



SUFFOLK UNIVERSITY  
CENTER FOR PUBLIC MANAGEMENT

**RYAN WHITE HIV/AIDS TREATMENT MODERNIZATION ACT  
BOSTON EMA PART A (TITLE I) PROGRAMS**

*IMPACT OF PART A SERVICES  
ON NEW CLIENTS OVER TIME*

*JANUARY 2008*

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This project is supported by funding provided by the Boston Public Health Commission through the Ryan White HIV/AIDS Treatment Modernization Act of 2006, Part A.

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## Background

In order to assess the impact of Part A Services on people living with HIV/AIDS (PLWH) in the Boston EMA, the health and quality of life of one-hundred and seventy-seven (177) clients new to Part A services were tracked from the first reporting period of FY 2005 through the last reporting of FY2006 (*New Client Cohort*). The specific reporting periods reviewed were March 2005-August 2005, September 2005-February 2006, March 2006-August 2006 and September 2006-February 2007.

One thousand two hundred and ninety-five (1,295) clients identified as new clients in the Suffolk database for the March 2005-August 2005 reporting period were cross-referenced against the Boston Public Health Commission (BPHC) Database. BPHC staff generated several variables including new intake dates, the date when the Joint HIV/AIDS Client Information Form was completed and the date the client was added to database to verify client status. Out of the 1,295 only three hundred and four (23%) qualified as new according to the BPHC database for the March 2005-August 2005 period. Of the three hundred and four (304) clients, only one hundred and seventy-seven (177) received consistent outcome assessments over the four reporting periods (58%) and were included in the analysis. Clients not receiving consistent outcomes (thus excluded from the analysis) may be attributed to 1) inconsistent outcomes measurement reporting by Part A service providers or 2) a lack of consistent service utilization by the client during the FY 2005 and FY2006 reporting periods.

This report examines the change in overall health and quality of life of the *New Client Cohort* over the two-year service period (March 2005-February 2007)<sup>1</sup>. In addition, it details the changes in five individual outcomes (CD-4 counts, viral loads, ability to maintain medical care, ability to advocate and level of crisis intervention) during the same service period. The *New Client Cohort's* progress over time is measured by the actual outcome score (ranging from 0=poor to 100=excellent) and categorically by the level of change (declined, remained stable, improved).

In addition, a demographic and service profile is provided for the *New Client Cohort* and for the declined, remained stable and improved sub-groups within each of the analyses. Subsequently, a multi-variate analysis is employed to determine whether or not there are statistically significant differences based on demographics (age, gender, race, diagnosis, poverty level, housing status, referral source or exposure category) or by the type of service utilized.

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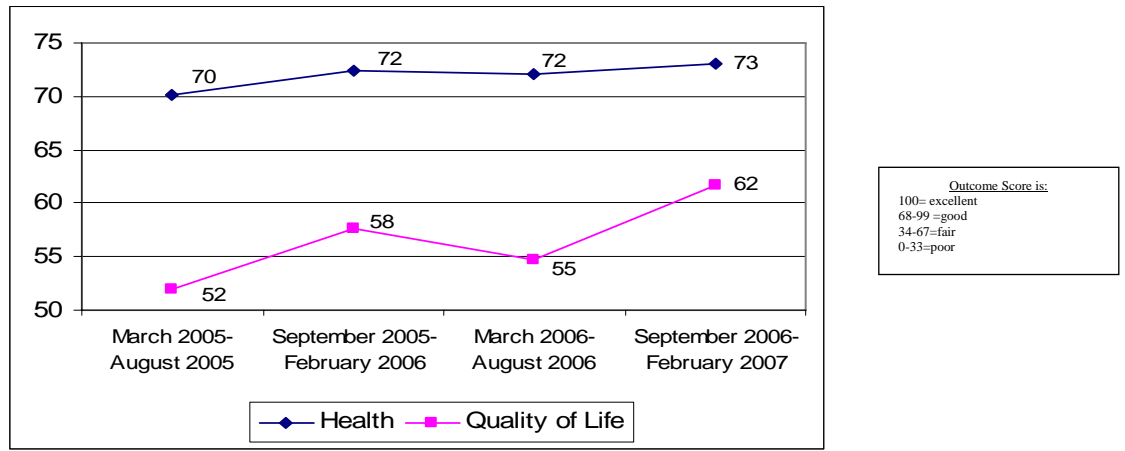
<sup>1</sup> See the **Data Notes Section** (pg 22) for a detailed description of the outcome measures included in assessing overall health & quality of life. The method for calculating individual outcome scores is also provided.

## Findings

### Health & Quality of Life

- Clients new to Part A services during the first reporting period of FY05 (March 2005-August 2005) showed a slight improvement in health outcomes scores and a statistically significant improvement in quality of life outcomes scores by the end of the fourth reporting period.\*

FIGURE 1. CHANGES IN HEALTH AND QUALITY OF LIFE OUTCOME SCORES FOR THE NEW CLIENT COHORT (March 2005-August 2005 vs. September 2005-February 2006 vs. March 2006-August 2006 vs. September 2006-February 2007) (n=177)



- Figures 2 below details the demographic profile for the *New Client Cohort*. The *New Client Cohort* is comprised primarily of White (44%), Non-Hispanic males who either are HIV Positive/Not AIDS (47%) or have AIDS/CDC Defined (40%) and were exposed primarily through heterosexual contact (37%) or MSM (27%). Income levels are predominately below the federal poverty level (72%). They are most likely permanently housed (60%) and were referred to Part A services by sources other than self referral, case managers or health centers. Other sources (43%) include, substance abuse treatment program, adult/juvenile detention facility, homeless service, counseling/testing site, mental health program, emergency room and other (broad category/not defined).

FIGURE 2. DEMOGRAPHIC PROFILE OF THE NEW CLIENT COHORT

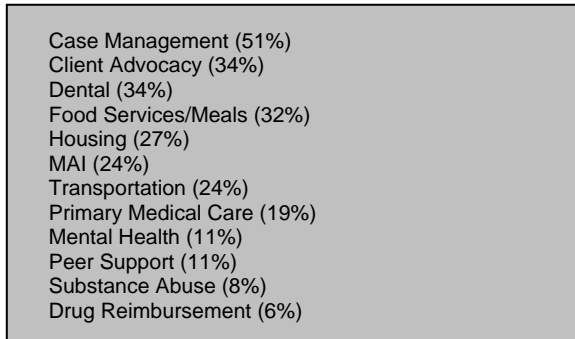
**Demographic Profile**

- Average age of 44
- 69% male, 30% female, 1% transgender
- 24% Hispanic
- 44% White, 32% Black, 22% unknown or unreported, 2% other
- 47% HIV positive/not AIDS, 40% AIDS/CDC Defined, 1% HIV Negative, 1% HIV indeterminate, 7% HIV/AIDS Status Unknown, 4% unknown or unreported
- 72% with income levels equal to or below federal poverty level
- 60% permanently housed, 29% not permanently housed, 6% unknown or unreported, 5% other
- Fifteen percent (15%) of new clients were self-referred, 18% by a case manager and 24% by a health center and 43% other
- Exposed through MSM (27%), IDU (17%) and heterosexual contact (37%)

\* Statistically significant, p<.05 (95% level of certainty in the findings).

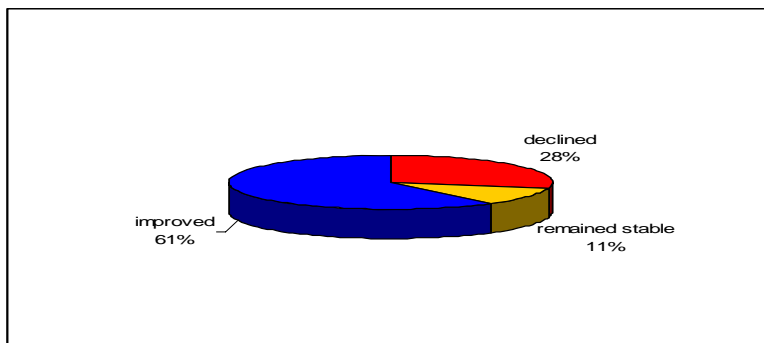
- The most utilized services among the *New Client Cohort* were Case Management (51%), Client Advocacy (34%), Dental (34%) and Food Services/Meals (32%). *Note: Service utilization records for the Cohort were provided by the Boston Public Health Commission. Client utilization reports are used to collect and review activity within each Part A funded program. Providers report on utilization data to BPHC quarterly for programs with cost reimbursement budgets and monthly for programs with unit rate budgets.*

FIGURE 3. PERCENTAGE OF SERVICES UTILIZED BY THE NEW CLIENT COHORT



- Sixty-one percent (61%) of clients new to Part A services during the first reporting period of FY05 (March 2005-August 2005) showed improved health outcomes during the last reporting period of FY06 (September 2006-February 2007).

FIGURE 4. LEVEL OF CHANGE- HEALTH OUTCOMES FOR THE NEW CLIENT COHORT  
FIRST REPORTING PERIOD OF FY05 VS. LAST REPORTING PERIOD OF FY06  
(March 2005-August 2005 vs. September 2006-February 2007)  
(n=177)



- Comparing the demographic profiles by change in health status (improved, remained stable, declined) for the *New Client Cohort*, there were no statistically significant differences based on age, gender, race, diagnosis, poverty level, housing status, referral source or exposure category.

