

HHS COMMITTEE #2  
June 24, 2009

**MEMORANDUM**

June 22, 2009

TO: Health and Human Services Committee

FROM: Linda McMillan, Senior Legislative Analyst 

SUBJECT: **Briefing and Discussion: Evaluation of the Montgomery Cares Behavioral Health Care Pilot Program**

*Those expected for this session:*

Uma Ahluwalia, Director, Department of Health and Human Services  
Becky Smith, DHHS Program Manager, Montgomery Cares  
Sharon Zalewski, Director, Center for Health Care Access, Primary Care Coalition  
Dr. Carol Alter, Department of Psychiatry, Georgetown University  
Jennifer Pauk, Behavioral Health Program Manager

At this worksession, the Committee will receive a briefing on the Montgomery Cares Behavioral Health Care Program and the evaluation that has been conducted by Georgetown University. Slides for the presentation are attached at © 1-29 and the Mid-Year FY08-09 Evaluation is attached at © 30-59.

**The goal of the Montgomery Cares Behavioral Health Care Program is to establish an evidence-based collaborative care model that provides behavioral health care to Montgomery Cares patients in the primary care setting.**

The Montgomery Cares Behavioral Health Care (MC-BHC) Program is currently at three of the Montgomery Cares clinics: (1) Holy Cross, (2) Proyecto Salud, and (3) Mercy Clinic.

As a part of the FY10 budget worksessions, the HHS Committee discussed a proposed reduction to the funding for the Montgomery Cares Behavioral Health Care Pilot. At the recommendation of the Montgomery Cares Advisory Board, the HHS Committee recommended and the Council agreed to restore the Executive's proposed reduction of \$70,000 and approved \$600,000 in funding for FY10. At the HHS Committee worksession it was noted that Mid-Year FY08-09 Evaluation of the Behavioral Health Care Pilot Program, which was completed in February 2009, showed that of the 425 unique patients served during the evaluation period, 60% met the diagnostic criteria for depression and anxiety disorders, 25% were considered at risk for mental health disorders, and 16% needed primary psychiatric and/or substance abuse services. The program appears to be successful in treating depression and anxiety and the per-user costs are decreasing as the efficiency of the program improves. The evaluation also noted that over 70% of those served by the program were women and the average age at the three clinics was between 42 and 47 years old. Providers interviewed noted that the population being served have a tendency to combine mental and physical health problems and that, in addition to the stigma of seeking mental health treatment, because patients are low-income they do not follow-through with referrals because of transportation issues. Providing mental health care at the primary health care setting makes it more likely that patients will follow through with treatment recommendations.

The presentation slides note that this pilot began in 2004. Information at © 8 indicates that there is now a greater use of licensed mental health professionals rather than Registered Nurses and an increased attention to social services. Language capacity is English, Spanish, French, and Portuguese. Circle 9 indicates that referrals are increasing and that about 10% of all patients seen at the three participating clinics have participated in the Behavioral Health Care Program. It is expected that this will increase to about 13% in FY10 (© 13).

Information at © 29 shows projected costs estimates if behavioral health services were expanded to serve all patients in Montgomery Cares, assuming that about 30% of patients have mental health care needs and that about one-half of those will be willing to seek care.

Council staff also notes that the Montgomery Cares Behavioral Health Care Program has provided training in collaboration with the DHHS Abused Persons Program. The Montgomery Cares Advisory Board was informed that in April and May the following sessions were provided: (1) *When and How to Say No: Providing Services to Patients with Addictions* – held at Proyecto Salud; and (2) *The Use of Psychotropic Medications to Treat Post Traumatic Stress Disorder* – held at Holy Cross Health Center. A session on the *Use of Medications to Treat Depression and Anxiety in the Primary Care Setting* is scheduled to be held at the Mercy Health Clinic in June.

# Montgomery Cares Behavioral Health Program

**Montgomery County Council HHS Work Group  
June 24, 2009**

**Sharon Zalewski, Director, Center for Health Care Access  
301-628-3412  
Jennifer Pauk, Behavioral Health Program Manager  
301-628-3407**

# Need for Behavioral Health in MC Population

## 2009 Rand Evaluation of Montgomery Cares from 2006 - 2008

General MC population self-reported:

- 13% fair or poor mental health
- 16% current depression
- 22% current depression OR fair or poor mental health

“ . . . clinics not involved in the behavioral health care pilot report that obtaining mental health care services for their patients is a significant problem and even that they are sometimes reluctant to diagnose depression because of a lack of available treatment options. Other clinics reported initiating care with medication therapy but not being able to offer follow-up appointments or other types of treatment. ***Thus, we recommend increasing attention to mental health problems among Montgomery Cares patients and strengthening access to mental health care.***”

