severity for Continuous Clients.....	29
Health Outcome Score Distribution for Continuous Black, Hispanic/Latino, Case Management and Peer Support clients.....	32
Change in Severity for Continuous Black, Hispanic/Latino clients, Case Management and Peer Support clients.....	33
<b><u>Summary and Conclusion</u></b> .....	34
<b><u>Recommendations and Next Steps</u></b> .....	36
<b>Appendix A: Outcome Measurement Report Form</b>	
<b>Appendix B: Supplementary Data Tables</b>	

This project is supported by funding provided by the Boston Public Health Commission through the Ryan White HIV/AIDS Treatment Extension Act of 2009

## **INTRODUCTION**

This report summarizes outcome measurement data across all Boston Public Health Commission (BPHC) providers funded to provide MAI services under Part A of the Ryan White HIV/AIDS Extension Act of 2009. The data in this report come from the four most recent reporting periods: Year-End 2008 (February 2009-July 2009), Mid-Year FY 2009 (August 2009 – January 2010), Year-End 2009 (February 2010 – August 2010), and Year-End 2010 (September 2010 – February 2011.)

Please note that there was a change in reporting periods in FY 2010, so the MAI grant period would be consistent with the Part A program application/award schedule (the MAI reporting period had been August-July, and is now March-February which is the same as Part A). Data were collected throughout that time period; however the reporting period previously referred to as “Mid-Year 2010” was eliminated and data collected during that time are included in two new reporting periods (February 2010 – August 2010 and September 2010 – February 2011) as detailed in the following table:

<b>Name of reporting period</b>	<b>Months included in the reporting period</b>
Year-End FY 2008	February 2009-July 2009
Mid-Year FY 2009	August 2009-January 2010
Year-End FY 2009	February 2010-August 2010
Year-End FY 2010	September 2010-February 2011

*\* There is only 1 reporting period for MAI in 2010, so this report does not refer to “Mid-Year 2010.” However, all data from February 2009 through February 2011 are included in this report.*

The data in this report include demographic, descriptive and outcomes data summaries for 565 clients served by Part A MAI funded providers. These data are also provided for “continuous MAI clients” (a subset of clients who show at least one report during each reporting period included in this report). In past reports, a similar analysis was done on a group referred to as the “cohort”; however, this included clients who were seen at least once per fiscal year (versus once per reporting period).

Outcome measurement data are collected by providers using a standardized Outcome Measurement Report form (Appendix A). The current version of this report form was introduced at the beginning of FY 2007. This is the third MAI Annual Outcomes Report that includes two full years (all four reporting periods) of data collected using the 2007 form. We would like to acknowledge Suffolk University Center for Public Management and the Boston Public Health Commission for their support and thoughtful input.

The Outcome Measurement Report is completed by providers who receive Part A MAI funds from BPHC to deliver services in Case Management and Psychosocial Support. This report summarizes the results of 1465 individual outcome measurement reports submitted by eight funded providers during Year-end 2008 (297 reports), FY 2009 (704 reports) and Year-End 2010 (464 reports).

## **METHODS**

### **Data Collection**

The BPHC Outcome Measurement Form is completed by all Ryan White Part A and MAI providers for each of their active clients during each six-month reporting period. Providers are instructed, during annual training and in the BPHC Client Services Provider Manual, to complete the form for every client, using both a Client Code and a Unique Client Identifier. Providers are permitted to submit one report per client for each service category in which the client received a service, or to submit one report for the client summarizing all services received from that provider. Providers are instructed to indicate which service(s) each report form applies to.

There are nine outcome categories on the report form, and providers are required to select a rating for the client in each of these categories, regardless of which service(s) were received by the client. Of the nine outcome categories, four are focused on health and five are focused on quality of life. The four health outcomes are: CD-4 Count; Viral Load; Maintenance of Primary Medical Care; and Adherence to Prescribed HIV Related Medical Therapies. The five quality of life outcomes include: Impact of Side Effects from HIV-related Medications; Mental Health Status; Access to Psychosocial Support; Level of Self Sufficiency; and Housing Status. These outcomes are defined in detail in the Provider Manual (<http://www.bphc.org/AIDS>).

Each outcome includes four response options for rating client status: Poor/In Crisis; Fair; Good; and Excellent. Each of these response options is defined further, for each individual outcome category, on the report form. For two of the outcome categories (Adherence to Prescribed HIV Related Medical Therapies and Impact of Side Effects from HIV-related Medications) an “N/A” option is available for clients who have not been prescribed HIV-related medical therapies.

### **Data Analysis**

Client-level demographic and descriptive data were prepared by BPHC staff from the Joint HIV/AIDS Client Information Form. These data were linked to Outcomes Report data, using a unique client code, to facilitate presentation of demographic data for clients served during the most recent reporting period.

These data, along with raw data from the Outcome Measurement Reports were exported from Microsoft Excel files and converted into a SAS data file (SAS Institute, Inc., Cary, NC), so that client-level analysis could be conducted across the breadth of available variables.

Demographics were reported for clients served during the most recent reporting period (i.e., at least one Outcome Measurement Report was completed for the client). When demographic or descriptive data were missing for a particular client for the current reporting period, JSI drew the information from the most recent previous reporting period. For example, if a client’s gender was missing from the Year-End 2010 data set,

information was drawn from the Mid-Year 2010 data, then from Year-End 2009, and finally from Mid-Year 2009. In this example, data were considered “missing” only if the client did not have gender reported in any of the past four reporting periods.

Univariate analyses were conducted and reported for demographic and descriptive data from the Joint Form, as well as from the Outcome Measurement Report. Independent samples t-tests were used to evaluate significant changes in outcomes between reporting periods for the full data set, while paired t-tests were used to evaluate significant changes for continuous clients. For the purposes of this report, a p-value of < 0.05 is considered a significant difference.

### *Scoring of Outcome Data*

As discussed above, each outcome includes four response options for rating client status: Poor/In Crisis; Fair; Good; and Excellent. The scores assigned to each category are: Poor=9, Fair=6, Good=3 and Excellent=0. As a result of this system (one in which the value descended as the outcome improved) a formula was devised to turn these into scores that ascended as the client outcome improved. The initial value was subtracted from 9, with the result of the subtraction multiplied by 11.1, and that result was rounded to an integer.

Some examples:

Poor:  $(9-9) \times 11.1 = 0 \times 11.1 = 0$

Fair:  $(9-6) \times 11.1 = 3 \times 11.1 = 33.3$ , rounded to 33

Good:  $(9-3) \times 11.1 = 6 \times 11.1 = 66.6$ , rounded to 67

Excellent:  $(9-0) \times 11.1 = 9 \times 11.1 = 99.9$ , rounded to 100.

In reports prior to FY 2008, ascending numeric scores were assigned as follows: Poor = 0-33, Fair = 34-67, Good = 68-99 and Excellent = 100. Applying this scale to the above examples, a score of 33 (Fair) would be classified as Poor (0-33) and a score of 67 (Good) would be classified as Fair. Therefore, a reclassification of scores was made, better representing the calculated scores for clients on the edges of categories. The revised scores, presented in all reports starting in FY 2008, are: Poor = 0-32, Fair = 33-66, Good = 67-99 and Excellent = 100. While this is a slight change, it could impact the way clients are distributed along this scale and it is important to keep in mind when comparing this Outcomes Report to any reports prior to FY 2008.

### **Limitations**

#### *Number of Reports per Client*

Providers are permitted to submit one report per client for each service category in which the client received a service, or to submit one report for the client summarizing all services received from that provider. Providers are instructed to indicate which service(s) the report applies to.

As such, the total number of reports does not line up with the number of clients served (as would be the case with one report per client, per provider), or with the number of independent service categories in which clients received services (as would be the case with one report per client, per provider, per service category).

In addition, it should also be noted that data do not necessarily reflect all services received by individual clients. Clients may be receiving services funded by other private, state and federal sources (including other Ryan White program-funded sources), and also at other agencies.

#### *New vs. On-going Clients*

Clients are categorized on the report form as “new” if they were seen for the first time by the provider completing the report. This category may include clients who dropped out of care (at the same provider, or at another provider) for more than one year and have returned to care. Thus, clients may be new to a particular service but not new to the larger Part A system.

Clients are categorized as “on-going” if they are continuing to use services and have been seen once or more during the reporting period. If a client was not seen during the reporting period then a form is not completed. This means that a client may be reported as “new” at one provider and “on-going” at another, even during a single reporting period. However, this distinction may still be informative because it identifies clients who are newly accessing a service, likely indicating their increased need in that specific service category.

#### *Maintenance of Primary Medical Care*

Following a review of the Outcome Measurement Form, which included discussions with providers and a detailed review of the literature, it was determined that **Maintenance of Primary Medical Care** may not be an adequate measure of access to medical care and as such should be reviewed with consideration to its limitations. This measure will no longer be collected after September 2011, when a new version of the form will be introduced.

Clients will instead be asked to report the month and year of their last appointment with an HIV primary medical care provider, along with more detailed information about receipt of case management services. It is anticipated that this method will more accurately reflect access to medical care.

## RESULTS

### Data Summary

**Figure 1** provides a summary of total unduplicated clients receiving MAI-funded services, as well as the number of outcome reports submitted, during each reporting period. Total clients ranged from a low of 295 in Year-End 2008 to a high of 462 at Year-End FY 2010. There were 565 unduplicated MAI clients in the four most recent reporting periods. Total outcome reports ranged from a low of 297 Year-End 2008 to a high of 464 at Year-End FY 2010. A total of 1465 reports were submitted in the last four reporting periods.

**Figure 1. Number of Clients and Outcome Reports by Reporting Period**

	Feb 2009- Jul 2009	Aug 2009- Jan 2010	Feb 2010- Aug 2010	Sep 2010- Feb 2011	All Periods
Unduplicated Clients	295	338	361	462	565
Outcome Reports	297	339	365	464	1465

**Figure 2** details the number of outcome reports and unduplicated MAI clients, by reporting period, according to service category. MAI-funded programs are permitted to use funds to provide **Case Management** and **Peer Support** services. As discussed under Methods, providers are permitted to submit one report per client for each service category, in which the client received a service, or to submit one report for the client summarizing all services received from that provider. In this report the number of outcome reports is only slightly higher than the number of unduplicated clients, indicating that most providers submitted only one report per client.

**Figure 2. Number of Outcome Reports and Clients by Service Category and Reporting Period**

Service Category		Feb 2009- Jul 2009	Aug 2009- Jan 2010	Feb 2010- Aug 2010	Sep 2010- Feb 2011
Case Management	Outcome Reports	257	305	336	390
	Unduplicated Clients	249	294	320	370
Peer Support	Outcome Reports	103	101	110	200
	Unduplicated Clients	103	101	110	197

**Figure 3** shows the number of outcome reports and unduplicated MAI clients, by reporting period, according to outcomes category. There is very little variation between categories, indicating that sites reported on all outcomes categories for nearly all MAI clients during each reporting period. Providers are required to report on all nine outcomes for all of their clients, so minor variations in reports submitted or clients served are likely due to missing data on individual Outcome Measurement Report forms.

**Figure 3. Number of Outcome Reports and Clients by Outcome Category.**

Outcomes Category		Feb 2009- Jul 2009	Aug 2009- Jan 2010	Feb 2010- Aug 2010	Sep 2010-Feb 2011
		CD-4 Count	Outcome Reports	296	339
	Unduplicated Clients	287	328	315	430
Viral Load	Outcome Reports	293	339	329	449
	Unduplicated Clients	284	328	313	417
Maintenance of Primary Medical Care	Outcome Reports	290	337	360	463
	Unduplicated Clients	281	326	344	431
Adherence to Prescribed HIV Related Medical Therapies	Outcome Reports	293	339	360	464
	Unduplicated Clients	284	328	344	432
Impact of Side-Effects from HIV-Related Medications	Outcome Reports	293	339	359	460
	Unduplicated Clients	284	328	343	428
Mental Health Status	Outcome Reports	293	339	360	463
	Unduplicated Clients	284	328	344	431
Access to Psychosocial Support	Outcome Reports	293	339	361	464
	Unduplicated Clients	284	328	345	432
Level of Self-Sufficiency	Outcome Reports	292	339	360	464
	Unduplicated Clients	284	328	344	432
Housing Status	Outcome Reports	293	339	361	464
	Unduplicated Clients	284	328	345	432

**Figure 4** shows the number of outcome reports where clients were listed as “New Intakes” and the number of reports where clients were listed as “On-going.” “On-going” clients are those that had been seen by the provider before, and were seen at least once during the reporting period. The “New Intake” category shows the total number of reports submitted on clients who were seen for the first time by the provider agency completing the form. This category may include clients who dropped out of care (at the same provider, or at another provider) for more than one year and have returned to care.

**Figure 4. Status of Outcome Reports by Reporting Period**

MAI reports Status	Outcome Reports							
	Feb 2009- Jul 2009		Aug 2009- Jan 2010		Feb 2010- Aug 2010		Sep 2010- Feb 2011	
	Reports	Percent	Reports	Percent	Reports	Percent	Reports	Percent
New Intake	46	16%	26	8%	31	9%	25	5%
On-going	251	85%	313	92%	334	92%	439	95%
Missing Data	0	0%	0	0%	0	0%	0	0%
Total	297	100%	339	100%	365	100%	464	100%

**Figure 5** shows the number of MAI clients, by reporting period, and indicates the number of clients that were categorized only as “New” or only as “Ongoing.” A very small number of clients are listed as “Both New and On-going”, most likely because they were seen as new clients at one or more agencies, and as on-going clients at one or more agencies. This is likely to be the case, for example, when a client is referred to a new service that is not provided by the agency where the client currently receives most of his or her services.