FIGURE 5. DEMOGRAPHIC PROFILE OF THE NEW CLIENT COHORT BY CHANGE IN HEALTH STATUS

Demographic Profile		
Improved (n=107)	Remained Stable (n=20)	Declined (n=50)
<ul style="list-style-type: none"> <li>• Average age of 46</li> <li>• 69% male, 30% female, 1% transgender</li> <li>• 22% Hispanic</li> <li>• 40% White, 35% Black, 22% unknown or unreported, 3% other</li> <li>• 41% HIV positive/not AIDS, 42% AIDS/CDC Defined, 2% HIV Negative, 1% HIV indeterminate, 9% HIV/AIDS Status Unknown, 5% unknown or unreported</li> <li>• 71% with income levels equal to or below federal poverty level</li> <li>• 61% permanently housed, 28% not permanently housed, 11% other</li> <li>• Seventeen percent (17%) of new clients were self-referred, 20% by a case manager and 20% by a health center and 43% other</li> <li>• Exposed through MSM (30%), IDU (17%), and heterosexual contact (34%)</li> </ul>	<ul style="list-style-type: none"> <li>• Average age of 45</li> <li>• 100% male</li> <li>• 20% Hispanic</li> <li>• 45% White, 27% Black, 23% unknown or unreported, 5% other</li> <li>• 65% HIV positive/not AIDS, 35% AIDS/CDC Defined</li> <li>• 65% with income levels equal to or below federal poverty level</li> <li>• 65% permanently housed, 10% not permanently housed, 25% other</li> <li>• Ten percent (10%) of new clients were self-referred, 30% by a case manager and 15% by a health center and 45% other</li> <li>• Exposed through MSM (38%), IDU (13%), and heterosexual contact (33%)</li> </ul>	<ul style="list-style-type: none"> <li>• Average age of 40</li> <li>• 57% male, 42% female, 1% transgender</li> <li>• 30% Hispanic</li> <li>• 49% White, 28% Black, 23% unknown or unreported, 0% other</li> <li>• 53% HIV positive/not AIDS, 39% AIDS/CDC Defined, 8% HIV/AIDS Status Unknown</li> <li>• 77% with income levels equal to or below federal poverty level</li> <li>• 56% permanently housed, 29% not permanently housed, 1% unknown or unreported, 14% other</li> <li>• Fourteen percent (14%) of new clients were self-referred, 10% by a case manager and 37% by a health center and 39% other</li> <li>• Exposed through MSM (17%), IDU (19%) and heterosexual contact (45%)</li> </ul>

- Comparing service utilization by change in health status for the *New Client Cohort*, case management, food services and client advocacy was among the top three utilized services for both the improved and declined groups.

FIGURE 6. SERVICE UTILIZATION BY THE NEW CLIENT COHORT BY CHANGE IN HEALTH STATUS

Service Utilization		
Improved (n=107)	Remained Stable (n=20)	Declined (n=50)
<ul style="list-style-type: none"> <li>Case Management (52%)</li> <li>Food Services/Meals (35%)</li> <li>Client Advocacy (31%)</li> <li>Dental (30%)</li> <li>Housing (23%)</li> <li>Transportation (23%)</li> <li>Primary Medical Care (21%)</li> <li>MAI (21%)</li> <li>Mental Health (14%)</li> <li>Peer Support (11%)</li> <li>Substance Abuse (8%)</li> <li>Drug Reimbursement (8%)</li> </ul>	<ul style="list-style-type: none"> <li>Dental (75%)</li> <li>Housing (30%)</li> <li>Case Management (25%)</li> <li>Client Advocacy (20%)</li> <li>Substance Abuse (15%)</li> <li>MAI (10%)</li> <li>Peer Support (10%)</li> <li>Transportation (10%)</li> <li>Food Services/Meals (5%)</li> <li>Primary Medical Care (5%)</li> <li>Mental Health (0%)</li> <li>Drug Reimbursement (0%)</li> </ul>	<ul style="list-style-type: none"> <li>Case Management (60%)</li> <li>Client Advocacy (48%)</li> <li>Food Services/Meals (38%)</li> <li>MAI (36%)</li> <li>Housing (34%)</li> <li>Transportation (32%)</li> <li>Dental (28%)</li> <li>Primary Medical Care (16%)</li> <li>Mental Health (10%)</li> <li>Peer Support (10%)</li> <li>Substance Abuse (6%)</li> <li>Drug Reimbursement (4%)</li> </ul>

- Comparing the demographic profiles by change in quality of life status (improved, remained stable, declined) for the *New Client Cohort*, there were no statistically significant differences based on age, gender, race, diagnosis, poverty level, housing status, referral source or exposure category.

FIGURE 7. DEMOGRAPHIC PROFILE BY CHANGE IN QUALITY OF LIFE STATUS

<b>Demographic Profile</b>		
<b>Improved (n=83)</b>	<b>Remained Stable (n=58)</b>	<b>Declined (n=35)</b>
<ul style="list-style-type: none"> <li>• Average age of 47</li> <li>• 62% male, 38% female, 0% transgender</li> <li>• 28% Hispanic</li> <li>• 39% White, 33% Black, 27% unknown or unreported, 1% other</li> <li>• 46% HIV positive/not AIDS, 34% AIDS/CDC Defined, 2% HIV Negative, 1% HIV indeterminate, 7% HIV/AIDS Status Unknown, 9% unknown or unreported</li> <li>• 74% with income levels equal to or below federal poverty level</li> <li>• 62% permanently housed, 24% not permanently housed, 7% unknown or unreported, 7% other</li> <li>• Eleven percent (11%) of new clients were self-referred, 16% by a case manager and 24% by a health center and 49% other</li> <li>• Exposed through MSM (25%), IDU (17%) and heterosexual contact (37%)</li> </ul>	<ul style="list-style-type: none"> <li>• Average age of 42</li> <li>• 79% male, 21% female, 0% transgender</li> <li>• 15% Hispanic</li> <li>• 52% White, 31% Black, 14% unknown or unreported, 3% other</li> <li>• 48% HIV positive/not AIDS, 47% AIDS/CDC Defined, 5% HIV/AIDS Status Unknown</li> <li>• 67% with income levels equal to or below federal poverty level</li> <li>• 67% permanently housed, 21% not permanently housed, 3% unknown or unreported, 9% other</li> <li>• Nineteen percent (19%) of new clients were self-referred, 26% by a case manager and 17% by a health center and 38% other</li> <li>• Exposed through MSM (37%), IDU (13%) and heterosexual contact (35%)</li> </ul>	<ul style="list-style-type: none"> <li>• Average age of 40</li> <li>• 69% male, 28% female, 3% transgender</li> <li>• 29% Hispanic</li> <li>• 42% White, 32% Black, 24% unknown or unreported, 3% other</li> <li>• 46% HIV positive/not AIDS, 43% AIDS/CDC Defined, 11% HIV/AIDS Status Unknown</li> <li>• 74% with income levels equal to or below federal poverty level</li> <li>• 46% permanently housed, 42% not permanently housed, 6% unknown or unreported, 6% other</li> <li>• Twenty percent (20%) of new clients were self-referred, 11% by a case manager and 34% by a health center and 35% other</li> <li>• Exposed through MSM (16%), IDU (22%) and heterosexual contact (41%)</li> </ul>

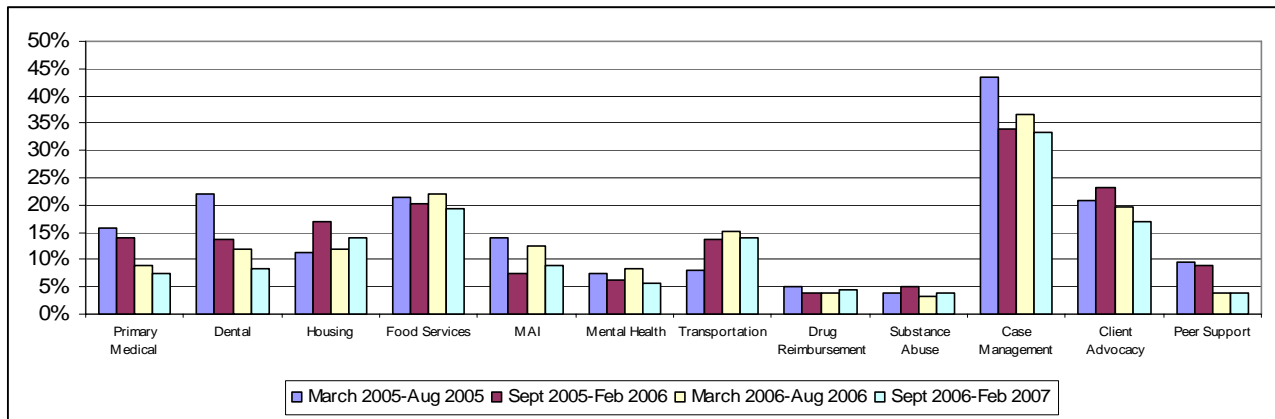
- Similar to health status, case management, food services and client advocacy were among the top three utilized services for both the improved and declined groups for quality of life status for the *New Client Cohort*.

FIGURE 8. SERVICE UTILIZATION BY CHANGE IN QUALITY OF LIFE STATUS

<b>Service Utilization</b>		
<b>Improved (n=83)</b>	<b>Remained Stable (n=58)</b>	<b>Declined (n=35)</b>
<ul style="list-style-type: none"> <li>Case Management (57%)</li> <li>Food Services/Meals (40%)</li> <li>Client Advocacy (33%)</li> <li>MAI (27%)</li> <li>Housing (24%)</li> <li>Primary Medical Care (22%)</li> <li>Dental (22%)</li> <li>Transportation (20%)</li> <li>Mental Health (16%)</li> <li>Peer Support (12%)</li> <li>Substance Abuse (11%)</li> <li>Drug Reimbursement (2%)</li> </ul>	<ul style="list-style-type: none"> <li>Dental (62%)</li> <li>Client Advocacy (33%)</li> <li>Case Management (29%)</li> <li>Primary Medical Care (22%)</li> <li>Housing (22%)</li> <li>Transportation (21%)</li> <li>Food Services/Meals (16%)</li> <li>MAI (14%)</li> <li>Drug Reimbursement (14%)</li> <li>Substance Abuse (07%)</li> <li>Mental Health (3%)</li> <li>Peer Support (3%)</li> </ul>	<ul style="list-style-type: none"> <li>Case Management (71%)</li> <li>Client Advocacy (46%)</li> <li>Food Services/Meals (43%)</li> <li>Housing (43%)</li> <li>Transportation (37%)</li> <li>MAI (34%)</li> <li>Peer Support (20%)</li> <li>Dental (17%)</li> <li>Mental Health (14%)</li> <li>Primary Medical Care (6%)</li> <li>Substance Abuse (6%)</li> <li>Drug Reimbursement (3%)</li> </ul>