# Behavioral Health In Primary Care Settings

**Most Mental Health treatment occurs in the Primary Care setting, and this is often the setting of choice for patients**

- 50% of all mental health care is provided by primary care providers
- 60% of all antidepressants are prescribed by primary care providers
- 60% of primary care visits have psychosocial drivers

**Despite this, treatment in the Primary Care setting is often not optimal**

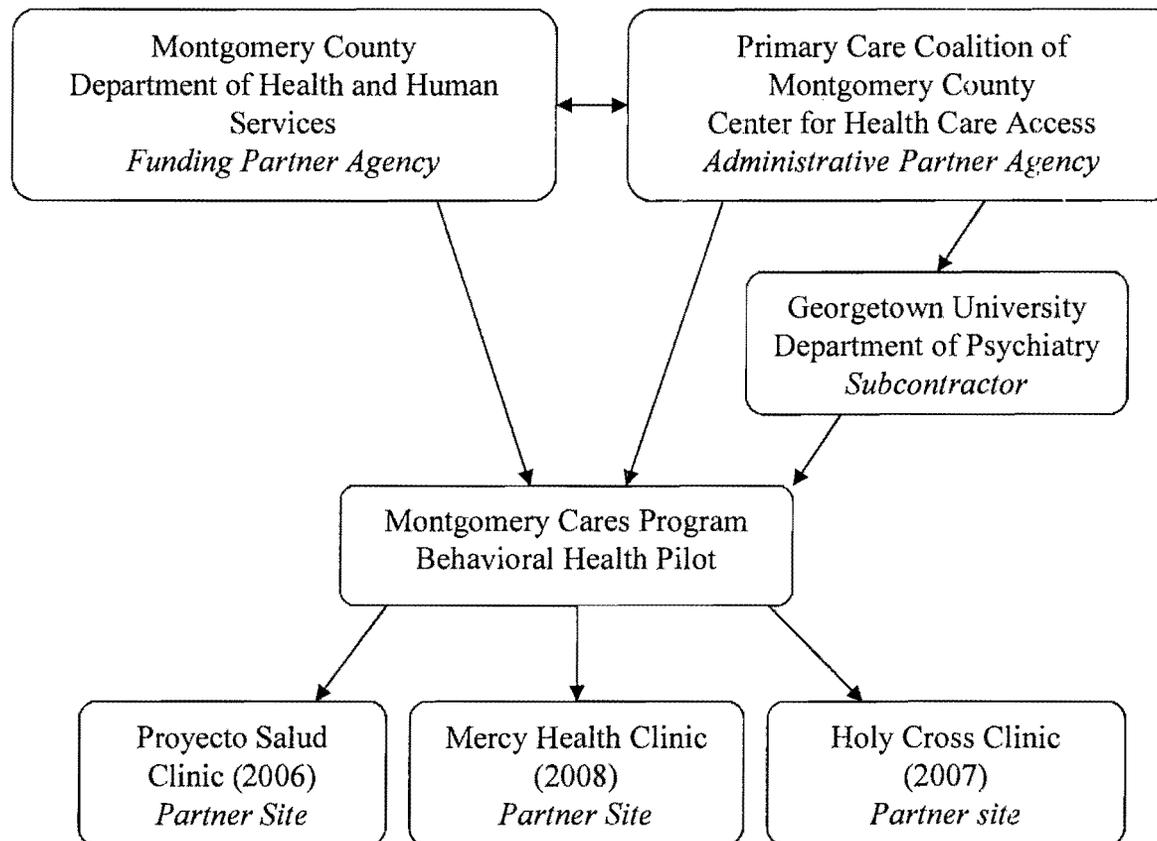
- PCPs often do not recognize or treat mental health disorder
- PCP referrals to mental health professionals are not successful
- PCPs are prescribing antidepressants but treatment is often ineffective
- Patients discontinue use of medication too soon or stay on ineffective medications too long

# Behavioral Health Program Goal

**The goal of the Montgomery Cares Behavioral Health Program is to establish an evidence-based collaborative care model that provides behavioral health care to Montgomery Cares patients in the primary care setting.**

- Identify patients with behavioral health needs.
- Evaluate patients to determine diagnoses and appropriate levels of care.
- Collaborate with primary care providers to offer appropriate treatment including medication, support, social service intervention and short-term therapy.
- Refer patients to primary psychiatric or substance abuse services as needed and assist with follow-through.