**Figure 5. MAI Client Status by Reporting Period**

MAI Client Status	Feb 2009- Jul 2009		Aug 2009- Jan 2010		Feb 2010- Aug 2010		Sep 2010- Feb 2011	
	Clients	Percent	Clients	Percent	Clients	Percent	Clients	Percent
New Intake Only	38	13%	26	8%	29	9%	10	3%
On-Going Only	242	85%	302	92%	308	91%	354	97%
Both New And On-Going	6	2%	0	0%	1	0%	2	1%
Total	286	100%	328	100%	338	100%	366	100%

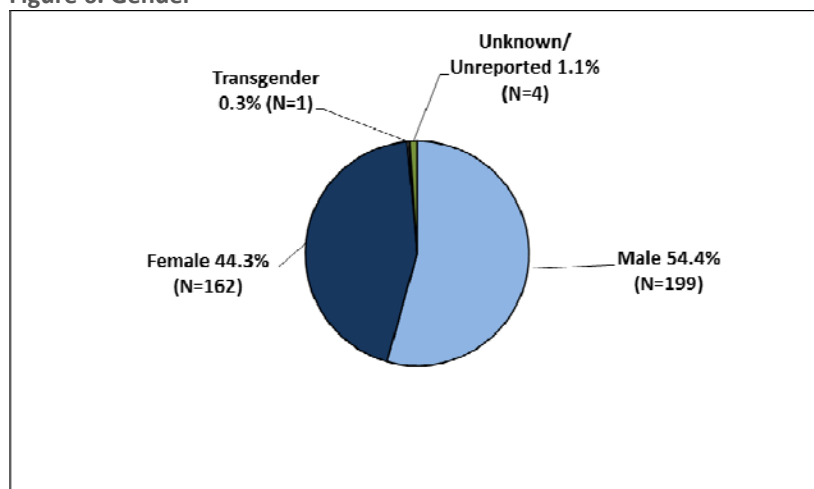
### Demographic and Descriptive Characteristics of MAI Clients with Outcome Reports

This section summarizes the demographic and descriptive characteristics of unduplicated MAI clients with one or more outcomes reports. Demographic data were available for 366 MAI clients in Year-End 2010, and were drawn from data reported by BPHC providers using the *Joint HIV/AIDS Client Information Form*. Data for the Year-End FY 2010 reporting period (September 1, 2010 – February 28, 2011) are presented below.

#### Gender and Age

More than half (54.4%) of clients with outcome reports during the Year-End FY 2010 reporting period were male, and 44.3% were female. The average age of clients was 48.1 years, with a range of 6 years to 82 years old.

**Figure 6. Gender**



## Ethnicity and Race

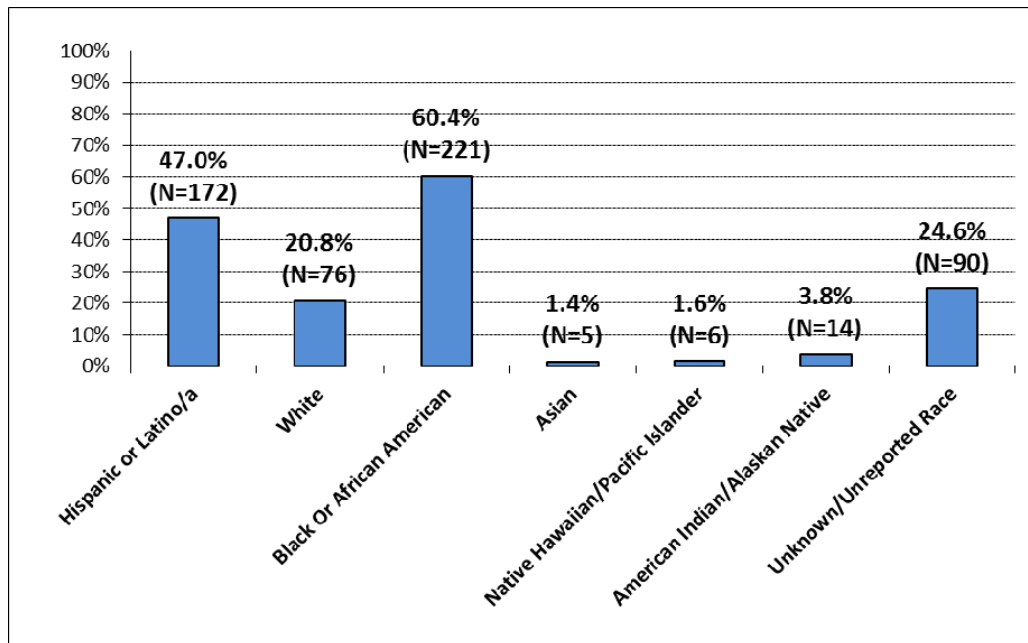
Almost half (47.0%) of clients identified their ethnicity as Hispanic or Latino during the Year-End FY 2010 reporting period, and well over half of clients (60.4%) were reported as Black or African American. These high percentages are expected here because MAI funds are intended to support access to care for Hispanic/Latino as well as Black/African American persons living with HIV/AIDS.

It should be noted that Hispanic/Latino ethnicity is asked separately from questions about race, due to federal data collection requirements. For all clients, providers are required to document first whether the client is of Hispanic/Latino ethnicity, and then document one or more race categories for the client.

Unknown/Unreported Race was reported for about one-fourth of clients (24.6%). The larger proportion of clients in this category is primarily explained by the fact that 91% (N=156) of Hispanic/Latino clients were also reported as “Unknown/Unreported” race. In this round of data analysis, all those clients who had ‘Unknown/Unreported’ and another Race checked had the ‘Unknown/Unreported’ checkbox removed. Compared to earlier reports, where around one-third of clients were Unknown/Unreported, this data cleaning step has helped to more accurately reflect how clients have most recently self-identified.

A number of clients also identified as White (20.8%), Asian (1.4%), Native Hawaiian/Pacific Islander (1.6%) and American Indian/Alaskan Native (3.8%).

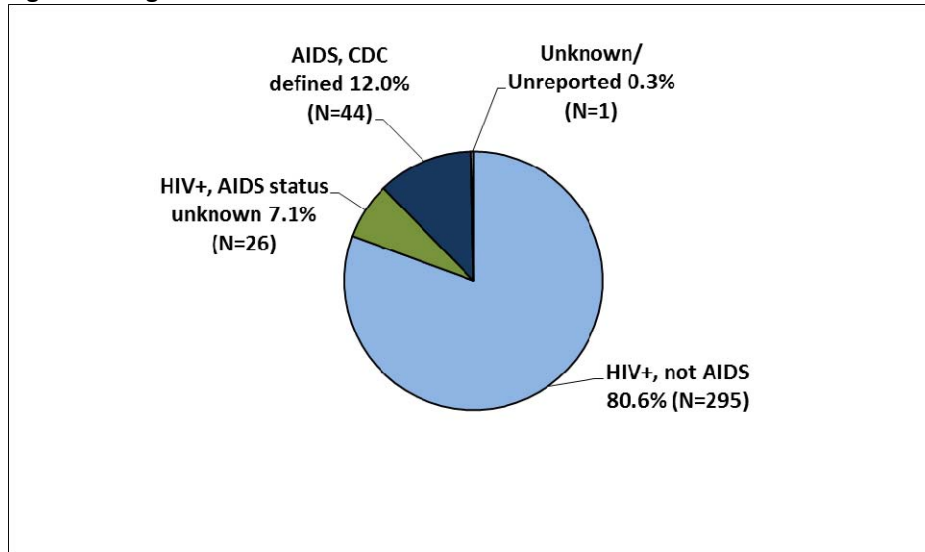
Figure 7. Race and Ethnicity



### Diagnostic Information

Diagnostic information summarizes the HIV/AIDS status of MAI clients reporting outcomes during the Year-End FY 2010 reporting period. Most clients (80.6%) were categorized as HIV positive, not AIDS. Another 12.0% were categorized as AIDS, CDC defined. A small group of clients (7.1%) were categorized as HIV positive, AIDS status unknown and 0.3% had unknown/unreported diagnostic status.

Figure 8. Diagnostic Information

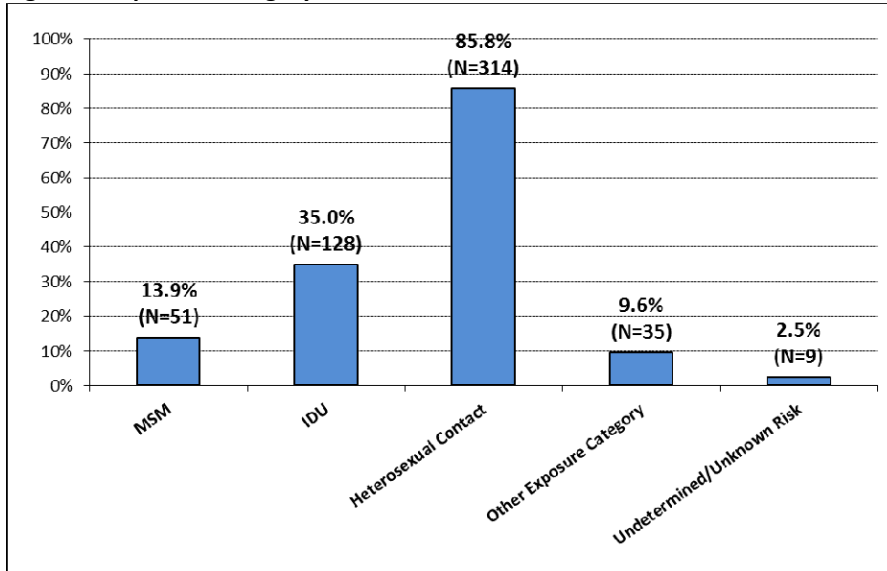


### Exposure Category

Clients receiving MAI-funded services were categorized according to one or more HIV exposure categories (self-reported). As shown in **Figure 9**, most clients (85.8%) were reported as having heterosexual exposure. Over one-third of clients were reported as injection drug users (35.0%). Far fewer clients were reported as MSM (13.9%). Other exposure categories (including perinatal transmission, hemophilia/coagulation disorder, blood/blood products/tissue, and other risk) were identified for 9.6% of clients.

A very small percentage of clients (2.5%) had Undetermined/Unknown Risk. In the past, around one-fifth of clients were categorized as unknown/unreported. However, in this round of data analysis all those clients who had 'Unknown/Unreported' and another Exposure category checked had the 'Unknown/Unreported' checkbox removed. This data cleaning step has helped to more accurately reflect the population of clients whose exposure risk is actually unknown.

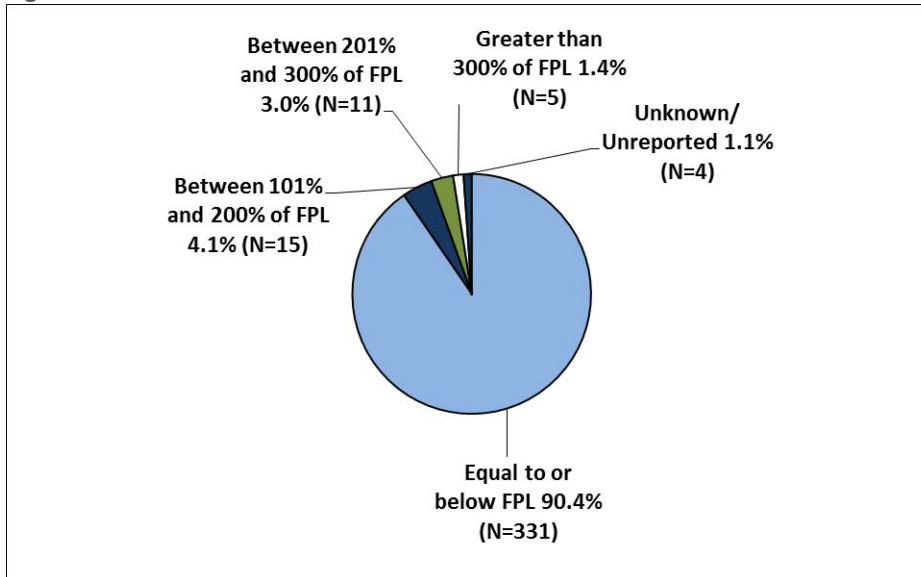
**Figure 9. Exposure Category**



**Income**

The income level of most MAI clients (90.4%) was equal to or below the Federal Poverty Line (U.S. FPL in 2011 for one person is \$10,890<sup>1</sup>). A small percentage of clients (4.1%) had even lower incomes, between 101% and 200% of the Federal poverty line, and a few clients (3.0%) had incomes between 201% and 300% of the Federal poverty line or greater (1.4%).

**Figure 10. Income Level**



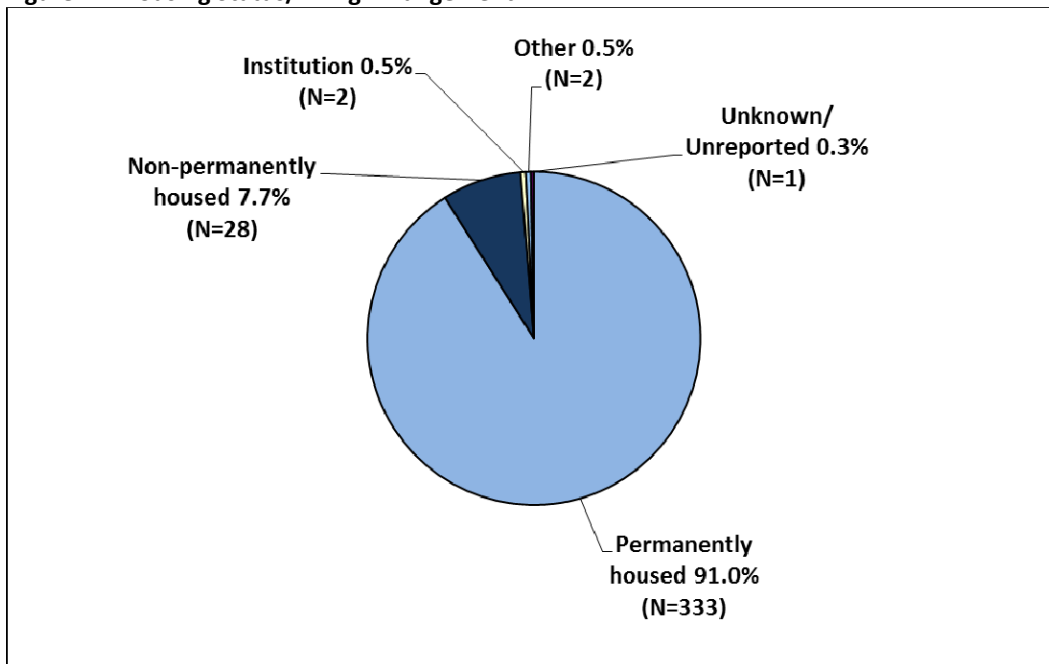
<sup>1</sup> U.S. Department of Health and Human Services. <http://aspe.hhs.gov/poverty/11poverty.shtml>

## Housing Status

A large majority of MAI clients (91.0%) were in permanent housing during this reporting period. Another 7.7% reported non-permanent housing status (this category includes homeless as well as transient or transitional housing).

