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# MassHealth Managed Care HEDIS<sup>®</sup> 2005 FINAL REPORT

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# Table of Contents

<b>Executive Summary .....</b>	<b>2</b>
<b>Introduction .....</b>	<b>5</b>
Organization of the MassHealth Managed Care HEDIS 2005 Report .....	7
Health Plan Profiles .....	9
Data Collection and Analysis Methods .....	12
<b>Staying Healthy</b>	
Breast Cancer Screening.....	16
Cervical Cancer Screening .....	20
Prenatal and Postpartum Care .....	22
Frequency of Ongoing Prenatal Care .....	26
Adults' Access to Preventive/Ambulatory Health Services .....	28
<b>Getting Better</b>	
Appropriate Treatment for Children with Upper Respiratory Infection .....	34
<b>Living With Illness</b>	
Controlling High Blood Pressure .....	38
Initiation and Engagement of Alcohol and Other Drug Dependence Treatment.....	42
Follow-up After Hospitalization for Mental Illness .....	46
Antidepressant Medication Management.....	50
<b>Appendix A: Initiation and Engagement of Alcohol and Other Drug Dependence Treatment– Age-Stratified Results.....</b>	<b>55</b>
<b>Appendix B: Select PCC Plan Data by Eligibility Type .....</b>	<b>59</b>
<b>Appendix C: PCC Plan Data with and without the Essential Population .....</b>	<b>63</b>
<b>References .....</b>	<b>67</b>

# Executive Summary

## Background

The MassHealth Managed Care HEDIS® 2005 Report presents information on the quality of care provided by the five health plans serving the MassHealth managed care population (Boston Medical Center HealthNet Plan, Fallon Community Health Plan, Neighborhood Health Plan, Network Health and the Primary Care Clinician Plan). This assessment was conducted by the Center for Health Policy and Research (CHPR), the MassHealth Office of Acute and Ambulatory Care (OAAC) and the MassHealth Behavioral Health Program (MHBH) by using a subset of HEDIS (Health Plan Employer Data and Information Set) measures. HEDIS has been developed by the National Committee for Quality Assurance (NCQA) and is the most widely used set of standardized performance measures to measure and report on the quality of care delivered by health care organizations. Through this collaborative project, CHPR, OAAC, and MHBH have been able to evaluate a broad range of clinical and service areas that are of importance to MassHealth members, policy makers and program staff.

## Measures Selected for HEDIS 2005

For the HEDIS 2005 project, the MassHealth measurement set focuses on staying healthy (e.g., breast and cervical cancer screening, prenatal and postpartum care, and adult access to ambulatory and preventive health services), getting better (e.g., treatment of upper respiratory infection in children), and living with illness (e.g., controlling high blood pressure, treatment for alcohol and drug dependency, follow-up after hospitalization for mental illness, and antidepressant medication management).

## Summary of Overall Results

Results from the MassHealth Managed Care HEDIS 2005 project demonstrate that MassHealth plans performed well overall when compared to other Medicaid plans around the country. For the purpose of this report, we conducted tests of statistical significance and compared the performance of the individual MassHealth plans with that of the top 25% of all Medicaid plans in the country (represented by the national Medicaid 75<sup>th</sup> percentile).

For some measures such as Breast and Cervical Cancer Screening, Appropriate Treatment for Children with Upper Respiratory Infection, and Adults' Access to Ambulatory and Preventive Health Services, MassHealth plans generally reported rates that are significantly better than or no different from the national Medicaid 75th percentile. Results were mixed for other measures such as Prenatal and Postpartum Care and Antidepressant Medication Management. For these measures, fewer plans reported rates that were significantly better than or no different from the Medicaid 75th percentile. One measure, Follow-up after Hospitalization for Mental Illness, yielded results with significant variation across the plans. It is not known whether the cause of this variation is a true difference in quality or some other factor such as differences in the demographic characteristics and health status of the populations served by the plans. Performance on new measures was encouraging, particularly on the Appropriate Treatment for Children with Upper Respiratory Infection, for which four plans reported rates that were significantly better than the national Medicaid 75th percentile.

## MassHealth HEDIS 2005 Highlights

- ◆ MassHealth plans performed well overall when compared to Medicaid plans throughout the U.S.
- ◆ Some plans performed significantly better than or no different from the national Medicaid 75th percentile on measures such as breast and cervical cancer screening, treatment for children with upper respiratory infection, and adults' access to ambulatory and preventive health services. The national Medicaid 75th percentile represents a level of performance that was exceeded by only the top 25% of all Medicaid plans in the U.S.
- ◆ Results for some measures, such as prenatal and postpartum care and antidepressant management, were mixed.
- ◆ There was wide variation among some plans for certain measures, including the Follow-up after Hospitalization for Mental Illness measure. The cause of this variation is not known but one factor may be differences in demographic and health characteristics in the populations served by the plans.

## Executive Summary (*continued*)

### **Breast and Cervical Cancer Screening**

- For breast cancer screening, all five MassHealth plans performed significantly better than the national Medicaid 75th percentile.
- One plan reported a HEDIS 2005 breast cancer screening rate that was significantly better than the plan's own HEDIS 2003 rate.
- For cervical cancer screening, all five MassHealth plans performed significantly better than the national Medicaid 75th percentile.
- All five plans reported HEDIS 2005 cervical cancer screening rates that were not significantly different from their 2003 rates.

### **Prenatal and Postpartum Care/Frequency of Ongoing Prenatal Care**

- Three plans performed significantly better than the national Medicaid 75th percentile on the timeliness of prenatal care measure.
- One plan's rate for the timeliness of prenatal care measure was significantly better than its HEDIS 2003 rate.
- Performance on the postpartum visit rate was lower than that on the prenatal care measure. No MassHealth plan performed better than the national Medicaid 75th percentile, although two plans had rates that were not significantly different from the benchmark.
- All five plans had HEDIS 2005 rates that were not significantly different from their HEDIS 2003 rates.
- Three plans performed significantly better than or no different from the national Medicaid 75th percentile on the frequency of ongoing prenatal care measure.

### **Adults' Access to Ambulatory and Preventive Health Services**

- Four plans had rates that were significantly better than or no different from the national Medicaid 75th percentile for both the 20-44 and 45-64 age groups.
- Comparisons were not made to previous plan performance because this measure was last reported by MassHealth plans in 1997.

### **Appropriate Treatment for Children with Upper Respiratory Infection**

- This was a new measure for the MassHealth plans.
- Four of the MassHealth plans performed significantly better than the national Medicaid 75th percentile.

### **Controlling High Blood Pressure**

- This was a new measure for the MassHealth plans.
- Four plans reported rates that were not significantly different from the 75<sup>th</sup> percentile.

### **Initiation and Engagement of Alcohol and Other Drug Dependence Treatment**

- This was a new measure for the MassHealth plans.
- For the Initiation rate, three plans reported rates that were significantly better than or no different from the national Medicaid 75th percentile.
- For the Engagement rate, all five plans reported rates that were significantly better than or no different from the national Medicaid 75th percentile.

### **Follow-up after Hospitalization for Mental Illness**

- For both the 7-day and 30-day follow-up rates, four plans reported rates that were significantly better than or no different from the national Medicaid 75th percentile.
- Three plans reported rates that were significantly better than their 2003 rates for both the 7-day and 30-day follow-up rates.

### **Antidepressant Medication Management**

- For the Optimal Practitioner Contacts rate, three plans had rates that were significantly better than or no different from the national Medicaid 75th percentile.
- For the Effective Acute Phase measure, two plans reported rates that were not significantly different from the national Medicaid 75th percentile.
- For the Effective Continuation Phase rate, one plan reported a rate that was not significantly different from the national Medicaid 75th percentile.
- Performance since 2003 was mixed. For all three measures, MassHealth plans generally reported rates that were significantly lower than or no different from their HEDIS 2003 rates, indicating room for improvement.

# Summary of MassHealth Managed Care HEDIS 2005 Results

HEDIS Measure	National Medicaid 75 <sup>th</sup> Percentile	PCCP	NHP	NH	FCHP	BMCHP
<b>Breast Cancer Screening</b>	59.8%	65.0%↑	74.3%↑	64.4%↑	70.4%↑	78.1%↑
<b>Cervical Cancer Screening</b>	72.3%	74.8%↑	83.2%↑	79.4%↑	86.5%↑	82.0%↑
<b>Prenatal and Postpartum Care</b>						
Timeliness of Prenatal Care	86.4%	69.1%↓	91.6%↑	79.3%↓	94.0%↑	91.0%↑
Postpartum Care	65.2%	43.6%↓	57.9%↓	60.6%	66.7%	60.1%↓
<b>Frequency of Ongoing Prenatal Care</b>						
≥ 81% of Expected Visits	67.6%	54.5%↓	82.1%↑	56.2%↓	70.5%	72.0%
<b>Adults' Access to Preventive/Ambulatory Health Services</b>						
Ages 20-44	83.6%	85.1%↑	85.4%↑	82.7%↓	85.3%	85.2%↑
Ages 45-64	87.3%	89.8%↑	85.2%↓	86.5%	88.6%	89.7%↑
<b>Appropriate Treatment for Children with Upper Respiratory Infection</b>	85.6%	70.1%↓	91.9%↑	89.9%↑	90.2%↑	91.1%↑
<b>Controlling High Blood Pressure</b>	68.4%	64.2%	66.9%	56.0%↓	71.7%	65.9%
<b>Initiation and Engagement of Alcohol and Other Drug Dependence Treatment</b>						
Initiation - All Ages	51.6%	36.3%↓	73.7%↑	40.4%↓	94.6%↑	50.6%
Engagement - All Ages	15.0%	17.5%↑	44.4%↑	14.2%	69.9%↑	24.4%↑
<b>Follow-up After Hospitalization for Mental Illness</b>						
7-Day Follow-up	49.6%	46.0%↓	65.1%↑	55.9%↑	61.3%	60.5%↑
30-Day Follow-up	70.6%	65.5%↓	85.2%↑	75.1%↑	80.0%	80.3%↑
<b>Antidepressant Medication Management</b>						
Optimal Practitioner Contacts for Medication Management	25.4%	18.8%↓	30.0%↑	14.3%↓	35.1%	35.1%↑
Effective Acute Phase Treatment	51.5%	48.1%↓	41.3%↓	52.0%	44.2%	34.5%↓
Effective Continuous Phase Treatment	35.2%	32.6%↓	24.6%↓	37.1%	22.1%↓	19.4%↓

**Key:** PCCP—Primary Care Clinician Plan  
NHP—Neighborhood Health Plan  
NH—Network Health  
FCHP—Fallon Community Health Plan  
BMCHP—Boston Medical Center HealthNet Plan

↑ Indicates a rate that is significantly above the national Medicaid 75th percentile.  
↓ Indicates a rate that is significantly below the national Medicaid 75th percentile.

# Introduction

# Introduction

## Purpose of the Report

This report presents the results of the MassHealth Managed Care HEDIS 2005 project. This report was designed to be used by MassHealth program managers and by managed care organization (MCO) managers to identify plan performance on select HEDIS measures, compare performance with that of other plans and with national benchmarks, identify opportunities for improvement, and set quality improvement goals.

## Project Background

Since 2001, the Center for Health Policy and Research (CHPR) has collaborated with the MassHealth Office of Acute and Ambulatory Care (OAAC) and the MassHealth Behavioral Health Program (MHBH) to conduct an annual assessment of the performance of all MassHealth managed care organizations (MCOs) and the Primary Care Clinician (PCC) Plan, the primary care case management program administered by the Executive Office of Health and Human Services (EOHHS). CHPR, OAAC and MHBH conduct this annual assessment by using a subset of HEDIS measures. Developed by the National Committee for Quality Assurance (NCQA), HEDIS is the most widely used set of standardized performance measures to measure and report on the quality of care delivered by health care organizations. HEDIS includes clinical measures, as well as measures of access to care and utilization of services.

The measures selected for the MassHealth Managed Care HEDIS 2005 project assess the performance of the five MassHealth plans that provided health care services to MassHealth managed care members during the 2004 calendar year. The five MassHealth plans included in this report are the Primary Care Clinician Plan (PCCP), Neighborhood Health Plan (NHP), Network Health (NH), Fallon Community Health Plan (FCHP), and Boston Medical Center HealthNet Plan (BMCHP). Descriptive information about each health plan can be found in the Health Plan Profiles section on page 9.

## MassHealth HEDIS 2005 Measures

MassHealth selected ten measures for the HEDIS 2005 project. The ten measures included in this report assess health care quality in three key areas: clinical quality, access and availability of care, and use of services.

The clinical quality measures included in this report provide information about preventive services, up-to-date treatments for acute illness, management of chronic illness, and appropriate testing and screening. The specific topics evaluated in this report are breast and cervical cancer screening, controlling high blood pressure, follow-up after hospitalization for mental illness, antidepressant medication management, and appropriate treatment for children with upper respiratory infection.

The access and availability of care measures included in this report provide information

about the ability of members to get the basic and important services they need. The specific topics evaluated in this report include prenatal and postpartum care, adult access to preventive and ambulatory health services, and initiation and engagement of alcohol and other drug dependence treatment.

Use of service measures provide information about what services the health plan provides to its members. The use of services is affected by member characteristics such as age, sex, current medical condition, and socioeconomic status, all of which could vary across plans. The only use of service measure included in this report provides information on the frequency of ongoing prenatal care.

**Note:** MassHealth measures member satisfaction through biennial administration of the Consumer Assessment of Health Plans (CAHPS®) survey. Results of the MassHealth CAHPS measurement effort can be found in the biennial MassHealth CAHPS report produced by CHPR in collaboration with the UMASS Center for Survey Research (CSR).

## Organization of the MassHealth Managed Care HEDIS 2005 Report

This report presents the results of the MassHealth Managed Care HEDIS 2005 project in three sections. The three sections are based on consumer reporting domains created by the Foundation for Accountability (FACCT). The FACCT domains group clinical and access HEDIS measures with similar characteristics and are used in many national and regional health plan report card projects.

DOMAIN	DEFINITION	MEASURES SELECTED BY MASSHEALTH FOR HEDIS 2005 REPORTING
Staying Healthy	These measures provide information about how well a plan provides services that maintain good health and prevent illness.	<ul style="list-style-type: none"><li>• Breast Cancer Screening</li><li>• Cervical Cancer Screening</li><li>• Prenatal and Postpartum Care</li><li>• Frequency of Ongoing Prenatal Care</li><li>• Adults' Access to Preventive and Ambulatory Health Services</li></ul>
Getting Better	These measures emphasize how well a plan helps people recover from illness.	<ul style="list-style-type: none"><li>• Appropriate Treatment for Children with Upper Respiratory Infection</li></ul>
Living with Illness	These measures provide information about how well a plan helps people manage chronic illness.	<ul style="list-style-type: none"><li>• Controlling High Blood Pressure</li><li>• Initiation and Engagement of Alcohol and Other Drug Dependence Treatment</li><li>• Follow-up After Hospitalization for Mental Illness</li><li>• Antidepressant Medication Management</li></ul>

Separate data charts and supporting text have been added to the report for three measures— Adults' Access to Preventive and Ambulatory Health Services, Initiation and Engagement of Alcohol and Other Drug Dependence Treatment, and Follow-up After Hospitalization after Mental Illness—in order to present PCC Plan data with and without the Essential population. For more information on this analysis, see page 11 of this report.

This report also includes three appendices that provide more detailed results.

- **Appendix A** includes age-stratified results for the Initiation and Engagement of Alcohol and Other Drug Dependency Treatment measure.
- **Appendix B** presents coverage type break-outs for the PCC Plan for three behavioral health-related measures. The coverage types included in the breakouts are Basic, Essential and non-Basic/non-Essential.
- **Appendix C** presents data on the PCC Plan rates with and without the Essential population.

The schematic on the next page provides an overview of the template for reporting results for each measure.



# Organization of the MassHealth Managed Care HEDIS 2005 Report

Name of measure

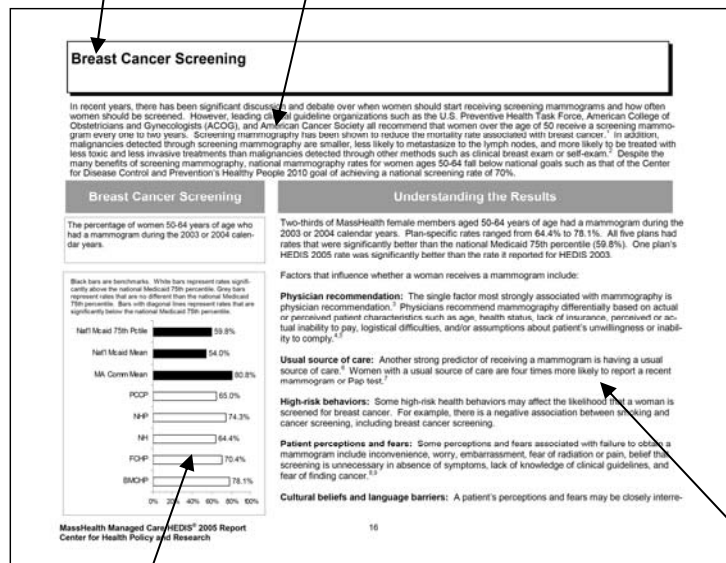
Information on the relevance of each measure

Statistical summary comparing plan rates to comparison rates named at the top of each column.

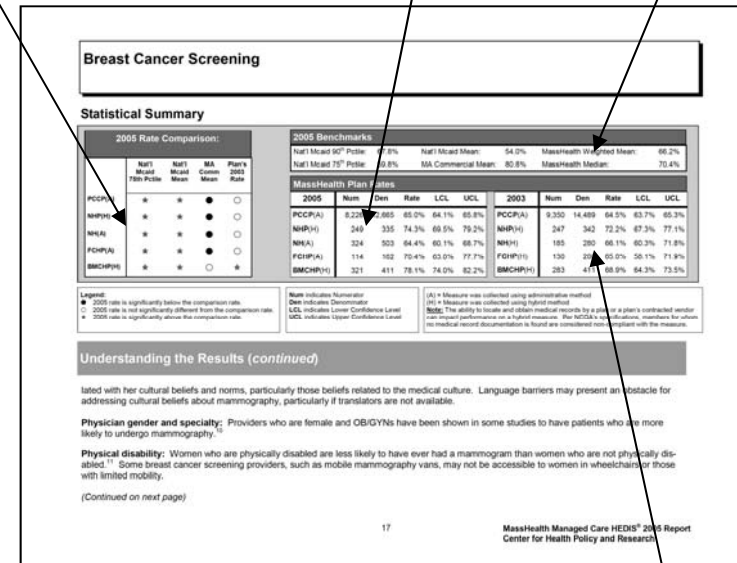
- 2005 rate is significantly below the comparison rate.
- 2005 rate is not significantly different from the comparison rate.
- ★ 2005 rate is significantly above the comparison rate.