# BHP Organizational Structure



# Behavioral Health Pilot Implementation

- 2004: Robert Wood Johnson “Healthy Body, Healthy Minds” Program.
- 2005: PCC contracted with Georgetown University, Department of Psychiatry, Center for Mental Health Outreach to design a behavioral health pilot program for Montgomery Cares.
- 2006: Collaboration between PCC, Georgetown Department of Psychiatry and DHHS results in the implementation of MC Behavioral Health Pilot.
- 2006: BHP implemented at Proyecto Salud.
- 2007: BHP implemented at Holy Cross Health Center Clinic.
- 2008: BHP implemented at Mercy Health Clinic.
- 2009: Evaluation phase is complete and the Behavioral Health Pilot becomes the Behavioral Health Program.



# Behavioral Health Pilot Challenges

- Variation in service delivery models among Montgomery Cares clinics.
- Clinics had limited space and resources to support BHP.
- Low comfort level of PCPs with treating mental health conditions.
- Continuity of patient care at those sites relying primarily on volunteer primary care providers.
- Appointment capacity for follow-up visits with PCPs was limited by the volume of patients requiring primary care.
- Co-payments were a barrier for those patients requiring more frequent primary care visits during early treatment.
- Lack of resources for uninsured patients with more severe mental health conditions-those beyond the scope of the primary care setting.
- Multi-cultural nature of Montgomery Cares patients.
- Complexity of patients physical and behavioral health needs combined with complex socio-economic situations.

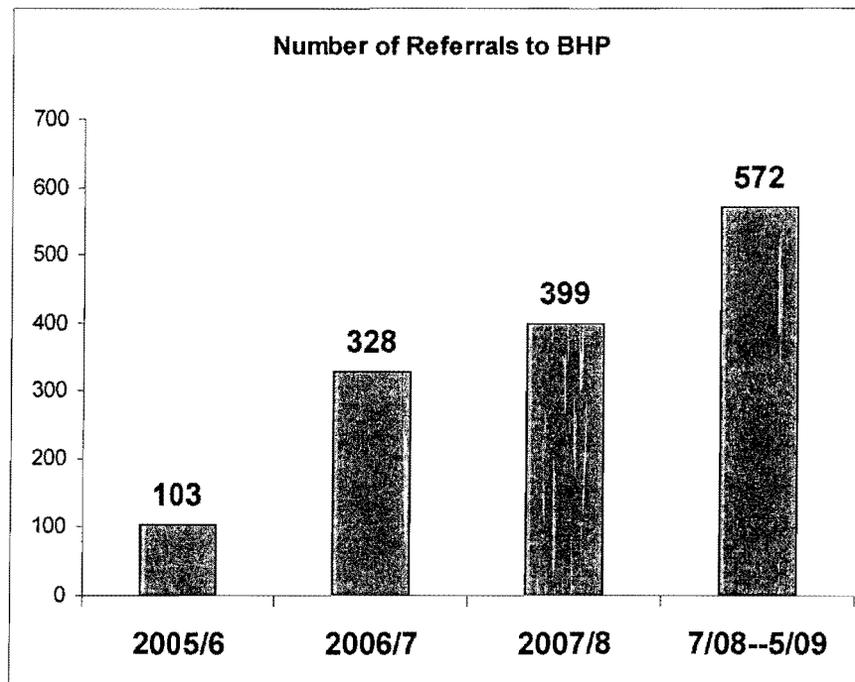
# Behavioral Health Pilot Adaptations Over Time

- Expanded the scope of service to address anxiety, post traumatic stress disorder, substance use and other mild mental health disorders.
- Added on-site psychiatric evaluation and limited care for patients with more severe mental health conditions.
- Greater use of care managers that are licensed mental health professionals rather than RNs and increased attention to social service and support needs of patients.
- Multi-lingual BHP staff, current language capacity is English, Spanish, French and Portuguese.
- Negotiated fee waivers and reserved appointment slots for patients requiring behavioral health-related primary care follow-up visits.
- Provide PCP training and on-site consultation and support for behavioral health concerns.
- Adapted referral, intake and evaluation processes to fit clinic flow and operations at each BHP site. Flexibility of program staff working with space and facility.



# Referrals

The number of referrals to the program from primary care providers has grown each year, demonstrating both a need and demand for services, as well as increasing level of integration into the clinics where the program is located.