A few clients (0.5%) were in institutional settings (residential, health care and correctional facilities) or other settings (0.5%). Housing status was unknown/unreported for 0.3% of clients.

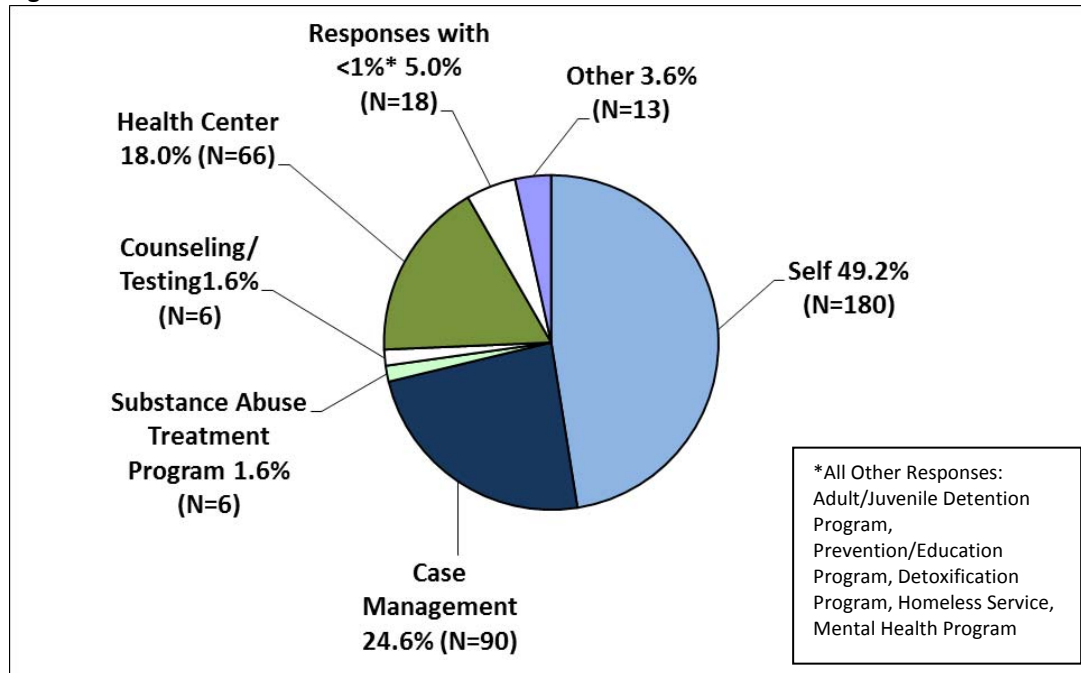
**Figure 11. Housing Status/Living Arrangement**



## Referral Source

Almost half (49.2%) of MAI clients were self-referred to the reporting provider. Case management (24.6%) and health centers (18.0%) were the other major referral sources. A smaller percentage of clients were referred from specific services such as counseling and testing (1.6%), or substance abuse treatment (1.6%). An additional category “Responses with <1%” (5.0%) includes data from various specific services (detailed in **Figure 12**, below). Other unspecified programs accounted for 3.6% of clients’ referral sources. Note: the data in Figure 12 show only the most recent referral for each client.

Figure 12. Referral Source



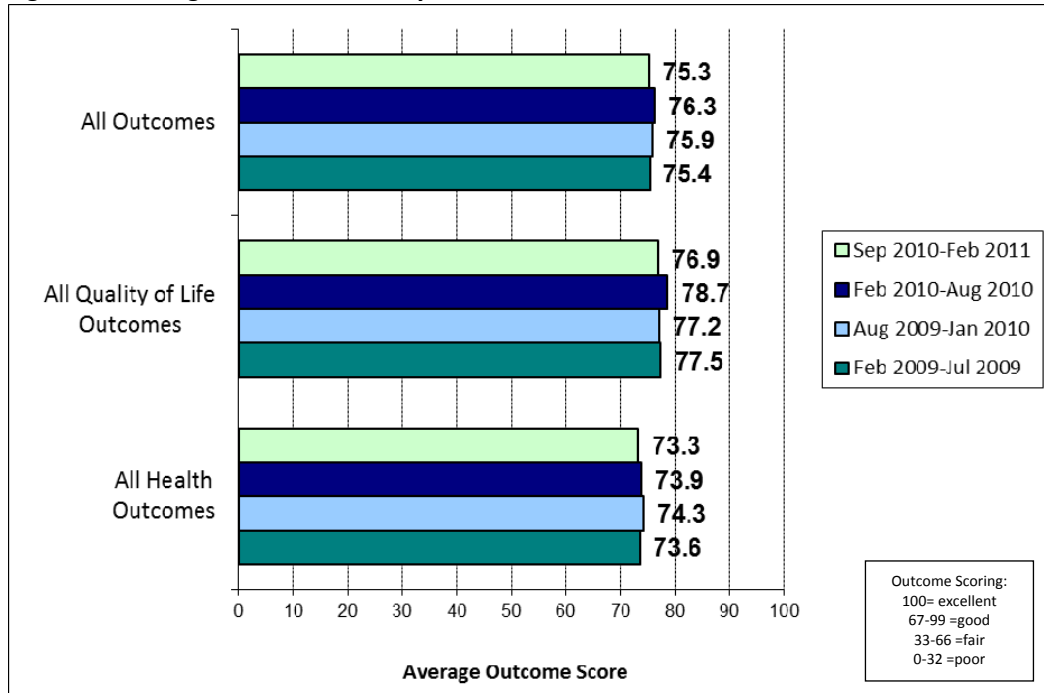
## Outcome Scores: All MAI Clients

The following tables show average outcome scores, by outcome category, for unduplicated MAI clients across the four reporting periods. Individual outcome scores are categorized as: Excellent (scores of 100 only); Good (67-99), Fair (33-66) and Poor (0-32).

### All Outcomes

Overall outcomes for health and quality of life were stable across reporting periods, with the average scores for both remaining solidly in the “good” category.

**Figure 13. Average Health and Quality of Life Outcome Scores for All MAI Clients**

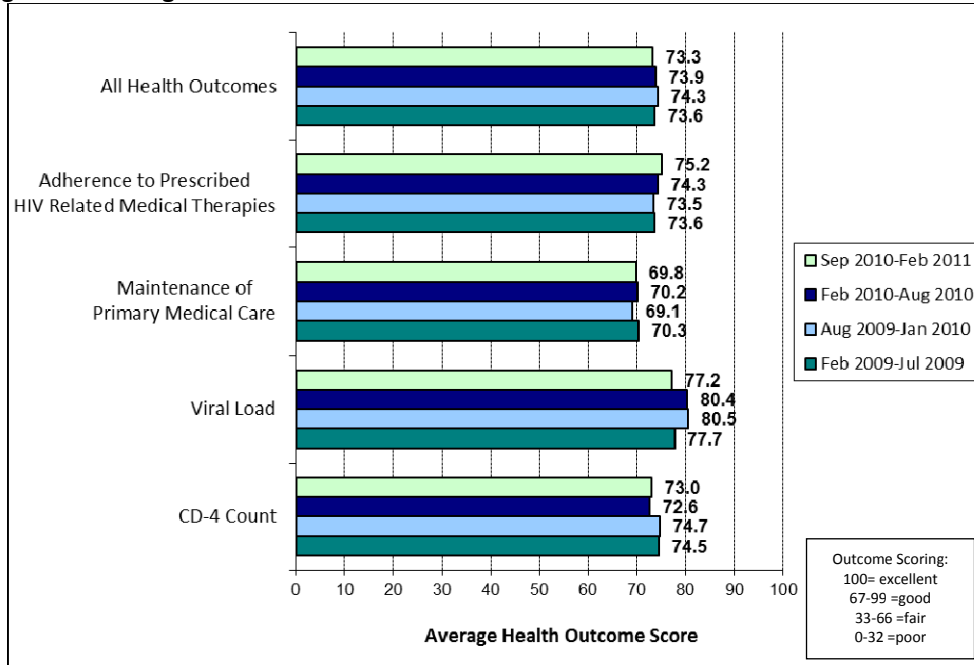


## All Health Outcomes

**Figure 14** shows a comparison of average health outcome scores for unduplicated MAI clients across reporting periods. Scores were categorized as “good” across all reporting periods. Maintenance of Primary Medical Care was the only outcome where scores were nearing the “Fair” category. However, as discussed above under “limitations,” this may not be of concern as this category may not be an adequate measure of access to medical care.

Note that the data presented for each reporting period include only clients with one or more Outcome Measurement Reports submitted during that period, and therefore individual clients may not be included in every period.

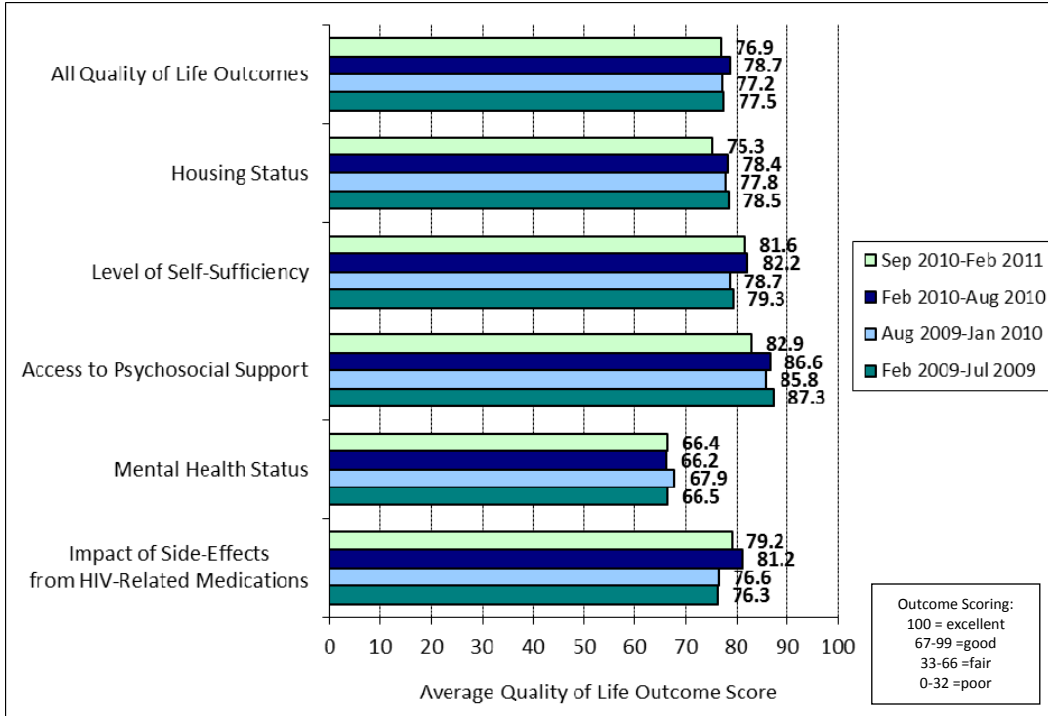
**Figure 14. Average Health Outcome Scores for All MAI Clients**



## All Quality of Life Outcomes

**Figure 15** shows a comparison of average quality of life outcome scores for unduplicated MAI clients across reporting periods. While average scores across most quality of life outcomes remained in the “good” range, average scores within one of the individual outcome categories – **Mental Health Status** – were categorized as “fair” during three out of four reporting periods.

**Figure 15. Average Quality of Life Outcome Scores for All MAI Clients**



## Average Health Outcome Scores of MAI clients: Independent Samples t-test

**Figure 16** shows where statistically significant changes were measured across average health outcomes. There were no statistically significant changes in Health Outcome scores which (as indicated in **Figure 14**) all remained in the “good” range. It is important to keep in mind that a lack of significant improvement is not a concern if scores are already in the “good” or “excellent” range.