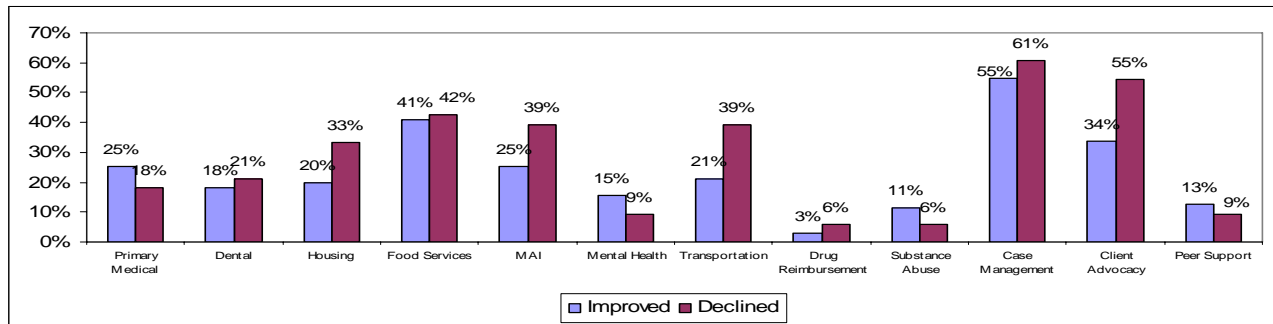
- Figure 9 details the type of services being utilized by the *New Client Cohort* over the four (4) reporting periods.
- Interestingly, service utilization appears to have dropped in nine (9) out of twelve (12) service areas from the first reporting of FY05 to the last reporting period of FY06. Importantly, the discrepancy between the two reporting periods is not statistically significant.
- Similar to the overall service profile for *New Client Cohort* (Figure 3), case management, client advocacy and food services were the most frequently utilized services by the *New Client Cohort* within each of the four (4) reporting periods.

FIGURE 9. SERVICE UTILIZATION FOR THE NEW CLIENT COHORT OVER TIME  
 (March 2005-August 2005 vs. September 2005-February 2006 vs. March 2006-August 2006 vs. September 2006-February 2007)  
 (n=177)



- One hundred and seven (107) clients had improved health outcomes from the first reporting period of FY05 to the last reporting period of FY06. Of the 107, 71 (66%) also had improved quality of life outcomes.
- Fifty (50) clients had declining health outcomes from the first reporting period of FY05 to the last reporting period of FY06. Of the 50, 33 (66%) also had declining quality of life outcomes.
- Figure 10 shows the service mix among clients who had improved health and quality of life outcomes (n=71) compared to those clients whose health and quality of life outcomes declined (n=33). Of note:
  - A greater percentage of clients with improved health and quality of life outcomes in the *New Client Cohort* utilized primary medical care, mental health, substance abuse and peer support services (see Figure 10 below).
  - Clients with declining health and quality of life outcomes in the *New Client Cohort* consumed a greater percentage of services (in 8 out of 12 service categories) than clients with improved health and quality of life outcomes (see Figure 10 below).

FIGURE 10. COMPARISON OF SERVICE UTILIZATION – CLIENTS WITH IMPROVED VS. DECLINED HEALTH AND QUALITY OF LIFE OUTCOMES (March 2005-August 2005 vs. September 2006-February 2007)



- Reviewing the demographic profiles of clients in the *New Client Cohort* with improved vs. declined health & quality of life outcomes, there appears to be a noticeably higher percentage of Hispanics (40%) with declining health & quality of life outcomes. However, this finding is not statistically significant.

FIGURE 11. DEMOGRAPHIC PROFILE BY IMPROVED VS. DECLINED HEALTH & QUALITY OF LIFE

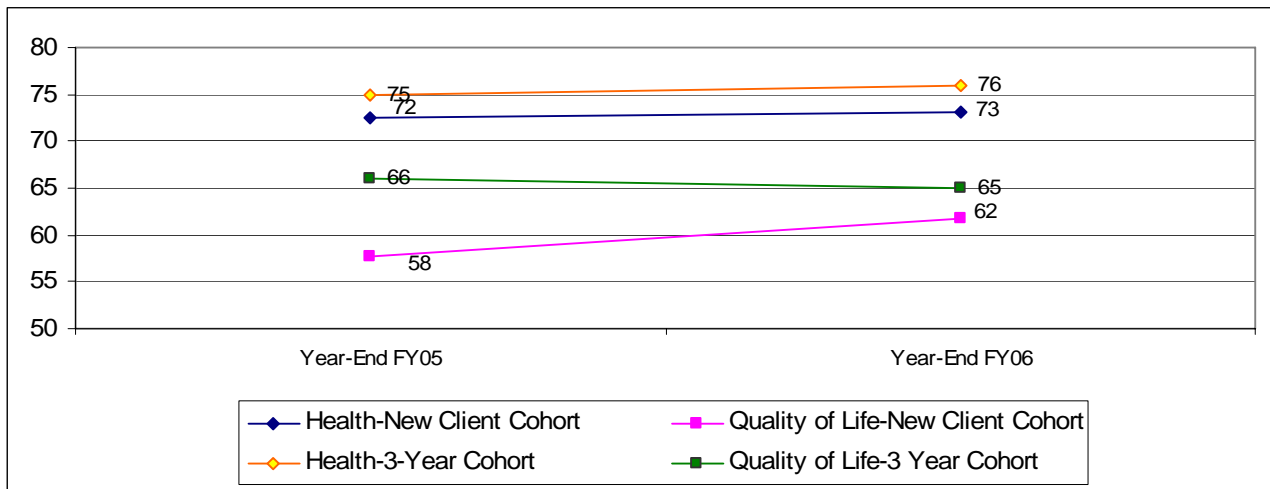
Demographic Profile	
Improved Health & Quality of Life (n=71)	Declined Health & Quality of Life (n=33)
<ul style="list-style-type: none"> <li>• Average age of 50</li> <li>• 68% male, 32% female, 0% transgender</li> <li>• 27% Hispanic</li> <li>• 35% White, 34% Black, 30% unknown or unreported, 1% other</li> <li>• 42% HIV positive/not AIDS, 38% AIDS/CDC Defined, 3% HIV Negative, 1% HIV indeterminate, 6% HIV/AIDS Status Unknown, 9% unknown or unreported</li> <li>• 74% with income levels equal to or below federal poverty level</li> <li>• 61% permanently housed, 24% not permanently housed, 8% unknown or unreported, 7% other</li> <li>• Twelve percent (12%) of new clients were self-referred, 15% by a case manager and 20% by a health center and 53% other</li> <li>• Exposed through MSM (28%), IDU (20%), and heterosexual contact (36%)</li> </ul>	<ul style="list-style-type: none"> <li>• Average age of 41</li> <li>• 75% male, 25% female, 0% transgender</li> <li>• 40% Hispanic</li> <li>• 55% White, 18% Black, 27% unknown or unreported</li> <li>• 60% HIV positive/not AIDS, 40% AIDS/CDC Defined</li> <li>• 75% with income levels equal to or below federal poverty level</li> <li>• 50% permanently housed, 30% not permanently housed, 5% institution, 5% unknown or unreported, 10% other</li> <li>• Fifteen percent (15%) of new clients were self-referred, 10% by a case manager and 40% by a health center and 35% other</li> <li>• Exposed through MSM (22%), IDU (26%), and heterosexual contact (44%)</li> </ul>

### Comparison to the 3-Year Cohort

A Cohort is a group of individuals, identified by a common characteristic, who are studied over a period of time. The 3-Year Cohort (previously reported on in the FY06 Annual Outcomes Report) includes on-going clients who consistently received an outcomes measurement report (at least once in each fiscal year) over a three-year period (March 2004-February 2007).

- Figure 11 below shows that by the end of FY06 the *New Client Cohort* remained within 3 points of the 3-Year Cohort for overall Health. However, the *New Client Cohort* made statistically significant progress and noticeably closed the gap with the 3-Year Cohort by the end of FY06 for overall Quality of Life.

FIGURE 12. COMPARISON OF THE NEW CLIENT COHORT TO THE 3-YEAR COHORT FOR HEALTH & QUALITY OF LIFE



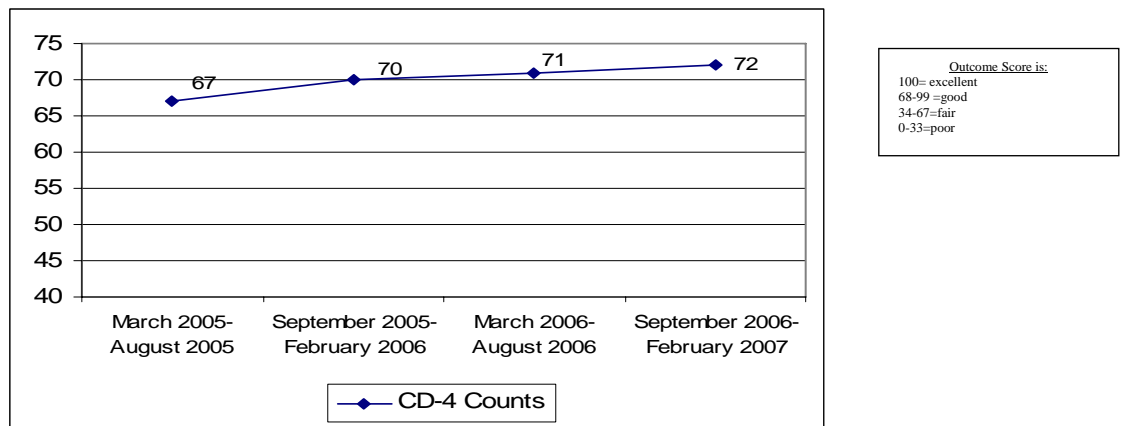
Outcome Score is:  
 100= excellent  
 68-99 =good  
 34-67=fair  
 0-33=poor