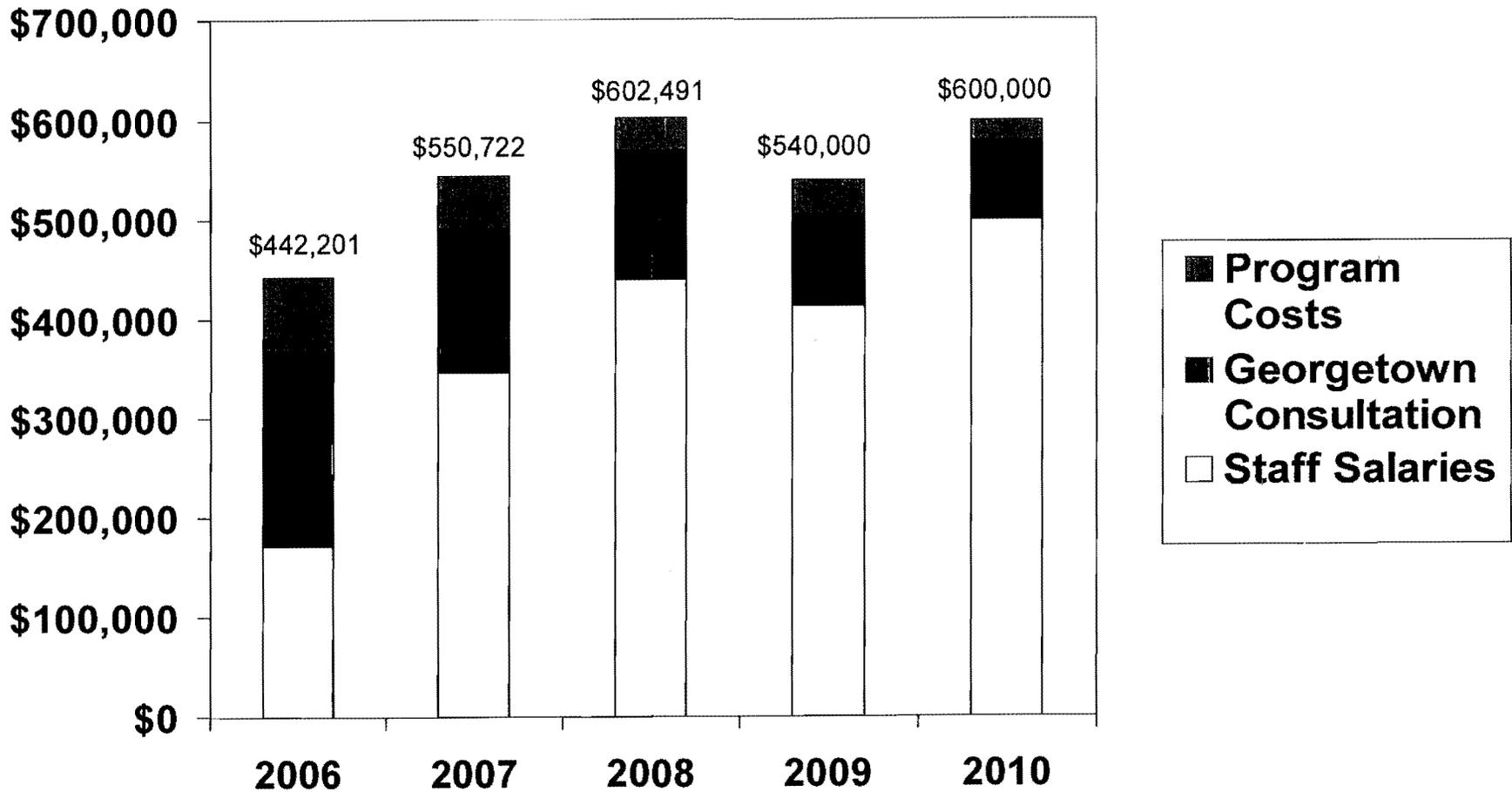


# Current Utilization

The number of patients has steadily increased. In FY2008 the program served a total of 490 patients, or 7% of the patient population of the three clinics. The total number of patients served in 2009 is 857 which is a 75% increase in the total number of patients served.

<b>PROJECTED NUMBER OF PATIENTS SERVED FY2009</b>			
	<b>Patient Population</b>	<b>Total Patients Served By BHP</b>	<b>% patient served</b>
<b>Holy Cross</b>	<b>1740</b>	<b>279</b>	<b>16.0%</b>
<b>Proyecto Salud</b>	<b>4794</b>	<b>313</b>	<b>6.5%</b>
<b>Mercy</b>	<b>1672</b>	<b>265</b>	<b>15.8%</b>
<b>Total</b>	<b>8206</b>	<b>857</b>	<b>10.4%</b>

