

# Outcome Evaluation of MAI-Funded Programs in the New York EMA

## Authors

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This poster reports on preliminary findings from an outcome evaluation of Title I Minority AIDS Initiative programs in the New York EMA. These 21 programs provide services to improve access to care and maintenance in care for people of color living with HIV. Data reported on were collected between October 1999 and June 2002.

## BACKGROUND

### Program Types in the Evaluation

Access to Care Programs: Eleven Access to Care programs help HIV-positive people of color who are not in care to get medical care and other services. This is accomplished through outreach, referrals, and support services (such as case management, escort services, etc.)

Maintenance in Care Programs: Ten Maintenance in Care programs help HIV-positive people of color who have difficulty staying in care to remain in care. This is accomplished through intensive follow-up and supportive services

## METHODS

- Clients are assessed upon entry into the program and reassessed quarterly (3, 6, 9, and 12 months).
- Client service utilization is documented for each telephone or in-person contact.
- Programs are visited annually to update program description.

### Client-Level Data: Main Constructs

The main client-level data elements collected during baseline and follow-up interviews are the following:

- Biological markers (including HIV status, viral load, t-cell count)
- Service utilization (including types of services used and number of services used)
- Demographic characteristics
- Adherence to treatment
- Barriers to care
- Social support
- Substance use and treatment
- Functional health status

### Functional Health Status

- Used in this evaluation as the primary measure of final “outcomes.”
- The most widely used health status measurement tool in HIV research. Validated in numerous studies.
- Compared to biological markers (such as viral load), functional health status is more closely linked to the objectives of the program being evaluated.
- Does not require access to medical records
- Relies on clients’ self-report about their feelings and their ability to accomplish daily life tasks.

### Functional Health Status Sub-Scales

The Functional Health Status measures used are from the ACTG SF-21 (a modified version of the Medical Outcomes Study instrument). The measures are divided into 8 sub-scales, shown below. Many of the analyses in this poster focus on the General Health Perception sub-scale.

- General Health Perception
- Physical Functioning
- Role Functioning
- Social Functioning
- Cognitive Functioning
- Pain
- Mental Health
- Vitality/Energy

### Overall Evaluation Objectives

1. Describe the change in functional health status for different populations and groups of clients.
2. Identify services or constellations of services and intensity of services associated with change in functional health status.
3. Assess whether programs meet intermediate objectives (decreased drug use, increased service use, improved housing stability)
4. Identify barriers to access to and maintenance in care.

## CURRENT FINDINGS

### BASELINE CHARACTERISTICS OF CLIENTS

CHARACTERISTICS	ALL ENROLLEES (N=1406)
PROGRAM TYPE	%
Access to Care	64
Maintenance in Care	36
GENDER	
Female	40
Male	58
Transgender	1
RACE/ETHNICITY	
Black	61
Hispanic	34
Other	5
DRUG USE	
Current (within last 3 months)	37
HOUSING STATUS	
Unstable	59
HEALTH CARE	
Out of care	29
HIV STATUS	
HIV-Positive	69
EDUCATION	
Less than HS graduation	51
HS graduate	28
More than HS graduation	21
PLACE OF BIRTH	
U.S.	75
U.S./Puerto Rico	11
Not in U.S.	14

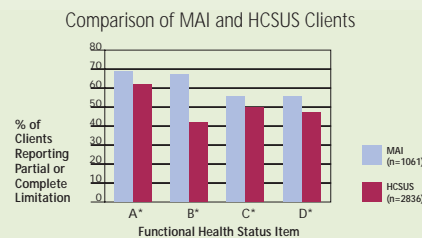
### BASELINE CHARACTERISTICS OF HIV-POSITIVE CLIENTS

CHARACTERISTICS	HIV+ ENROLLEES (N=1061)
Taking HIV Meds	48 %
Know Viral Load	42 %
Know CD4 Count	53 %
Adherence Rate (n = 389)	86 %

### Comparison of MAI HIV-positive clients in the evaluation to individuals in HCSUS

HCSUS is the “HIV Cost and Services Utilization Study.” The HCSUS cohort is a nationally representative sample of HIV-infected adults 18 years old and older, receiving care in the U.S. mainland.