**Assessment of Individual Outcomes**

**CD-4 Counts**

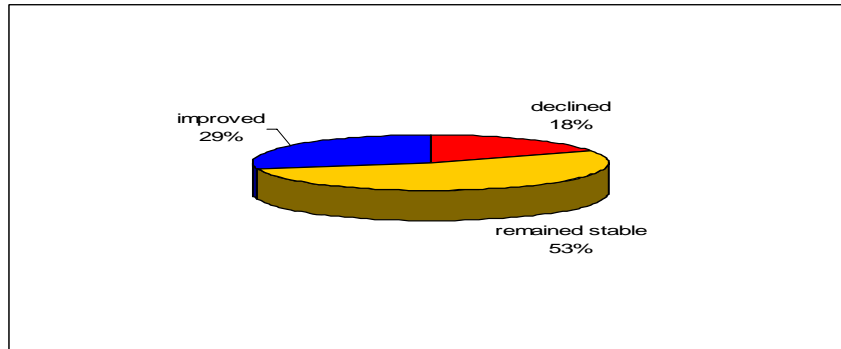
- Clients new to Part A services during the first reporting period of FY05 (March 2005-August 2005) showed statistically significant improvements in CD-4 counts during the last reporting period of FY06 (September 2006-February 2007) moving from a fair (score=34-67) to good outcome score (score=68-99). \*

FIGURE 13. CHANGES IN OUTCOME SCORES - CD-4 COUNTS FOR THE NEW CLIENT COHORT (March 2005-August 2005 vs. September 2005-February 2006 vs. March 2006-August 2006 vs. September 2006-February 2007) (n=156)<sup>2</sup>



- The majority of Clients (53%) new to Part A services during the first reporting period of FY05 (March 2005-August 2005) remained the same in CD-4 counts during the last reporting period of FY06 (September 2006-February 2007).

FIGURE 14. LEVEL OF CHANGE- CD-4 COUNTS FOR THE NEW CLIENT COHORT FIRST REPORTING PERIOD OF FY05 VS. LAST REPORTING PERIOD OF FY06 (March 2005-August 2005 vs. September 2006-February 2007) (n=156)



\* Statistically significant, p<.05 (95% level of certainty in the findings).

<sup>2</sup> The n represents the number of clients within the *New Client Cohort* who received consistent assessments for the outcome measure.

- Comparing the demographic profiles by change in CD-4 counts (improved, remained stable, declined) for the *New Client Cohort*, there were no statistically significant differences based on age, gender, race, diagnosis, poverty level, housing status, referral source or exposure category.

FIGURE 15. DEMOGRAPHIC PROFILE BY CHANGE IN CD-4 COUNTS

<b>Demographic Profile</b>		
<b>Improved (n=46)</b>	<b>Remained Stable (n=82)</b>	<b>Declined (n=28)</b>
<ul style="list-style-type: none"> <li>• Average age of 40</li> <li>• 82% male, 18% female, 0% transgender</li> <li>• 31% Hispanic</li> <li>• 44% White, 22% Black, 30% unknown or unreported, 4% other</li> <li>• 36% HIV positive/not AIDS, 62% AIDS/CDC Defined, 2% unknown or unreported</li> <li>• 73% with income levels equal to or below federal poverty level</li> <li>• 62% permanently housed, 24% not permanently housed, 7% unknown or unreported, 7% other</li> <li>• Sixteen percent (16%) of new clients were self-referred, 20% by a case manager and 22% by a health center and 42% other</li> <li>• Exposed through MSM (32%), IDU (25%) and heterosexual contact (38%)</li> </ul>	<ul style="list-style-type: none"> <li>• Average age of 47</li> <li>• 59% male, 40% female, 1% transgender</li> <li>• 21% Hispanic</li> <li>• 52% White, 31% Black, 14% unknown or unreported, 3% other</li> <li>• 46% HIV positive/not AIDS, 33% AIDS/CDC Defined, 21% HIV/AIDS Status Unknown</li> <li>• 77% with income levels equal to or below federal poverty level</li> <li>• 67% permanently housed, 21% not permanently housed, 4% unknown or unreported, 8% other</li> <li>• Seventeen percent (17%) of new clients were self-referred, 15% by a case manager and 22% by a health center and 46% other</li> <li>• Exposed through MSM (28%), IDU (13%) and heterosexual contact (40%)</li> </ul>	<ul style="list-style-type: none"> <li>• Average age of 40</li> <li>• 63% male, 37% female, 0% transgender</li> <li>• 33% Hispanic</li> <li>• 42% White, 32% Black, 24% unknown or unreported, 3% other</li> <li>• 52% HIV positive/not AIDS, 30% AIDS/CDC Defined, 18% unknown or unreported</li> <li>• 59% with income levels equal to or below federal poverty level</li> <li>• 63% permanently housed, 26% not permanently housed, 11% unknown or unreported, 0% other</li> <li>• Seven percent (7%) of new clients were self-referred, 15% by a case manager and 41% by a health center and 37% other</li> <li>• Exposed through MSM (23%), IDU (23%) and heterosexual contact (52%)</li> </ul>

- Comparing service utilization by change in CD-4 counts for the *New Client Cohort*, a higher percentage of clients in the declined group were receiving MAI services (37%) than in the improved (16%) or remained stable categories (22%).

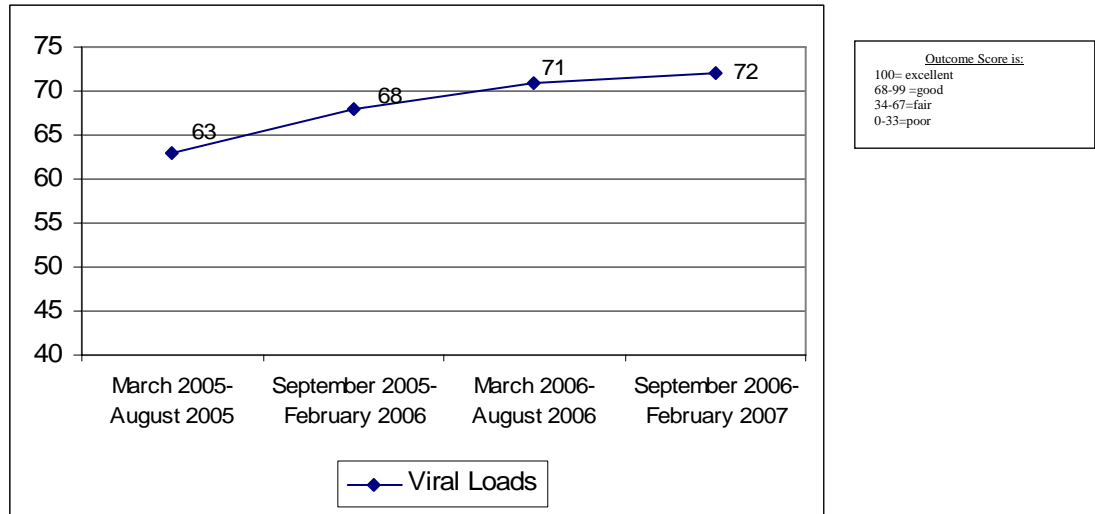
FIGURE 16. SERVICE UTILIZATION BY CHANGE IN CD-4 COUNT

<b>Service Utilization</b>		
<b>Improved (n=83)</b>	<b>Remained Stable (n=58)</b>	<b>Declined (n=35)</b>
<ul style="list-style-type: none"> <li>Case Management (35%)</li> <li>Food Services/Meals (28%)</li> <li>Dental (22%)</li> <li>Client Advocacy (20%)</li> <li>Transportation (17%)</li> <li>MAI (16%)</li> <li>Primary Medical Care (12%)</li> <li>Housing (12%)</li> <li>Peer Support (7%)</li> <li>Mental Health (6%)</li> <li>Substance Abuse (6%)</li> <li>Drug Reimbursement (6%)</li> </ul>	<ul style="list-style-type: none"> <li>Case Management (66%)</li> <li>Client Advocacy (45%)</li> <li>Housing (38%)</li> <li>Dental (36%)</li> <li>Food Services/Meals (29%)</li> <li>Primary Medical Care (29%)</li> <li>Transportation (24%)</li> <li>MAI (22%)</li> <li>Mental Health (21%)</li> <li>Peer Support (14%)</li> <li>Substance Abuse (9%)</li> <li>Drug Reimbursement (7%)</li> </ul>	<ul style="list-style-type: none"> <li>Case Management (49%)</li> <li>Food Services/Meals (37%)</li> <li>MAI (37%)</li> <li>Client Advocacy (34%)</li> <li>Transportation (31%)</li> <li>Housing (31%)</li> <li>Dental (20%)</li> <li>Primary Medical Care (14%)</li> <li>Peer Support (14%)</li> <li>Substance Abuse (9%)</li> <li>Drug Reimbursement (6%)</li> <li>Mental Health (6%)</li> </ul>

**Viral Loads**

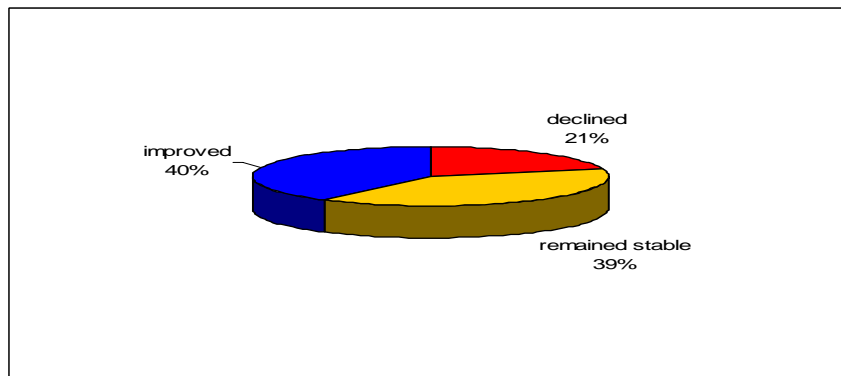
- Clients new to Part A services during the first reporting period (March 2005-August 2005) showed statistically significant improvement in HIV Viral Loads by the end of the fourth reporting period (Sept 2006-February 2007).\*

**FIGURE 17. CHANGES IN OUTCOME SCORES - VIRAL LOADS FOR THE NEW CLIENT COHORT**  
 (March 2005-August 2005 vs. September 2005-February 2006 vs. March 2006-August 2006 vs. September 2006-February 2007)  
 (n=128)



- Forty percent (40%) of clients new to Part A services during the first reporting period of FY05 (March 2005-August 2005) showed improvement in viral loads during the last reporting period of FY06 (September 2006-February 2007).