Individual HEDIS 2005 plan data including numerator, denominator, reported rate, and upper and lower confidence intervals

Benchmarks including national Medicaid 75th and 90th percentiles, national Medicaid mean, Massachusetts Commercial mean, and MassHealth weighted mean and median



Comparison of plan rates with the national Medicaid benchmarks and Massachusetts Commercial benchmarks. The black bars are the various benchmarks. The white bars represent rates that are significantly above the national Medicaid 75th percentile. The grey bars represent rates that are not significantly different from the national Medicaid 75th percentile. Bars with diagonal lines represent rates that are significantly below the national Medicaid 75th percentile.



Analysis of results, including the factors influencing performance and opportunities for improvement

Comparison data from HEDIS 2003, if available

# Health Plan Profiles

MassHealth managed care plans provide care to over 600,000 Massachusetts residents. The MassHealth Managed Care HEDIS 2005 report includes data from five MassHealth plans serving members enrolled in managed care. This report does not reflect care provided to MassHealth members receiving their health care services outside of the five managed care plans. The following profiles provide some basic information about each plan and its members. The data chart on the next page provides a statistical summary of the demographic characteristics of each plan's population.

## Primary Care Clinician Plan (PCCP)

- Primary care case management program administered by EOHHS.
- Statewide managed care option for MassHealth members eligible for managed care.
- 311,687 MassHealth members as of December 31, 2004.
- Provider network includes group practices, community health centers, hospital outpatient departments, and individual practitioners.
- Behavioral health services are managed through a carve-out contract with the Massachusetts Behavioral Health Partnership (MBHP).

## Neighborhood Health Plan (NHP)

- Non-profit managed care organization that serves primarily Medicaid members.
- 95,936 MassHealth members as of December 31, 2004.
- Primary service areas are Greater Boston, Lawrence, Lynn, Quincy, Revere, Brockton, and Worcester.
- Provider network includes mostly community health centers in addition to Harvard

Vanguard Medical Associates, group practices and hospital-based clinics.

- Behavioral health services are managed through a carve-out contract with Beacon Health Strategies.

## Network Health (NH)

- Medicaid-only provider-sponsored health plan owned and operated by Cambridge Health Alliance.
- 65,658 MassHealth members as of December 31, 2004.
- Primary service areas are Cambridge, Somerville, Arlington, Malden, Revere, Worcester, Gardner-Fitchburg, Lawrence, Lowell, Southbridge and Springfield.
- Provider network includes community health centers, group practices, hospital outpatient departments, and individual practitioners
- Behavioral health services are provided by Network Health providers.

## Fallon Community Health Plan (FCHP)

- Non-profit managed care organization that serves the commercial, Medicare, and Medicaid populations.
- 8,536 MassHealth members as of December 31, 2004.
- Primary service areas are Worcester, Gardner-Fitchburg, Southbridge, and Framingham.
- Behavioral health services are managed through a carve-out contract with Beacon Health Services.
- Provider network for MassHealth members is exclusively through Fallon Clinic sites.

## Boston Medical Center HealthNet Plan (BMCHP)

- Medicaid-only provider-sponsored health

plan, owned and operated by Boston Medical Center, the largest public safety-net hospital in Boston.

- 126,220 MassHealth members as of December 31, 2004.
- Primary service areas are Springfield, Boston, New Bedford, Brockton, Fall River, Holyoke, Pittsfield and Westfield.
- Provider network includes community health centers, hospital outpatient departments, and group and individual practices.
- Behavioral health services are provided by BMCHP providers.

## Differences in Populations Served by MassHealth Plans

Demographic characteristics and membership health status, including factors such as age, gender, geographic residence and disability status, vary across the five plans. These variations are most visible in the differences between the four MCOs and the PCC Plan. The overall physical and mental health of a plan's members (including disability status) may influence a plan's HEDIS performance. Because HEDIS measures are not designed for case-mix adjustment, rates presented here do not take into account the medical and mental health status of the members included in the measures.

The data on the next page describe each plan's population in terms of age, gender, disability status, and use of Department of Mental Health services (a proxy for mental health status). **It is important for readers to consider the differences in the characteristics of each plan's population when reviewing and comparing the HEDIS performance of the five plans.**

## Health Plan Profiles: Demographic Characteristics of the Plan Populations

MassHealth Plan	Total MassHealth Members	Female	Disabled	DMH*	Mean Age	0-11 yrs	12-17 yrs	18-39 yrs	40-64 yrs
Primary Care Clinician Plan	311,687	54.7%	24.9%	1.9%	26.0	26.8%	16.3%	29.6%	27.3%
Neighborhood Health Plan	95,936	61.0%	1.9%	0.2%	17.6	42.7%	18.8%	28.0%	10.5%
Network Health	65,658	58.1%	7.4%	0.5%	17.7	44.9%	16.1%	27.2%	11.9%
Fallon Community Health Plan	8,536	60.0%	11.2%	0.3%	20.8	36.6%	16.1%	31.5%	15.8%
Boston Medical Center HealthNet Plan	126,220	59.1%	9.7%	0.4%	18.0	44.0%	16.7%	27.2%	12.1%
<b>TOTAL MASSHEALTH MANAGED CARE</b>	<b>608,037</b>	<b>57.1%</b>	<b>16.0%</b>	<b>1.20%</b>	<b>22.0</b>	<b>35.0%</b>	<b>16.8%</b>	<b>28.6%</b>	<b>19.7%</b>

MassHealth members enrolled on 12/31/2004 (Source: MMIS)

\* These data represent the percentage of members who are served by the Massachusetts Department of Mental Health (DMH). These data are a proxy for mental health status.

### Statistically Significant Differences Among the Plans

**Female:** All four MCOs have a significantly higher proportion of female members than the PCC Plan ( $p < .005$ ). NHP, Fallon and BMCHP all have a significantly higher proportion of female members than Network Health, and NHP also has a significantly higher proportion of female members than BMCHP ( $p < .005$ ).

**Disabled:** The PCC Plan has a significantly higher proportion of disabled members compared to the four MCOs ( $p < .005$ ). In addition, BMCHP, Network Health and Fallon all have a significantly higher proportion of disabled members than NHP. Fallon and BMCHP also have a significantly higher proportion of disabled members than Network Health, and Fallon has a significantly higher proportion than BMCHP ( $p < .005$ ).

**DMH:** The PCC Plan has a significantly higher proportion of members being served by the Department of Mental Health (DMH) than any of the four other MCOs ( $p < .005$ ). BMCHP and Network Health both have a significantly higher proportion of members being served by DMH compared to NHP ( $p < .005$ ).

**Age:** The mean age of PCC Plan's population is significantly older compared to the other four MCOs ( $t < .005$ ). The mean age of NHP's and Network Health's members is significantly younger than that of BMCHP's, Fallon's and the PCC Plan's members ( $t < .005$ ). The mean age of NHP and Network Health's members is not significantly different.

**Note:** Generally, a p-value of 0.05 indicates statistical significance. For this analysis, however, the p-value was adjusted because multiple comparisons were made between plans (a total of 10 comparisons). Therefore, a p-value that is less than .005 is considered significant for this analysis. T-tests were used for age comparisons ( $t < .005$  indicates significance).

## Health Plan Profiles: Impact of Eligibility Types on HEDIS Data

MassHealth has several Medicaid eligibility types that are offered by all five MassHealth plans including the Basic, Standard, CommonHealth, and Family Assistance coverage types. One eligibility type is offered by only the PCC Plan—MassHealth Essential. MassHealth Essential covers individuals ages 19-64 who are long-term unemployed and ineligible for MassHealth Basic (certain individuals with non-citizen status are also eligible). Ten percent (10%) of the PCC Plan's membership is enrolled in MassHealth Essential.

During the planning for the MassHealth Managed Care HEDIS 2005 project, it was decided that the PCC Plan's data submission would include the Essential population. Inclusion of this population affected the results for some measures. These population differences resulted in significantly different measurement results for three measures—Adults' Access to Preventive and Ambulatory Health Services, Initiation and Engagement of Alcohol and Other Drug Dependence Treatment, and Follow-up After Hospitalization after Mental Illness. For these measures, data charts and supporting text have been included in the main body of the report to demonstrate the differences in the PCC Plan's rate with and without Essential members. Separate rates for Essential members are included in Appendix B for the behavioral health measures (Initiation and Engagement of Alcohol and Other Drug Dependence Treatment, Follow-up After Hospitalization for Mental Illness, and Antidepressant Medication Management). Appendix C includes data charts on

the PCC Plan's data with and without the Essential population for all applicable measures.

## Data Collection and Analysis Methods

### Data Collection and Submission

In December 2004, the MassHealth Office of Acute and Ambulatory Care (OAAC) provided plans with a list of measures to be collected for HEDIS 2005. The list of measures was developed by key stakeholders within MassHealth, including stakeholders within OAAC, the Office of Clinical Affairs, and the MassHealth Behavioral Health Program. In general, each plan was responsible for collecting the measures according to the HEDIS 2005 Technical Specifications and for reporting the results using NCQA's Data Submission Tool (DST). Each plan submitted its results to both NCQA and CHPR.

MassHealth does not require plans to undergo an NCQA Compliance Audit. NCQA Compliance Audits are independent reviews conducted by organizations or individuals licensed or certified by NCQA. The purpose of the audit is to validate a plan's HEDIS results by verifying the integrity of the plan's data collection and calculation processes. All plans undergoing NCQA Accreditation must have their HEDIS data audited. NCQA only reports audited data in Quality Compass. One plan, Neighborhood Health Plan, voluntarily underwent an NCQA Compliance Audit for HEDIS 2005.

### Eligible Population

For each HEDIS measure, NCQA specifies the eligible population by defining the age, continuous enrollment, enrollment gap, and diagnosis or event criteria that a member must meet to be eligible for a measure.

Age: The age requirements for Medicaid HEDIS measures vary by measure. The MassHealth program serves members up to the age of 65. Therefore, only data for members under 65 are presented in this report.

Continuous enrollment: The continuous enrollment criteria varies for each measure and specifies the minimum amount of time that a member must be enrolled in a MassHealth plan before becoming eligible for that plan's HEDIS measure. Continuous enrollment ensures that a plan has had adequate time to deliver services to the member before being held accountable for providing those services.

Enrollment gap: The specifications for most measures allow members to have a gap in enrollment during the continuous enrollment period and still be eligible for the measure. The allowable gap is specified for each measure but is generally defined for the Medicaid population as one gap of up to 45 days.

Diagnosis/event criteria: Some measures require a member to have a specific diagnosis or health care event to be included in the denominator. Diagnoses are defined by specific administrative codes (e.g., ICD-9, CPT). Other health care events may include prescriptions, hospitalizations, or outpatient visits.

The measure descriptions included in this report do not always include every requirement for the eligible populations (e.g., enrollment gaps). For complete specifications for each measure included in this report, please see

*HEDIS 2005 Volume 2: Technical Specifications.*

### Administrative vs. Hybrid Data Collection

HEDIS measures are collected through one of two methodologies—the administrative method or the hybrid method.

The **administrative method** requires plans to identify the denominator and numerator using claims or encounter data, or data from other administrative databases. Plans calculated the administrative measures using programs developed by plan staff or NCQA-certified software purchased from a vendor. For measures collected through the administrative method, the denominator includes all members who satisfy all criteria specified in the measure including any age and continuous enrollment requirements (these members are known as the "eligible population"). The plan's HEDIS rate is based on all members in the denominator who are found through administrative data to have received the service reported in the numerator (e.g., visit, treatment, etc.).

The **hybrid methodology** requires plans to identify the numerator through both administrative and medical record data. Plans may collect medical record data using plan staff and a plan-developed data collection tool. Plans may also contract with a vendor for the tool, staffing, or both. For measures collected using the hybrid methodology, the denominator consists of a systematic sample of members drawn from the measure's eligible population. This systematic sample generally con-

## Data Collection and Analysis Methods (*continued*)

sists of a minimum required sample size of 411 members plus an over sample determined by the plan to account for valid exclusions and contraindications. The measure's rate is based on members in the sample (411) who are found through either administrative or medical record data to have received the service reported in the numerator. Plans may report data with denominators smaller than 411 for two reasons: 1) the plan has a small eligible population or 2) the plan reduced its sample size based on its previous year's audited rate, according to NCQA's specifications.

It is important to note that performance on a hybrid measure can be impacted by the ability of a plan or its contracted vendor to locate and obtain member medical records. Per NCQA's specifications, members for whom no medical record documentation is found are considered non-compliant with the measure.

### Data Analysis

Throughout this report, we compare the HEDIS 2005 results from each plan to several other rates and benchmarks, including the national Medicaid 75th percentile, national Medicaid mean, and Massachusetts Commercial mean.

#### National Medicaid 75<sup>th</sup> Percentile

For this report, the national Medicaid 75<sup>th</sup> percentile serves as the benchmark to which plan performance is compared. This is a change from previous MassHealth HEDIS reports in which the MassHealth weighted mean was used for statistical tests of significance. The 75<sup>th</sup> percentile was used for the HEDIS 2005

because of concerns that plan size was skewing the MassHealth weighted mean. (Historically, MassHealth plans have consistently outperformed the national Medicaid mean on most measures. Therefore, the national Medicaid mean is not used for tests of statistical significance for this report.) CHPR obtained the national Medicaid data through NCQA's Quality Compass, a database of regional and national Medicaid and Commercial performance benchmarks. NCQA releases its Quality Compass in July of each year with the rates for Commercial and Medicare plans. NCQA provides the national Medicaid data in a supplement that is released in late Fall. (Individual state reporting requirements supersede NCQA's reporting deadline of June 15. Therefore, NCQA must wait until all Medicaid plans have submitted their data before calculating and releasing the national Medicaid benchmarks.)

#### National Medicaid Mean & Massachusetts Commercial Mean

National Medicaid and Massachusetts Commercial means are also included as benchmarks in bar charts and data tables. Although the populations served by the plans represented by the Commercial benchmarks are fundamentally different from the MassHealth population, these benchmarks are helpful for measures where some or all of MassHealth plans are exceeding the national Medicaid 75th percentile.

#### Other Benchmarks Included in this Report

Other benchmarks are included in the data tables of this report including the national Medicaid 90th percentile, MassHealth

weighted mean, and MassHealth median. The national Medicaid 90th percentile represents a level of performance that was exceeded by only the top 10% of all Medicaid plans in the country. The 90th percentile is included as a future goal for MassHealth plans.

The MassHealth weighted mean is a weighted average of the five plans participating in HEDIS 2005. The weighted average is calculated by multiplying the performance rate for each plan by the number of individuals who met the eligibility criteria for the measure. The values are then summed across plans and divided by the total eligible population for all the plans. Because the MassHealth mean is a weighted average, the effect of a plan's performance on the mean depends on the size of that plan. The largest MassHealth plan (PCC Plan) serves 51.3% of all MassHealth members and the smallest (FCHP) serves only 1.4%. Because of the differences in the size of the populations served by the plans, the MassHealth weighted mean is not used for tests of statistical significance.

The MassHealth median is also provided and is the middle value of the set of values represented by the individual plan rates.

### Caveats for the Interpretation of Results

All data analyses have limitations and those presented here are no exception.

#### Data Collection Methodology

Performance on hybrid measures can be impacted by a plan's ability (or that of its con-

## Data Collection and Analysis Methods (*continued*)

tracted vendor) to locate and obtain member medical records as well as the quality of medical record documentation. Per NCQA's specifications, members for whom no medical record documentation is found are considered non-compliant with the measure. This applies for records that cannot be located and obtained as well as for medical records that contain incomplete documentation (e.g., indication of a test but no date or result).

### Lack of Case-Mix Adjustment

The specifications for collecting HEDIS measures do not allow case-mix or risk-adjustment for existing co-morbidities, disability (physical or mental), or severity of disease. Therefore, it is difficult to determine whether differences among plan rates are due to differences in the quality of care or use of services, or differences in the health of the populations served by the plans. For example, the PCC Plan serves a significantly higher number of disabled members compared to the MCOs. The PCC Plan also serves a significantly higher number of members served by the Department of Mental Health.

### Demographic Differences in Plan Membership

In addition to disability, the populations served by each plan differ in other demographic characteristics such as gender, age, and geographic residence. As shown through the plan profile chart on page 10, the PCC Plan has more male members as well as more members in the 18-39 and 40-64 age stratifications than the MCOs. (These differences may reflect the large number

of disabled members enrolled in the PCC Plan compared to the number enrolled in the MCOs.)

### Potential Selection Bias

Another factor to consider when reviewing the HEDIS 2005 results is the possibility of a selection bias caused by whether MassHealth members choose or are assigned to a specific MassHealth health plan. For example, there may be differences between the members who select a health plan and the members who are automatically assigned to a health plan because they failed to make a selection. If members who do not select a health plan are automatically assigned to one specific health plan, then a selection bias may exist.

### Overlapping Provider Networks

Many providers caring for MassHealth members have contracts with multiple plans. Overlapping provider networks may affect the ability of any one plan to influence provider behavior.

### Variation in Data Collection Procedures

Each plan collects and reports its own HEDIS data. Although there are standard specifications for collecting HEDIS measures, MassHealth does not audit the plans' data collection methods. Factors that may influence the collection of HEDIS data by plan include:

- Use of software to calculate the administrative measures,
- Use of a tool and/or abstractors from an external medical record review vendor,
- Completeness of administrative data due to

claims lags,

- Amount of time in the field collecting medical record data,
- The overall sample size for medical record review (plans with small eligible populations could have a systematic sample smaller than 411 members),
- Staffing changes among the plan's HEDIS team,
- Voluntary review by an NCQA-Certified HEDIS Auditor,
- Choice of administrative or hybrid method. Some measures may be collected using either the administrative or the hybrid methodology. For these measures, the methodology used to collect the data may impact a plan's rate (generally, the hybrid method yields a higher rate, but the number of numerator events gained may be limited for some measures).

### Limitations of HEDIS Measures

Some measures, such as the Frequency of Ongoing Prenatal Care, provide information on utilization and not on the quality of the care. Therefore, readers should be cautioned against using utilization data to make judgments about the quality of the care delivered by a plan or its providers.