Comparison of HIV-positive MAI clients in the evaluation to a sample of the HCSUS cohort indicates that the MAI clients in New York tend to be in poorer health at baseline than individuals in HCSUS. This indicates that NYC MAI programs are successful in targeting those most in need. (HCSUS comparison data are taken from Crystal, S., et al., “Physical and role functioning among persons with HIV,” Medical Care. 2000. 38(12):1210-1223.)



\* p < .001 for all comparisons using a Two-Sample Test of Proportion

Item A	“Are you limited in the kinds or amounts of vigorous activity you can do . . . ?”
Item B	“Are you limited in walking uphill or climbing stairs . . . ?”
Item C	“Has your health kept you from working a job, doing work around the house. . . ?”
Item D	“Have you been unable to do certain kinds or amounts of work, housework, or schoolwork because of your health?”

### Change in Functional Health Status

On all sub-scales, clients showed statistically significant improvement in functional health status between their baseline assessment and their 1st follow-up assessment.

Change in Functional Health Status: Baseline to 1st Follow-Up Assessment (mean time interval = 135 days)

DOMAIN	MEAN CHANGE <sup>1</sup> (n = 802)	MEAN PERCENT CHANGE <sup>2</sup> (n = 678)
General Health Perception	4.3 ****	27.9 ****
Physical Functioning	2.9 **	16.0 ****
Role Functioning	3.9 ***	12.6 ****
Social Functioning	3.2 **	16.7 ****
Cognitive Functioning	3.4 ***	18.4 ****
Pain	2.5 *	13.8 ****
Mental Health	2.3 *	21.0 ****
Vitality/Energy	2.4 **	18.9 ****

<sup>1</sup> Scores in each sub-scale range from 0 to 100.  
<sup>2</sup> Mean Percent Change emphasizes changes for those with lower scores at baseline and de-emphasizes changes for those with higher scores at baseline. Thus, mean percent change can be understood as highlighting change among the neediest clients. One drawback of using mean percent change is that clients who scored 0 at baseline must be excluded from the analysis (which explains the difference in n’s for mean change and mean percent change).

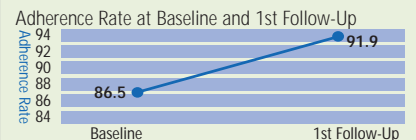
### Intermediate Outcomes

#### Improvement

Many MAI clients showed improvement on intermediate outcome measures between baseline and follow-up assessment.

RATES OF IMPROVEMENT INTERMEDIATE OUTCOME MEASURE	RATE OF IMPROVEMENT
<b>STABLE HOUSING</b> Percent of Clients Unstably Housed at Baseline who became Stably Housed at Follow-Up (n = 430)	23.3%
<b>DRUG USE</b> Percent of Clients Using Drugs at Baseline who were Not Using Drugs at Follow-Up (n = 284)	40.5%
<b>REGULAR MEDICAL CARE</b> Percent of Clients Not Receiving Regular Medical Care at Baseline who were Receiving Regular Medical Care at Follow-Up (n = 201)	53.7%
<b>RECEIVING HIV MEDICATIONS</b> Percent of Clients Not Receiving HIV Medications at Baseline who were Receiving HIV Medications at Follow-Up (n = 255)	34.9%

There was also a statistically significant improvement in Adherence Rate between baseline and follow-up, from 86.5% to 91.9% (p < .05, n = 173).



#### Maintenance

Most MAI clients who were already in the desired intermediate outcome state at baseline were still in that state at follow-up. However, some clients moved in the opposite direction, for example, going from being stably housed to being unstably housed.

RATES OF MAINTENANCE INTERMEDIATE OUTCOME MEASURE	RATE OF MAINTENANCE
<b>STABLE HOUSING</b> Percent of Clients Stably Housed at Baseline who were still Stably Housed at Follow-Up (n = 319)	81.2%
<b>DRUG USE</b> Percent of Clients Not Using Drugs at Baseline who were still Not Using Drugs at Follow-Up (n = 509)	88.2%
<b>REGULAR MEDICAL CARE</b> Percent of Clients Receiving Regular Medical Care at Baseline who were still Receiving Regular Medical Care at Follow-Up (n = 593)	93.4%
<b>RECEIVING HIV MEDICATIONS</b> Percent of Clients Receiving HIV Medications at Baseline who were still Receiving HIV Medications at Follow-Up (n = 281)	85.8%