**Figure 16. Change in Average Health Outcome Scores for All MAI Clients (Independent samples t-tests)**

Health Outcomes	Feb 2009- Jul 2009		Aug 2009- Jan 2010		Change		Sig*	Feb 2010- Aug 2010		Change		Sig*	Sep 2010- Feb 2011		Change		Sig*
	Clients	Avg. Score	Clients	Avg. Score				Clients	Avg. Score				Clients	Avg. Score			
CD-4 Count	287	74.5	328	74.7	↑	0.2	NS	315	72.6	↓	-2.1	NS	430	73.0	↑	0.4	NS
Viral Load	284	77.7	328	80.5	↑	2.8	NS	313	80.4	↓	-0.1	NS	417	77.2	↓	-3.2	NS
Maintenance of Primary Medical Care	281	70.3	326	69.1	↓	-1.2	NS	344	70.2	↑	1.1	NS	431	69.8	↓	-0.4	NS
Adherence to Prescribed HIV Related Medical Therapies	262	73.6	300	73.5	↓	-0.1	NS	318	74.3	↑	0.9	NS	408	75.2	↑	0.9	NS
All Health Outcomes	287	73.6	328	74.3	↑	0.7	NS	347	73.9	↓	-0.4	NS	432	73.3	↓	-0.6	NS

\*Level of significance:  $p < .05$

## Average Quality of Life Outcome Scores: Independent Samples t-test

**Figure 17** shows where statistically significant changes were measured across average quality of life outcomes. There was no significant change for most outcome categories across most time periods, although **Impact of Side-Effects from HIV-Related Medications** increased in each reporting period, and increased significantly ( $p < .05$ ) at Year-End FY 2009. **Access to Psychosocial Support** decreased significantly at Year-End 2010, while **Level of Self-Sufficiency** increased significantly between Mid-Year and Year-End 2009.

**Figure 17. Change in Average Quality of Life Outcome Scores for All MAI Clients (Independent samples t-tests)**

Quality of Life Outcomes	Feb 2009-Jul 2009		Aug 2009-Jan 2010		Change		Sig*	Feb 2010-Aug 2010		Change		Sig*	Sep 2010-Feb 2011		Change		Sig*
	Clients	Avg. Score	Clients	Avg. Score				Clients	Avg. Score				Clients	Avg. Score			
Impact of Side-Effects from HIV-Related Medications	262	76.3	300	76.6	↑	0.3	NS	318	81.2	↑	4.6	0.003	406	79.2	↓	-2.0	NS
Mental Health Status	284	66.5	328	67.9	↑	1.4	NS	344	66.2	↓	-1.7	NS	431	66.4	↑	0.2	NS
Access to Psychosocial Support	284	87.3	328	85.8	↓	-1.5	NS	345	86.6	↑	0.8	NS	432	82.9	↓	-3.7	0.020
Level of Self-Sufficiency	284	79.3	328	78.7	↓	-0.6	NS	344	82.2	↑	3.5	0.043	432	81.6	↓	-0.6	NS
Housing Status	284	78.5	328	77.8	↓	-0.8	NS	345	78.4	↑	0.6	NS	432	75.3	↓	-3.1	NS
All Quality of Life Outcomes	284	77.5	328	77.2	↓	-0.3	NS	345	78.7	↑	1.5	NS	432	76.9	↓	-1.8	NS

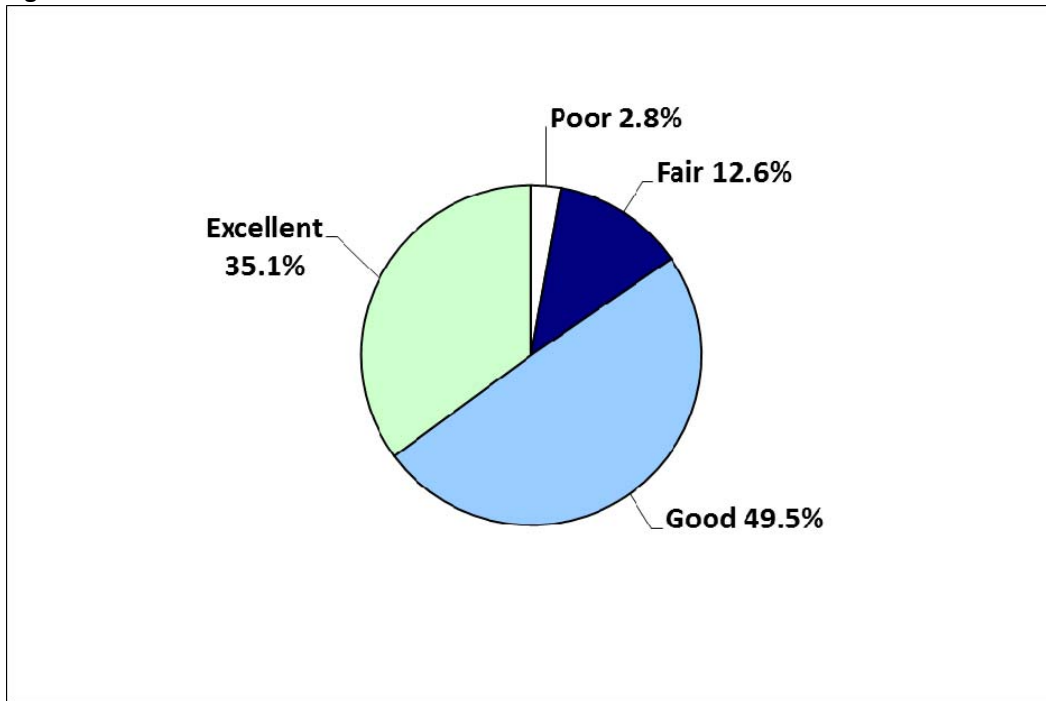
\*Level of significance:  $p < .05$

## Health Outcome Distribution for All MAI Clients: Year-End FY 2010

Figures 18 - 21 show the distribution of scores for unduplicated MAI clients, for each of the four health outcomes at Year-End FY 2010: **CD-4 count**, **Viral Load**, **Maintenance of Primary Medical Care**, and **Adherence to Prescribed HIV Related Medical Therapies**. A table showing health outcome score distribution for the most recent four reporting periods is included in Appendix B.

Figure 18 shows that just over one-third of clients (35.1%) were categorized as Excellent and half (49.5%) were categorized as Good in the **CD-4 count** outcome category at the end of the most recent reporting period. A smaller percentage of clients were categorized as Fair (12.6%) or Poor (2.8%).

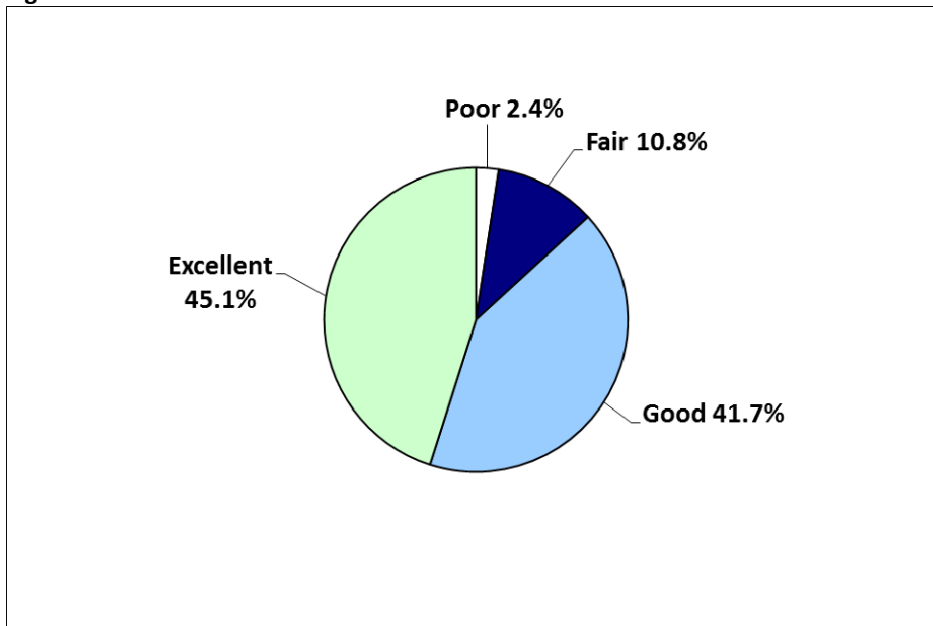
Figure 18. CD4 Count



**Figure 19** shows that almost half of clients (45.1%) were categorized as Excellent and well over one-third (41.7%) were categorized as Good in the outcome category of **Viral Load**, while a very small percentage of clients were categorized as Fair (10.8%) or Poor (2.4%).

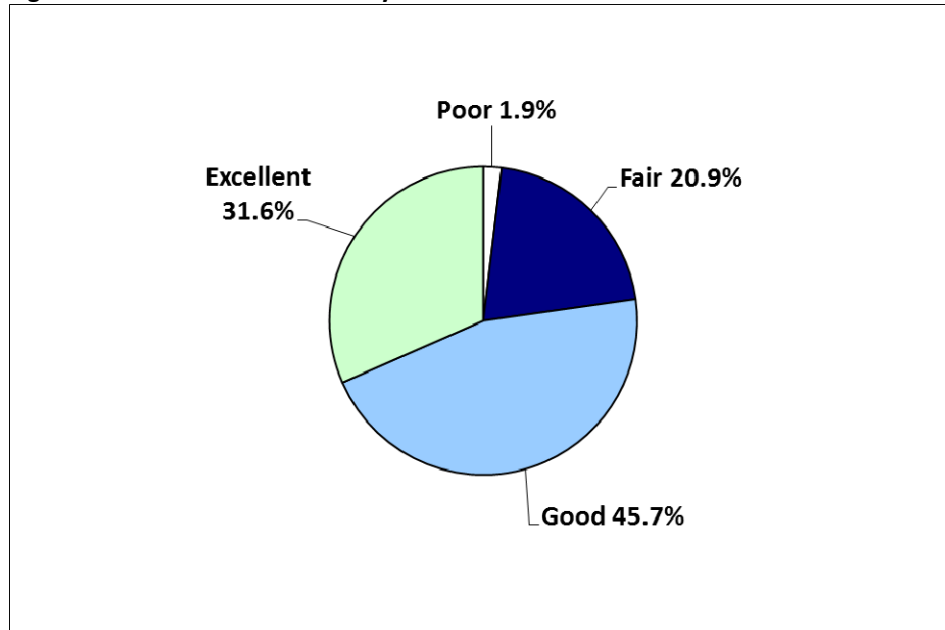
While **CD4** testing (**Figure 18**) is a measure of the strength of the immune system, **Viral Load** measures the amount of active HIV. Among MAI clients, relatively fewer (35.1%) clients were categorized as Excellent in the **CD4** outcome category, than for **Viral Load**. This is likely due to the success of available antiretroviral drug therapies in reducing viral load. These same medications are not always as effective in improving overall immune system health, due to factors like advanced age or insufficient time on therapy for the full CD4 recovery.

**Figure 19. Viral Load**



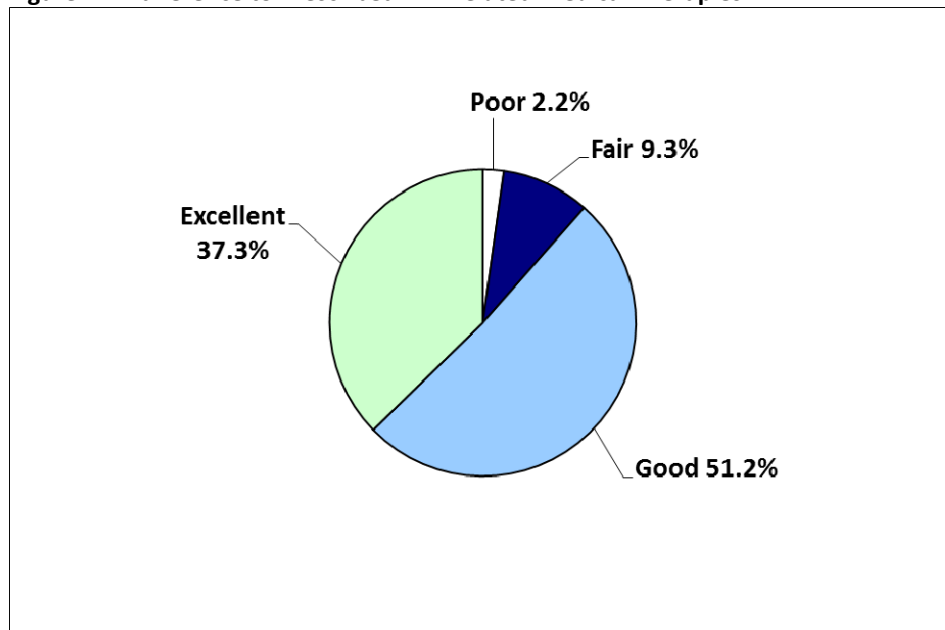
**Figure 20** shows 31.6% of clients in the Excellent category, and 45.7% of clients in the Good category, for **Maintenance of Primary Medical Care**. Compared to **CD-4 count** and **Viral Load** categories above, a larger percentage of clients were categorized as Fair (20.9%). A small percentage of clients were categorized as Poor (1.9%).

**Figure 20. Maintenance of Primary Medical Care**



**Figure 21** shows 37.3% of clients in the Excellent category for **Adherence to Prescribed HIV Related Medical Therapies**, and 51.2% of clients in the Good category. A small percentage of clients were categorized as Fair (9.3%) or Poor (2.2%).

**Figure 21. Adherence to Prescribed HIV Related Medical Therapies**



## Demographic and Descriptive Characteristics of Continuous Clients

Continuous MAI clients (**n=189**) are those clients who had at least one outcome report during each of the four most recent reporting periods. Demographic data were available for all 189 continuous clients. The demographic characteristics of the continuous clients February 2009 – February 2011 do not differ notably from the non-continuous group (at Year-End FY 2010) on most parameters (**Figure 22**). For example, the continuous group contains similar percentages of female (46.6% vs. 44.3%), Hispanic/Latino (45.0% vs. 47.0%), and a slightly higher percentage of Black/African American clients (65.6% vs. 60.4%). HIV exposure was also similar between continuous and all MAI clients, for example the clients exposed through injection drug use (32.8% vs. 35.0%), heterosexual exposure (84.7% vs. 85.8%) and MSM (11.6% vs. 13.9%) were all similar.