# Staying Healthy



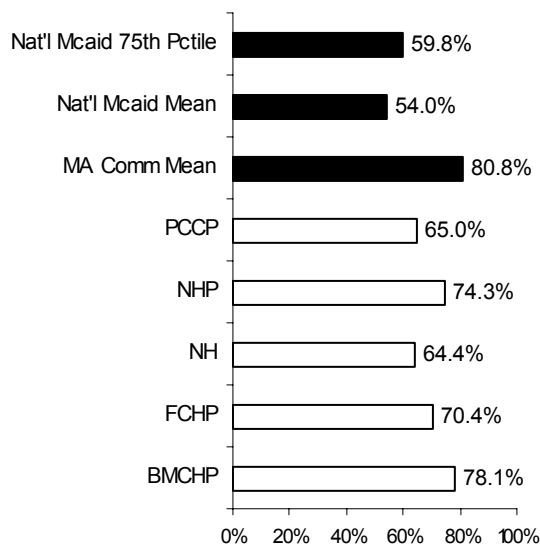
## Breast Cancer Screening

In recent years, there has been significant discussion and debate over when women should start receiving screening mammograms and how often women should be screened. However, leading clinical guideline organizations such as the U.S. Preventive Health Task Force, American College of Obstetricians and Gynecologists (ACOG), and American Cancer Society all recommend that women over the age of 50 receive a screening mammogram every one to two years. Screening mammography has been shown to reduce the mortality rate associated with breast cancer.<sup>1</sup> In addition, malignancies detected through screening mammography are smaller, less likely to metastasize to the lymph nodes, and more likely to be treated with less toxic and less invasive treatments than malignancies detected through other methods such as clinical breast exam or self-exam.<sup>2</sup> Despite the many benefits of screening mammography, national mammography rates for women ages 50-64 fall below national goals such as that of the Center for Disease Control and Prevention's Healthy People 2010 goal of achieving a national screening rate of 70%.

### Breast Cancer Screening

The percentage of women 50-64 years of age who had a mammogram during the 2003 or 2004 calendar years.

Black bars are benchmarks. White bars represent rates significantly above the national Medicaid 75th percentile. Grey bars represent rates that are no different than the national Medicaid 75th percentile. Bars with diagonal lines represent rates that are significantly below the national Medicaid 75th percentile.



### Understanding the Results

Two-thirds of MassHealth female members aged 50-64 years of age had a mammogram during the 2003 or 2004 calendar years. Plan-specific rates ranged from 64.4% to 78.1%. All five plans had rates that were significantly better than the national Medicaid 75th percentile (59.8%). One plan's HEDIS 2005 rate was significantly better than the rate it reported for HEDIS 2003.

Factors that influence whether a woman receives a mammogram include:

**Physician recommendation:** The single factor most strongly associated with mammography is physician recommendation.<sup>3</sup> Physicians recommend mammography differentially based on actual or perceived patient characteristics such as age, health status, lack of insurance, perceived or actual inability to pay, logistical difficulties, and/or assumptions about patient's unwillingness or inability to comply.<sup>4,5</sup>

**Usual source of care:** Another strong predictor of receiving a mammogram is having a usual source of care.<sup>6</sup> Women with a usual source of care are four times more likely to report a recent mammogram or Pap test.<sup>7</sup>

**High-risk behaviors:** Some high-risk health behaviors may affect the likelihood that a woman is screened for breast cancer. For example, there is a negative association between smoking and cancer screening, including breast cancer screening.

**Patient perceptions and fears:** Some perceptions and fears associated with failure to obtain a mammogram include inconvenience, worry, embarrassment, fear of radiation or pain, belief that screening is unnecessary in absence of symptoms, lack of knowledge of clinical guidelines, and fear of finding cancer.<sup>8,9</sup>

**Cultural beliefs and language barriers:** A patient's perceptions and fears may be closely interre-

# Breast Cancer Screening

## Statistical Summary

2005 Rate Comparison:				
	Nat'l Mcaid 75th Pctile	Nat'l Mcaid Mean	MA Comm Mean	Plan's 2003 Rate
PCCP(A)	★	★	●	○
NHP(H)	★	★	●	○
NH(A)	★	★	●	○
FCHP(A)	★	★	●	○
BMCHP(H)	★	★	○	★

2005 Benchmarks											
Nat'l Mcaid 90 <sup>th</sup> Pctile:		67.8%		Nat'l Mcaid Mean:		54.0%		MassHealth Weighted Mean:		66.2%	
Nat'l Mcaid 75 <sup>th</sup> Pctile:		59.8%		MA Commercial Mean:		80.8%		MassHealth Median:		70.4%	

MassHealth Plan Rates											
2005	Num	Den	Rate	LCL	UCL	2003	Num	Den	Rate	LCL	UCL
PCCP(A)	8,226	12,665	65.0%	64.1%	65.8%	PCCP(A)	9,350	14,489	64.5%	63.7%	65.3%
NHP(H)	249	335	74.3%	69.5%	79.2%	NHP(H)	247	342	72.2%	67.3%	77.1%
NH(A)	324	503	64.4%	60.1%	68.7%	NH(H)	185	280	66.1%	60.3%	71.8%
FCHP(A)	114	162	70.4%	63.0%	77.7%	FCHP(H)	130	200	65.0%	58.1%	71.9%
BMCHP(H)	321	411	78.1%	74.0%	82.2%	BMCHP(H)	283	411	68.9%	64.3%	73.5%

**Legend:**

- 2005 rate is significantly below the comparison rate.
- 2005 rate is not significantly different from the comparison rate.
- ★ 2005 rate is significantly above the comparison rate.

**Num** indicates Numerator

**Den** indicates Denominator

**LCL** indicates Lower Confidence Level

**UCL** indicates Upper Confidence Level

(A) = Measure was collected using administrative method

(H) = Measure was collected using hybrid method

**Note:** The ability to locate and obtain medical records by a plan or a plan's contracted vendor can impact performance on a hybrid measure. Per NCQA's specifications, members for whom no medical record documentation is found are considered non-compliant with the measure.

### Legend:

- 2005 rate is significantly below the comparison rate.
- 2005 rate is not significantly different from the comparison rate.
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**Num** indicates Numerator

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(A) = Measure was collected using administrative method

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**Note:** The ability to locate and obtain medical records by a plan or a plan's contracted vendor can impact performance on a hybrid measure. Per NCQA's specifications, members for whom no medical record documentation is found are considered non-compliant with the measure.

## Understanding the Results (*continued*)

lated with her cultural beliefs and norms, particularly those beliefs related to the medical culture. Language barriers may present an obstacle for addressing cultural beliefs about mammography, particularly if translators are not available.

**Physician gender and specialty:** Providers who are female and OB/GYNs have been shown in some studies to have patients who are more likely to undergo mammography.<sup>10</sup>

**Physical disability:** Women who are physically disabled are less likely to have ever had a mammogram than women who are not physically disabled.<sup>11</sup> Some breast cancer screening providers, such as mobile mammography vans, may not be accessible to women in wheelchairs or those with limited mobility.

(Continued on next page)

# Breast Cancer Screening

## Understanding the Results (*continued*)

**Group practice vs. individual physician practice:** Some studies have found that mammography rates are higher in group practices than in individual physician practices.

**On-site vs. off-site referral:** Members who can obtain a mammogram at the same location as where they receive most of their care may face fewer barriers than women who must obtain a mammogram through a referral to a separate provider.

**Timeliness of appointment:** Members who can obtain an immediate appointment for a mammogram may face less barriers than women who must return for a future appointment.

Plans can develop a number of interventions to overcome barriers to breast cancer screening. Most notably, plans can develop strategies directed toward providers or provider office systems to increase physician recommendation. These strategies can be cognitive (e.g., identifying and changing provider attitudes), behavioral (e.g., implementing reminders or system prompts) or sociological (e.g., using social norms and peers to increase adherence to screening guidelines.) In particular, interventions aimed at improving office systems have been shown to increase mammography utilization. These may include the use of flow sheets and the scheduling of mammography appointments by patients.<sup>12</sup> Reminder stamps in the medical record that prompt the provider to ask about breast cancer screening, health questionnaires that ask a patient about her screening status, and reminder letters mailed to the member are also effective. Health plans and providers can also direct interventions to the patient through office-based educational materials such as pamphlets and posters.



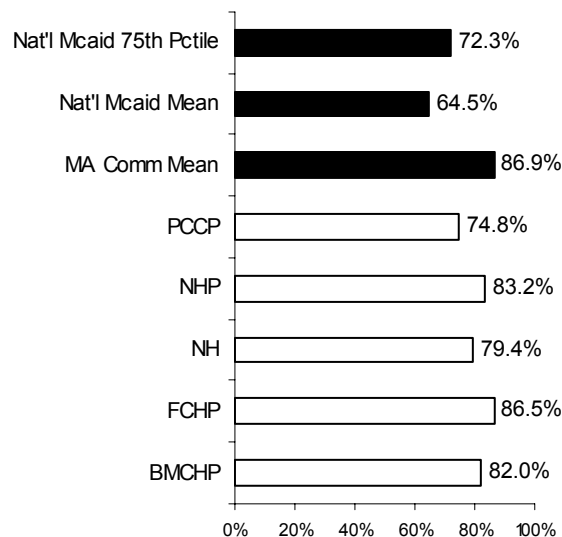
# Cervical Cancer Screening

The incidence of cervical cancer has decreased markedly in the last few decades due to the wide use of the Papanicolaou (Pap) test and increased clinical knowledge and public awareness of the causes of cervical cancer, including the Human Papilloma Virus (HPV). Despite these advances, it is estimated that over 10,000 women in the U.S. will be diagnosed with cervical cancer and approximately 3,700 will die from the disease in 2005. When detected early, cervical cancer is one of the most treatable cancers, with a five-year survival rate of 92%.<sup>13</sup> A lack of routine screening, however, can lead to diagnosis at a later stage and a poorer prognosis. Half of cervical cancers are diagnosed in women who never had a Pap test and another 10% in women who lacked screening in the prior five years.<sup>14</sup>

## Cervical Cancer Screening

The percentage of women 18-64 years of age who received one or more Pap tests during the 2002, 2003 or 2004 calendar years.

Black bars are benchmarks. White bars represent rates significantly above the national Medicaid 75th percentile. Grey bars represent rates that are no different than the national Medicaid 75th percentile. Bars with diagonal lines represent rates significantly below the national Medicaid 75th percentile.



## Understanding the Results

Seventy-nine percent (78.6%) of female MassHealth female members received one or more Pap tests during the three-year period from 2002 to 2004. Plan-specific rates ranged from 74.8% to 86.5%, with all five plans performing significantly better than the national Medicaid 75th percentile (72.3%). None of the plans' rates were significantly different from their HEDIS 2003 rates, indicating room for improvement.

A number of interventions can directly address the known barriers to cervical cancer screening:

**Increasing access to all preventive services:** People who have reduced access to preventive care are less likely to get timely cancer screenings.<sup>15</sup> Therefore, increasing access to all preventive care would likely improve cervical cancer screening rates.

**Identifying patients at risk for lack of screening:** Plans can identify members at risk for lack of screening and target them for education and outreach. Older age has been found to be associated with non-screening; in some cases, older women may be less able or willing to participate in screening. In addition, women who have resided in the U.S. for five years or less are significantly less likely to ever have had a Pap test.<sup>16</sup> Use of translators or English-speaking members of the patient's family may be necessary to communicate with non-English speaking patients who are at risk for lack of screening.

**Implementing office-based systems:** As with breast cancer, members who get a physician recommendation for screening are more likely to be screened.<sup>17,18</sup> Computer reminder systems that prompt physicians to make recommendations on screening can be effective at increasing screening rates.

# Cervical Cancer Screening

## Statistical Summary

2005 Rate Comparison:				
	Nat'l Mcaid 75th Pctile	Nat'l Mcaid Mean	MA Comm Mean	Plan's 2003 Rate
PCCP(A)	★	★	●	○
NHP(H)	★	★	○	○
NH(H)	★	★	●	○
FCHP(H)	★	★	○	○
BMCHP(H)	★	★	●	○

2005 Benchmarks											
Nat'l Mcaid 90 <sup>th</sup> Pctile:		76.6%		Nat'l Mcaid Mean:		64.5%		MassHealth Weighted Mean:		78.6%	
Nat'l Mcaid 75th Pctile:		72.3%		MA Commercial Mean:		86.9%		MassHealth Median:		82.0%	
MassHealth Plan Rates											
2005	Num	Den	Rate	LCL	UCL	2003	Num	Den	Rate	LCL	UCL
PCCP(A)	31,537	42,158	74.8%	74.4%	75.2%	PCCP(H)	261	335	77.9%	73.3%	82.5%
NHP(H)	208	250	83.2%	78.4%	88.0%	NHP(H)	258	313	82.4%	78.1%	86.8%
NH(H)	266	335	79.4%	74.9%	83.9%	NH(H)	270	360	75.0%	70.4%	79.6%
FCHP(H)	198	229	86.5%	81.8%	91.1%	FCHP(H)	214	260	82.3%	77.5%	87.1%
BMCHP(H)	337	411	82.0%	78.2%	85.8%	BMCHP(H)	320	411	77.9%	73.7%	82.0%

### Legend:

- 2005 rate is significantly below the comparison rate.
- 2005 rate is not significantly different from the comparison rate.
- ★ 2005 rate is significantly above the comparison rate.

Num indicates Numerator

Den indicates Denominator

LCL indicates Lower Confidence Level

UCL indicates Upper Confidence Level

(A) = Measure was collected using administrative method

(H) = Measure was collected using hybrid method

**Note:** The ability to locate and obtain medical records by a plan or a plan's contracted vendor can impact performance on a hybrid measure. Per NCQA's specifications, members for whom no medical record documentation is found are considered non-compliant with the measure.

## Understanding the Results (*continued*)

**Using personalized communications:** Personalized, tailored letters with general information on the risk of cervical cancer have been shown to increase cervical cancer screening rates among low-income women.<sup>19</sup>

**Targeting providers less likely to screen in the office:** Women who are able to obtain a Pap test where they receive most of their care may face fewer barriers to cervical cancer screening than women who must obtain a Pap test through a referral. Although some primary care providers conduct Pap tests in their offices, some types of primary care providers such as internal medicine physicians may be less likely to perform a Pap test in their office than other types of primary care providers such as family medicine physicians.

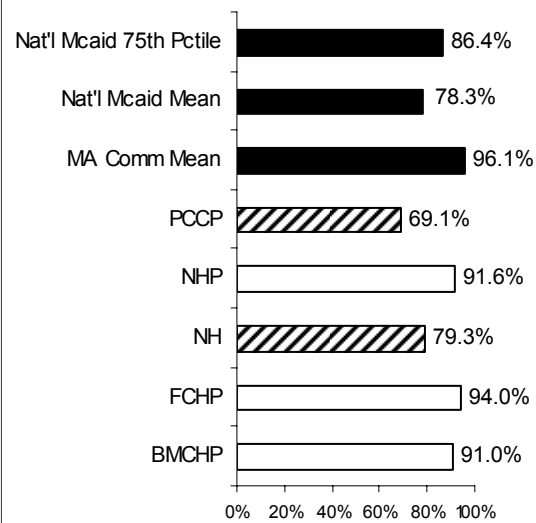
## Prenatal and Postpartum Care

Prenatal visits in the first trimester promote good clinical outcomes for both mother and child by providing the opportunity for early risk assessment (including screening for tobacco, alcohol, drug use, and domestic violence), health promotion (including discussion of exercise habits and environmental hazards) and medical, nutritional and psychosocial interventions. Despite the benefits of early prenatal care, Medicaid plan rates of prenatal care in the first trimester have consistently fallen short of the CDC's Healthy People 2000 and 2010 goals aimed at ensuring that 90% of pregnant women have a prenatal visit in the first trimester.<sup>20</sup> Postpartum care is an essential component to ensuring good clinical outcomes. A postpartum exam within fifty-six days after delivery provides the opportunity for a physical exam as well as education on birth control methods, discussion of physical limitations and restrictions, and assessment of postpartum depression.

### Timeliness of Prenatal Care

The percentage of members who delivered a live birth and who received a prenatal care visit in the first trimester or within 42 days of enrollment in the health plan.

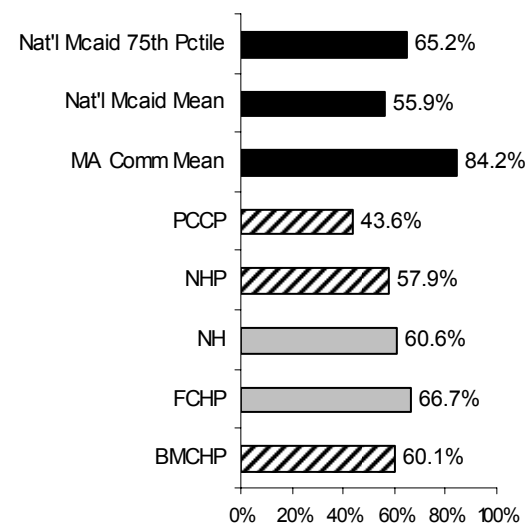
Black bars are benchmarks. White bars represent rates significantly above the national Medicaid 75th percentile. Grey bars represent rates that are no different than the national Medicaid 75th percentile. Bars with diagonal lines represent rates significantly below the national Medicaid 75th percentile.



### Postpartum Care

The percentage of members who delivered a live birth and who had a postpartum visit on or between 21 and 56 days after delivery.

Black bars are benchmarks. White bars represent rates significantly above the national Medicaid 75th percentile. Grey bars represent rates that are no different than the national Medicaid 75th percentile. Bars with diagonal lines represent rates significantly below the national Medicaid 75th percentile.



### Understanding the Results

Eight-one percent (80.7%) of MassHealth members had a prenatal visit in the first trimester or within 42 days of enrollment. Three plans performed significantly better than the national Medicaid 75th percentile (86.4%). One plan's rate was significantly better than its HEDIS 2003 rate. Sixty-one percent (60.5%) of MassHealth members had a postpartum visit on or between 21 and 56 days after delivery. No MassHealth plan performed better than the national Medicaid 75th percentile (68.6%), although two plans had rates that were not significantly different from the benchmark.