**FIGURE 18. LEVEL OF CHANGE- VIRAL LOADS FOR THE NEW CLIENT COHORT FIRST REPORTING PERIOD OF FY05 vs. LAST REPORTING PERIOD OF FY06**  
 (March 2005-August 2005 vs. September 2006-February 2007)  
 (n=128)



\* Statistically significant, p<.05 (95% level of certainty in the findings).

- Comparing the demographic profiles by change in viral loads (improved, remained stable, declined) for the *New Client Cohort*, there were no statistically significant differences based on age, gender, race, diagnosis, poverty level, housing status, referral source or exposure category.

FIGURE 19. DEMOGRAPHIC PROFILE BY CHANGE IN VIRAL LOADS

<b>Demographic Profile</b>		
<b>Improved (n=51)</b>	<b>Remained Stable (n=50)</b>	<b>Declined (n=27)</b>
<ul style="list-style-type: none"> <li>• Average age of 47</li> <li>• 62% male, 38% female, 0% transgender</li> <li>• 28% Hispanic</li> <li>• 39% White, 33% Black, 27% unknown or unreported, 1% other</li> <li>• 46% HIV positive/not AIDS, 34% AIDS/CDC Defined, 2% HIV Negative, 1% HIV indeterminate, 7% HIV/AIDS Status Unknown, 9% unknown or unreported</li> <li>• 74% with income levels equal to or below federal poverty level</li> <li>• 62% permanently housed, 24% not permanently housed, 7% unknown or unreported, 7% other</li> <li>• Eleven percent (11%) of new clients were self-referred, 16% by a case manager and 24% by a health center and 49% other</li> <li>• Exposed through MSM (25%), IDU (17%) and heterosexual contact (37%)</li> </ul>	<ul style="list-style-type: none"> <li>• Average age of 42</li> <li>• 79% male, 21% female, 0% transgender</li> <li>• 15% Hispanic</li> <li>• 52% White, 31% Black, 14% unknown or unreported, 3% other</li> <li>• 48% HIV positive/not AIDS, 47% AIDS/CDC Defined, 5% HIV/AIDS Status Unknown</li> <li>• 67% with income levels equal to or below federal poverty level</li> <li>• 67% permanently housed, 21% not permanently housed, 3% unknown or unreported, 9% other</li> <li>• Nineteen percent (19%) of new clients were self-referred, 26% by a case manager and 17% by a health center and 38% other</li> <li>• Exposed through MSM (37%), IDU (13%) and heterosexual contact (35%)</li> </ul>	<ul style="list-style-type: none"> <li>• Average age of 40</li> <li>• 69% male, 28% female, 3% transgender</li> <li>• 29% Hispanic</li> <li>• 42% White, 32% Black, 24% unknown or unreported, 3% other</li> <li>• 46% HIV positive/not AIDS, 43% AIDS/CDC Defined, 11% HIV/AIDS Status Unknown</li> <li>• 74% with income levels equal to or below federal poverty level</li> <li>• 46% permanently housed, 42% not permanently housed, 6% unknown or unreported, 6% other</li> <li>• Twenty percent (20%) of new clients were self-referred, 11% by a case manager and 34% by a health center and 35% other</li> <li>• Exposed through MSM (16%), IDU (22%) and heterosexual contact (41%)</li> </ul>

Similar to CD-4 counts, comparing service utilization by change in viral loads for the *New Client Cohort*, a higher percentage of clients in the declined group were receiving MAI services (56%) than in the improved (24%) or remained stable categories (18%)\*.

FIGURE 20. SERVICE UTILIZATION BY CHANGE IN VIRAL LOADS

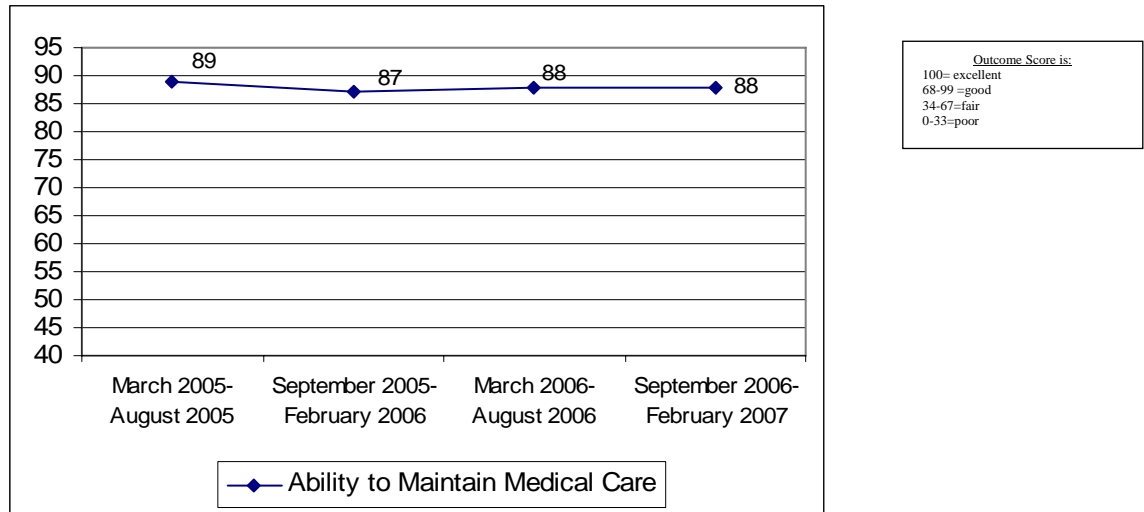
<b>Service Utilization</b>		
<b>Improved (n=51)</b>	<b>Remained Stable (n=50)</b>	<b>Declined (n=27)</b>
<ul style="list-style-type: none"> <li>Case Management (65%)</li> <li>Food Services/Meals (49%)</li> <li>Client Advocacy (49%)</li> <li>Dental (43%)</li> <li>Transportation (33%)</li> <li>Housing (29%)</li> <li>Primary Medical Care (27%)</li> <li>MAI (24%)</li> <li>Mental Health (16%)</li> <li>Peer Support (16%)</li> <li>Drug Reimbursement (16%)</li> <li>Substance Abuse (8%)</li> </ul>	<ul style="list-style-type: none"> <li>Client Advocacy (42%)</li> <li>Case Management (34%)</li> <li>Primary Medical Care (28%)</li> <li>Dental (24%)</li> <li>Food Services/Meals (22%)</li> <li>Housing (20%)</li> <li>MAI (18%)</li> <li>Transportation (14%)</li> <li>Mental Health (12%)</li> <li>Peer Support (6%)</li> <li>Substance Abuse (4%)</li> <li>Drug Reimbursement (2%)</li> </ul>	<ul style="list-style-type: none"> <li>MAI (56%)</li> <li>Case Management (52%)</li> <li>Food Services/Meals (52%)</li> <li>Housing (52%)</li> <li>Transportation (44%)</li> <li>Client Advocacy (41%)</li> <li>Peer Support (26%)</li> <li>Dental (26%)</li> <li>Substance Abuse (22%)</li> <li>Mental Health (19%)</li> <li>Primary Medical Care (11%)</li> <li>Drug Reimbursement (4%)</li> </ul>

\* Statistically significant, p<.05 (95% level of certainty in the findings).

**Ability to Maintain Medical Care**

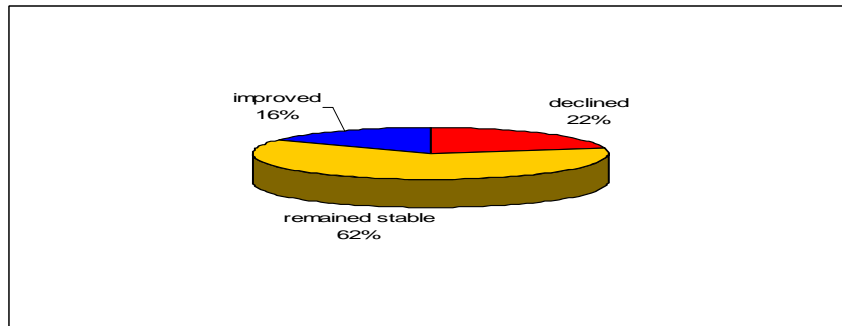
- Clients new to Part A services during the first reporting period (March 2005-August 2005) showed minimal variation in their ability to maintain medical care outcomes by the end of the fourth reporting period (Sept 2006-February 2007).

FIGURE 21. CHANGES IN OUTCOME SCORES-ABILITY TO MAINTAIN MEDICAL CARE FOR THE NEW CLIENT COHORT (March 2005-August 2005 vs. September 2005-February 2006 vs. March 2006-August 2006 vs. September 2006-February 2007) (n=77)



- Not surprisingly, sixty-two percent (62%) of clients new to Part A services during the first reporting period of FY05 (March 2005-August 2005) showed no change in their outcome level (remained stable) for their ability to maintain medical care during the last reporting period of FY06 (September 2006-February 2007).

FIGURE 22. LEVEL OF CHANGE- ABILITY TO MAINTAIN MEDICAL CARE FOR THE NEW CLIENT COHORT FIRST REPORTING PERIOD OF FY05 vs. LAST REPORTING PERIOD OF FY06 (March 2005-August 2005 vs. September 2006-February 2007) (n=77)



- Comparing the demographic profiles by change in ability to maintain medical care (improved, remained stable, declined) for the *New Client Cohort*, there were no statistically significant differences based on age, gender, race, diagnosis, poverty level, housing status, referral source or exposure category.