**Figure 22. Selected Demographic Characteristics: Continuous Clients vs. All Clients**

Response	Continuous MAI Clients		All MAI Clients (Year-End FY 2010)	
	Clients	Percent	Clients	Percent
Number Of Clients And Mean Age	189	47.9	366	48.1
<b>Gender</b>				
Male	98	51.9%	199	54.4%
Female	88	46.6%	162	44.3%
Transgender	1	0.5%	1	0.3%
Unknown/Unreported	2	1.1%	4	1.1%
<b>Ethnicity</b>				
Hispanic or Latino/a	85	45.0%	172	47.0%
<b>Federal Race Categories</b>				
White	34	18.0%	76	20.8%
Black Or African American	124	65.6%	221	60.4%
Asian	3	1.6%	5	1.4%
Native Hawaiian/Pacific Islander	4	2.1%	6	1.6%
American Indian/Alaskan Native	8	4.2%	14	3.8%
Unknown/Unreported Race	42	22.2%	90	24.6%
<b>Diagnostic Information</b>				
HIV+, not AIDS	156	82.5%	295	80.6%
HIV+, AIDS status unknown	12	6.3%	26	7.1%
AIDS, CDC defined	20	10.6%	44	12.0%
Unknown/Unreported	1	0.5%	1	0.3%
<b>Exposure Category</b>				
MSM	22	11.6%	51	13.9%
IDU	62	32.8%	128	35.0%
Heterosexual Contact	160	84.7%	314	85.8%
Other Exposure Category	21	11.1%	35	9.6%
Undetermined/Unknown Risk	6	3.2%	9	2.5%

### Average Health Outcome Scores: Paired Samples t-test (Continuous Clients)

As shown in **Figure 23**, Continuous clients showed a statistically significant improvement ( $p < .05$ ) in **Viral Load** score between Year-End 2008 and Mid-Year 2009, followed by a significant decrease at Year-End 2010. There was a significant decrease in outcome scores for **Maintenance of Primary Medical Care** between Year-End FY 2008 and Mid-Year FY 2009, although this may not be of particular concern due to limitations with this outcome measure discussed earlier. No significant changes were seen in **CD4 Count** or **Adherence to Prescribed HIV-Related Medical Therapies**.

**Figure 23. Average Health Outcome Scores for Continuous MAI Clients: Paired Samples t-test**

Health Outcome	Year-End 2008 Feb 2009- Jul 2009		Mid-Year 2009 Aug 2009- Jan 2010		Change		Sig*	Year-End 2009 Feb 2010- Aug 2010		Change		Sig*	Year-End 2010 Sep 2010- Feb 2011		Change		Sig*
	Clients	Avg. Score	Clients	Avg. Score				Clients	Avg. Score				Clients	Avg. Score			
CD-4 Count	189	75.7	189	74.6	↓	-1.1	NS	171	76.3	↑	1.7	NS	187	77.1	↑	0.8	NS
Viral Load	188	78.5	189	81.7	↑	3.2	<b>0.0256</b>	171	82.2	↑	0.5	NS	187	80.1	↓	-2.1	<b>0.0138</b>
Maintenance of Primary Medical Care	187	70.7	189	67.3	↓	-3.4	<b>0.012</b>	188	69.1	↑	1.8	NS	188	68.6	↓	-0.5	NS
Adherence to Prescribed HIV-Related Medical Therapies	171	73.6	172	74.0	↑	0.4	NS	175	73.5	↓	-0.5	NS	178	75.6	↑	2.1	NS
All Health Outcomes	189	74.4	189	74.2	↓	-0.2	NS	189	75.4	↑	1.2	NS	189	75.1	↓	-0.3	NS

\*Level of significance:  $p < .05$

### Average Quality of Life Outcome Scores: Paired Samples t-test (Continuous Clients)

As shown in **Figure 24** below, Quality of Life Outcome Scores for Continuous clients showed significant improvements ( $p < .05$ ) in **Impact of Side-Effects from HIV-Related Medications** between Mid-Year and Year-End FY 2009. There were no other other significant changes in MAI clients' quality of life outcome scores.

**Figure 24. Average Quality of Life Outcome Scores for Continuous MAI Clients: Paired Samples t-test**

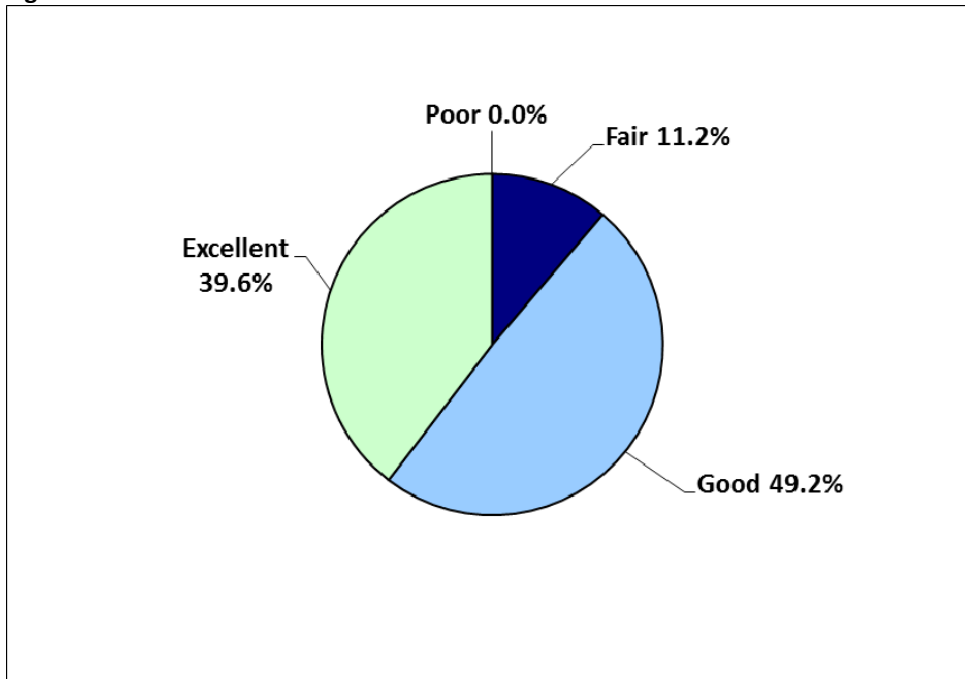
Quality of Life Outcome	Year-End 2008 Feb 2009- Jul 2009		Mid-Year 2009 Aug 2009- Jan 2010		Change		Sig*	Year-End 2009 Feb 2010- Aug 2010		Change Clients		Sig*	Year-End 2010 Sep 2010- Feb 2011		Change		Sig*
	Clients	Avg. Score	Clients	Avg. Score				Clients	Avg. Score				Avg. Score	Clients			
Impact of Side-Effects From HIV-Related Medications	171	75.0	172	75.2	↑	0.2	NS	175	81.3	↑	6.1	<b>0.00051</b>	176	80.2	↓	-1.1	NS
Mental Health Status	188	65.8	189	67.6	↑	1.8	NS	189	66.4	↓	-1.2	NS	189	68.0	↑	1.6	NS
Access to Psychosocial Support	188	88.6	189	89.2	↑	0.6	NS	189	89.7	↑	0.5	NS	189	89.2	↓	-0.5	NS
Level of Self-Sufficiency	188	79.0	189	79.9	↑	0.9	NS	188	82.4	↑	2.5	NS	189	84.0	↑	1.6	NS
Housing Status	188	76.9	189	79.2	↑	2.3	NS	189	80.3	↑	1.1	NS	189	80.3	↓	0.0	NS
All Quality of Life Outcomes	188	76.9	189	78.1	↑	1.2	NS	189	79.8	↑	1.7	NS	189	80.3	↑	0.5	NS

\*Level of significance:  $p < .05$

**Health Outcome Score Distribution: Continuous MAI Clients, Year-End FY 2010 (N=189)**

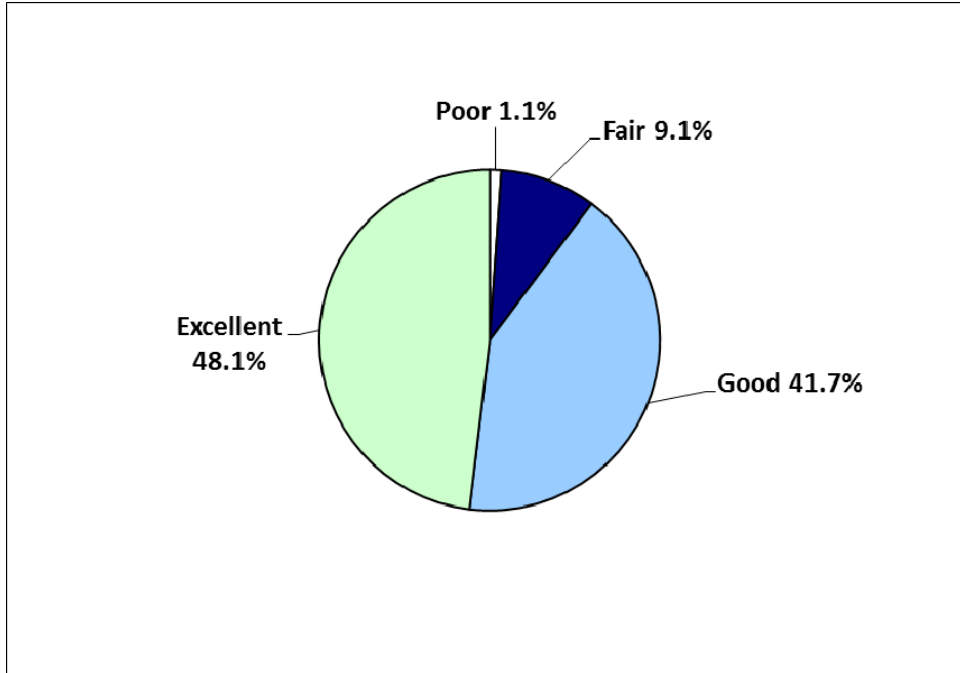
**Figure 25** shows that the majority of continuous MAI clients had **CD4 Count** scores in the Excellent (39.6%) and Good (49.2%) categories in the most recent reporting period. A smaller percentage of clients were categorized as Fair (11.2%), and there were no clients with outcome scores in the “Poor” category.

**Figure 25. CD4 Count**



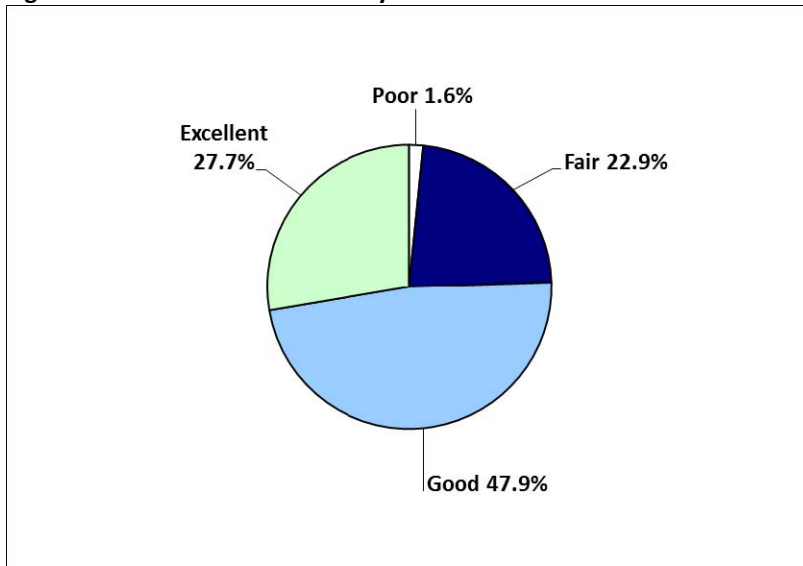
In the **Viral Load** outcome category, shown in **Figure 26**, nearly half of continuous clients (48.1%) scored in the Excellent category. Slightly fewer (41.7%) continuous MAI clients had Viral Load scores in the Good range, while only 9.1% and 1.1% scored in the Fair and Poor categories, respectively. As discussed under **Figure 19**, a higher percentage of clients were categorized as Excellent for Viral Load than for CD4 count; this is likely related to the great success of antiretroviral therapy in reducing viral load with incomplete recovery of the CD4 count in some clients.

**Figure 26. Viral Load**



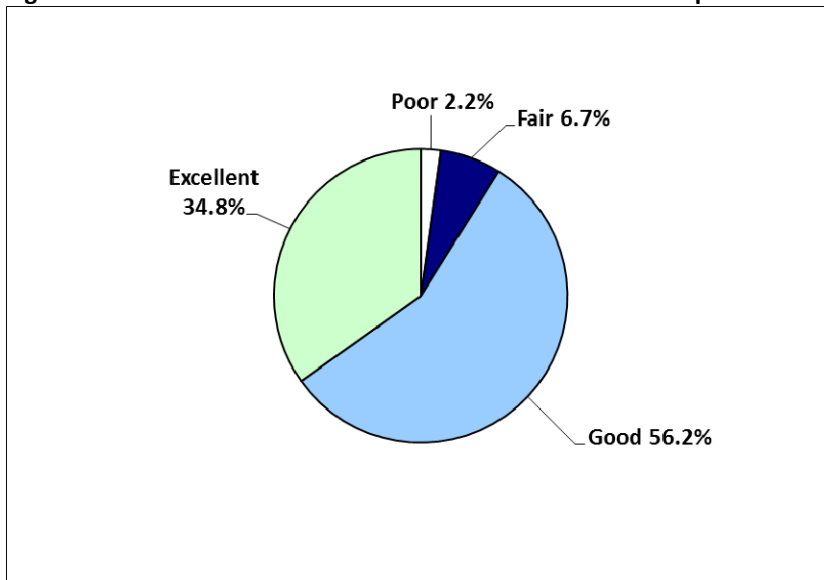
**Figure 27** displays score distribution for **Maintenance of Primary Medical Care**. Just over one-quarter of clients (27.7%) had Excellent outcome scores, while nearly half of clients (47.9%) scored in the Good range. Compared to other outcomes, the percentage of clients who scored in the Fair category is high (22.9%), while a very small percentage of clients (1.6%) had Poor outcome scores. However, this may not be a major consideration, due to limitations with this outcome measure discussed above.