Factors influencing whether a woman receives prenatal or postpartum care include:

**Drug and alcohol use:** Drug and alcohol use, including fear of disclosure, is associated with delayed prenatal care.<sup>21,22</sup>

**Personal factors:** Personal factors associated with delayed prenatal care include feeling too tired to attend an appointment, physical violence during pregnancy, and lack of support from an infant's father.<sup>23</sup> Other factors include fear, stress, de-

(Continued on page 24)

# Prenatal and Postpartum Care

## Statistical Summary: Timeliness of Prenatal Care

2005 Rate Comparison:				
	Nat'l Mcaid 75th Pctile	Nat'l Mcaid Mean	MA Comm Mean	Plan's 2003 Rate
PCCP(H)	●	●	●	●
NHP(H)	★	★	●	★
NH(H)	●	○	●	○
FCHP(H)	★	★	○	○
BMCHP(H)	★	★	●	○

2005 Benchmarks														
Nat'l Mcaid 90 <sup>th</sup> Pctile: 89.5%					Nat'l Mcaid Mean: 78.3%					MassHealth Weighted Mean: 80.7%				
Nat'l Mcaid 75 <sup>th</sup> Pctile: 86.4%					MA Commercial Mean: 96.1%					MassHealth Median: 91.0%				
MassHealth Plan Rates														
2005	Num	Den	Rate	LCL	UCL		2003	Num	Den	Rate	LCL	UCL		
PCCP(H)	284	411	69.1%	64.5%	73.7%		PCCP(H)	335	411	81.5%	77.6%	85.4%		
NHP(H)	359	392	91.6%	88.7%	94.5%		NHP(H)	328	401	81.8%	77.9%	85.7%		
NH(H)	326	411	79.3%	75.3%	83.4%		NH(H)	352	411	85.6%	82.1%	89.2%		
FCHP(H)	220	234	94.0%	90.8%	97.3%		FCHP(H)	220	243	90.5%	86.6%	94.4%		
BMCHP(H)	374	411	91.0%	88.1%	93.9%		BMCHP(H)	363	411	88.3%	85.1%	91.5%		

## Statistical Summary: Postpartum Care

2005 Rate Comparison:				
	Nat'l Mcaid 75th Pctile	Nat'l Mcaid Mean	MA Comm Mean	Plan's 2003 Rate
PCCP (H)	●	●	●	○
NHP (H)	●	○	●	○
NH (H)	○	○	●	○
FCHP (H)	○	★	●	○
BMCHP (H)	●	○	●	○

2005 Benchmarks												
Nat'l Mcaid 90 <sup>th</sup> Pctile:		69.8%		Nat'l Mcaid Mean:		55.9%		MassHealth Weighted Mean:		60.5%		
Nat'l Mcaid 75 <sup>th</sup> Pctile		65.2%		MA Commercial Mean:		84.2%		MassHealth Median:		60.1%		
MassHealth Plan Rates												
2005	Num	Den	Rate	LCL	UCL		2003	Num	Den	Rate	LCL	UCL
PCCP(H)	179	411	43.6%	38.6%	48.5%		PCCP(H)	198	411	48.2%	43.2%	53.1%
NHP(H)	227	392	57.9%	52.9%	62.9%		NHP(H)	247	401	61.6%	56.7%	66.5%
NH(H)	249	411	60.6%	55.7%	65.4%		NH(H)	227	411	55.2%	50.3%	60.2%
FCHP(H)	156	234	66.7%	60.4%	72.9%		FCHP(H)	155	243	63.8%	57.5%	70.0%
BMCHP(H)	247	411	60.1%	55.2%	65.0%		BMCHP(H)	241	411	58.6%	53.8%	63.5%

### Legend:

- 2005 rate is significantly below the comparison rate.
- 2005 rate is not significantly different from the comparison rate.
- ★ 2005 rate is significantly above the comparison rate.

Num indicates Numerator

Den indicates Denominator

LCL indicates Lower Confidence Level

UCL indicates Upper Confidence Level

A) = Measure was collected using administrative method

(H) = Measure was collected using hybrid method

**Note:** The ability to locate and obtain medical records by a plan or a plan's contracted vendor can impact performance on a hybrid measure. Per NCQA's specifications, members for whom no medical record documentation is found are considered non-compliant with the measure.



## Prenatal and Postpartum Care

### Understanding the Results *(continued)*

pression, job demands, cultural beliefs, lack of support from family and friends, and attitudes about providers. Perceived long waiting times have also been associated with delayed care<sup>24</sup> as have socio-demographic characteristics such as young age, being single, being less educated, and having more than one child.<sup>25</sup>

**Correlation between prenatal and postpartum care:** Lack of prenatal care often results in failure to attend a postpartum visit.<sup>26</sup>

**Postpartum visit prior to 21 days after delivery:** Although clinical guidelines recommend a postpartum visit at least four weeks after delivery and the HEDIS measure requires a visit 21 to 56 days after delivery, a woman who had a postpartum visit before 21 days after delivery may not have an additional visit during the timeframe evaluated for this measure.



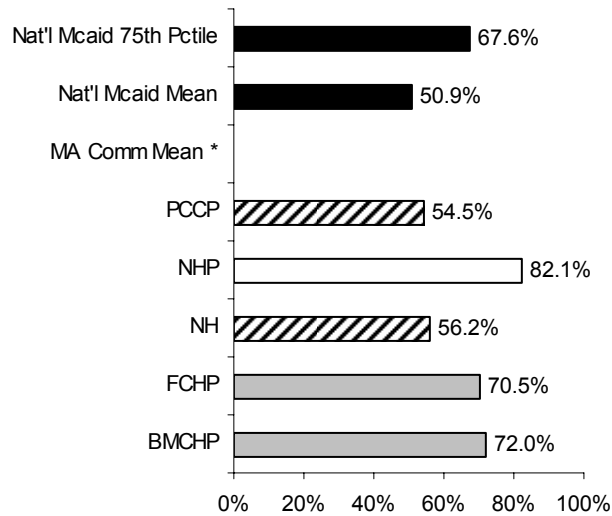
## Frequency of Ongoing Prenatal Care

The quality of prenatal care is measured not only by whether a woman has a prenatal visit in the first trimester but also by whether a woman receives prenatal care throughout her pregnancy. The American College of Obstetrics and Gynecology recommends that women receive prenatal visits every four weeks for the first 28 weeks of pregnancy, every two to three weeks for the seven weeks thereafter, and then weekly until delivery. Therefore, the percentage of expected visits a woman has throughout her pregnancy, based on gestational age at the time of enrollment, provides important information on the quality of prenatal care delivered by a health plan. This measure only provides information on the number of visits, however, and does not indicate whether the timing, content and distribution of those visits throughout the pregnancy was appropriate.

### Greater Than 81% of Expected Visits

The percentage of women who had a live birth and received greater than 81 percent of the expected number of prenatal care visits, adjusted for gestational age and the month that the member enrolled in the health plan. This measure uses the same denominator as the Prenatal and Postpartum Care measure.

Black bars are benchmarks. White bars represent rates significantly above the national Medicaid 75th percentile. Grey bars represent rates that are no different than the national Medicaid 75th percentile. Bars with diagonal lines represent rates significantly below the national Medicaid 75th percentile.



\* Medicaid-only measure. No MA Commercial mean available.

### Understanding the Results

Performance on this measure varied widely. Individual plans reported rates ranging from 54.5% to 82.1% of members receiving more than 81% of the expected prenatal visits, adjusted for gestational age and the month that the member enrolled in the health plan. Three plans performed significantly better than or no different from the national Medicaid 75th percentile (67.6%). None of the plans' rates were significantly better than the 2003 rates, indicating room for improvement.

Factors influencing the number of prenatal visits a woman has include:

**Use of single provider:** Women who receive prenatal care from a single physician are likely to receive more prenatal care.<sup>27</sup> Lack of coordination of services and difficulty finding a provider can interrupt ongoing prenatal care.<sup>27</sup>

**Logistical barriers:** Some women may fail to receive ongoing prenatal care due to issues such as transportation and child care for other children.<sup>29,30</sup>

**Psychosocial barriers:** Fear and negative attitudes also are associated with inadequate prenatal care.<sup>31,32</sup>

Effective interventions can increase the rate of prenatal care utilization, including<sup>33</sup>:

- Providing lists of open obstetric providers to pregnant women,
- Providing outreach to all members of childbearing age, including free pregnancy testing,
- Seeing members as early as possible in the first trimester and within 3 weeks of a positive pregnancy test.

## Frequency of Ongoing Prenatal Care

### Statistical Summary: $\geq 81\%$ of expected visits

2005 Rate Comparison:				
	Nat'l Mcaid 75th Pctile	Nat'l Mcaid Mean	MA Comm Mean	Plan's 2003 Rate
PCCP(H)	●	○	n/a	○
NHP(H)	★	★	n/a	○
NH(H)	●	★	n/a	○
FCHP(H)	○	★	n/a	●
BMCHP(H)	○	★	n/a	○

2005 Benchmarks												
Nat'l Mcaid 90 <sup>th</sup> Pctile:		80.0%		Nat'l Mcaid Mean:		50.9%		MassHealth Weighted Mean:			64.8%	
Nat'l Mcaid 75 <sup>th</sup> Pctile:		67.6%		MA Commercial Mean:		n/a		MassHealth Median:			70.5%	

MassHealth Plan Rates												
2005	Num	Den	Rate	LCL	UCL		2003	Num	Den	Rate	LCL	UCL
PCCP(H)	224	411	54.5%	49.6%	59.4%		PCCP(H)	259	411	63.0%	58.2%	67.8%
NHP(H)	322	392	82.1%	78.2%	86.1%		NHP(H)	303	401	75.6%	71.2%	79.9%
NH(H)	231	411	56.2%	51.3%	61.1%		NH(H)	213	411	51.8%	46.9%	56.8%
FCHP(H)	165	234	70.5%	64.5%	76.6%		FCHP(H)	215	243	88.5%	84.3%	92.7%
BMCHP(H)	296	411	72.0%	67.6%	76.5%		BMCHP(H)	264	411	64.2%	59.5%	69.0%

**Legend:**

- 2005 rate is significantly below the comparison rate.
- 2005 rate is not significantly different from the comparison rate.
- ★ 2005 rate is significantly above the comparison rate.

**Num** indicates Numerator  
**Den** indicates Denominator  
**LCL** indicates Lower Confidence Level  
**UCL** indicates Upper Confidence Level

A) = Measure was collected using administrative method  
(H) = Measure was collected using hybrid method  
**Note:** The ability to locate and obtain medical records by a plan or a plan's contracted vendor can impact performance on a hybrid measure. Per NCQA's specifications, members for whom no medical record documentation is found are considered non-compliant with the measure.

### Statistical Summary: All % of Expected Visit Rates

MassHealth Plan Rates														
2005	Den	< 21%	21% to ≤ 40%	41% to ≤ 60%	61% to ≤ 80%	≥ 81%		2003	Den	< 21%	21% to ≤ 40%	41% to ≤ 60%	61% to ≤ 80%	≥ 81%
PCCP(H)	411	21.2%	3.9%	7.3%	13.1%	54.5%		PCCP(H)	411	8.3%	2.9%	5.6%	20.2%	63.0%
NHP(H)	392	3.3%	1.8%	3.1%	9.7%	82.1%		NHP(H)	401	3.5%	3.2%	6.5%	11.2%	75.6%
NH(H)	411	19.7%	4.9%	4.4%	14.8%	56.2%		NH(H)	411	10.2%	2.9%	11.2%	23.4%	51.8%
FCHP(H)	234	3.0%	0.9%	4.7%	20.9%	70.5%		FCHP(H)	243	0.8%	0.8%	2.1%	7.8%	88.5%
BMCHP(H)	411	6.3%	4.6%	5.6%	11.4%	72.0%		BMCHP(H)	411	10.2%	8.3%	5.8%	11.4%	64.2%

**Note:** The <21% of expected visit rate includes members for whom no medical record documentation was found in addition to members who received less than 21% of the expected prenatal visits.

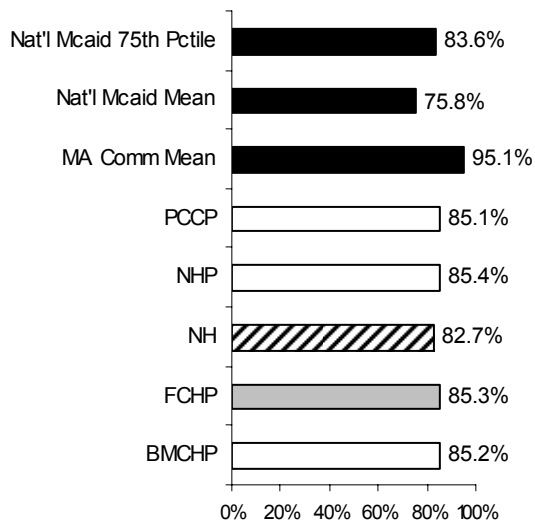
## Adults' Access to Preventive/Ambulatory Health Services

The Institute of Medicine defines access as “the timely use of personal health services to achieve the best possible health outcomes.”<sup>33</sup> Barriers to accessing recommended preventive care have been well-documented.<sup>35</sup> A review of data from the Medicare Expenditure Panel Survey (MEPS) found that 10-30% of respondents reported going without needed care or having difficulties obtaining it, not having a usual source of care, and encountering organizational barriers such as long waiting times or difficulties obtaining medical appointments.<sup>36</sup> Medicaid members responding to the survey experienced barriers at the same rate as the total MEPS sample but were more likely to report using the hospital emergency room for basic care and experiencing long waits for care.<sup>37</sup>

### Ages 20-44

The percentage of members age 20-44 who had an ambulatory or preventive care visit during the 2004 calendar year.

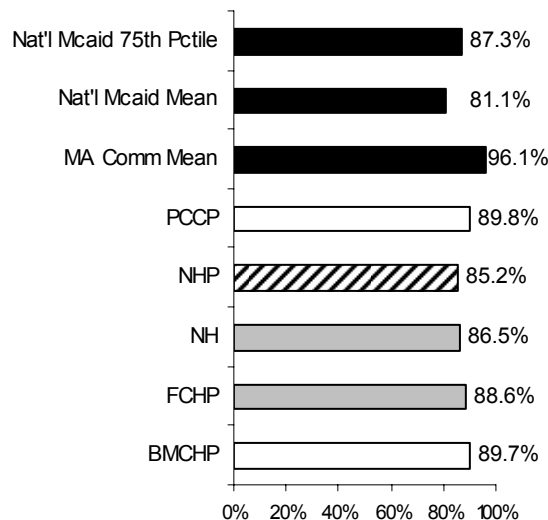
Black bars are benchmarks. White bars represent rates significantly above the national Medicaid 75th percentile. Grey bars represent rates that are no different than the national Medicaid 75th percentile. Bars with diagonal lines represent rates significantly below the national Medicaid 75th percentile.



### Ages 45-64

The percentage of members age 45-64 who had an ambulatory or preventive care visit during the 2004 calendar year.

Black bars are benchmarks. White bars represent rates significantly above the national Medicaid 75th percentile. Grey bars represent rates that are no different than the national Medicaid 75th percentile. Bars with diagonal lines represent rates significantly below the national Medicaid 75th percentile.



### Understanding the Results

Eighty-five percent (85%) of MassHealth members aged 20-44 and 89.4% of members aged 45-64 had an ambulatory or preventive health visit in 2004. There was little variation among the individual plan rates, which ranged from 82.7% to 85.4% for the 20-44 age group and from 85.2% to 89.8% for the 45-64 age group. Four health plans performed significantly better than or no different from the national Medicaid 75th percentile for both the 20-44 and 45-64 age rates.

Factors that influence access to ambulatory and preventive health care for adults include:

**Health and mental status:** An individual's health and mental health status are key independent predictors of barriers to care. Patients with fair or poor health or mental health status are more likely to report barriers to care than patients who do not have a better health or mental health status.<sup>38</sup>

**Race/ethnicity:** Medicaid enrollees who are minorities, particularly Hispanics and Asian-Americans, are more likely to report access barriers than non-Hispanic Whites enrolled in Medicaid.<sup>39</sup>

(Continued on page 30)

# Adults' Access to Preventive/Ambulatory Health Services

## Statistical Summary: Ages 20-44

2005 Rate Comparison:				
	Nat'l Mcaid 75th Pctile	Nat'l Mcaid Mean	MA Comm Mean	Plan's 2003 Rate
PCCP(A)	★	★	●	n/a
NHP(A)	★	★	●	n/a
NH(A)	●	★	●	n/a
FCHP(A)	○	★	●	n/a
BMCHP(A)	★	★	●	n/a

2005 Benchmarks											
Nat'l Mcaid 90 <sup>th</sup> Pctile:		85.4%		Nat'l Mcaid Mean:		75.8%		MassHealth Weighted Mean:		85.0%	
Nat'l Mcaid 75 <sup>th</sup> Pctile:		83.6%		MA Commercial Mean:		95.1%		MassHealth Median:		85.2%	
MassHealth Plan Rates											
2005	Num	Den	Rate	LCL	UCL	2003	Num	Den	Rate	LCL	UCL
PCCP (A)	53,970	63,416	85.1%	84.8%	85.4%	PCCP	No data available				
NHP (A)	13,870	16,242	85.4%	84.8%	85.9%	NHP					
NH (A)	7,597	9,182	82.7%	82.0%	83.5%	NH					
FCHP (A)	1,636	1,919	85.3%	83.6%	86.9%	FCHP					
BMCHP (A)	18,814	22,071	85.2%	84.8%	85.7%	BMCHP					

## Statistical Summary: Ages 45-64

2005 Rate Comparison:				
	Nat'l Mcaid 75th Pctile	Nat'l Mcaid Mean	MA Comm	Plan's 2003 Rate
PCCP(A)	★	★	●	n/a
NHP(A)	●	★	●	n/a
NH(A)	○	★	●	n/a
FCHP(A)	○	★	●	n/a
BMCHP(A)	★	★	●	n/a

2005 Benchmarks														
Nat'l Mcaid 90 <sup>th</sup> Pctile:			88.7%		Nat'l Mcaid Mean:			81.1%		MassHealth Weighted Mean:			89.4%	
Nat'l Mcaid 75 <sup>th</sup> Pctile:			87.3%		MA Commercial Mean:			96.1%		MassHealth Median:			88.6%	
MassHealth Plan Rates														
2005	Num	Den	Rate	LCL	UCL	2003	Num	Den	Rate	LCL	UCL			
PCCP (A)	40,414	45,004	89.8%	89.5%	90.1%	PCCP	No data available							
NHP (A)	2,762	3,241	85.2%	84.0%	86.5%	NHP								
NH (A)	2,431	2,812	86.5%	85.2%	87.7%	NH								
FCHP (A)	528	596	88.6%	86.0%	91.2%	FCHP								
BMCHP (A)	6,008	6,697	89.7%	89.0%	90.4%	BMCHP								

### Legend:

- 2005 rate is significantly below the comparison rate.
- 2005 rate is not significantly different from the comparison rate.
- ★ 2005 rate is significantly above the comparison rate.

Num indicates Numerator

Den indicates Denominator

LCL indicates Lower Confidence Level

UCL indicates Upper Confidence Level

A) = Measure was collected using administrative method

(H) = Measure was collected using hybrid method

**Note:** The ability to locate and obtain medical records by a plan or a plan's contracted vendor can impact performance on a hybrid measure. Per NCQA's specifications, members for whom no medical record documentation is found are considered non-compliant with the measure.

## Adults' Access to Preventive/Ambulatory Health Services

### Understanding the Results (*continued*)

**Urban location:** Medicaid recipients in urban areas may have more limited access to outpatient care and may often use hospital emergency departments for basic health care services.<sup>40</sup>

**Lack of convenience:** Some members may not seek routine care because of a lack of convenient appointments that do not conflict with work schedules (e.g., after-hours care) and a lack of transportation.