FIGURE 23. DEMOGRAPHIC PROFILE BY CHANGE IN ABILITY TO MAINTAIN MEDICAL CARE

<b>Demographic Profile</b>		
<b>Improved (n=12)</b>	<b>Remained Stable (n=48)</b>	<b>Declined (n=17)</b>
<ul style="list-style-type: none"> <li>• Average age of 61</li> <li>• 58% male, 42% female, 0% transgender</li> <li>• 33% Hispanic</li> <li>• 31% White, 39% Black, 31% unknown or unreported, 0% other</li> <li>• 8% HIV positive/not AIDS, 50% AIDS/CDC Defined, 8% HIV Negative, 17% HIV/AIDS Status Unknown, 17% unknown or unreported</li> <li>• 83% with income levels equal to or below federal poverty level</li> <li>• 42% permanently housed, 42% not permanently housed, 8% unknown or unreported, 8% other</li> <li>• Seventeen percent (17%) of new clients were self-referred, 17% by a case manager and 8% by a health center and 68% other</li> <li>• Exposed through MSM (5%), IDU (35%) and heterosexual contact (35%)</li> </ul>	<ul style="list-style-type: none"> <li>• Average age of 48</li> <li>• 65% male, 35% female, 0% transgender</li> <li>• 27% Hispanic</li> <li>• 24% White, 46% Black, 28% unknown or unreported, 2% other</li> <li>• 48% HIV positive/not AIDS, 47% AIDS/CDC Defined, 5% HIV/AIDS Status Unknown</li> <li>• 83% with income levels equal to or below federal poverty level</li> <li>• 52% permanently housed, 38% not permanently housed, 0% unknown or unreported, 10% other</li> <li>• Ten percent (10%) of new clients were self-referred, 11% by a case manager and 23% by a health center and 56% other</li> <li>• Exposed through MSM (19%), IDU (13%) and heterosexual contact (47%)</li> </ul>	<ul style="list-style-type: none"> <li>• Average age of 39</li> <li>• 75% male, 25% female, 0% transgender</li> <li>• 31% Hispanic</li> <li>• 44% White, 22% Black, 28% unknown or unreported, 6% other</li> <li>• 38% HIV positive/not AIDS, 56% AIDS/CDC Defined, 6% HIV/AIDS Status Unknown</li> <li>• 94% with income levels equal to or below federal poverty level</li> <li>• 47% permanently housed, 40% not permanently housed, 13% unknown or unreported, 0% other</li> <li>• Six percent (6%) of new clients were self-referred, 12% by a case manager and 31% by a health center and 51% other</li> <li>• Exposed through MSM (17%), IDU (30%) and heterosexual contact (35%)</li> </ul>

- Comparing service utilization by change in ability to maintain medical care for the *New Client Cohort*, a statistically higher percentage of clients in the improved group were receiving transportation services (42%) than in the declined (29%) or remained stable categories (17%).\*

FIGURE 24. SERVICE UTILIZATION BY CHANGE IN ABILITY TO MAINTAIN MEDICAL CARE

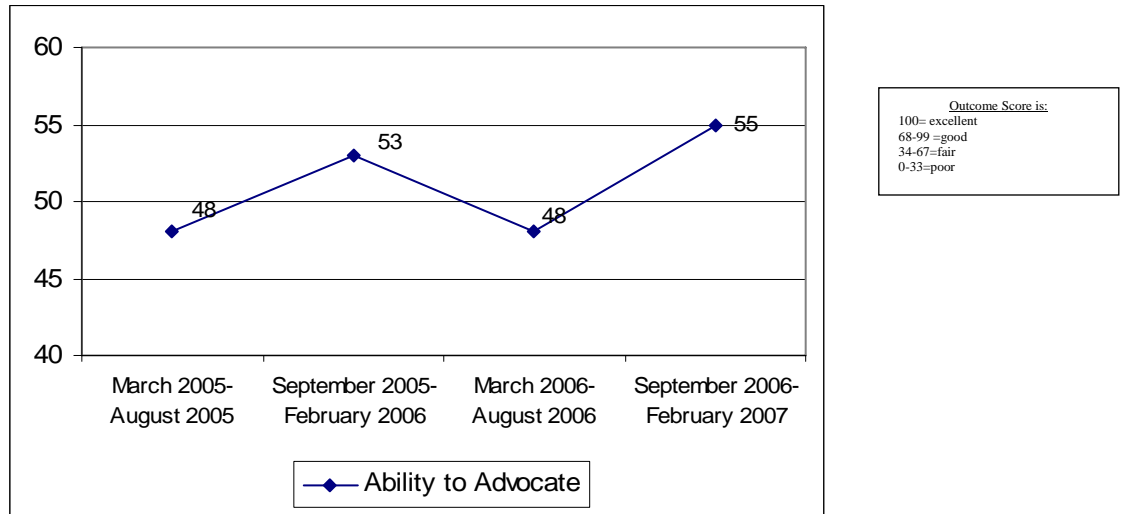
<b>Service Utilization</b>		
<b>Improved (n=12)</b>	<b>Remained Stable (n=48)</b>	<b>Declined (n=17)</b>
<ul style="list-style-type: none"> <li>Client Advocacy (58%)</li> <li>Case Management (50%)</li> <li>Transportation (42%)</li> <li>Food Services/Meals (33%)</li> <li>Housing (33%)</li> <li>Substance Abuse (33%)</li> <li>Primary Medical Care (25%)</li> <li>MAI (25%)</li> <li>Peer Support (25%)</li> <li>Mental Health (17%)</li> <li>Dental (0%)</li> <li>Drug Reimbursement (0%)</li> </ul>	<ul style="list-style-type: none"> <li>Case Management (60%)</li> <li>Client Advocacy (31%)</li> <li>Primary Medical Care (25%)</li> <li>Food Services/Meals (23%)</li> <li>MAI (23%)</li> <li>Transportation (17%)</li> <li>Housing (15%)</li> <li>Mental Health (10%)</li> <li>Peer Support (6%)</li> <li>Substance Abuse (6%)</li> <li>Dental (0%)</li> <li>Drug Reimbursement (0%)</li> </ul>	<ul style="list-style-type: none"> <li>Case Management (41%)</li> <li>Client Advocacy (41%)</li> <li>Dental (41%)</li> <li>Housing (35%)</li> <li>MAI (29%)</li> <li>Transportation (29%)</li> <li>Food Services/Meals (24%)</li> <li>Primary Medical Care (24%)</li> <li>Mental Health (6%)</li> <li>Substance Abuse (6%)</li> <li>Peer Support (0%)</li> <li>Drug Reimbursement (0%)</li> </ul>

\* Statistically significant, p<.05 (95% level of certainty in the findings).

**Ability to Advocate**

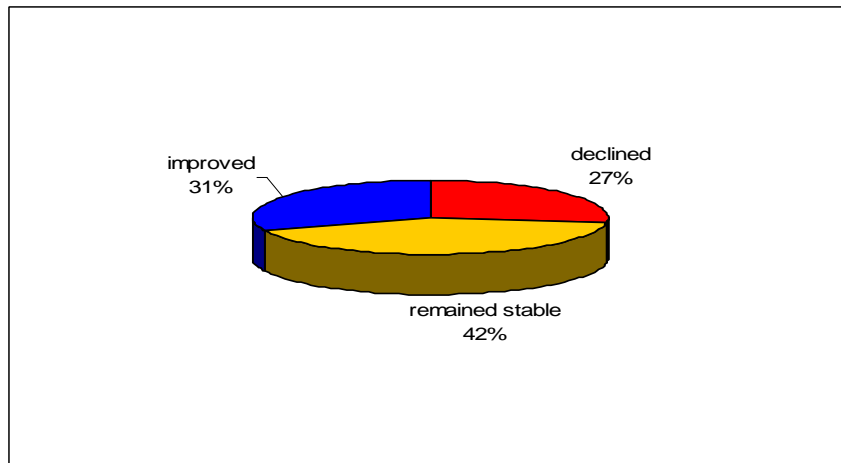
- Clients new to Part A services during the first reporting period (March 2005-August 2005) showed inconsistent changes in their ability to advocate over the four reporting periods. However, changes between reporting periods were not statistically significant.

FIGURE 25. CHANGES IN OUTCOME SCORES- ABILITY TO ADVOCATE FOR THE NEW CLIENT COHORT (March 2005-August 2005 vs. September 2005-February 2006 vs. March 2006-August 2006 vs. September 2006-February 2007) (n=77)



- Twenty-seven percent (27%) of clients new to Part A services during the first reporting period of FY05 (March 2005-August 2005) showed a decline in their ability to advocate during the last reporting period of FY06 (September 2006-February 2007). Notably, ability to advocate had the highest percentage of decline among all of the individual outcomes studied (CD-4 Counts, Viral Loads, Ability to Advocate and Level of Crisis Intervention).

FIGURE 26. LEVEL OF CHANGE- ABILITY TO ADVOCATE FOR THE NEW CLIENT COHORT FIRST REPORTING PERIOD OF FY05 vs. LAST REPORTING PERIOD OF FY06 (March 2005-August 2005 vs. September 2006-February 2007) (n=77)



- Comparing the demographic profiles by change in ability to advocate (improved, remained stable, declined) for the *New Client Cohort*, there were no statistically significant differences based on age, gender, race, diagnosis, poverty level, housing status, referral source or exposure category.