**Figure 27. Maintenance of Primary Medical Care**



As shown in **Figure 28**, the majority (56.2%) of continuous MAI clients scored in the Good category for **Adherence to Prescribed HIV-Related Medical Therapies**. About one-third (34.8%) of clients were in the Excellent category, while 6.7% and 2.2% scored in the Fair and Poor categories, respectively.

**Figure 28. Adherence to Prescribed HIV Related Medical Therapies**



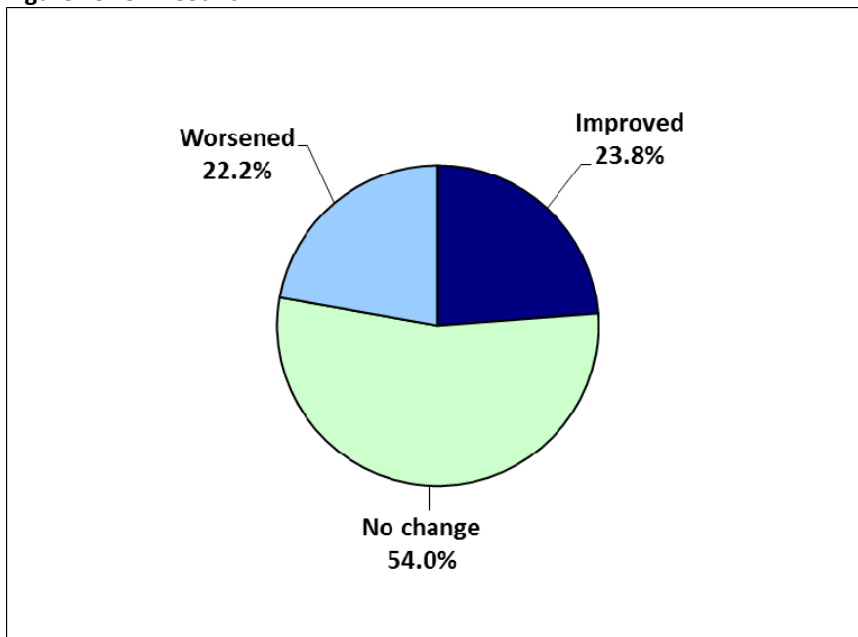
## Change in Severity for Continuous MAI Clients-Final vs. Initial Outcome, N=189

Change in severity is a measure of continuous clients' final outcomes versus their initial outcomes. This analysis is done only for continuous clients, who by definition have outcome data in each reporting period. This allows data from the most recent reporting period, Year End FY 2010, to be compared with data from Year-End FY 2008 to measure the change in severity over time (four reporting periods).

Between 54%-60% of continuous MAI clients had no change in severity between their initial and final outcomes (**Figures 29 – 32**). For **CD4 Count, Viral Load, Maintenance of Primary Medical Care, and Adherence to Prescribed HIV-Related Medical Therapies**, between 17%-24% of clients improved. Between 16% and 22% of clients Worsened in **CD4 Count, Viral Load, and Adherence to Prescribed HIV-Related Medical Therapies**, whereas a higher percentage of clients worsened in **Maintenance of Primary Medical Care** (26.5%).

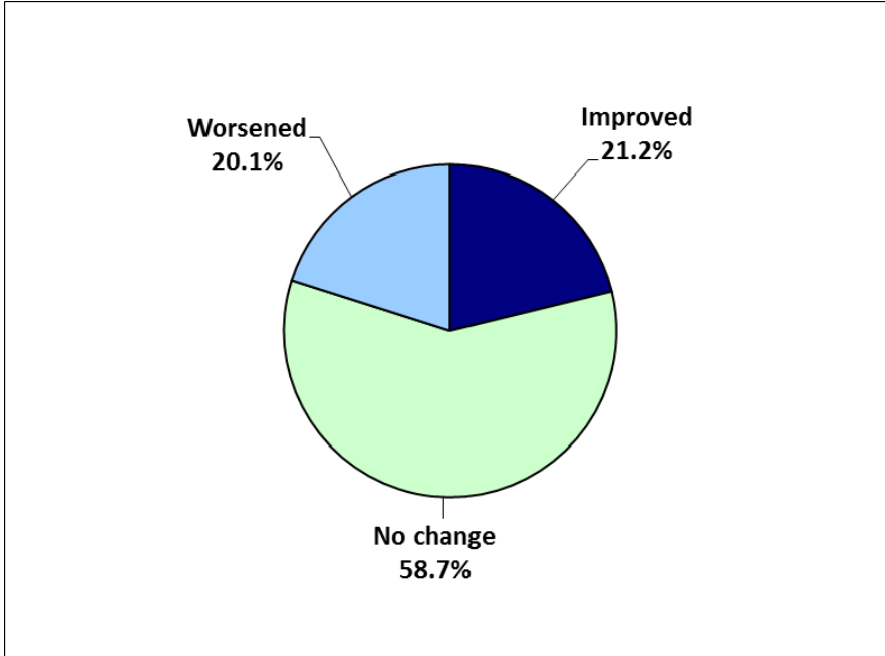
**Figure 29** shows change in severity in **CD4 Count** for Continuous MAI Clients. There was no change in outcome scores for more than half of clients (54.0%). Between the initial and final outcomes, 23.8% of clients improved, and 22.2% worsened.

**Figure 29. CD4 Count**



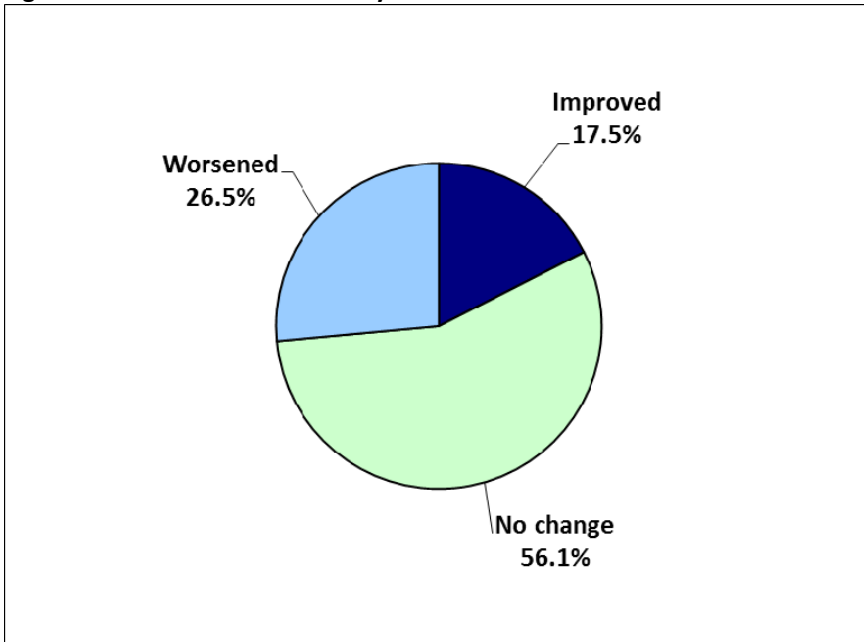
**Figure 30** shows change in severity for **Viral Load**, in which a comparatively higher percentage of clients had improved outcomes between the initial and final scores. Similar to **CD4 Count** above, there was no change in outcome scores for many clients (58.7%). Between the initial and final outcomes, 21.2% of clients improved, and 20.1% worsened.

**Figure 30. Viral Load**



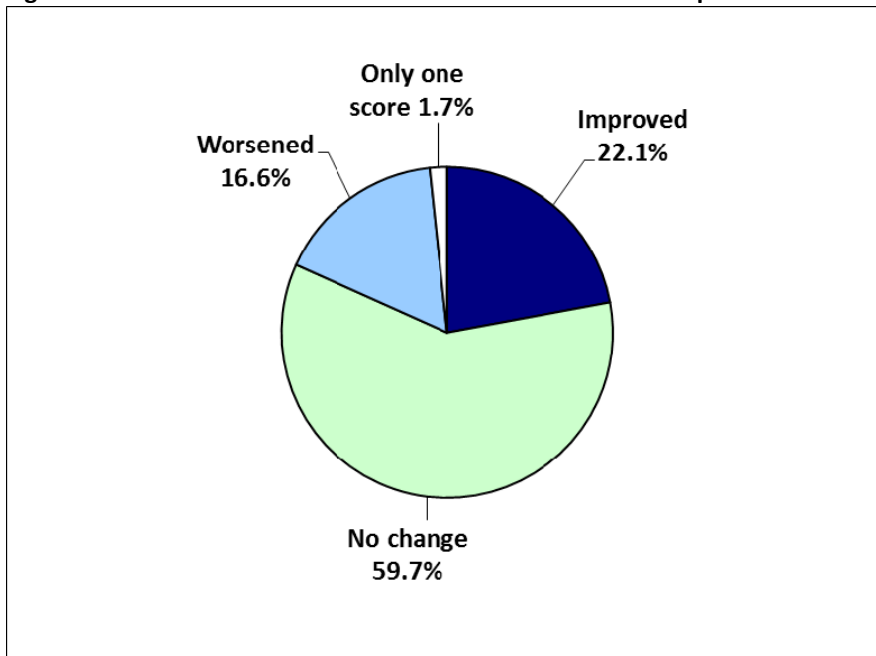
**Figure 31** displays change in severity for **Maintenance of Primary Medical Care**. Compared to CD4 Count and Viral Load, a larger percentage of clients (26.5%) worsened in this outcome. Over half (56.1%) had no change in outcome scores, and 17.5% of clients improved.

**Figure 31. Maintenance of Primary Medical Care**



As shown in **Figure 32**, change in severity for **Adherence to Prescribed HIV-Related Medical Therapies** is quite similar to the previous three outcomes. The majority of clients (59.7%) had no change between initial and final outcome scores, while 16.6% of clients worsened and 22.1% of clients had improvements in outcome scores. A very small percentage of clients (1.7%) had only one score for this particular outcome, so change in severity could not be calculated. This is likely because these are clients who were not currently on HIV-related medications and therefore this particular outcome was not applicable.

**Figure 32. Adherence to Prescribed HIV-Related Medical Therapies**



**Figure 33** shows the Year-End 2010 health outcome score distribution for four sub-groups of continuous MAI clients: Black clients, Hispanic/Latino clients, clients who received Case Management and those receiving Psychosocial Support services. It is worth noting that these sub-groups are not mutually exclusive; the same client may be included in one or multiple sub-groups.

Health outcome score distribution for Black and Hispanic/Latino Continuous MAI clients was similar for **CD4 Count**, **Viral Load**, and **Maintenance of Primary Medical Care**. For each outcome, a higher percentage of Hispanic/Latino clients and clients had Excellent scores compared to Black clients.

Notably, the percentage of Hispanic/Latino clients (50.0%) in the “Excellent” category was nearly twice as high as among Black clients (25.2%) in the **Adherence to Prescribed HIV-Related Medical Therapies** category.

For clients receiving Case Management and Peer Support, health outcome score distribution for **CD4 Count** and **Viral Load** was very similar. However, there were notable differences in the remaining health outcomes. For **Maintenance of Primary Medical Care**, a much higher percentage of Peer Support clients scored in the “Excellent” category (39.4%) compared to Case Management clients (24.9%). Similarly, in **Adherence to Prescribed HIV-Related Medical Therapies**, 48.1% of Peer Support clients scored “Excellent” compared to 31.7% of Case Management Clients.

**Figure 33. Health Outcome Score Distribution by selected Race/Ethnicity and Service Category**

Year-End 2010: Continuous MAI Clients								
	Black Clients		Hispanic/Latino/a Clients		Case Management		Psychosocial Support	
<b>CD-4 Count</b>								
Poor	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Fair	15	12.2%	8	9.6%	21	11.9%	16	14.8%
Good	61	49.6%	38	45.8%	87	49.4%	44	40.7%
Excellent	47	38.2%	37	44.6%	68	38.6%	48	44.4%
<b>Total</b>	<b>123</b>	<b>100%</b>	<b>83</b>	<b>100%</b>	<b>176</b>	<b>100%</b>	<b>108</b>	<b>100%</b>
<b>Viral Load</b>								
Poor	2	1.6%	1	1.2%	2	1.1%	2	1.9%
Fair	13	10.6%	5	6.0%	17	9.7%	10	9.3%
Good	52	42.3%	33	39.8%	75	42.6%	37	34.3%
Excellent	56	45.5%	44	53.0%	82	46.6%	59	54.6%
<b>Total</b>	<b>123</b>	<b>100%</b>	<b>83</b>	<b>100%</b>	<b>176</b>	<b>100%</b>	<b>108</b>	<b>100%</b>
<b>Maintenance of Primary Medical Care</b>								
Poor	1	0.8%	3	3.5%	3	1.7%	3	2.8%
Fair	31	25.2%	19	22.4%	42	23.7%	31	28.4%
Good	63	51.2%	32	37.6%	88	49.7%	32	29.4%
Excellent	28	22.8%	31	36.5%	44	24.9%	43	39.4%
<b>Total</b>	<b>123</b>	<b>100%</b>	<b>85</b>	<b>100%</b>	<b>177</b>	<b>100%</b>	<b>109</b>	<b>100%</b>
<b>Adherence to Prescribed HIV-Related Medical Therapies</b>								
Poor	3	2.6%	3	3.8%	4	2.4%	4	3.8%
Fair	11	9.6%	5	6.4%	12	7.2%	10	9.6%
Good	72	62.6%	31	39.7%	98	58.7%	40	38.5%
Excellent	29	25.2%	39	50.0%	53	31.7%	50	48.1%
<b>Total</b>	<b>115</b>	<b>100%</b>	<b>78</b>	<b>100%</b>	<b>167</b>	<b>100%</b>	<b>104</b>	<b>100%</b>

**Figure 34** shows Change in Severity data for these same four subsets of continuous MAI clients: Black clients, Hispanic/Latino clients, clients who received Case Management, and those receiving Peer Support services.