A number of interventions have been shown to be effective at reducing barriers to care for adults seeking ambulatory and preventive health services, including:

**Computer-based reminder systems:** Randomized controlled studies support the effectiveness of data-driven computer-based reminder systems to improve prevention services in the ambulatory care setting. Reminders can entail prompts to the provider as well as computer-generated letters to the member. MassHealth plans or providers seeking to institute computer-based reminder systems may face barriers such as capital and operating costs, confidentiality and data security concerns, legal issues, problems capturing the necessary clinical data, and a lack of standardized medical vocabulary and medical logic frameworks.<sup>41</sup>

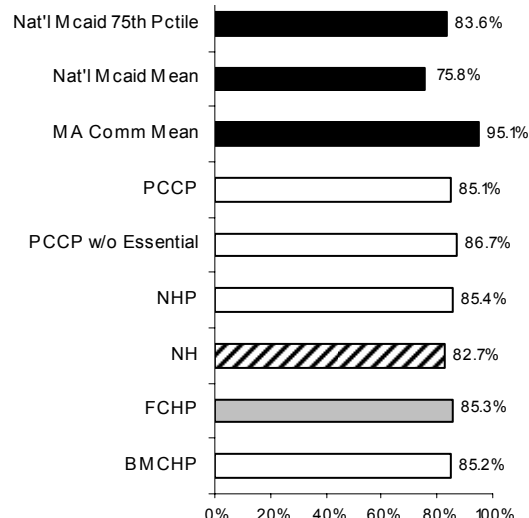
**Community outreach:** Plans and providers can also seek to educate members about the importance of routine care in public forums (e.g., community events).<sup>42</sup> In addition, outreach conducted through schools, places of employment and places of worship can also reinforce the importance of preventive care. Services delivered during outreach are not likely to be captured in this measure, however, due to a lack of documentation and coding.

# Adults' Access to Preventive/Ambulatory Health Services

## Impact of Essential Population on PCC Plan Data

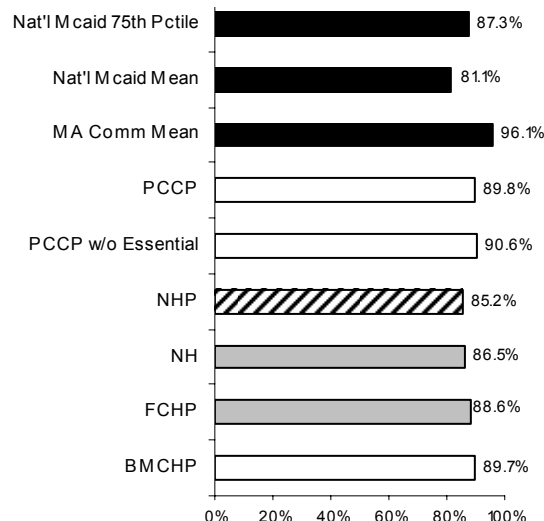
### Ages 20-44

Black bars are benchmarks. White bars represent rates significantly above the national Medicaid 75th percentile. Grey bars represent rates that are no different than the national Medicaid 75th percentile. Bars with diagonal lines represent rates significantly below the national Medicaid 75th percentile.



### Ages 45-64

Black bars are benchmarks. White bars represent rates significantly above the national Medicaid 75th percentile. Grey bars represent rates that are no different than the national Medicaid 75th percentile. Bars with diagonal lines represent rates significantly below the national Medicaid 75th percentile.



### Discussion

As discussed on page 11, MassHealth has several Medicaid eligibility types that are offered by all five MassHealth plans. One eligibility type is offered by only the PCC Plan—MassHealth Essential. Inclusion of this population affected the results for some measures.

For the Adults' Access to Ambulatory/Preventive Health Services measure, the PCC Plan rate without the Essential population is significantly better than the PCC Plan rate with the Essential population for both age stratifications (ages 20-44 and ages 45-64). (Note: Statistical significance was determined by comparing the upper and lower confidence intervals of the PCC Plan's rate without Essential to the PCC Plan's overall rate, which includes Essential members).

Factors such as differences in the mental and health status of members with Essential coverage may create barriers to accessing care.

#### 2005 Rate Comparison: Ages 20-44

	Nat'l Medicaid 75th Pctile	Nat'l Medicaid Mean	MA Comm Mean
PCCP	★	★	●
PCCP w/o Essential	★	★	●

#### 2005 Rate Comparison: Ages 45-64

	Nat'l Medicaid 75th Pctile	Nat'l Medicaid Mean	MA Comm Mean
PCCP	★	★	●
PCCP w/o Essential	★	★	●

#### PCC Plan: Ages 20-44

	Num	Den	Rate	LCL	UCL
PCCP	53,970	63,416	85.1%	84.8%	85.4%
PCCP w/o Essential	50,427	58,149	86.7%	86.4%	87.0%

#### PCC Plan: Ages 45-64

	Num	Den	Rate	LCL	UCL
PCCP	40,414	45,004	89.8%	89.5%	90.1%
PCCP w/o Essential	37,298	41,163	90.6%	90.3%	90.9%





# Getting Better

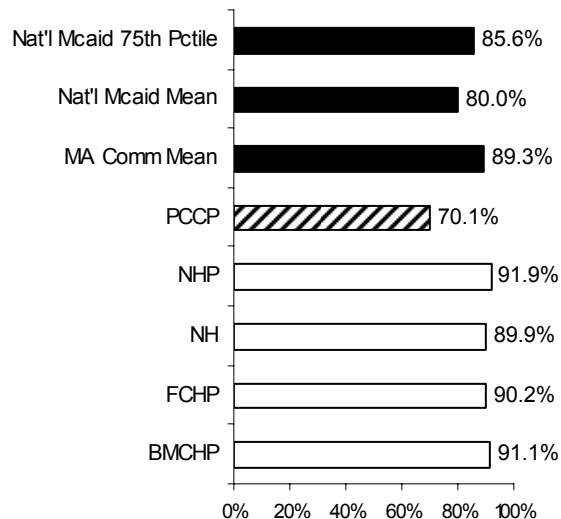
# Appropriate Treatment for Children with Upper Respiratory Infection

The emergence of antibiotic-resistant bacteria is a major and growing public health concern. The increase in antibiotic-resistant strains of bacteria such as *Streptococcus pneumoniae* is due in part to the inappropriate use of antibiotics for conditions, such as upper respiratory infection (URI), which are commonly caused by viruses. Antibiotics neither shorten the course of a viral URI nor prevent secondary infection.<sup>43</sup> Despite this, approximately three fourths of all outpatient antibiotic prescriptions are given to children for URIs.<sup>44</sup> The inappropriate use of using antibiotics for viral URI among children is common regardless of geographic area, payment source, patient demographics, and physician specialty.<sup>45</sup>

## Appropriate Treatment for Children with Upper Respiratory Infection

The percentage of children 3 months to 18 years of age who had a URI and were not dispensed an antibiotic prescription on or three days after the outpatient visit where the URI diagnosis was made. Higher rates indicate more appropriate use of antibiotics.

Black bars are benchmarks. White bars represent rates significantly above the national Medicaid 75th percentile. Grey bars represent rates that are no different than the national Medicaid 75th percentile. Bars with diagonal lines represent rates significantly below the national Medicaid 75th percentile.



## Understanding the Results

Eighty-one percent (81.3%) of children aged 3 months to 18 years who had a URI were not prescribed an antibiotic within the first three days after diagnosis. Plan-specific rates ranged from 70.1% to 91.9%. Four plans performed significantly better than the national Medicaid 75th percentile (85.6%). No comparisons to past plan performance can be made because this measure was collected by MassHealth plans for the first time with HEDIS 2005.

Factors that influence the inappropriate prescription of antibiotics for children with URI include:

**Parent expectations:** The most significant factor influencing the prescribing of antibiotics to children with URI is a physician's perception about parent expectation.<sup>46</sup> Parents may expect antibiotics to be reassured that their child is not seriously ill or to validate their decision to obtain medical attention. A parent's expectations also may be higher if a child received an antibiotic in the past for the same symptoms. Studies also have shown that strategies to manage parent expectations can be effective; for example, in one study, parent satisfaction with care did not decrease when the parent did not receive an expected antibiotic.<sup>47</sup>

**Age of child:** Children of school age are more likely to receive an antibiotic for a URI than children not of school age (i.e., age 4 and under)<sup>48</sup>, possibly reflecting pressure by parents who cannot care for a school-aged child at home and want them to be able to return to school as soon as possible.

**Chronic illness:** Children with chronic conditions such as asthma, cardiovascular disease or chronic pulmonary disease may be at higher risk for severe complications of upper respiratory infections.<sup>49</sup> Because of the higher risk, providers may be more likely to prescribe an antibiotic during the initial visit than for children without these conditions.

# Appropriate Treatment for Children with Upper Respiratory Infection

## Statistical Summary

2005 Rate Comparison:				
	Nat'l Mcaid 75th Pctile	Nat'l Mcaid Mean	MA Comm Mean	Plan's 2003 Rate
PCCP(A)	●	●	●	n/a
NHP(A)	★	★	★	n/a
NH(A)	★	★	○	n/a
FCHP(A)	★	★	○	n/a
BMCHP(A)	★	★	★	n/a

2005 Benchmarks											
Nat'l Mcaid 90 <sup>th</sup> Pctile:		89.0%		Nat'l Mcaid Mean:		80.0%		MassHealth Weighted Mean:		81.3%	
Nat'l Mcaid 75 <sup>th</sup> Pctile:		85.6%		MA Commercial Mean:		89.3%		MassHealth Median:		90.2%	

MassHealth Plan Rates											
2005	Num	Den	Rate	LCL	UCL	2003	Num	Den	Rate	LCL	UCL
PCCP (A)	4,673*	15,607	70.1%	69.3%	70.8%	PCCP	No data available				
NHP (A)	498*	6,113	91.9%	91.2%	92.5%	NHP					
NH (A)	310*	3,059	89.9%	88.8%	91.0%	NH					
FCHP (A)	43*	440	90.2%	87.3%	93.1%	FCHP					
BMCHP (A)	731*	8,191	91.1%	90.5%	91.7%	BMCHP					

**Legend:**

- 2005 rate is significantly below the comparison rate.
- 2005 rate is not significantly different from the comparison rate.
- ★ 2005 rate is significantly above the comparison rate.

**Num** indicates Numerator  
**Den** indicates Denominator  
**LCL** indicates Lower Confidence Level  
**UCL** indicates Upper Confidence Level

\* The numerator is the number of members prescribed antibiotics. The reported rate is an inverted rate and represents the percentage of members who were not prescribed an antibiotic. A higher rate indicates better performance.  
(A) = Measure was collected using administrative method  
(H) = Measure was collected using hybrid method  
**Note:** The ability to locate and obtain medical records by a plan or a plan's contracted vendor can impact performance on a hybrid measure. Per NCQA's specifications, members for whom no medical record documentation is found are considered non-compliant with the measure.

## Understanding the Results (continued)

**Medical specialty and practice setting:** Non-pediatricians are more likely to prescribe antibiotics inappropriately than pediatricians<sup>50</sup>, although physicians from all specialties prescribe inappropriately. In addition, emergency room (ER) providers may be more likely to prescribe an antibiotic for a URI during the initial visit compared to a primary care provider because of concerns that a patient presenting to the ER may not return for follow-up care.

**Facility characteristics:** Staff physicians are more likely to prescribe antibiotics for a URI than trainees, possibly because trainees perceive less legal and administrative risk associated with withholding an antibiotic and may be more familiar with current practice guidelines. In addition, staff physicians practicing in non-teaching hospitals are more likely than those in teaching institutions to prescribe an antibiotic for a URI.<sup>51</sup>

**Years in practice:** Research has shown that providers who are classified as "high prescribers" of antibiotics for URIs graduated medical school a significantly longer time ago than "low prescribers."<sup>52</sup>

# Appropriate Treatment for Children with Upper Respiratory Infection

## Understanding the Results (*continued*)

There are a number of interventions that are effective in reducing inappropriate prescribing of antibiotics for children with URI, including:

**Public education:** Well-coordinated and multiple interventions to increase public understanding of appropriate antibiotic use will result in fewer demands for unnecessary antibiotics.<sup>53</sup> Public education materials are available through a number of organizations such as the Centers for Disease Control and Prevention (CDC), American Academy of Pediatrics, American Academy of Family Physicians, American Society for Microbiology, and Alliance for the Prudent Use of Antibiotics.

**Physician profiling:** Plans can implement physician profiling activities that track rates of antibiotic prescribing overall and by diagnosis. Profiling activities provide plans with data to use as feedback to prescribers.

**Training to identify expectation behaviors:** Parent expectation behaviors are not always easily identifiable; they can come in the form of direct verbal requests but also can be communicated otherwise, such as through resistance to clinical advice.<sup>54</sup> Plans can develop and implement training programs that help physicians recognize these behaviors so that they can communicate with parents more effectively.

**Use of a contingency plan:** Another intervention entails the use of a contingency plan that providers can communicate to parents when they do not prescribe an antibiotic for a child's illness. This contingency plan outlines for the parent the next steps in treatment if the child does not improve. The use of a contingency plan among parents who expected antibiotics but did not receive them has been shown to increase parent satisfaction with care.<sup>55</sup>

**System-based interventions:** The use of formularies and other strategies to reduce cost have also been shown to reduce inappropriate drug use.

# Living with Illness

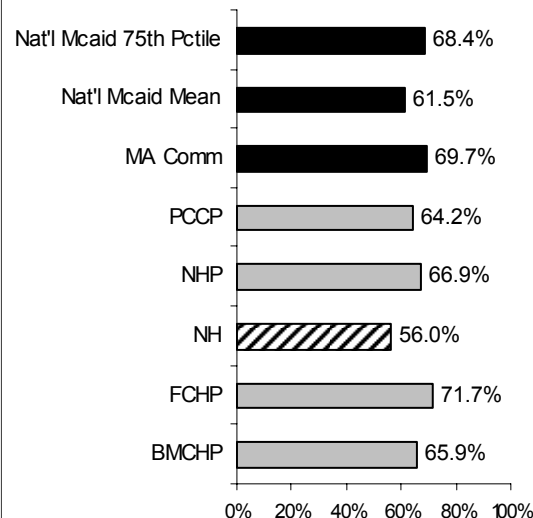
# Controlling High Blood Pressure

Over one-third of the U.S. population, or 65 million adults, have hypertension<sup>56</sup> and only 30% of those people have their blood pressure in good control.<sup>57</sup> To combat the prevalence of high blood pressure and the cardiovascular disease it causes, Healthy People 2010 set a goal of having 50% of all Americans with hypertension with blood pressure that is in good control. (For both Healthy People 2010 and this HEDIS measure, good blood pressure control is defined as a blood pressure <140/90. Other current clinical guidelines, such as the Seventh Report of the Joint National Committee on the Prevention, Detection, Evaluation and Treatment of High Blood Pressure or JNCVII, define good control as <130/80.) Lifestyle modifications such as increased exercise and reduced salt intake can help individuals control their blood pressure. In addition, antihypertensive pharmacotherapy is effective in controlling blood pressure and has been associated with reduced incidence of stroke, heart attack, and heart failure.<sup>58</sup>

## Controlling High Blood Pressure

The percentage of MassHealth members 46-64 years of age who had hypertension and whose blood pressure was adequately controlled (<140/90) during the 2004 calendar year.

Black bars are benchmarks. White bars represent rates significantly above the national Medicaid 75th percentile. Grey bars represent rates that are no different than the national Medicaid 75th percentile. Bars with diagonal lines represent rates significantly below the national Medicaid 75th percentile.



## Understanding the Results

Sixty-four percent (64.3%) of MassHealth members aged 46-64 years who had hypertension had their blood pressure controlled to <140/90 during the 2004 calendar year. Plan-specific rates ranged from 56.0% to 71.7%. Four of the plans had rates that were not significantly different from the national Medicaid 75th percentile (68.4%). No comparisons to past plan performance can be made because this measure was collected by MassHealth plans for the first time with HEDIS 2005.

Factors associated with poor blood pressure control in individuals with hypertension include:

**Lack of awareness of illness:** Individuals who are unaware of their hypertension are not likely to focus on controlling their blood pressure. Almost 30% of individuals with hypertension are unaware of their illness.<sup>59</sup>

**Gender, race, and age:** Individuals who are female, of Mexican-American ethnicity or over the age of 60 have significantly lower rates of hypertension control compared to men, younger Americans, and those who are not of Mexican-American ethnicity.<sup>60</sup>

**Co-morbid conditions:** Patients who have other or multiple medical conditions, such as diabetes, may be less likely to have their hypertension controlled.<sup>61</sup> Uncontrolled hypertension in patients with comorbidities may exist despite the fact that some providers may pay more attention to a patient's blood pressure if other risk factors are present such as having coronary artery disease, renal disease or high cholesterol.

**Side effects of pharmaceutical therapy:** Patients experiencing side effects from antihypertensive therapy, including sexual dysfunction, may be less likely to adhere to their drug regimen.

# Controlling High Blood Pressure

## Statistical Summary

2005 Rate Comparison:				
	Nat'l Mcaid 75th Pctile	Nat'l Mcaid Mean	MA Comm Mean	Plan's 2003 Rate
PCCP(H)	○	○	●	n/a
NHP(H)	○	★	○	n/a
NH(H)	●	●	●	n/a
FCHP(H)	○	★	○	n/a
BMCHP(H)	○	○	○	n/a

2005 Benchmarks												
Nat'l Mcaid 90 <sup>th</sup> Pctile:		71.1%		Nat'l Mcaid Mean:		61.5%		MassHealth Weighted Mean:		64.3%		
Nat'l Mcaid 75 <sup>th</sup> Pctile:		68.4%		MA Commercial Mean:		69.7%		MassHealth Median:		65.9%		
MassHealth Plan Rates												
2005	Num	Den	Rate	LCL	UCL		2003	Num	Den	Rate	LCL	UCL
PCCP(H)	264	411	64.2%	59.5%	69.0%		PCCP	No data available				
NHP(H)	275	411	66.9%	62.2%	71.6%		NHP					
NH(H)	230	411	56.0%	51.0%	60.9%		NH					
FCHP(H)	76	106	71.7%	62.7%	80.7%		FCHP					
BMCHP(H)	271	411	65.9%	61.2%	70.6%		BMCHP					

### Legend:

- 2005 rate is significantly below the comparison rate.
- 2005 rate is not significantly different from the comparison rate.
- ★ 2005 rate is significantly above the comparison rate.

Num indicates Numerator

Den indicates Denominator

LCL indicates Lower Confidence Level

UCL indicates Upper Confidence Level

A) = Measure was collected using administrative method

(H) = Measure was collected using hybrid method

**Note:** The ability to locate and obtain medical records by a plan or a plan's contracted vendor can impact performance on a hybrid measure. Per NCQA's specifications, members for whom no medical record documentation is found are considered non-compliant with the measure.