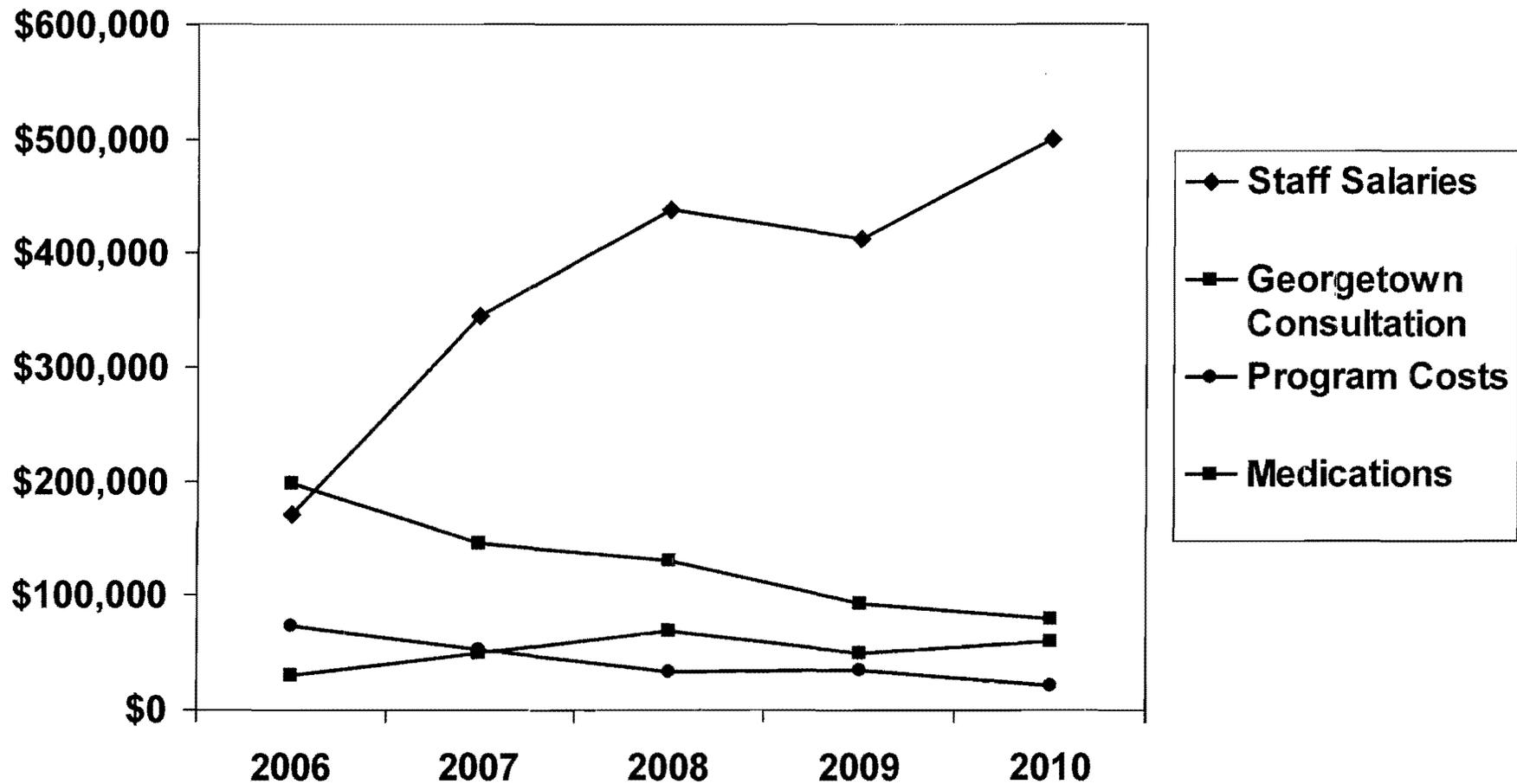
# Behavioral Health Pilot Budget



**Note:** The Primary Care Coalition contributed \$150,000 in foundation funds to the initial development of the Behavioral Health Pilot. This amount is included in the 2006 Budget.



# Behavioral Health Pilot Cost Distribution



\*2009 Projection  
\*\*2009 Projected  
2009 Budget  
\*\*2010 Budget

## Impact of Restored Funding for FY10

BHP Site	2009 Census	BHP Patients	% of Total	2010 Projected Census	BHP Projected Patients	% of Total
Holy Cross SS	1,740	279	16.0%	1,986	300	15.1%
Holy Cross GB	479	-	-	1,182	150	12.6%
Mercy	1,672	265	15.8%	1,770	300	16.9%
Proyecto Salud	4,794	313	6.5%	5,000	527	10.5%
<b>Total</b>	<b>8206</b>	<b>894</b>	<b>10.4%</b>	<b>9,938</b>	<b>1277</b>	<b>12.8%</b>

\$57,500 will support the addition of a half-time Care Manager and Family Support Worker at Proyecto Salud allowing 214 additional patients to be served and an overall increase in the percent of patients served by the BHP.