Among Black and Hispanic/Latino/ continuous MAI clients, health outcome score distribution is similar for **CD4 Count** and **Viral Load**. A higher percentage of Black clients (60.5%) had no change in **Maintenance of Primary Medical Care** outcome scores compared to Hispanic/Latino clients (50.6%). Hispanic clients showed more improvement (24.7%) than Black clients (14.5%) in this outcome. Similarly, in **Adherence**

**to Prescribed HIV-Related Medical Therapies**, a higher percentage of Black clients had no change in average outcome score (65.5%) compared to Hispanic/Latino clients (46.9%). Again, Hispanic/Latino clients showed higher percentages of improvement (32.1%) in this category compared to Black clients (17.2%)

There was very little variation in change in severity between clients receiving Case Management and those receiving Peer Support. For client populations and across outcomes, the majority of clients had no change in average outcome scores.

**Figure 34. Continuous MAI Clients: Change in Severity by selected Race/Ethnicity and Service Category**

Outcome	Final Outcome vs. Initial Outcome: Continuous MAI Clients							
	Black Clients		Hispanic/Latino/a Clients		Case Management		Peer Support	
<b>CD-4 Count</b>								
Improved	26	21.0%	21	24.7%	44	24.7%	28	25.5%
No change	68	54.8%	47	55.3%	93	52.2%	55	50.0%
Worsened	30	24.2%	17	20.0%	41	23.0%	27	24.5%
<b>Total</b>	<b>124</b>	<b>100</b>	<b>85</b>	<b>100%</b>	<b>178</b>	<b>100%</b>	<b>110</b>	<b>100</b>
<b>Viral Load</b>								
Improved	25	20.2%	23	27.1%	39	21.9%	26	23.6%
No change	72	58.1%	48	56.5%	103	57.9%	62	56.4%
Worsened	27	21.8%	14	16.5%	36	20.2%	22	20.0%
<b>Total</b>	<b>124</b>	<b>100%</b>	<b>85</b>	<b>100%</b>	<b>178</b>	<b>100%</b>	<b>110</b>	<b>100%</b>
<b>Maintenance of Primary Medical Care</b>								
Improved	18	14.5%	21	24.7%	31	17.4%	27	24.5%
No change	75	60.5%	43	50.6%	98	55.1%	51	46.4%
Worsened	31	25.0%	21	24.7%	49	27.5%	32	29.1%
<b>Total</b>	<b>124</b>	<b>100%</b>	<b>85</b>	<b>100%</b>	<b>178</b>	<b>100%</b>	<b>110</b>	<b>100%</b>
<b>Adherence to Prescribed HIV-Related Medical Therapies</b>								
Improved	20	17.2%	26	32.1%	39	22.9%	29	27.4%
No change	76	65.5%	38	46.9%	99	58.2%	55	51.9%
Worsened	19	16.4%	14	17.3%	30	17.6%	20	18.9%
Only one score	1	0.9%	3	3.7%	2	1.2%	2	1.9%
<b>Total</b>	<b>116</b>	<b>100%</b>	<b>81</b>	<b>100%</b>	<b>170</b>	<b>100%</b>	<b>106</b>	<b>100%</b>

## **SUMMARY AND CONCLUSION**

### **All MAI Clients: Health Outcomes and Quality of Life Outcome Scores**

Among MAI clients, average outcome scores for **All Health Outcomes** and **All Quality of Life Outcomes** did not show much change across reporting periods. Average scores for these measures remained solidly in the “Good” category, as did scores for nearly all individual outcome categories.

**Mental Health Status** was the only outcome in which average outcome scores dipped just below the lower cutoff of “Good”, into the “Fair” category. **Mental Health Status** scores were categorized as “Fair” in three out of four reporting periods.

Meanwhile, the percentage of clients who scored in the “Excellent” category for **Viral Load** continued to be comparatively higher than other outcomes. This relatively higher scoring is likely due to the success of available antiretroviral drug therapies in reducing viral load. These same medications are not always as effective in improving overall immune system health.

There were no statistically significant changes in Health outcome scores for all MAI clients. Among Quality of Life outcomes, there were improvements in February-August 2010 in **Impact of Side-Effects from HIV-Related Medications** and **Level of Self-Sufficiency** and a significant decrease in average outcome score for **Access to Psychosocial Support** in the last reporting period.

### **Continuous MAI Clients: Outcome Scores and Health Score Distribution**

Given the small sample size (N=189), continuous MAI clients appear to be relatively reflective of the full MAI client group on key parameters (age, gender, race/ethnicity, diagnostic information, exposure, income and housing).

Average outcome scores remained in the “Good” range for all health outcomes (**CD-4 count, Viral Load, Maintenance of Primary Medical Care, Adherence to Prescribed HIV Related Medical Therapies**). However, there was a statistically significant improvement in **Viral Load** between August 2009-January 2010, followed by a significant decrease between February-August 2010. Also, there was a statistically significant decrease in **Maintenance of Primary Medical Care** between August 2009-January 2010, though this may not be of particular concern due to limitations with this outcome measure discussed earlier.

The majority of continuous clients’ average Quality of Life outcome scores were in the “Good” range, with the exception of **Mental Health Status**, where (similar to all MAI clients) scores slipped into the “Fair” category for two reporting periods. Between September 2010-February 2011 there were statistically significant improvements in **Impact of Side-Effects from HIV-Related Medications**.

### **Health Outcome Score Distribution: Continuous MAI Clients**

Data on continuous clients were further divided into four subcategories (clients that identified as Black and/or Hispanic/Latino, and clients who received Case Management and/or Peer Support MAI services). Health outcome score distribution for Black clients was similar to Hispanic/Latino Continuous MAI clients for **CD4 Count**, **Viral Load**, and **Maintenance of Primary Medical Care**. For each outcome, a higher percentage of Hispanic/Latino clients had Excellent scores compared to Black clients.

Among Case Management and Peer Support MAI clients, health outcome score distribution for **CD4 Count** and **Viral Load** was very similar. However, there were notable differences in the other two health outcomes. For **Maintenance of Primary Medical Care** and **Adherence to Prescribed HIV-Related Medical Therapies**, a much higher percentage of Peer Support clients scored in the “Excellent” category compared to Case Management clients.

### **Change in Severity: Continuous MAI Clients**

Across all four sub-populations and in nearly all categories, the majority of continuous MAI clients’ outcome health outcome scores did not change between initial and final score. Again, a higher percentage of Black clients had no change in **Maintenance of Primary Medical Care** outcome scores compared to Hispanic/Latino clients, who showed more improvement than Black clients across outcomes. In **Adherence to Prescribed HIV-Related Medical Therapies**, a higher percentage of Black clients had no change in average outcome score compared to Hispanic/Latino clients. Again, Hispanic/Latino clients showed higher percentages of improvement in this category compared to Black clients. There was very little variation in change in severity between clients receiving Case Management and those receiving Peer Support.

## **RECOMMENDATIONS AND NEXT STEPS**

This is the third year of JSI's work with BPHC on Outcome Measurement reporting, and efforts continue to focus on data quality improvement and assessment of analytic methods. JSI is also engaged in a process of assessing potential improvements to Outcome Measurement system overall, including how outcome data are collected, possible revisions to the Outcomes Measurement Report Form itself, and soliciting feedback from providers about how the form is completed.

Continuing analyses of the data will support ongoing attention to the *completeness* and *accuracy* of data across the Part A program – as well as for individual providers – and will inform methods, results and conclusions in future reports. Further, individual providers' data are now being analyzed to identify specific opportunities for data quality improvement at the provider level.

Demographic and descriptive data are being explored at the raw data level. Some improvements have already been made, and we will continue to explore possibilities for improving the clarity and relevance of these data.

Finally, we worked with BPHC and the funded agencies to revise the data collection methods and improve elements of the Outcomes Measurement form. The goal of this process was to create a more meaningful and standardized approach in which client input is directly incorporated, and all the relevant background factors related to outcome variation can be measured. Following a literature review and focus group discussions, a modified approach was developed. The new version will be in use after September 1, 2011. Changes to the form include removing Maintenance of Primary Medical Care. Clients will now be asked to report the month and year of their last appointment with an HIV primary medical care provider, along with more detailed information about receipt of case management services.

A new Microsoft Access database was developed to correspond to this form, in order to facilitate data entry while minimizing errors and improving overall data quality. The development process included gathering feedback through a technology assessment, and a piloting process with a subset of funded. It is currently being installed at all funded agencies, and providers are being trained on data collection, entry, and export for the next reporting period.



# **Appendix A**



## Boston Public Health Commission AIDS Program - Ryan White Part A OUTCOME MEASUREMENT REPORT

Date: \_\_\_\_\_

Reporting Period:  March - August or  September - February

Agency: \_\_\_\_\_

Contact Name: \_\_\_\_\_

Client Code:

--	--	--	--	--	--	--	--	--	--	--	--	--

The client:  is a new intake (date \_\_/\_\_/\_\_)       is an on-going client

**\*\* IF THE CLIENT WAS NOT SEEN DURING THE REPORTING PERIOD, DO NOT COMPLETE THE FORM \*\***

Check all Part A funded services that this report applies to:

- Case Management;  Client Advocacy;  Dental;  Drug Reimbursement;  Food Services/Meals;  
 Housing;  Mental Health;  Peer Support;  Primary Medical Care;  Substance Abuse;  Transportation;  MAI

Check the one (1) box for each outcome that most appropriately describes the client's status at the time of this review:

	Poor/In Crisis	Fair	Good	Excellent
<b>1. <u>CD-4 Count</u></b>	<input type="checkbox"/> Less than 50	<input type="checkbox"/> 50 – 199	<input type="checkbox"/> 200 – 500	<input type="checkbox"/> >500
<b>2. <u>Viral Load</u></b>	<input type="checkbox"/> >100,000	<input type="checkbox"/> 10,000 – 100,000	<input type="checkbox"/> 75 – 9,999	<input type="checkbox"/> <75/virus undetectable
<b>3. <u>Maintenance of Primary Medical Care</u></b>	<input type="checkbox"/> Missed all or had no scheduled primary medical care appointments in the past 6 months	<input type="checkbox"/> Kept some scheduled primary medical care appointments in the past 6 months	<input type="checkbox"/> Kept most scheduled primary medical care appointments in the past 6 months	<input type="checkbox"/> Kept all scheduled primary medical care appointments in the past 6 months
<b>4. <u>Adherence to Prescribed HIV Related Medical Therapies</u></b> <input type="checkbox"/> N/A because not on ART	<input type="checkbox"/> Rarely adheres to HIV-related medical therapies as prescribed	<input type="checkbox"/> Sometimes adheres to HIV-related medical therapies as prescribed	<input type="checkbox"/> Frequently adheres to HIV-related medical therapies as prescribed	<input type="checkbox"/> Always adheres to HIV-related medical therapies as prescribed
<b>5. <u>Impact of Side Effects from HIV-related Medications</u></b> <input type="checkbox"/> N/A because not on ART	<input type="checkbox"/> Side effects are severely impacting activities of daily living	<input type="checkbox"/> Side effects are moderately impacting activities of daily living	<input type="checkbox"/> Side effects are minimally impacting activities of daily living	<input type="checkbox"/> No side effects or side effects are not impacting activities of daily living
<b>6. <u>Mental Health Status</u></b>	<input type="checkbox"/> Is danger to self and others and needs immediate psychiatric evaluation/assessment	<input type="checkbox"/> Needs high level of emotional support or counseling due to acute crises, mental health episodes, or severe stress in relationships	<input type="checkbox"/> Needs some emotional support or counseling but otherwise functioning	<input type="checkbox"/> No indication of mental health problems
<b>7. <u>Access to Psychosocial Support</u></b>	<input type="checkbox"/> Has no access to psychosocial support when needed	<input type="checkbox"/> Has limited access to psychosocial support when needed	<input type="checkbox"/> Has moderate access to psychosocial support when needed	<input type="checkbox"/> Fully connected to psychosocial support when needed
<b>8. <u>Level of Self Sufficiency</u></b>	<input type="checkbox"/> Unable to manage day to day activities	<input type="checkbox"/> Able to manage some day to day activities	<input type="checkbox"/> Able to manage most day to day activities	<input type="checkbox"/> Able to manage all day to day activities
<b>9. <u>Housing Status</u></b>	<input type="checkbox"/> Homeless, recently evicted, or home is uninhabitable	<input type="checkbox"/> Limited stability in housing (e.g., facing eviction or will need housing placement)	<input type="checkbox"/> Housing is stable but may need assistance (e.g., rental or utility assistance)	<input type="checkbox"/> Stable and satisfactory housing