## Understanding the Results (*continued*)

A number of interventions have been shown to be effective in maintaining good blood pressure for people with hypertension:

**Education about lifestyle modifications:** Lifestyle modification such as weight reduction, adoption of the Dietary Approaches to Stop Hypertension (DASH) eating plan, dietary sodium reduction, physical activity, and moderation of alcohol consumption all have been shown to promote blood pressure control.<sup>62</sup>

**Appropriate pharmaceutical therapy and dosage:** Many people with hypertension will need to take two medications concurrently to achieve their blood pressure goal.<sup>63</sup> Providers should have a method for identifying members with resistant hypertension when the members fail to meet their blood pressure goals despite adhering to full doses of an appropriate drug regimen. Providers also should have a method for seeking consultation with a hypertension specialist when appropriate.<sup>64</sup>

(Continued on next page)



## Controlling High Blood Pressure

### Understanding the Results (*continued*)

**Appropriate follow-up and monitoring:** In addition to appropriate pharmaceutical therapy and dosage, appropriate follow-up and monitoring must be implemented. Once started, therapy should be monitored and adjusted at monthly intervals until the member's blood pressure goal is reached and monitored thereafter. Providers should follow-up more frequently with members who have severe hypertension (systolic greater than 160 or diastolic greater than 100) or co-morbid conditions.<sup>65</sup>

**Side effect screening:** Antihypertensive medications can cause a number of adverse side effects such as changes in heart rate, headache, edema in the ankles and feet, and sexual dysfunction. Patients who experience adverse side effects from antihypertensive medications are more likely to have poor blood pressure control than patients who do not experience adverse side effects.<sup>66</sup> Interventions to educate providers about how to anticipate and screen for side effects in members who are using antihypertensive medications may help to identify those members who are less likely to maintain their medication regimen.



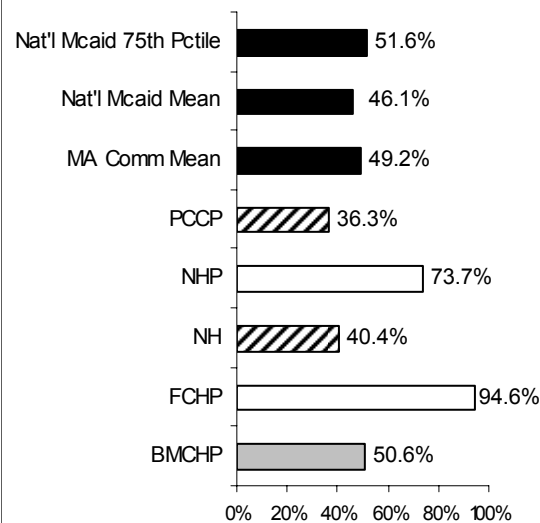
# Initiation and Engagement of Alcohol and Other Drug (AOD) Dependence Treatment

Untreated substance abuse exacts an enormous toll on the U.S. health care system. People with substance-related disorders who are not receiving treatment generate about \$1000 annually per individual in costs related to excess health care utilization compared to individuals without substance-related disorders. Most of the additional costs that occur for people with substance-related disorders are attributable to greater inpatient and emergency department utilization.<sup>67</sup> To successfully address untreated disorders, efforts should focus not only on initiating patients into treatment but also on ensuring that they adhere to their treatment regimens. Engaging people with substance-related disorders in treatment for at least six months has been associated with significant improvement in both health and social indicators such as keeping appointments and improving housing situations.<sup>68</sup> In addition, regular treatment alone or in conjunction with medical care is strongly associated with lower likelihood of hospitalizations for alcohol or mental-health complications<sup>69</sup> and improves survival rates.<sup>70</sup>

## Initiation of Treatment

The percentage of adults diagnosed with alcohol and other dependence who initiated treatment in the 2004 calendar year through either 1) an inpatient AOD admission or 2) an outpatient service for AOD abuse or dependence and an additional AOD service within 14 days.

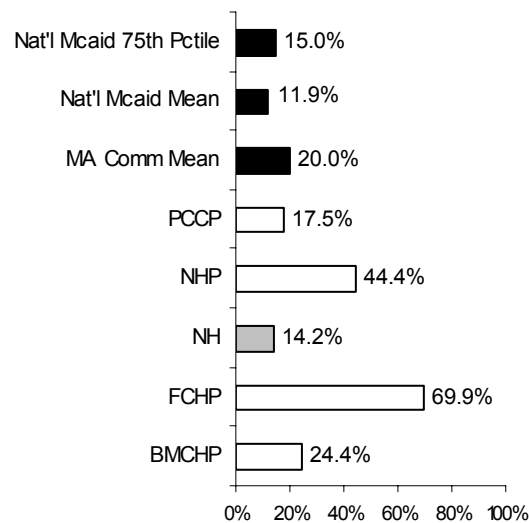
Black bars are benchmarks. White bars represent rates significantly above the national Medicaid 75th percentile. Grey bars represent rates that are no different than the national Medicaid 75th percentile. Bars with diagonal lines represent rates significantly below the national Medicaid 75th percentile.



## Engagement of Treatment

The percentage of adult members diagnosed with AOD disorders who received two additional AOD services during the 2004 calendar year within 30 days after the initiation of AOD treatment.

Black bars are benchmarks. White bars represent rates significantly above the national Medicaid 75th percentile. Grey bars represent rates that are no different than the national Medicaid 75th percentile. Bars with diagonal lines represent rates significantly below the national Medicaid 75th percentile.



## Understanding the Results

Forty-one percent (41.3%) of MassHealth members diagnosed with AOD dependence initiated treatment in 2004. Plan-specific rates ranged from 36.3% to 94.6%. Three plans had rates that were significantly better than or no different from the national Medicaid 75th percentile. Fewer MassHealth members continued treatment (20%) than initiated treatment, with plan rates ranging from 14.2% to 69.9%. All five plans had rates that were significantly better than or no different from the national Medicaid 75th percentile. No comparisons to past plan performance can be made because this measure was collected by MassHealth plans for the first time with HEDIS 2005.

It is important to note that this measure does not account for how well a plan screens members for substance abuse disorders, only whether those members who are already diagnosed are initiated into treatment and remain engaged in treatment for 30 days after initiation.

A number of factors are associated with failed initiation and engagement of alcohol and other drug dependence treatment. Some of these factors are older age, higher levels of drug and psychiatric severity, and prior treatment history.<sup>71</sup>

(Continued on page 44)

# Initiation and Engagement of Alcohol and Other Drug Dependence Treatment

## Statistical Summary: Initiation of AOD Treatment

2005 Rate Comparison:				
	Nat'l Mcaid 75th Pctile	Nat'l Mcaid Mean	MA Comm Mean	Plan's 2003 Rate
PCCP(A)	●	●	●	n/a
NHP(A)	★	★	★	n/a
NH(A)	●	●	●	n/a
FCHP(A)	★	★	★	n/a
BMCHP(A)	○	★	○	n/a

2005 Benchmarks											
Nat'l Mcaid 90 <sup>th</sup> Pctile:		73.7%		Nat'l Mcaid Mean:		46.1%		MassHealth Weighted Mean:		41.3%	
Nat'l Mcaid 75 <sup>th</sup> Pctile:		51.6%		MA Commercial Mean:		49.2%		MassHealth Median:		50.6%	
MassHealth Plan Rates											
2005	Num	Den	Rate	LCL	UCL	2003	Num	Den	Rate	LCL	UCL
PCCP(A)	3,187	8,771	36.3%	35.3%	37.3%	PCCP	No data available				
NHP(A)	481	653	73.7%	70.3%	77.0%	NHP					
NH(A)	426	1,054	40.4%	37.5%	43.4%	NH					
FCHP(A)	88	93	94.6%	90.0%	99.2%	FCHP					
BMCHP(A)	1,026	2,027	50.6%	48.4%	52.8%	BMCHP					

## Statistical Summary: Engagement of AOD Treatment

2005 Rate Comparison:				
	Nat'l Mcaid 75th Pctile	Nat'l Mcaid Mean	MA Comm Mean	Plan's 2003 Rate
PCCP(A)	★	★	●	n/a
NHP(A)	★	★	★	n/a
NH(A)	○	★	●	n/a
FCHP(A)	★	★	★	n/a
BMCHP(A)	★	★	★	n/a

2005 Benchmarks											
Nat'l Mcaid 90 <sup>th</sup> Pctile:		34.2%		Nat'l Mcaid Mean:		11.9%		MassHealth Weighted Mean:		20.1%	
Nat'l Mcaid 75 <sup>th</sup> Pctile:		15.0%		MA Commercial Mean:		20.0%		MassHealth Median:		24.4%	
MassHealth Plan Rates											
2005	Num	Den	Rate	LCL	UCL	2003	Num	Den	Rate	LCL	UCL
PCCP(A)	1,534	8,771	17.5%	16.7%	18.3%	PCCP	No data available				
NHP(A)	290	653	44.4%	40.6%	48.2%	NHP					
NH(A)	150	1,054	14.2%	12.1%	16.3%	NH					
FCHP(A)	65	93	69.9%	60.6%	79.2%	FCHP					
BMCHP(A)	494	2,027	24.4%	22.5%	26.2%	BMCHP					

### Legend:

- 2005 rate is significantly below the comparison rate.
- 2005 rate is not significantly different from the comparison rate.
- ★ 2005 rate is significantly above the comparison rate.

Num indicates Numerator

Den indicates Denominator

LCL indicates Lower Confidence Level

UCL indicates Upper Confidence Level

(A) = Measure was collected using administrative method

(H) = Measure was collected using hybrid method

**Note:** The ability to locate and obtain medical records by a plan or a plan's contracted vendor can impact performance on a hybrid measure. Per NCQA's specifications, members for whom no medical record documentation is found are considered non-compliant with the measure.

# Initiation and Engagement of Alcohol and Other Drug Dependence Treatment

## Understanding the Results (*continued*)

Other factors associated with failed initiation and engagement of alcohol and other drug dependence treatment include:

**Type of substance:** Individuals who are drug dependent are less likely to begin treatment than those dependent only on alcohol. Being employed and having higher drug severity scores is associated with initiating drug treatment.<sup>72,73</sup>

**Gender:** The factors related to retention in drug treatment programs are gender-specific, unless drug problems are not severe. Generally, women are better engaged in treatment programs compared to men if they have higher incomes, are non-African-American, are employed, are married, and have lower levels of psychiatric severity. Men are better engaged in treatment compared to women if they are older, if treatment has been suggested or interventions have been made by an employer, and if they have abstinence goals at the start of treatment.<sup>74</sup>

**Health plan model type:** It is important to note the health plan model type may also influence how members initiate and engage in substance abuse treatment. For example, members served by closed-panel or staff model systems may have more immediate access to substance abuse providers than members served by open-panel plans.<sup>75</sup>

Interventions that are effective at improving the number of people with drug and alcohol dependence who initiate and engage in treatment include:

**Educating primary care physicians:** Ten to sixteen percent (10-16%) of all people seen in an outpatient setting are suffering from drug or alcohol addiction.<sup>76</sup> Given this prevalence, the role of the primary care physician in initiating patients with substance-related disorders into treatment cannot be overstated. Some providers may fail to initiate a patient into substance abuse treatment because the providers are unaware of counseling techniques that they could use in the primary care setting with a patient who has screened positive for substance abuse. In addition, providers may be unaware of the effective medications that are available to treat substance abuse as well as all of the resources that are available in the community through referral. Interventions aimed at increasing awareness by providers of all the available resources as well as instituting office tools and procedures that support use of those resources could increase the rate at which patients with substance-related disorders are initiated into treatment.

**Identifying members at high risk for relapse and recurrence:** Characteristics of individuals at high-risk for drug abuse relapse and recurrence include co-occurring psychiatric disorders, homelessness, severity of dependence, and lack of family and psychosocial supports. In contrast, members who are in treatment due to an employer or court mandate tend to be at lower risk for treatment failure. Plans could create a mechanism to identify these members at risk and target programs to this population to address the barriers to maintaining treatment.<sup>77</sup>

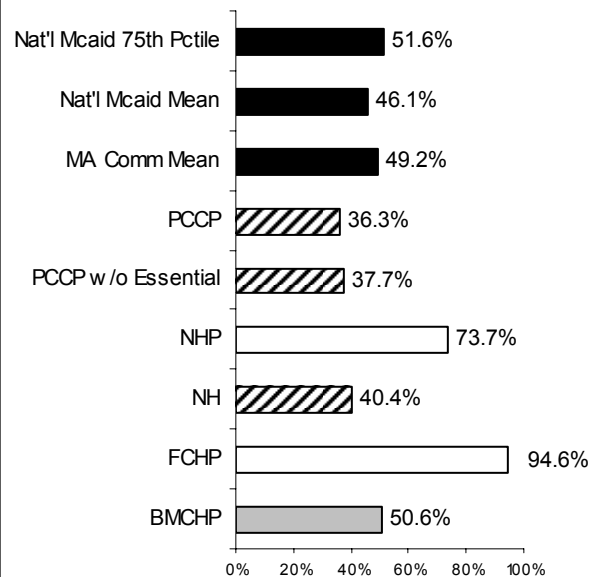
Other interventions that may be effective include:

- On-site crisis and referral teams
- Case management programs for high-utilizers of substance abuse treatment services
- Efforts to change provider attitudes about substance abuse treatment.

# Initiation and Engagement of Alcohol and Other Drug Dependence Treatment Impact of Essential Population on PCC Plan Data

## Initiation of Treatment

Black bars are benchmarks. White bars represent rates significantly above the national Medicaid 75th percentile. Grey bars represent rates that are no different than the national Medicaid 75th percentile. Bars with diagonal lines represent rates significantly below the national Medicaid 75th percentile.



## Discussion

The Essential population had a significant effect on the Initiation rate of the Initiation and Engagement of Alcohol and Other Drug Dependence Treatment measure. The PCC Plan's rate without the Essential population is significantly better than the PCC Plan's rate with the Essential population. (Note: Statistical significance was determined by comparing the upper and lower confidence intervals of the PCC Plan's rate without Essential to the PCC Plan's overall rate, which includes Essential members).

Being unemployed is known to influence the initiation of drug treatment. Thus, employment status may be one factor influencing the PCC Plan's overall rates since members eligible for Essential coverage are long-term unemployed individuals.

There were no significant differences between the PCC Plan's rate with and without the Essential population for the Engagement of Treatment measure. See Appendix D for results of the Engagement measure for both PCC Plan populations.

### 2005 Rate Comparison: Initiation of Treatment

	Nat'l Mcaid 75th Pctile	Nat'l Mcaid Mean	MA Comm Mean	Plan's 2003 Rate
PCCP	●	●	●	n/a
PCCP w/o Essential	●	●	●	n/a

### PCC Plan—Initiation of Treatment

	Num	Den	Rate	LCL	UCL
PCCP	3,187	8,771	36.3%	35.3%	37.3%
PCCP w/o Essential	2,495	6,621	37.7%	36.5%	38.9%

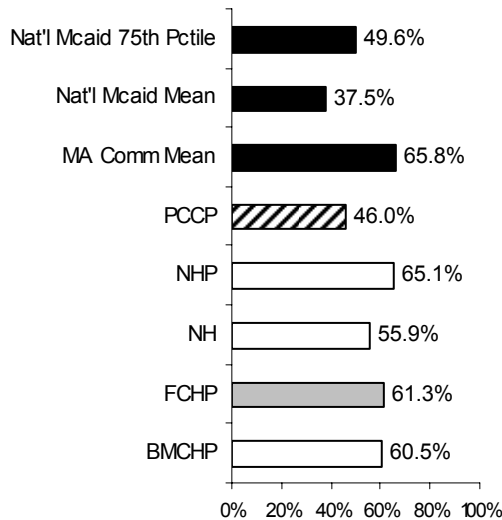
## Follow-up After Hospitalization for Mental Illness

Regular outpatient follow-up visits after discharge from a mental illness-related hospitalization are essential to long-term treatment success as well as prevention of relapse and re-hospitalization. Regular outpatient care can help a patient with the transition back to the home and work environment. It also can help with medication management. Failure to engage in follow-up visits increases likelihood of readmission.<sup>78</sup>

### Follow-Up within 7 days

The percentage of members 6 years of age and older who were discharged after treatment of selected mental health disorders and who were seen on an ambulatory basis or were in intermediate treatment with a mental health provider within 7 days after discharge.

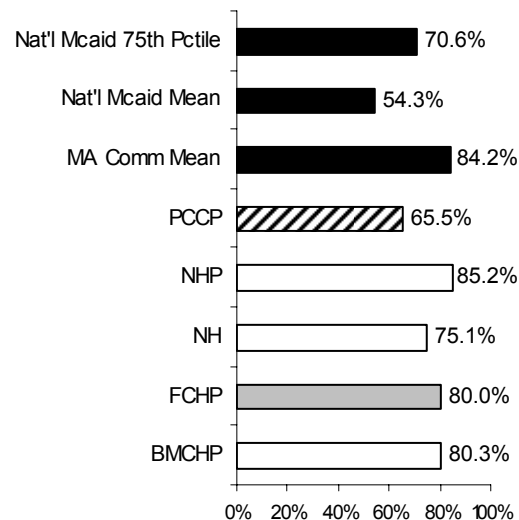
Black bars are benchmarks. White bars represent rates significantly above the national Medicaid 75th percentile. Grey bars represent rates that are no different than the national Medicaid 75th percentile. Bars with diagonal lines represent rates significantly below the national Medicaid 75th percentile.



### Follow-Up within 30 days

The percentage of members 6 years of age and older who were discharged after treatment of selected mental health disorders and who were seen on an ambulatory basis or were in intermediate treatment with a mental health provider within 30 days after discharge.

Black bars are benchmarks. White bars represent rates significantly above the national Medicaid 75th percentile. Grey bars represent rates that are no different than the national Medicaid 75th percentile. Bars with diagonal lines represent rates significantly below the national Medicaid 75th percentile.