FIGURE 27. DEMOGRAPHIC PROFILE BY CHANGE IN ABILITY TO ADVOCATE

<b>Demographic Profile</b>		
<b>Improved (n=24)</b>	<b>Remained Stable (n=32)</b>	<b>Declined (n=21)</b>
<ul style="list-style-type: none"> <li>• Average age of 42</li> <li>• 75% male, 21% female, 4% transgender</li> <li>• 33% Hispanic</li> <li>• 39% White, 22% Black, 39% unknown or unreported, 0% other</li> <li>• 42% HIV positive/not AIDS, 46% AIDS/CDC Defined, 12% HIV/AIDS Status Unknown</li> <li>• 71% with income levels equal to or below federal poverty level</li> <li>• 54% permanently housed, 38% not permanently housed, 4% unknown or unreported, 4% other</li> <li>• Twelve percent (12%) of new clients were self-referred, 25% by a case manager and 25% by a health center and 38% other</li> <li>• Exposed through MSM (33%), IDU (20%) and heterosexual contact (37%)</li> </ul>	<ul style="list-style-type: none"> <li>• Average age of 43</li> <li>• 84% male, 16% female, 0% transgender</li> <li>• 25% Hispanic</li> <li>• 50% White, 28% Black, 22% unknown or unreported, 0% other</li> <li>• 48% HIV positive/not AIDS, 47% AIDS/CDC Defined, 5% HIV/AIDS Status Unknown</li> <li>• 66% with income levels equal to or below federal poverty level</li> <li>• 69% permanently housed, 16% not permanently housed, 6% unknown or unreported, 9% other</li> <li>• Fifteen percent (15%) of new clients were self-referred, 15% by a case manager and 25% by a health center and 45% other</li> <li>• Exposed through MSM (35%), IDU (19%) and heterosexual contact (32%)</li> </ul>	<ul style="list-style-type: none"> <li>• Average age of 42</li> <li>• 71% male, 29% female, 0% transgender</li> <li>• 29% Hispanic</li> <li>• 26% White, 48% Black, 26% unknown or unreported, 0% other</li> <li>• 33% HIV positive/not AIDS, 57% AIDS/CDC Defined, 10% HIV/AIDS Status Unknown</li> <li>• 76% with income levels equal to or below federal poverty level</li> <li>• 52% permanently housed, 43% not permanently housed, 0% unknown or unreported, 5% other</li> <li>• Nine percent (9%) of new clients were self-referred, 29% by a case manager and 29% by a health center and 33% other</li> <li>• Exposed through MSM (27%), IDU (15%) and heterosexual contact (46%)</li> </ul>

- Comparing service utilization by change in ability to advocate for the *New Client Cohort*, there were no statistically significant differences based on services utilized.

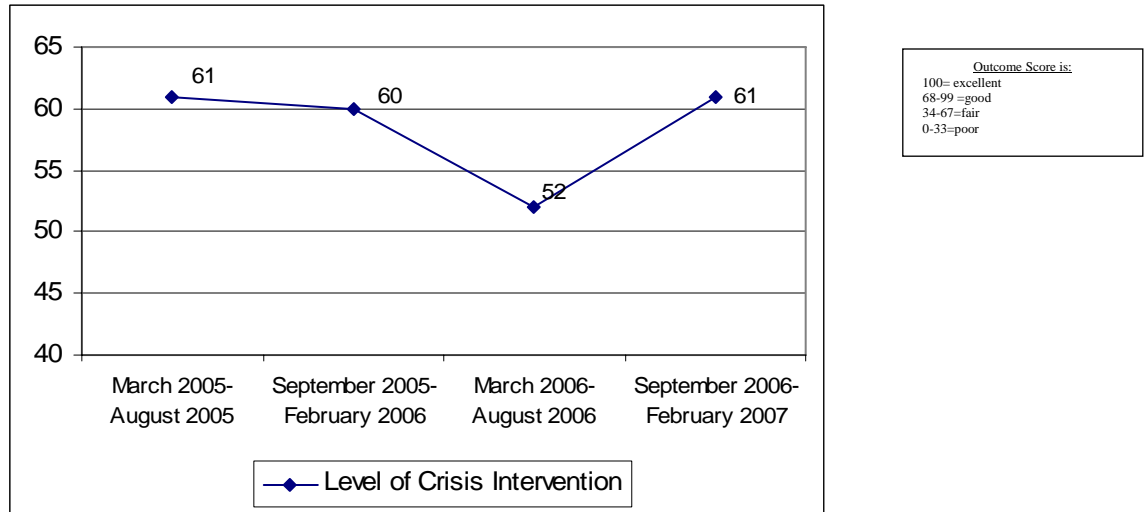
FIGURE 28. SERVICE UTILIZATION BY CHANGE IN ABILITY TO ADVOCATE

<b>Service Utilization</b>		
<b>Improved (n=24)</b>	<b>Remained Stable (n=32)</b>	<b>Declined (n=21)</b>
Case Management (71%) Client Advocacy (63%) Food Services/Meals (50%) Housing (50%) MAI (42%) Transportation (29%) Mental Health (25%) Peer Support (25%) Dental (25%) Substance Abuse (17%) Primary Medical Care (13%) Drug Reimbursement (8%)	Case Management (59%) Food Services/Meals (38%) Client Advocacy (28%) MAI (28%) Housing (28%) Transportation (28%) Dental (16%) Mental Health (13%) Substance Abuse (6%) Primary Medical Care (3%) Peer Support (3%) Drug Reimbursement (0%)	Housing (67%) Client Advocacy (62%) Case Management (52%) Food Services/Meals (43%) Transportation (43%) MAI (38%) Dental (33%) Peer Support (14%) Mental Health (10%) Substance Abuse (10%) Primary Medical Care (5%) Drug Reimbursement (5%)

### Level of Crisis Intervention

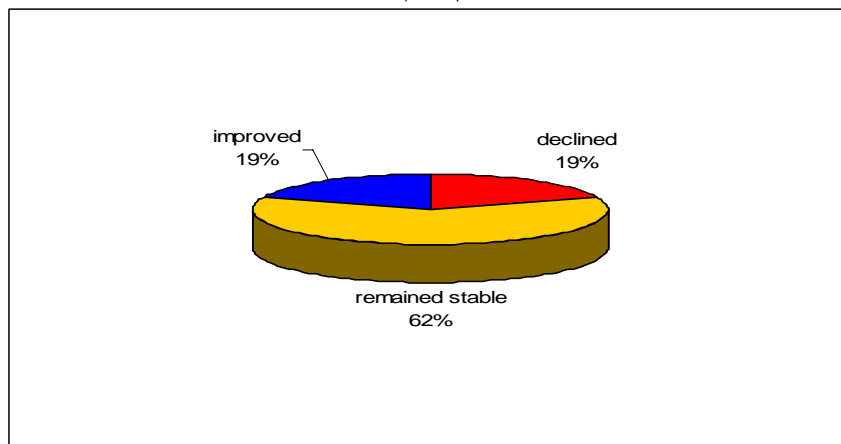
- Clients new to Part A services during the first reporting period (March 2005-August 2005) showed inconsistent changes in their ability to advocate over the four reporting periods. However, changes between reporting periods were not statistically significant.

FIGURE 29. CHANGES IN OUTCOME SCORES- LEVEL OF CRISIS INTERVENTION FOR THE NEW CLIENT COHORT (March 2005-August 2005 vs. September 2005-February 2006 vs. March 2006-August 2006 vs. September 2006-February 2007) (n=72)



- Interestingly, sixty-two percent (62%) of clients new to Part A services during the first reporting period of FY05 (March 2005-August 2005) showed similar outcome scores (remained stable) for level of crisis intervention during the last reporting period of FY06 (September 2006-February 2007).

FIGURE 30. LEVEL OF CHANGE- CRISIS INTERVENTION FOR THE NEW CLIENT COHORT FIRST REPORTING PERIOD OF FY05 VS. LAST REPORTING PERIOD OF FY06 (March 2005-August 2005 vs. September 2006-February 2007) (n=72)



- Comparing the demographic profiles by change in level of crisis intervention (improved, remained stable, declined) for the *New Client Cohort*, there were no statistically significant based on age, gender, race, diagnosis, poverty level, housing status, referral source or exposure category.

FIGURE 31. DEMOGRAPHIC PROFILE BY CHANGE IN LEVEL OF CRISIS INTERVENTION

<b>Demographic Profile</b>		
<b>Improved (n=14)</b>	<b>Remained Stable (n=44)</b>	<b>Declined (n=14)</b>
<ul style="list-style-type: none"> <li>• Average age of 44</li> <li>• 85% male, 15% female, 0% transgender</li> <li>• 15% Hispanic</li> <li>• 62% White, 23% Black, 15% unknown or unreported, 0% other</li> <li>• 54% HIV positive/not AIDS, 46% AIDS/CDC Defined</li> <li>• 57% with income levels equal to or below federal poverty level</li> <li>• 69% permanently housed, 31% not permanently housed, 0% unknown or unreported, 0% other</li> <li>• Seven percent (7%) of new clients were self-referred, 15% by a case manager and 15% by a health center and 61% other</li> <li>• Exposed through MSM (29%), IDU (35%) and heterosexual contact (29%)</li> </ul>	<ul style="list-style-type: none"> <li>• Average age of 43</li> <li>• 73% male, 27% female, 0% transgender</li> <li>• 21% Hispanic</li> <li>• 45% White, 32% Black, 23% unknown or unreported, 0% other</li> <li>• 43% HIV positive/not AIDS, 46% AIDS/CDC Defined, 11% HIV/AIDS Status Unknown</li> <li>• 71% with income levels equal to or below federal poverty level</li> <li>• 64% permanently housed, 30% not permanently housed, 2% unknown or unreported, 4% other</li> <li>• Thirteen percent (13%) of new clients were self-referred, 25% by a case manager and 39% by a health center and 23% other</li> <li>• Exposed through MSM (35%), IDU (12%) and heterosexual contact (35%)</li> </ul>	<ul style="list-style-type: none"> <li>• Average age of 39</li> <li>• 57% male, 36% female, 7% transgender</li> <li>• 36% Hispanic</li> <li>• 29% White, 29% Black, 35% unknown or unreported, 6% other</li> <li>• 21% HIV positive/not AIDS, 57% AIDS/CDC Defined, 21% HIV/AIDS Status Unknown</li> <li>• 86% with income levels equal to or below federal poverty level</li> <li>• 29% permanently housed, 57% not permanently housed, 7% unknown or unreported, 7% other</li> <li>• Fifty percent (50%) of new clients were self-referred, 0% by a case manager and 14% by a health center and 36% other</li> <li>• Exposed through MSM (9%), IDU (14%) and heterosexual contact (50%)</li> </ul>

- Comparing service utilization by change in level of crisis intervention for the *New Client Cohort*, a statistically higher percentage of clients in the improved group were receiving primary medical care services (57%) than in the declined (0%) or remained stable categories (9%).\*