## **Appendix B**

### Appendix B.1: Outcome Score Distribution for All Part A-only Clients

Outcome	Unduplicated Part A only Clients							
	Mid-Year FY 2009		Year-End FY 2009		Mid-Year FY 2010		Year-End FY 2010	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All Outcomes								
Poor	45	1.0%	51	1.1%	60	1.3%	46	1.0%
Fair	1071	23.4%	1005	21.7%	754	16.9%	930	19.4%
Good	3174	69.4%	3275	70.7%	3243	72.5%	3425	71.5%
Excellent	283	6.2%	303	6.5%	414	9.3%	387	8.1%
<b>Total</b>	<b>4573</b>	<b>100.0%</b>	<b>4634</b>	<b>100.0%</b>	<b>4471</b>	<b>100.0%</b>	<b>4788</b>	<b>100.0%</b>
CD-4 Count								
Poor	147	3.2%	159	3.5%	151	3.4%	153	3.2%
Fair	606	13.3%	510	11.1%	481	10.8%	546	11.5%
Good	2201	48.4%	2282	49.7%	2129	48.0%	2228	46.9%
Excellent	1597	35.1%	1638	35.7%	1675	37.8%	1824	38.4%
<b>Total</b>	<b>4551</b>	<b>100.0%</b>	<b>4589</b>	<b>100.0%</b>	<b>4436</b>	<b>100.0%</b>	<b>4751</b>	<b>100.0%</b>
Viral Load								
Poor	141	3.1%	159	3.5%	145	3.3%	157	3.3%
Fair	531	11.7%	440	9.6%	380	8.6%	432	9.1%
Good	1296	28.5%	1315	28.8%	1073	24.2%	1160	24.5%
Excellent	2582	56.7%	2653	58.1%	2827	63.9%	2990	63.1%
<b>Total</b>	<b>4550</b>	<b>100.0%</b>	<b>4567</b>	<b>100.0%</b>	<b>4425</b>	<b>100.0%</b>	<b>4739</b>	<b>100.0%</b>
Maintenance of Primary Medical Care								
Poor	343	7.5%	324	7.0%	189	4.3%	274	5.8%
Fair	767	16.8%	708	15.3%	481	10.9%	617	13.1%
Good	1540	33.7%	1613	34.8%	1569	35.5%	1604	34.0%
Excellent	1914	41.9%	1986	42.9%	2176	49.3%	2222	47.1%
<b>Total</b>	<b>4564</b>	<b>100.0%</b>	<b>4631</b>	<b>100.0%</b>	<b>4415</b>	<b>100.0%</b>	<b>4717</b>	<b>100.0%</b>
Adherence to Prescribed HIV Related Medical Therapies								
Poor	120	2.8%	166	3.9%	78	1.9%	204	4.6%
Fair	444	10.4%	381	8.9%	295	7.2%	424	9.6%
Good	1800	42.3%	1779	41.3%	1452	35.5%	1650	37.2%
Excellent	1892	44.5%	1977	45.9%	2270	55.4%	2154	48.6%
<b>Total</b>	<b>4256</b>	<b>100.0%</b>	<b>4303</b>	<b>100.0%</b>	<b>4095</b>	<b>100.0%</b>	<b>4432</b>	<b>100.0%</b>
All Health Outcomes								
Poor	94	2.1%	113	2.4%	98	2.2%	98	2.0%
Fair	913	20.0%	850	18.3%	602	13.5%	811	16.9%
Good	2950	64.5%	3030	65.4%	2944	65.8%	3069	64.1%
Excellent	616	13.5%	640	13.8%	827	18.5%	809	16.9%
<b>Total</b>	<b>4573</b>	<b>100.0%</b>	<b>4633</b>	<b>100.0%</b>	<b>4471</b>	<b>100.0%</b>	<b>4787</b>	<b>100.0%</b>

**Appendix B.2 (continued): Outcome Score Distribution for All Part A – only Clients**

Outcome	Unduplicated Part A only Clients							
	Mid-Year FY 2009		Year-End FY 2009		Mid-Year FY 2010		Year-End FY 2010	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Impact of Side-Effects from HIV-Related Medications								
Poor	73	1.8%	78	2.1%	67	1.9%	60	1.5%
Fair	1085	26.5%	1070	29.2%	690	19.7%	1105	28.4%
Good	1337	32.7%	1240	33.8%	1155	33.0%	1165	29.9%
Excellent	1597	39.0%	1280	34.9%	1584	45.3%	1565	40.2%
<b>Total</b>	<b>4092</b>	<b>100.0%</b>	<b>3668</b>	<b>100.0%</b>	<b>3496</b>	<b>100.0%</b>	<b>3895</b>	<b>100.0%</b>
Mental Health Status								
Poor	69	1.7%	86	2.1%	78	2.0%	60	1.4%
Fair	566	14.2%	584	14.5%	630	16.4%	577	13.7%
Good	1915	48.2%	1911	47.5%	1838	47.9%	1887	44.9%
Excellent	1424	35.8%	1444	35.9%	1294	33.7%	1680	40.0%
<b>Total</b>	<b>3974</b>	<b>100.0%</b>	<b>4025</b>	<b>100.0%</b>	<b>3840</b>	<b>100.0%</b>	<b>4204</b>	<b>100.0%</b>
Access to Psychosocial Support								
Poor	231	5.8%	137	3.4%	173	4.5%	151	3.6%
Fair	868	21.8%	974	24.2%	648	16.9%	1056	25.1%
Good	1561	39.3%	1640	40.7%	1549	40.3%	1433	34.1%
Excellent	1314	33.1%	1274	31.7%	1473	38.3%	1567	37.2%
<b>Total</b>	<b>3974</b>	<b>100.0%</b>	<b>4025</b>	<b>100.0%</b>	<b>3843</b>	<b>100.0%</b>	<b>4207</b>	<b>100.0%</b>
Level of Self-Sufficiency								
Poor	61	1.5%	60	1.5%	70	1.8%	56	1.3%
Fair	574	14.4%	516	12.8%	503	13.1%	494	11.7%
Good	1532	38.6%	1591	39.5%	1442	37.5%	1386	33.0%
Excellent	1807	45.5%	1858	46.2%	1829	47.6%	2270	54.0%
<b>Total</b>	<b>3974</b>	<b>100.0%</b>	<b>4025</b>	<b>100.0%</b>	<b>3844</b>	<b>100.0%</b>	<b>4206</b>	<b>100.0%</b>
Housing Status								
Poor	388	9.4%	441	9.5%	309	7.0%	441	9.3%
Fair	468	11.3%	469	10.1%	416	9.4%	451	9.6%
Good	1207	29.2%	1360	29.4%	1224	27.7%	1153	24.4%
Excellent	2064	50.0%	2356	50.9%	2467	55.9%	2677	56.7%
<b>Total</b>	<b>4127</b>	<b>100.0%</b>	<b>4626</b>	<b>100.0%</b>	<b>4416</b>	<b>100.0%</b>	<b>4722</b>	<b>100.0%</b>
All Quality of Life Outcomes								
Poor	74	1.6%	56	1.2%	63	1.4%	49	1.0%
Fair	1092	23.9%	1074	23.2%	884	20.0%	1043	22.1%
Good	2524	55.2%	2627	56.7%	2464	55.8%	2682	56.8%
Excellent	880	19.3%	873	18.9%	1008	22.8%	950	20.1%
<b>Total</b>	<b>4570</b>	<b>100.0%</b>	<b>4630</b>	<b>100.0%</b>	<b>4419</b>	<b>100.0%</b>	<b>4724</b>	<b>100.0%</b>

## Appendix B.2: Outcome Score Distribution for All MAI Clients

Outcome	Unduplicated MAI Clients							
	Feb 2009-Jul 2009		Aug 2009-Jan 2010		Feb 2010-Aug 2010		Sep 2010-Feb 2011	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All Outcomes								
Poor	4	1.4%	1	0.3%	3	0.9%	6	1.4%
Fair	57	19.9%	63	19.2%	65	18.7%	95	22.0%
Good	216	75.3%	251	76.5%	264	76.1%	311	72.0%
Excellent	10	3.5%	13	4.0%	15	4.3%	20	4.6%
<b>Total</b>	<b>287</b>	<b>100.0%</b>	<b>328</b>	<b>100.0%</b>	<b>347</b>	<b>100.0%</b>	<b>432</b>	<b>100.0%</b>
CD-4 Count								
Poor	7	2.4%	8	2.4%	12	3.8%	12	2.8%
Fair	33	11.5%	35	10.7%	37	11.7%	54	12.6%
Good	135	47.0%	159	48.5%	153	48.6%	213	49.5%
Excellent	112	39.0%	126	38.4%	113	35.9%	151	35.1%
<b>Total</b>	<b>287</b>	<b>100.0%</b>	<b>328</b>	<b>100.0%</b>	<b>315</b>	<b>100.0%</b>	<b>430</b>	<b>100.0%</b>
Viral Load								
Poor	8	2.8%	5	1.5%	7	2.2%	10	2.4%
Fair	30	10.6%	27	8.2%	28	8.9%	45	10.8%
Good	110	38.7%	127	38.7%	112	35.8%	174	41.7%
Excellent	136	47.9%	169	51.5%	166	53.0%	188	45.1%
<b>Total</b>	<b>284</b>	<b>100.0%</b>	<b>328</b>	<b>100.0%</b>	<b>313</b>	<b>100.0%</b>	<b>417</b>	<b>100.0%</b>
Maintenance of Primary Medical Care								
Poor	6	2.1%	3	0.9%	6	1.7%	8	1.9%
Fair	52	18.5%	71	21.8%	66	19.2%	90	20.9%
Good	131	46.6%	154	47.2%	162	47.1%	197	45.7%
Excellent	92	32.7%	98	30.1%	110	32.0%	136	31.6%
<b>Total</b>	<b>281</b>	<b>100.0%</b>	<b>326</b>	<b>100.0%</b>	<b>344</b>	<b>100.0%</b>	<b>431</b>	<b>100.0%</b>
Adherence to Prescribed HIV Related Medical Therapies								
Poor	2	0.8%	5	1.7%	9	2.8%	9	2.2%
Fair	38	14.5%	36	12.0%	30	9.4%	38	9.3%
Good	129	49.2%	155	51.7%	163	51.3%	209	51.2%
Excellent	93	35.5%	104	34.7%	116	36.5%	152	37.3%
<b>Total</b>	<b>262</b>	<b>100.0%</b>	<b>300</b>	<b>100.0%</b>	<b>318</b>	<b>100.0%</b>	<b>408</b>	<b>100.0%</b>
All Health Outcomes								
Poor	7	2.4%	8	2.4%	13	3.7%	16	3.7%
Fair	62	21.6%	57	17.4%	59	17.0%	80	18.5%
Good	173	60.3%	217	66.2%	215	62.0%	265	61.3%
Excellent	45	15.7%	46	14.0%	60	17.3%	71	16.4%
<b>Total</b>	<b>287</b>	<b>100.0%</b>	<b>328</b>	<b>100.0%</b>	<b>347</b>	<b>100.0%</b>	<b>432</b>	<b>100.0%</b>

**Appendix B.2 (continued): Outcome Score Distribution for All MAI Clients**

Outcome	Unduplicated MAI Clients							
	Feb 2009-Jul 2009		Aug 2009-Jan 2010		Feb 2010-Aug 2010		Sep 2010-Feb 2011	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Impact of Side-Effects from HIV-Related Medications								
Poor	2	0.8%	2	0.7%	0	0.0%	3	0.7%
Fair	20	7.6%	16	5.3%	17	5.3%	25	6.2%
Good	144	55.0%	175	58.3%	150	47.2%	203	50.0%
Excellent	96	36.6%	107	35.7%	151	47.5%	175	43.1%
<b>Total</b>	<b>262</b>	<b>100.0%</b>	<b>300</b>	<b>100.0%</b>	<b>318</b>	<b>100.0%</b>	<b>406</b>	<b>100.0%</b>
Mental Health Status								
Poor	4	1.4%	3	0.9%	6	1.7%	8	1.9%
Fair	56	19.7%	60	18.3%	74	21.5%	92	21.3%
Good	165	58.1%	192	58.5%	187	54.4%	234	54.3%
Excellent	59	20.8%	73	22.3%	77	22.4%	97	22.5%
<b>Total</b>	<b>284</b>	<b>100.0%</b>	<b>328</b>	<b>100.0%</b>	<b>344</b>	<b>100.0%</b>	<b>431</b>	<b>100.0%</b>
Access to Psychosocial Support								
Poor	0	0.0%	1	0.3%	6	1.7%	4	0.9%
Fair	8	2.8%	12	3.7%	11	3.2%	34	7.9%
Good	94	33.1%	115	35.1%	103	29.9%	151	35.0%
Excellent	182	64.1%	200	61.0%	225	65.2%	243	56.3%
<b>Total</b>	<b>284</b>	<b>100.0%</b>	<b>328</b>	<b>100.0%</b>	<b>345</b>	<b>100.0%</b>	<b>432</b>	<b>100.0%</b>
Level of Self-Sufficiency								
Poor	1	0.4%	2	0.6%	4	1.2%	5	1.2%
Fair	27	9.5%	34	10.4%	26	7.6%	31	7.2%
Good	120	42.3%	138	42.1%	123	35.8%	170	39.4%
Excellent	136	47.9%	154	47.0%	191	55.5%	226	52.3%
<b>Total</b>	<b>284</b>	<b>100.0%</b>	<b>328</b>	<b>100.0%</b>	<b>344</b>	<b>100.0%</b>	<b>432</b>	<b>100.0%</b>
Housing Status								
Poor	15	5.3%	25	7.6%	24	7.0%	42	9.7%
Fair	24	8.5%	20	6.1%	27	7.8%	26	6.0%
Good	93	32.7%	108	32.9%	101	29.3%	151	35.0%
Excellent	152	53.5%	175	53.4%	193	55.9%	213	49.3%
<b>Total</b>	<b>284</b>	<b>100.0%</b>	<b>328</b>	<b>100.0%</b>	<b>345</b>	<b>100.0%</b>	<b>432</b>	<b>100.0%</b>
All Quality of Life Outcomes								
Poor	1	0.4%	1	0.3%	3	0.9%	4	0.9%
Fair	46	16.2%	50	15.2%	48	13.9%	89	20.6%
Good	206	72.5%	247	75.3%	260	75.4%	289	66.9%
Excellent	31	10.9%	30	9.1%	34	9.9%	50	11.6%
<b>Total</b>	<b>284</b>	<b>100.0%</b>	<b>328</b>	<b>100.0%</b>	<b>345</b>	<b>100.0%</b>	<b>432</b>	<b>100.0%</b>