### Understanding the Results

Nearly half (48.8%) of MassHealth members 6 years of age and older who were discharged due to a mental illness had a follow-up visit within seven days of discharge. Plan-specific rates ranged from 46% to 65.1%. Four plans had rates that were significantly better than or no different from the national Medicaid 75th percentile (49.6%). More MassHealth members had a follow-up visit within thirty days of discharge (68%) than within 7 days of discharge. Plan-specific rates of thirty-day follow-up ranged from 65.5% to 85.2%. Four plans performed significantly better than or no different from the national Medicaid 75th percentile (70.6%)

Several factors influence follow-up visits after discharge for a mental illness, including:

**Socio-demographic characteristics:** Socio-demographic characteristics associated with failure to attend follow-up visits include being white, male, young, unmarried, unemployed, as well as living in an urban environment, and having a low socioeconomic status. In addition, being socially isolated and living in inner-city are both associated with failure to attend follow-

(Continued on page 48)

# Follow-up After Hospitalization for Mental Illness

## Statistical Summary: 7-day Follow-up

2005 Rate Comparison:				
	Nat'l Mcaid 75th Pctile	Nat'l Mcaid Mean	MA Comm Mean	Plan's 2003 Rate
PCCP(A)	●	★	●	●
NHP(A)	★	★	○	★
NH(A)	★	★	●	★
FCHP(A)	○	★	○	○
BMCHP(A)	★	★	●	★

2005 Benchmarks												
Nat'l Mcaid 90 <sup>th</sup> Pctile:		62.5%		Nat'l Mcaid Mean:		37.5%		MassHealth Weighted Mean:		48.8%		
Nat'l Mcaid 75 <sup>th</sup> Pctile:		49.6%		MA Commercial Mean:		65.8%		MassHealth Median:		60.5%		
MassHealth Plan Rates												
2005	Num	Den	Rate	LCL	UCL		2003	Num	Den	Rate	LCL	UCL
PCCP(A)	3,349	7,287	46.0%	44.8%	47.1%		PCCP(A)	3168	6447	49.1%	47.9%	50.4%
NHP(A)	256	393	65.1%	60.3%	70.0%		NHP(A)	429	831	51.6%	48.2%	55.1%
NH(A)	276	494	55.9%	51.4%	60.4%		NH(A)	86	263	32.7%	26.8%	38.6%
FCHP(A)	46	75	61.3%	49.6%	73.0%		FCHP(A)	31	77	40.3%	28.7%	51.9%
BMCHP(A)	497	821	60.5%	57.1%	63.9%		BMCHP(A)	160	360	44.4%	39.2%	49.7%

## Statistical Summary: 30-day Follow-up

2005 Rate Comparison:				
	Nat'l Mcaid 75th Pctile	Nat'l Mcaid Mean	MA Comm Mean	Plan's 2003 Rate
PCCP(A)	●	★	●	●
NHP(A)	★	★	○	★
NH(A)	★	★	●	★
FCHP(A)	○	★	○	○
BMCHP(A)	★	★	●	★

2005 Benchmarks												
Nat'l Mcaid 90 <sup>th</sup> Pctile:		81.3%		Nat'l Mcaid Mean:		54.3%		MassHealth Weighted Mean:		68.3%		
Nat'l Mcaid 75 <sup>th</sup> Pctile:		70.6%		MA Commercial Mean:		84.2%		MassHealth Median:		80.0%		
MassHealth Plan Rates												
2005	Num	Den	Rate	LCL	UCL		2003	Num	Den	Rate	LCL	UCL
PCCP(A)	4,770	7,287	65.5%	64.4%	66.6%		PCCP(A)	4,503	6,447	69.8%	68.7%	71.0%
NHP(A)	335	393	85.2%	81.6%	88.9%		NHP(A)	601	831	72.3%	69.2%	75.4%
NH(A)	371	494	75.1%	71.2%	79.0%		NH(A)	122	263	46.4%	40.2%	52.6%
FCHP(A)	60	75	80.0%	70.3%	89.7%		FCHP(A)	48	77	62.3%	50.9%	73.8%
BMCHP(A)	659	821	80.3%	77.5%	83.1%		BMCHP(A)	226	360	62.8%	57.6%	67.9%

### Legend:

- 2005 rate is significantly below the comparison rate.
- 2005 rate is not significantly different from the comparison rate.
- ★ 2005 rate is significantly above the comparison rate.

Num indicates Numerator

Den indicates Denominator

LCL indicates Lower Confidence Level

UCL indicates Upper Confidence Level

(A) = Measure was collected using administrative method

(H) = Measure was collected using hybrid method

**Note:** The ability to locate and obtain medical records by a plan or a plan's contracted vendor can impact performance on a hybrid measure. Per NCQA's specifications, members for whom no medical record documentation is found are considered non-compliant with the measure.



## Follow-up After Hospitalization for Mental Illness

### Understanding the Results (*continued*)

up visits.<sup>79,80,81,82</sup>

**Severity of illness:** Another factor influencing a member's engagement in follow-up visits is the member's need for services as measured by diagnosis, severity of illness, length of hospital stay and number of previous hospitalizations.<sup>83,84</sup> In addition, co-morbid substance abuse also is a factor in engagement.<sup>85</sup>

**Involuntary admission:** Members who are admitted involuntarily have an increased risk of having no follow-up after discharge from the hospital.<sup>86</sup>

A number of interventions can address barriers to follow-up after hospitalization for mental illness. One such intervention is:

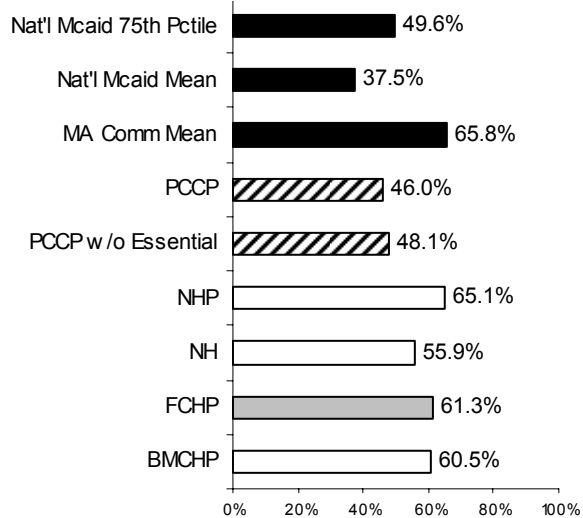
**Interaction with outpatient staff prior to discharge:** Arranging for outpatient staff to visit with a member before discharge from the hospital, as well as employing the use of a referral coordinator encourages members to attend follow-up visits.<sup>87,88</sup> In addition, effective communication about discharge plans between inpatient staff and outpatient clinicians, starting outpatient programs before discharge, and family involvement during hospital stay all are associated with engagement in follow-up care.<sup>89</sup>

In addition, interventions to provide assistance with transportation, offer case management, and implement appointment reminders may improve the rate at which members attend follow-up visits.

# Follow-up After Hospitalization for Mental Illness Impact of Essential Population on PCC Plan Data

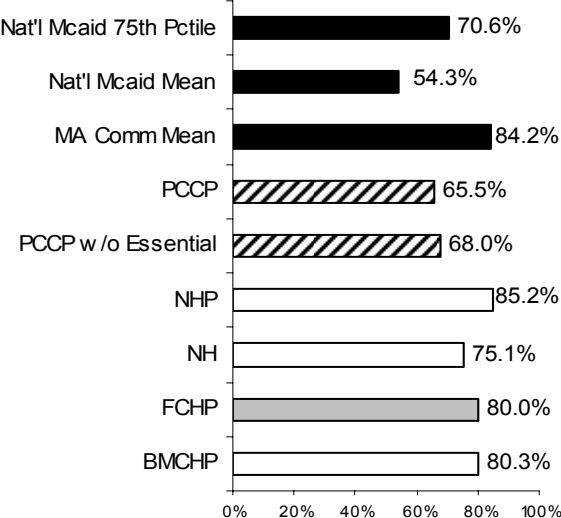
## 7-Day Follow-up

Black bars are benchmarks. White bars represent rates significantly above the national Medicaid 75th percentile. Grey bars represent rates that are no different than the national Medicaid 75th percentile. Bars with diagonal lines represent rates significantly below the national Medicaid 75th percentile.



## 30-Day Follow-up

Black bars are benchmarks. White bars represent rates significantly above the national Medicaid 75th percentile. Grey bars represent rates that are no different than the national Medicaid 75th percentile. Bars with diagonal lines represent rates significantly below the national Medicaid 75th percentile.



## Discussion

Both the 7-day and 30-day rates for the PCC Plan without the Essential population are significantly better than the PCC Plan's rate with the Essential population (48.1% vs. 46.0% for the 7-day rate and 68.0% vs. 65.5% for the 30-day rate). (Note: Statistical significance was determined by comparing the upper and lower confidence intervals of the PCC Plan's rate without Essential to the PCC Plan's overall rate, which includes Essential members).

Several known factors related to follow-up visits after hospitalization for mental illness may have impacted whether members with Essential coverage obtained follow-up care. Individuals who are male, unemployed, and socially isolated are less likely to attend follow-up visits. Because the Essential population has a higher proportion of males and is a coverage type for the long-term unemployed and non-citizens, these characteristics may have influenced the PCC Plan's overall HEDIS rate.

### 2005 Rate Comparison: 7 Day Follow Up

	Nat'l Medicaid 75th Pctile	Nat'l Medicaid Mean	MA Comm Mean
PCCP	●	●	●
PCCP w/o Essential	●	●	●

### PCC Plan: 7 Day Follow Up

	Num	Den	Rate	LCL	UCL
PCCP	3,349	7,287	46.0%	44.8%	47.1%
PCCP w/o Essential	3,127	6,503	48.1%	46.9%	49.3%

### 2005 Rate Comparison: 30 Day Follow Up

	Nat'l Medicaid 75th Pctile	Nat'l Medicaid Mean	MA Comm Mean
PCCP	●	●	●
PCCP w/o Essential	●	●	●

### PCC Plan: 30 Day Follow Up

	Num	Den	Rate	LCL	UCL
PCCP	4,770	7,287	65.5%	64.4%	66.6%
PCCP w/o Essential	4,424	6,503	68.0%	66.9%	69.2%

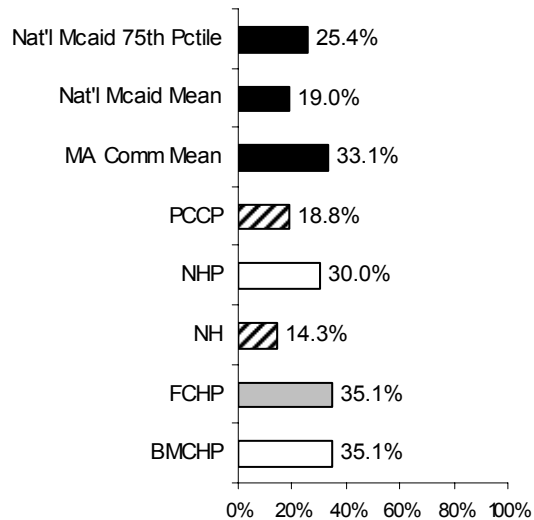
# Antidepressant Medication Management

Safe and effective pharmaceutical therapies to manage depression and its symptoms are widely available. However, to be most effective, a course of antidepressant therapy must be adhered to after treatment is initiated. Most depressed patients discontinue medication within the first 180 days of their first prescription. Discontinuation can have considerable consequences for the patient's overall mental health. Premature discontinuation of antidepressant treatment is associated with a greatly increased risk of worsening severity and recurrence.<sup>90</sup>

## Optimal Practitioner Contacts for Medication Management

The percentage of members 18 years of age and older who were diagnosed with a new episode of depression and treated with antidepressant medication, and who had at least three follow-up contacts with a practitioner coded with a mental health diagnosis during the 84-day Acute Treatment Phase.

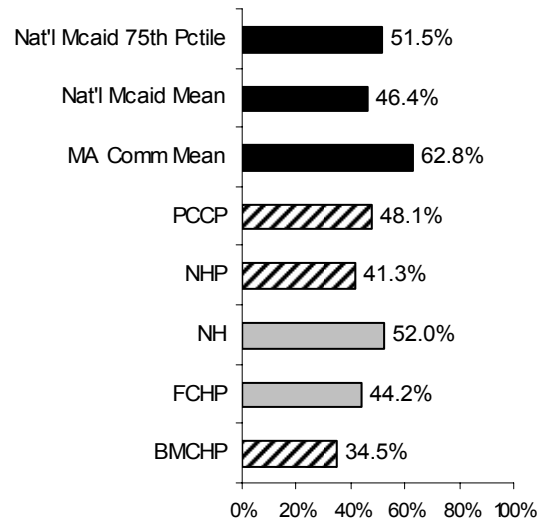
Black bars are benchmarks. White bars represent rates significantly above the national Medicaid 75th percentile. Grey bars represent rates that are no different than the national Medicaid 75th percentile. Bars with diagonal lines represent rates significantly below the national Medicaid 75th percentile.



## Effective Acute Phase Treatment

The percentage of members 18 years of age and older who were diagnosed with a new episode of depression, were treated with antidepressant medication and remained on an antidepressant drug during the entire 84-day Acute Treatment Phase.

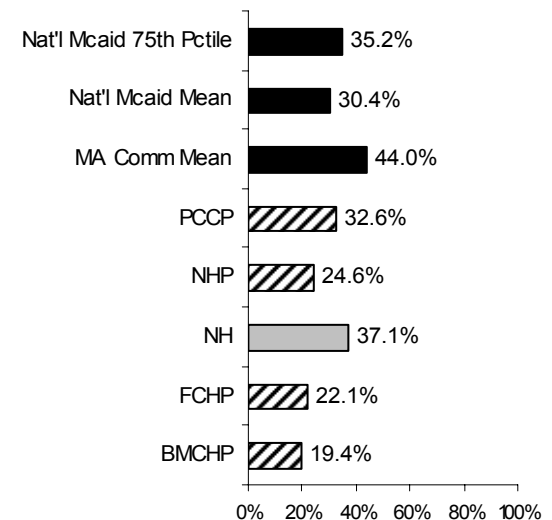
Black bars are benchmarks. White bars represent rates significantly above the national Medicaid 75th percentile. Grey bars represent rates that are no different than the national Medicaid 75th percentile. Bars with diagonal lines represent rates significantly below the national Medicaid 75th percentile.



## Effective Continuation Phase Treatment

The percentage of members 18 years of age and older who were diagnosed with a new episode of depression and treated with antidepressant medication and who remained on an antidepressant drug for at least 180 days.

Black bars are benchmarks. White bars represent rates significantly above the national Medicaid 75th percentile. Grey bars represent rates that are no different than the national Medicaid 75th percentile. Bars with diagonal lines represent rates significantly below the national Medicaid 75th percentile.



# Antidepressant Medication Management

## Statistical Summary: Optimal Practitioner Contacts for Medication Management

2005 Rate Comparison:				
	Nat'l Mcaid 75th Pctile	Nat'l Mcaid Mean	MA Comm Mean	Plan's 2003 Rate
PCCP(A)	●	○	●	●
NHP(A)	★	★	○	★
NH(A)	●	●	●	○
FCHP(A)	○	★	○	●
BMCHP(A)	★	★	○	★

2005 Benchmarks														
Nat'l Mcaid 90 <sup>th</sup> Pctile:			31.6%		Nat'l Mcaid Mean:			19.0%		MassHealth Weighted Mean:			23.3%	
Nat'l Mcaid 75 <sup>th</sup> Pctile:			25.4%		MA Commercial Mean:			33.1%		MassHealth Median:			30.0%	
MassHealth Plan Rates														
2005	Num	Den	Rate	LCL	UCL		2003	Num	Den	Rate	LCL	UCL		
PCCP(A)	461	2,454	18.8%	17.2%	20.4%		PCCP(A)	642	2,186	29.4%	27.4%	31.3%		
NHP(A)	151	504	30.0%	25.9%	34.1%		NHP(A)	176	781	22.5%	19.5%	25.5%		
NH(A)	51	356	14.3%	10.5%	18.1%		NH(A)	21	175	12.0%	6.9%	17.1%		
FCHP(A)	27	77	35.1%	23.8%	46.4%		FCHP(A)	103	187	55.1%	47.7%	62.5%		
BMCHP(A)	293	834	35.1%	31.8%	38.4%		BMCHP(A)	54	340	15.9%	11.9%	19.9%		

## Statistical Summary: Effective Acute Phase Treatment

2005 Rate Comparison:				
	Nat'l Mcaid 75th Pctile	Nat'l Mcaid Mean	MA Comm Mean	Plan's 2003 Rate
PCCP(A)	●	○	●	○
NHP(A)	●	●	●	○
NH(A)	○	★	●	○
FCHP(A)	○	○	●	●
BMCHP(A)	●	●	●	○

2005 Benchmarks											
Nat'l Mcaid 90 <sup>th</sup> Pctile:		55.1%		Nat'l Mcaid Mean:		46.4%		MassHealth Weighted Mean:		44.9%	
Nat'l Mcaid 75 <sup>th</sup> Pctile:		51.5%		MA Commercial Mean:		62.8%		MassHealth Median:		44.2%	
MassHealth Plan Rates											
2005	Num	Den	Rate	LCL	UCL	2003	Num	Den	Rate	LCL	UCL
PCCP(A)	1,180	2,454	48.1%	46.1%	50.1%	PCCP(A)	1,039	2,186	47.5%	45.4%	49.6%
NHP(A)	208	504	41.3%	36.9%	45.7%	NHP(A)	385	781	49.3%	45.7%	52.9%
NH(A)	185	356	52.0%	46.6%	57.3%	NH(A)	87	175	49.7%	42.0%	57.4%
FCHP(A)	34	77	44.2%	32.4%	55.9%	FCHP(A)	136	187	72.7%	66.1%	79.4%
BMCHP(A)	288	834	34.5%	31.2%	37.8%	BMCHP(A)	136	340	40.0%	34.6%	45.4%

### Legend:

- 2005 rate is significantly below the comparison rate.
- 2005 rate is not significantly different from the comparison rate.
- ★ 2005 rate is significantly above the comparison rate.

### Num indicates Numerator

Den indicates Denominator

LCL indicates Lower Confidence Level

UCL indicates Upper Confidence Level

(A) = Measure was collected using administrative method

(H) = Measure was collected using hybrid method

**Note:** The ability to locate and obtain medical records by a plan or a plan's contracted vendor can impact performance on a hybrid measure. Per NCQA's specifications, members for whom no medical record documentation is found are considered non-compliant with the measure.

# Antidepressant Medication Management

## Statistical Summary: Effective Continuation Phase Treatment

2005 Rate Comparison:				
	Nat'l Mcaid 75th Pctile	Nat'l Mcaid Mean	MA Comm Mean	Plan's 2003 Rate
PCCP(A)	●	★	●	○
NHP(A)	●	●	●	●
NH(A)	○	★	●	○
FCHP(A)	●	○	●	●
BMCHP(A)	●	●	●	○

**Legend:**

- 2005 rate is significantly below the comparison rate.
- 2005 rate is not significantly different from the comparison rate.
- ★ 2005 rate is significantly above the comparison rate.