\$12,500 will partially restore program costs including local travel, telephones, supplies and postage essential for staff support and operations.

# Program Model: Collaborative Care

**Collaborative Care is a population based care philosophy which augments and supports primary care providers' capacity to treat common mental health problems and supports the use of evidenced-based models to diagnose and treat patients with mental disorders.**

## Characteristics of Effective Collaborative Care Models

- Educated and prepared consumers and providers
- Effective models to screen for, diagnose, and monitor common mental disorders
- Evidence-based interventions
- Communication among all individuals involved in the patients' care, often coordinated by a care manager

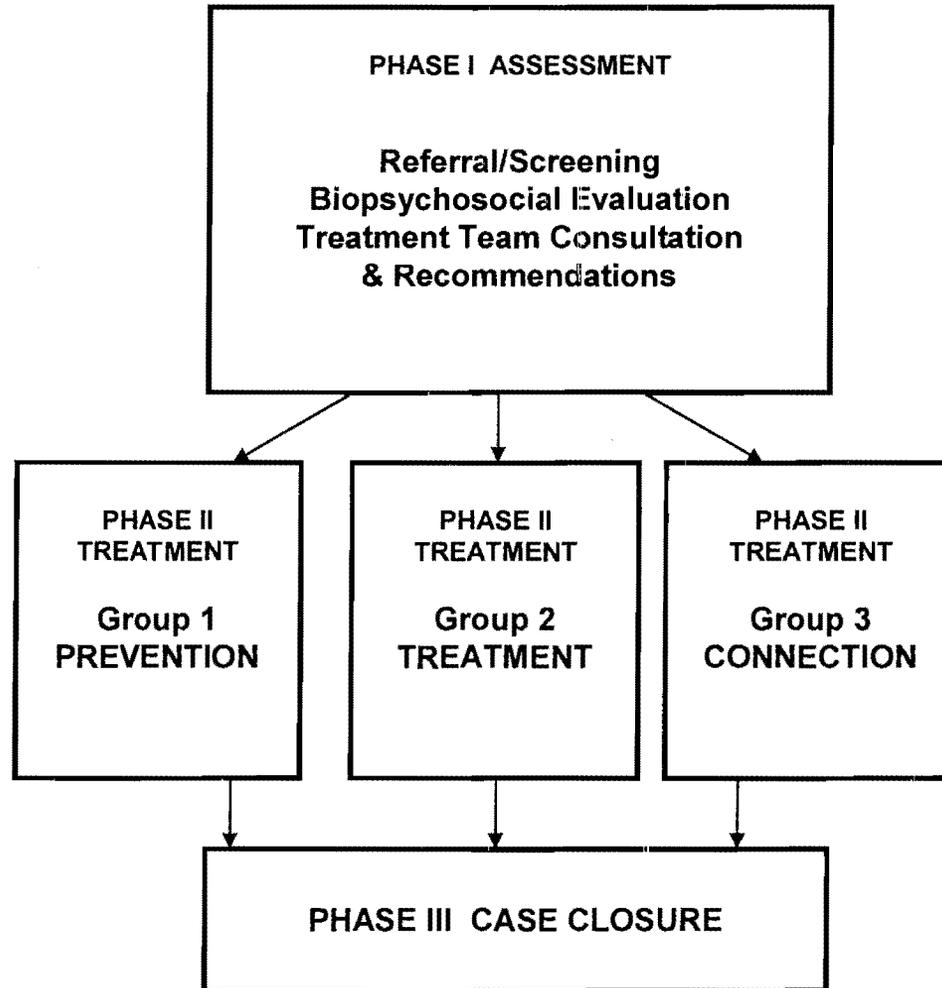
Neumeyer-Gromen et al., 2004;  
New Freedom Commission on Mental Health, 2003



# BHP Care Team

- **Primary Care Provider (PCP)**  
Refers patients  
Prescribes medications and follows care
- **Care Manager (RN or Licensed Mental Health Professional)**  
Conducts biopsychosocial assessment  
Provides psychoeducation, behavioral activation, short term therapy  
Monitors symptoms and treatment response  
Consults with psychiatrist and coordinates care with pcp
- **Family Support Worker**  
Screens patients  
Provides administrative support  
Refers to specialty care and community resources and social services
- **Consulting Psychiatrist**  
Provides case consultation for Treatment Team
- **Psychiatric Resident**  
Evaluates complex patients

# BHP Process: Phases of Treatment and Treatment Groups



# Treatment Goals and Common Problems

## Group I

### **Treatment Goal**

Address immediate needs of patients and provide support in order to reduce stress and prevent mental health problems.