FIGURE 32. SERVICE UTILIZATION BY CHANGE IN LEVEL OF CRISIS INTERVENTION

<b>Services Utilized</b>		
<b>Improved (n=14)</b>	<b>Remained Stable (n=44)</b>	<b>Declined (n=14)</b>
<ul style="list-style-type: none"> <li>Case Management (86%)</li> <li>Primary Medical Care (57%)</li> <li>Food Services/Meals (50%)</li> <li>MAI (36%)</li> <li>Client Advocacy (29%)</li> <li>Dental (29%)</li> <li>Transportation (29%)</li> <li>Mental Health (21%)</li> <li>Housing (21%)</li> <li>Peer Support (7%)</li> <li>Drug Reimbursement (7%)</li> <li>Substance Abuse (0%)</li> </ul>	<ul style="list-style-type: none"> <li>Case Management (66%)</li> <li>Client Advocacy (39%)</li> <li>Housing (34%)</li> <li>Transportation (32%)</li> <li>Food Services/Meals (30%)</li> <li>Dental (27%)</li> <li>MAI (25%)</li> <li>Mental Health (14%)</li> <li>Primary Medical Care (9%)</li> <li>Peer Support (9%)</li> <li>Substance Abuse (2%)</li> <li>Drug Reimbursement (2%)</li> </ul>	<ul style="list-style-type: none"> <li>Case Management (93%)</li> <li>Food Services/Meals (64%)</li> <li>Client Advocacy (50%)</li> <li>Housing (43%)</li> <li>Transportation (43%)</li> <li>MAI (29%)</li> <li>Peer Support (21%)</li> <li>Substance Abuse (14%)</li> <li>Mental Health (7%)</li> <li>Dental (7%)</li> <li>Drug Reimbursement (7%)</li> <li>Primary Medical Care (0%)</li> </ul>

\* Statistically significant, p<.05 (95% level of certainty in the findings).

## Conclusion

Research conducted by CPM to assess the impact of Part A Services on the *New Client Cohort* (clients new to Part A services tracked from the first reporting period of FY 2005 through the last reporting of FY2006) yielded several important findings.

To begin with, Part A Services had a positive impact on both the health and quality of life outcomes for the *New Client Cohort*. In fact, the *New Client Cohort* experienced a 10-point improvement in their overall quality of life score by the end of the 2-year service period. This statistically significant finding supports the importance of Part A Services in a client's ability to advocate, maintain housing, be fully networked, improve their coping skills, reduce stress levels, minimize depression, reduce the number of crisis interventions, and cope with side effects from their medications. Health scores also improved, increasing by 3-points from the first reporting of FY05 to the last reporting period of FY06.

Further, Part A services were effective in closing the gap between the *New Client Cohort* and *3-Year Cohort* (on-going clients who consistently received an outcomes measurement report [at least once in each fiscal year] over a three-year period (March 2004-February 2007)). By the end of FY06 (after two years of Part A Service utilization) the *New Client Cohort* was within 3-points of the 3 Year-Cohort for both overall Health & Quality of Life.

Interestingly, upon review of the five individual outcomes (CD-4 counts, HIV viral loads, ability to maintain medical care, ability to advocate and level of crisis intervention) Part A Services had a statistically significant impact on the two medical indicators (CD-4 counts and viral loads). Ability to maintain medical care and level of crisis intervention experienced minimal change while ability to advocate showed improvement that was notable but not statistically significant.

The demographic analysis by level of change (improved, remained stable, declined) produced no statistically significant differences with regards to overall health, overall quality life, CD-4 counts, HIV viral loads, ability to maintain medical care, ability to advocate and level of crisis intervention. However, there were several statistically significant differences with regards to service utilization and level of change (improved, remained stable, and declined). Specifically, it appears that a high percentage of clients with declining CD-4 counts and viral loads utilized MAI services. Notably, a high percentage of clients with improved levels of crisis intervention received primary medical care (57%), while a high percentage of clients showing an improved ability to maintain medical care received transportation (42%).

All in all, it appears that Part A Services were instrumental in improving the health and quality of life of PLWH in the *New Client Cohort* during the two-year study period (FY05 and FY06). It is recommended that the next Annual Outcomes Report for FY2007 include an assessment of these one-hundred and seventy-seven (177 clients) to determine whether or not 1) their overall health and quality of life has continued to improve, 2) they are still receiving Part A Services in the Boston EMA and 3) their service utilization profile has changed.

## Data Notes

The following section details the outcomes measures utilized by the Boston EMA. The section also shows the process for calculating individual outcome scores as well as overall health and quality of life.

### Outcome Measures

There are seven health outcome measures for PLWH in the Boston EMA. The optimal outcome for each health indicator is shown in table below.

<b>Health Outcome Measures</b>	<b>Optimal Outcome</b>
1. CD-4 Counts	Have a CD-4 count greater than 500.
2. HIV Progression-Viral Load	Have HIV Viral Loads of less than 50 or at an undetectable level.
3. Knowledge about HIV/AIDS & Other Support Services	Be fully informed about HIV/AIDS and other support services.
4. Ability to Access Medical Care & Other Support Services	Have most of their barriers to good health care addressed and be able to use both health care and other support services appropriately; thereby reducing the unnecessary use of emergency services.
5. Ability to Maintain Medical Care	Have not missed more than three medical appointments in past 6 months.
6. Ability to Adhere to Medical Therapies	Routinely adhere to their medical therapies.
7. Medical Treatments-Consistent with US Public Health Service Guidelines	Be receiving medical treatment that is consistent with US Public Health Service Guidelines.

There are eight quality of life outcome measures for PLWH in the Boston EMA. The optimal outcome for each quality of life indicator is shown in the table below.

<b>Quality of Life Outcome Measures</b>	<b>Optimal Outcome</b>
8. Ability to Advocate	Be able to access and use appropriately all needed services; have been clean and sober for more than six months; and would routinely use transmission prevention protocols.
9. Ability to Maintain Housing	Have been in stable housing for more than six months and their housing status would not be in jeopardy.
10. Network of Support	Have a full array of networked support available when they need it.
11. Coping Skills and Level of Stress	Have their personal stress under control and have assurance that their care-taking and family situation is also not overly stressed.
12. Level of Depression	Not depressed.
13. Level of Crisis Intervention Services	No crisis interventions needed in the last six months.
14. Level of Side Effects	Have no medication side effects which adversely impact life activities.
15. Level of Criminal Behavior	Have not been arrested or incarcerated in the last six months

**Outcome Calculations**

Analysts employed a four-step process in calculating outcome scores<sup>3</sup>:

Step 1: Each of the four measurement levels was assigned a descending numeric score (9=crisis, 0=no need). (See example below.)

Outcomes: To improve and/or stabilize...	Client's Level of Need			
	Crisis Score=9	High Need Score=6	Moderate/Low Need Score=3	No Need Score=0
1. CD-4 counts	<input type="checkbox"/> Less than 50	<input type="checkbox"/> 50 - 199	<input type="checkbox"/> 200 – 500	<input type="checkbox"/> >500

Step 2: Numeric scores ranging from 0-9 were computed.

Step 3: Mean scores were generated.

Step 4: Mean scores were adjusted to a 100-point ascending scale (0=crisis, 100=no need/achieved outcome) by subtracting the mean from 9.00 and then multiplying the result by 11.1.

**Calculating Health & Quality of Life Status**

Analysts measured Health Status by averaging Outcomes 1 to 6, then executing Step 4 above.<sup>4</sup>

- Outcome 1: CD-4 Counts
- Outcome 2: HIV Progression-Viral Load
- Outcome 3: Knowledge about HIV/AIDS & Other Support Services
- Outcome 4: Ability to Access Medical Care & Other Support Services
- Outcome 5: Ability to Maintain Medical Care
- Outcome 6: Ability to Adhere to Medical Therapies

Analysts measured Quality of Life Status by averaging Outcomes 7 & 9-15, then proceeding with step 4 above.

- Outcome 7: Ability to Advocate
- Outcome 9: Ability to Maintain Housing
- Outcome 10: Network of Support
- Outcome 11: Coping Skills and Level of Stress
- Outcome 12: Level of Depression
- Outcome 13: Level of Crisis Intervention Services
- Outcome 14: Level of Side Effects
- Outcome 15: Level of Criminal Behavior

<sup>3</sup> If a client receives an outcomes assessment from more than one provider then the scores are averaged.

<sup>4</sup> Outcome 8 (Medical Treatments – assuring that they are consistent with US Public Health Service Guidelines) is not included in the analysis since it is measured on a 2-point rather than 4 point scale.

## Interpreting Outcome Scores

Outcomes are ranked into four measurement levels: excellent (score: 100), good (score: 68-99), fair (score: 34-67), and poor (score: 0-33).

Reported Outcome Score	Health/Quality of Life
100	<b>EXCELLENT</b> ...Achieved outcome goal. May need continued services to maintain goal achievement.
68-99	<b>GOOD</b> ...Making significant progress towards outcome goal. Needs some additional services to reach the goal.
34-67	<b>FAIR</b> ...Making some progress toward reaching the outcome goal. There is a significant need for additional services.
0-33	<b>POOR</b> ...In crisis and in need of substantial additional services

## Statistical Notes

Using the Statistical Program for the Social Sciences (SPSS) several statistical procedures were utilized in the analysis.

Analysts employed a Paired-Samples T-Test to compare mean scores between the first reporting period of FY05 to the last reporting period of FY06. The Paired-Samples T Test procedure compares the means of two variables for a single group. It computes the differences between values of the two variables for each case and tests whether the average differs from 0.

The One-Way Analysis of Variance (ANOVA) procedure or a t-test procedure was used to determine whether or not the mean change in outcome scores differed between demographic groups. If there were more than two comparison groups, an ANOVA was employed. If a difference was found using the ANOVA, a second analysis (a version of a t-test) was conducted to determine which groups differed. Bonferroni's adjustment was used in these analyses to adjust for the differences in sample size among the groups.

Statistical significance indicates that there is a high probability that a result is not likely due to chance alone. An observed difference between two groups is usually considered statistically significant when a statistical test determines that chance accounts for this difference 5% of the time or less. In other words, there is a 95% certainty that the observed results cannot be explained solely by chance. In this report researchers marked statistically significant relationships with a single asterisk (\*) for  $p < .05$ , indicating that there is only a 5% chance that the findings fall outside the data presented.