### Attainment of Intermediate Outcomes and Improved Functional Health Status

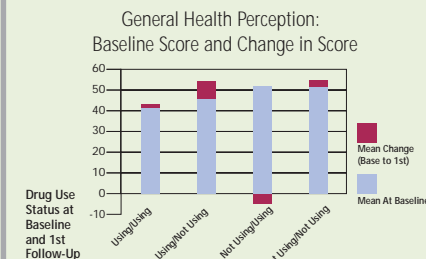
Analysis of the General Health Perception sub-scale shows that attainment of intermediate outcomes is related to improved functional health status in the areas of drug use, receipt of HIV medications, and receipt of medical care.

For this analysis, clients were divided into four categories reflecting their status at baseline and at 1st follow-up. For example, with drug use, clients who were not using drugs at baseline and using drugs at 1st follow-up were categorized as “Not Using/Using”. Then an ANOVA was performed with change in the General Health Perception score as the dependent variable. Follow-up logistic regression analyses performed after dichotomizing the dependent variable confirmed the ANOVA results.

### Drug Use

As the chart below shows, clients who stopped using drugs between baseline and 1st follow-up (Using/Not Using) showed the most marked improvement, becoming statistically indistinguishable from clients who were not using at either time (Not Using/Not Using). Clients who started using drugs between baseline and 1st follow-up (Not Using/Using) showed a decline so that they became statistically indistinguishable from clients who were using drugs all along (Using/Using).

Drug Use Status and Change in General Health Perception Score (Baseline to 1st Follow-Up)

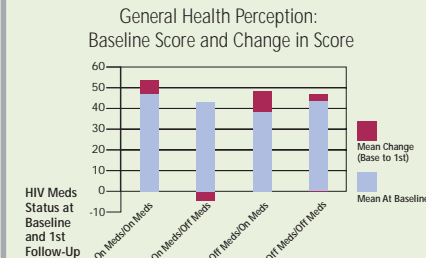


ANOVA model p < .05. Significant differences in mean values at baseline between Using/Using and Not Using/Using, and between Using/Using and Not Using/Not Using. Significant differences in mean values at 1st follow-up between Using/Using and Using/Not Using, between Using/Using and Not Using/Not Using, and between Not Using/Using and Not Using/Not Using.

### HIV Meds

HIV meds status reveals a similar pattern to that of drug use status. Clients who started taking HIV meds between baseline and 1st follow-up (Off Meds/On Meds) showed the most marked improvement, becoming statistically indistinguishable from clients who were on HIV meds all along (On Meds/On Meds). Clients never on meds (Off Meds/Off Meds) showed the smallest improvement, and clients who stopped taking HIV meds (On Meds/Off Meds) showed a decline.

HIV Meds Status and Change in General Health Perception Score (Baseline to 1st Follow-Up)



ANOVA model p < .05. Significant differences in mean values at baseline between On Meds/On Meds and Off Meds/On Meds, and between On Meds/On Meds and Off Meds/Off Meds. Significant differences in mean values at 1st follow-up between On Meds/On Meds and On Meds/Off Meds and between On Meds/On Meds and Off Meds/Off Meds.

### Receipt of Medical Care

Changes in clients’ care status show similar patterns to those of drug use and HIV meds status, with clients entering care showing the most marked improvement. Clients leaving care and clients not in care at all showed the least improvement. While there were significant differences found when comparing sub-group means, the overall ANOVA model was not significant (p = .0725).

### Summary and Conclusions

- “Access to Care” and “Maintenance in Care” MAI programs in the New York EMA are successful in reaching their target population – primarily Black and Latino individuals living with HIV.
- MAI clients in NYC appear to be in poorer health than the average HIV-positive person in care in the U.S.
- Clients in MAI programs show significant improvement on all functional health status sub-scales.
- Clients in MAI programs make movement towards desired intermediate outcomes between baseline and follow-up.
- Quitting drug use, starting HIV meds, and entering medical care appear to be important factors in improving functional health status.

### Study Limitations

- It is not possible to isolate causation without an experimental design.
- Because MAI programs are often embedded in a network of services offered by an agency, it is difficult to attribute outcomes solely to MAI-funded activities.
- Measures used are based on client self-report and may be biased.
- Coupling contract monitoring with program evaluation data collection may have distorted program evaluation data.

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