### **Common Problems**

Domestic Violence, Acculturation, Grief/Loss, Access to Services

## Group II

### **Treatment Goal**

Reduce the level of symptoms of a diagnosed mental health problem and improve patient functioning.

### **Common Problems**

Depression, Generalized Anxiety Disorder, Panic Disorder, PTSD, *Bipolar Disorder*

## Group III

### **Treatment Goal**

Link patient with appropriate psychiatric and/or substance abuse services.

### **Common Problems**

Psychosis, Schizophrenia, Bi-polar, Substance Abuse Dependence

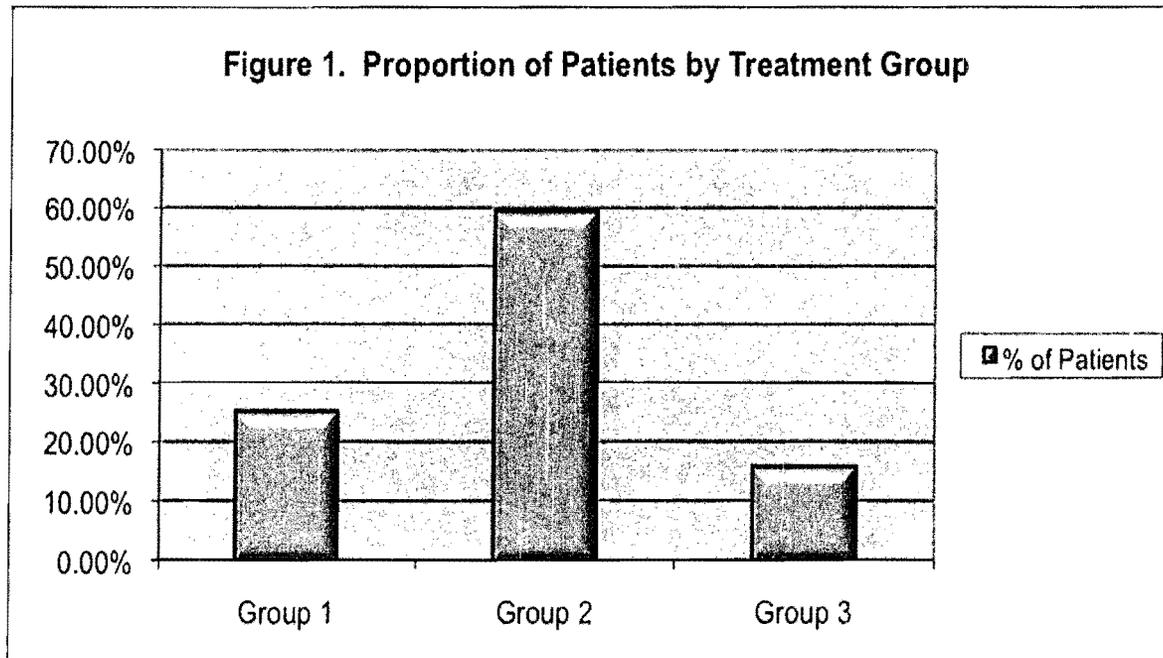


# Distribution of Patients By Treatment Group

The distribution of patients assessed indicates:

- **> 60 % would benefit from treatment for a mental health disorder in the primary care setting**
- **A significant need for prevention**
- **A significant need for services for patients with more complex needs.**

July 2008 – December 2008



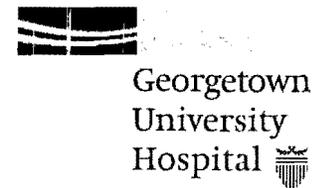
# Number of Encounters For Each Group

<b>Total Encounters</b>	<b>Group 1 Prevention</b>	<b>Group 2 Treatment</b>	<b>Group 3 Complex</b>
<b>890</b>	177 (19.89%)	596 (66.97%)	117 (13.15%)
<b>Overall per capita encounters</b>	2.85	4.08	3.00
<b>Data Source: CHLCare</b>			

# Behavioral Health Pilot Evaluation

## **Montgomery Cares Behavioral Health Pilot Evaluation**

**Carol L. Alter, MD  
Georgetown University Hospital  
Center for Mental Health Outreach  
Department of Psychiatry**



The name you know.  
The doctors you trust.