2005 Benchmarks											
Nat'l Mcaid 90 <sup>th</sup> Pctile:		38.6%		Nat'l Mcaid Mean:		30.4%		MassHealth Weighted Mean:		29.2%	
Nat'l Mcaid 75 <sup>th</sup> Pctile:		35.2%		MA Commercial Mean:		44.0%		MassHealth Median:		24.6%	

MassHealth Plan Rates											
2005	Num	Den	Rate	LCL	UCL	2003	Num	Den	Rate	LCL	UCL
PCCP(A)	799	2,454	32.6%	30.7%	34.4%	PCCP(A)	714	2,186	32.7%	30.7%	34.7%
NHP(A)	124	504	24.6%	20.7%	28.5%	NHP(A)	250	781	32.0%	28.7%	35.3%
NH(A)	132	356	37.1%	31.9%	42.2%	NH(A)	51	175	29.1%	22.1%	36.2%
FCHP(A)	17	77	22.1%	12.2%	32.0%	FCHP(A)	100	187	53.5%	46.1%	60.9%
BMCHP(A)	162	834	19.4%	16.7%	22.2%	BMCHP(A)	84	340	24.7%	20.0%	29.4%

**Num** indicates Numerator  
**Den** indicates Denominator  
**LCL** indicates Lower Confidence Level  
**UCL** indicates Upper Confidence Level

(A) = Measure was collected using administrative method  
(H) = Measure was collected using hybrid method  
**Note:** The ability to locate and obtain medical records by a plan or a plan's contracted vendor can impact performance on a hybrid measure. Per NCQA's specifications, members for whom no medical record documentation is found are considered non-compliant with the measure.

## Understanding the Results

Twenty-three percent (23.3%) of MassHealth members who were diagnosed with a new episode of depression and treated with antidepressant medication had at least three follow-up contacts with a practitioner during the 84-day Acute Phase. Plan-specific rates ranged from 14.3% to 35.1%. Three plans had rates that were significantly better than or no different from the national Medicaid 75th percentile. Forty-five percent (44.9%) of members with a new episode of depression and treated with antidepressant medication remained on an antidepressant drug during the entire 84-day Acute Treatment Phase. Plan-specific rates ranged from 34.5% to 52.0%. No plan had a rate that was significantly better than the national Medicaid 75th percentile. Two plans had rates that were not statistically different from the national Medicaid 75th percentile. Thirty-percent (30%) of members diagnosed with a new episode of depression and treated with antidepressant medication remained on that medication for at least 180 days. Plan-specific rates ranged from 19.4% to 37.1%. No plan had a rate that was significantly better than the national Medicaid 75th percentile. Only one plan had a rate that was not statistically different from the national Medicaid 75th percentile.

The barriers to attending follow-up visits and adhering to antidepressant medication have been well-researched. In addition, specific barriers related to the Antidepressant Medication Management measure have been identified:

**Failure to capture follow-up visits for HEDIS measure:** An analysis of national data from the Optimal Practitioner Contact HEDIS measure found

# Antidepressant Medication Management

## Understanding the Results (*continued*)

that the most common reason why at least three follow-up contacts with a practitioner were not identified for the 84-day Acute Treatment Phase was that the patient had restarted a previously successful antidepressant.<sup>91</sup> Other reasons cited were system-based and included failure to code a visit with the prescribing provider as mental health-related as well as documenting the wrong start dates for a prescription due to the use of medication samples.

**Failure to remain on an antidepressant:** Factors related to a patient's failure to remain on an antidepressant include concern over side effects and misconceptions about treatment. Antidepressant medications can cause side effects which, if they occur, are most common during the first month of treatment. Patients report that they discontinue their antidepressant treatment because they feel that they do not need medication, feel better, or feel that the medications are not working. In addition, the study of the national data from the Antidepressant Medication Management measure found that one quarter of the members who did not adhere to their medication regimen told their provider that they were taking their medication although a pharmacy data base showed that they were not.<sup>92</sup>

Some interventions have been shown to increase patient attendance at follow-up visits and adherence to an antidepressant regimen:

**Educational messages:** Patients may benefit from educational messages that will help a member to reduce possible side effects and to know what to expect during treatment, particularly in the first few months. These messages should reinforce that patients should take medication daily, that it may take 2-4 weeks to see effects, that they should continue taking the medication even if feeling better, and that they should not stop a medication without checking with a doctor first. The source of this information also matters. Research has shown that patients who receive antidepressant information from multiple sources (e.g., pharmacists, primary care providers, health plans, mental health specialists, friends, family members, and/or the internet) were significantly more likely to adhere to their antidepressant regimen than those who received the information through fewer sources.<sup>93</sup>

**Integrated role for psychologist or psychiatrist:** Multi-faceted primary care interventions that include an on-site integrated role for a psychologist or psychiatrist can significantly improve patient adherence to antidepressants.<sup>94</sup> In addition, quality improvement programs in which mental health specialists collaborate with primary care providers can substantially increase rates of antidepressant treatment.<sup>95</sup>

**Telephone care management:** Telephone care management has been shown to increase the likelihood that a patient uses antidepressants for at least 90 days. In one particular program, care managers contacted participants within four weeks of the initial antidepressant prescription, made two additional contacts four and twelve weeks later, and sent a personalized mailing approximately 20 weeks later.<sup>96</sup> In this intervention, the treating physician received a structured report for each patient contact that included a summary of the care manager's clinical assessment as well as computer-generated recommendations for medication adjustment. Participants also received a detailed self-management workbook.

Other interventions that may be effective include:

- Increasing communication between pharmacy providers and clinicians so that clinicians are notified when patients do not fill or re-fill a prescription
- Educating providers on how to anticipate and screen for the side effects of antidepressants which may lead patients to discontinue their treatment
- Using office visits with nurses to monitor medication compliance instead of visits with physicians (nurses may have more time to talk to the patient about barriers to medication compliance as well as more experience discussing patient concerns such as side effects), and
- Disease management programs for patients with depression.



# Appendix A: Initiation and Engagement of Alcohol and Other Drug Dependence Treatment—Age— Stratified Results



## Appendix A

### Initiation and Engagement of Alcohol and Other Drug (AOD) Dependence Treatment

#### Initiation - All Age Stratifications

Age 18-25	Num	Den	Rate	LCL	UCL
PCCP	538	1,373	39.2%	36.6%	41.8%
NHP	99	137	72.3%	64.4%	80.1%
NH	66	175	37.7%	30.2%	45.2%
FCHP*	8	8	n/a	n/a	n/a
BMCHP	156	321	48.6%	43.0%	54.2%

\* Rates cannot be calculated when a plan's denominator is <30.

Age 26-34	Num	Den	Rate	LCL	UCL
PCCP	720	1,844	39.0%	36.8%	41.3%
NHP	134	184	72.8%	66.1%	79.5%
NH	116	247	47.0%	40.5%	53.4%
FCHP*	16	17	n/a	n/a	n/a
BMCHP	218	418	52.2%	47.2%	57.1%

\* Rates cannot be calculated when a plan's denominator is <30.

Age 35-64	Num	Den	Rate	LCL	UCL
PCCP	1,929	5,554	34.7%	33.5%	36.0%
NHP	248	332	74.7%	69.9%	79.5%
NH	244	632	38.6%	34.7%	42.5%
FCHP	64	68	94.1%	87.8%	100.0%
BMCHP	652	1,288	50.6%	47.9%	53.4%

Age Total	Num	Den	Rate	LCL	UCL
PCCP	3,187	8,771	36.3%	35.3%	37.3%
NHP	481	653	73.7%	70.3%	77.0%
NH	426	1,054	40.4%	37.5%	43.4%
FCHP	88	93	94.6%	90.0%	99.2%
BMCHP	1,026	2,027	50.6%	48.4%	52.8%

## Appendix A

### Initiation and Engagement of Alcohol and Other Drug (AOD) Dependence Treatment

#### Engagement - All Age Stratifications

Age 18-25	Num	Den	Rate	LCL	UCL
PCCP	239	1,373	17.4%	15.4%	19.4%
NHP	53	137	38.7%	30.2%	47.2%
NH	16	175	9.1%	4.6%	13.7%
FCHP	6	8	n/a	n/a	n/a
BMCHP	65	321	20.2%	15.7%	24.8%

Age 26-34	Num	Den	Rate	LCL	UCL
PCCP	378	1,844	20.5%	18.6%	22.4%
NHP	88	184	47.8%	40.3%	55.3%
NH	50	247	20.2%	15.0%	25.5%
FCHP	14	17	n/a	n/a	n/a
BMCHP	128	418	30.6%	26.1%	35.2%

Age 35-64	Num	Den	Rate	LCL	UCL
PCCP	917	5,554	16.5%	15.5%	17.5%
NHP	149	332	44.9%	39.4%	50.4%
NH	84	632	13.3%	10.6%	16.0%
FCHP	45	68	66.2%	54.2%	78.2%
BMCHP	301	1,288	23.4%	21.0%	25.7%

Age Total	Num	Den	Rate	LCL	UCL
PCCP	1,534	8,771	17.5%	16.7%	18.3%
NHP	290	653	44.4%	40.6%	48.2%
NH	150	1,054	14.2%	12.1%	16.3%
FCHP	65	93	69.9%	60.6%	79.2%
BMCHP	494	2,027	24.4%	22.5%	26.2%



# Appendix B: Select PCC Plan Data by Eligibility Type

## Appendix B

### Select PCC Plan Data by Eligibility Type—Basic, Essential and Non-Basic/Non-Essential

#### Initiation and Engagement of Alcohol and Other Drug Dependence Treatment

##### Basic

Initiation	Num	Den	Rate	LCL	UCL
Ages 18-25	40	81	49.4%	37.9%	60.9%
Ages 26-34	69	172	40.1%	32.5%	47.7%
Ages 35-64	197	556	35.4%	31.4%	39.5%
Ages Total	306	809	37.8%	34.5%	41.2%

Engagement	Num	Den	Rate	LCL	UCL
Ages 18-25	29	81	35.8%	24.7%	46.9%
Ages 26-34	36	172	20.9%	14.6%	27.3%
Ages 35-64	99	556	17.8%	14.5%	21.1%
Ages Total	164	809	20.3%	17.5%	23.0%

##### Essential

Initiation	Num	Den	Rate	LCL	UCL
Ages 18-25	154	438	35.2%	30.6%	39.7%
Ages 26-34	202	569	35.5%	31.5%	39.5%
Ages 35-64	336	1,143	29.4%	26.7%	32.1%
Ages Total	692	2,150	32.2%	30.2%	34.2%

Engagement	Num	Den	Rate	LCL	UCL
Ages 18-25	82	438	18.7%	15.0%	22.5%
Ages 26-34	122	569	21.4%	18.0%	24.9%
Ages 35-64	189	1,143	16.5%	14.3%	18.7%
Ages Total	393	2,150	18.3%	16.6%	19.9%

##### Non-Basic / Non-Essential

Initiation	Num	Den	Rate	LCL	UCL
Ages 18-25	344	854	40.3%	36.9%	43.6%
Ages 26-34	449	1,103	40.7%	37.8%	43.7%
Ages 35-64	1,396	3,855	36.2%	34.7%	37.7%
Ages Total	2,189	5,812	37.7%	36.4%	38.9%

Engagement	Num	Den	Rate	LCL	UCL
Ages 18-25	128	854	15.0%	12.5%	17.4%
Ages 26-34	220	1,103	19.9%	17.5%	22.3%
Ages 35-64	629	3,855	16.3%	15.1%	17.5%
Ages Total	977	5,812	16.8%	15.8%	17.8%

## Appendix B

### Select PCC Plan Data by Eligibility Type—Basic, Essential and Non-Basic/Non-Essential

#### Antidepressant Medication Management

##### Optimal Practitioner Contacts for Medication Management

Population	Num	Den	Rate	LCL	UCL
Basic	26	130	20.0%	12.7%	27.3%
Essential	20	73	27.4%	16.5%	38.3%
Non-Basic/Non-Essential	415	2,251	18.4%	16.8%	20.1%

##### Effective Acute Phase Treatment

Population	Num	Den	Rate	LCL	UCL
Basic	65	130	50.0%	41.0%	59.0%
Essential	41	73	56.2%	44.1%	68.2%
Non-Basic/Non-Essential	1,074	2,251	47.7%	45.6%	49.8%

##### Effective Continuation Phase Treatment

Population	Num	Den	Rate	LCL	UCL
Basic	50	130	38.5%	29.7%	47.2%
Essential	31	73	42.5%	30.4%	54.5%
Non-Basic/Non-Essential	718	2,251	31.9%	29.9%	33.8%

#### Follow-up After Hospitalization for Mental Illness

##### Follow-up within 7 Days

Population	Num	Den	Rate	LCL	UCL
Basic	117	374	31.3%	26.5%	36.1%
Essential	222	784	28.3%	25.1%	31.5%
Non-Basic/Non-Essential	3,010	6,129	49.1%	47.9%	50.4%

##### Follow-up within 30 Days

Population	Num	Den	Rate	LCL	UCL
Basic	193	374	51.6%	46.4%	56.8%
Essential	346	784	44.1%	40.6%	47.7%
Non-Basic/Non-Essential	4,231	6,129	69.0%	67.9%	70.2%



# Appendix C: PCC Plan Data With and Without the Essential Population



## Appendix C

### PCC Plan Data With and Without the Essential Population

#### Breast Cancer Screening

	Num	Den	Rate	LCL	UCL
PCCP	8,226	12,665	65.0%	64.1%	65.8%
PCCP w/o Essential	8,175	12,586	65.0%	64.1%	65.8%

#### Cervical Cancer Screening

	Num	Den	Rate	LCL	UCL
PCCP	31,537	42,158	74.8%	74.4%	75.2%
PCCP w/o Essential	31,422	41,990	74.8%	74.4%	75.2%

#### Prenatal and Postpartum Care\*

##### Postpartum Care

	Num	Den	Rate	LCL	UCL
PCCP	n/a	n/a	n/a	n/a	n/a
PCCP w/o Essential*	n/a	n/a	n/a	n/a	n/a

##### Timeliness of Postpartum Care

	Num	Den	Rate	LCL	UCL
PCCP	n/a	n/a	n/a	n/a	n/a
PCCP w/o Essential*	n/a	n/a	n/a	n/a	n/a

\* There were no women in the PCC Plans sample for this measure who had an Essential enrollment segment long enough to be considered to have had Enrollment coverage during the measurement period for this measure.

#### Frequency of Ongoing Prenatal Care\*

##### All Age Groups (<21, 21-40, 41-60, 61-80, 81+)

	Num	Den	Rate	LCL	UCL
PCCP	n/a	n/a	n/a	n/a	n/a
PCCP w/o Essential*	n/a	n/a	n/a	n/a	n/a

\* There were no women in the PCC Plans sample for this measure who had an Essential enrollment segment long enough to be considered to have had Enrollment coverage during the measurement period for this measure.

#### Adults' Access to Preventive/Ambulatory Healthcare

##### Ages 20-44

	Num	Den	Rate	LCL	UCL
PCCP	53,970	63,416	85.1%	84.8%	85.4%
PCCP w/o Essential	50,427	58,149	86.7%	86.4%	87.0%

##### Ages 45-64

	Num	Den	Rate	LCL	UCL
PCCP	40,414	45,004	89.8%	89.5%	90.1%
PCCP w/o Essential	37,298	41,163	90.6%	90.3%	90.9%

##### Ages TOTAL

	Num	Den	Rate	LCL	UCL
PCCP	94,384	108,420	87.1%	86.9%	87.3%
PCCP w/o Essential	87,725	99,312	88.3%	88.1%	88.5%

#### Appropriate Treatment for Children with Upper Respiratory Infections\*

	Num	Den	Rate	LCL	UCL
PCCP	n/a	n/a	n/a	n/a	n/a
PCCP w/o Essential*	n/a	n/a	n/a	n/a	n/a

\* This measure assesses care provided to members 18 years of age and younger. Therefore, there were no members in the PCC Plan's denominator who had Essential coverage.

#### Controlling High Blood Pressure

	Num	Den	Rate	LCL	UCL
PCCP	264	411	64.2%	59.5%	69.0%
PCCP w/o Essential	263	404	65.1%	60.3%	69.9%

## Appendix C

### PCC Plan Data With and Without the Essential Population

#### Initiation and Engagement of Alcohol and Other Drug Dependence Treatment

##### Initiation 18-25

	Num	Den	Rate	LCL	UCL
PCCP	538	1,373	39.2%	36.6%	41.8%
PCCP w/o Essential	384	935	41.1%	37.9%	44.3%

##### Initiation 26-34

	Num	Den	Rate	LCL	UCL
PCCP	720	1,844	39.0%	36.8%	41.3%
PCCP w/o Essential	518	1,275	40.6%	37.9%	43.4%

##### Initiation 35-64

	Num	Den	Rate	LCL	UCL
PCCP	1,929	5,554	34.7%	33.5%	36.0%
PCCP w/o Essential	1,593	4,411	36.1%	34.7%	37.5%

##### Initiation Total

	Num	Den	Rate	LCL	UCL
PCCP	3,187	8,771	36.3%	35.3%	37.3%
PCCP w/o Essential	2,495	6,621	37.7%	36.5%	38.9%

#### Initiation and Engagement of Alcohol and Other Drug Dependence Treatment

##### Engagement 18-25

	Num	Den	Rate	LCL	UCL
PCCP	239	1,373	17.4%	15.4%	19.4%
PCCP w/o Essential	157	935	16.8%	14.3%	19.2%

##### Engagement 26-34

	Num	Den	Rate	LCL	UCL
PCCP	378	1,844	20.5%	18.6%	22.4%
PCCP w/o Essential	256	1,275	20.1%	17.8%	22.3%

##### Engagement 35-64

	Num	Den	Rate	LCL	UCL
PCCP	971	5,554	16.5%	15.5%	17.5%
PCCP w/o Essential	728	4,411	16.5%	15.4%	17.6%

##### Engagement Total

	Num	Den	Rate	LCL	UCL
PCCP	1,534	8,771	17.5%	16.7%	18.3%
PCCP w/o Essential	1,141	6,621	17.2%	16.3%	18.1%

#### Follow-up After Hospitalization for Mental Illness

##### Follow-up within 7 Days

	Num	Den	Rate	LCL	UCL
PCCP	3,349	7,287	46.0%	44.8%	47.1%
PCCP w/o Essential	3,127	6,503	48.1%	46.9%	49.3%

##### Follow-up within 30 Days

	Num	Den	Rate	LCL	UCL
PCCP	4,770	7,287	65.5%	64.4%	66.6%
PCCP w/o Essential	4,424	6,503	68.0%	66.9%	69.2%

## Appendix C

### PCC Plan Data With and Without the Essential Population

Antidepressant Medication Management					
Optimal Practitioner Contacts					
	Num	Den	Rate	LCL	UCL
PCCP	461	2,454	18.8%	17.2%	20.4%
PCCP w/o Essential	441	2,381	18.5%	16.9%	20.1%
Effective Acute Phase Treatment					
	Num	Den	Rate	LCL	UCL
PCCP	1,180	2,454	48.1%	46.1%	50.1%
PCCP w/o Essential	1,139	2,381	47.8%	45.8%	49.9%
Effective Continuous Phase Treatment					
	Num	Den	Rate	LCL	UCL
PCCP	799	2,454	32.6%	30.7%	34.4%
PCCP w/o Essential	768	2,381	32.3%	30.4%	34.2%

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