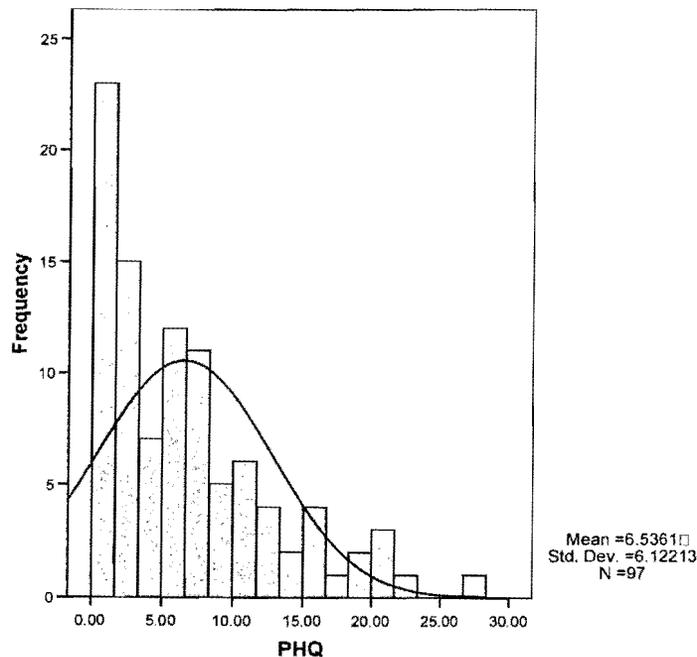
# Needs Assessments at Holy Cross and Mercy Clinic

The PHQ-9 is a screening tool used to identify depression in the primary care setting. At both sites, screening indicated

- High proportion of patients with probable diagnosis of depression (score >9)
- Many patients with a probable diagnosis of moderate or severe depression (score >15)

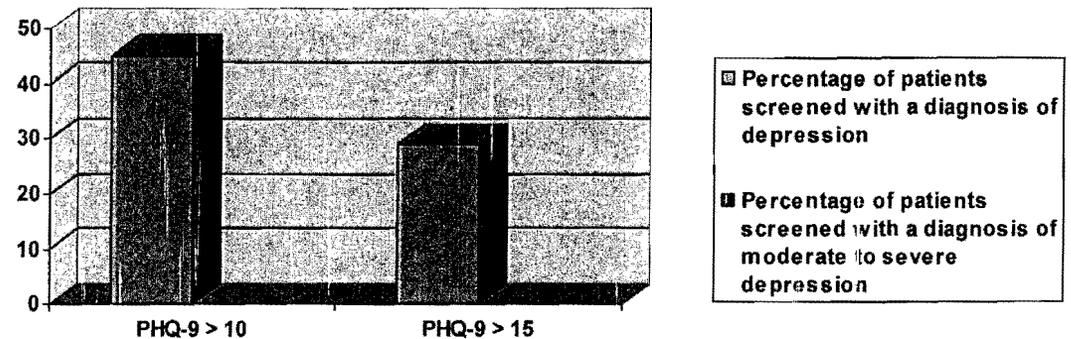
## HOLY CROSS CLINIC

The PHQ-9 screening tool was administered to 97 patients



## MERCY CLINIC

The PHQ-9 screening tool was administered to 55 patients



## Patient Demographics (2007/8)

- Mean age of the patients at all sites is between 42 and 47 years of age
- Approximately 75% of the patients served are female
- While there is some variation between sites, the program predominantly serves Latino patients
- Eighty percent or more of the patients at each site were immigrants



# Diagnoses (2007-2008)

	PS (n = 71)	HC (n = 88)	Mercy (n = 23)	Total (n = 182)
<b>DEP</b>	66.2%	67%	65.2%	66.1%
<b>GAD</b>	62% (n = 69)	54.5% (n = 84)	43.5%	55.7% (n = 176)
<b>Trauma Exposure</b>	54.9%	67%	73.9%	62.8%
<b>PTSD</b>	23.9% (n = 38)	36.4% (n = 51)	47.8% (n = 16)	32.8% (n = 105)

# Severity of Presenting Symptoms (2007-2008)

	<b>PS (n = 71)</b>	<b>HC (n = 88)</b>	<b>Mercy (n = 23)</b>	<b>Total (n = 182)</b>
<b>Severe</b>	38.0%	38.6%	30.4%	37.2%
<b>Moderate</b>	39.4%	39.8%	47.8%	40.4%
<b>Below Threshold Level of Symptoms</b>	22.6%	21.6%	21.8%	22.4%

# Total Face to Face Encounters: July-Dec 2008

<b>Clinic</b>	<b>No. of Encounters</b>	<b>July-Dec 08</b>
<b>PS</b>	<b>339</b>	
<b>HC</b>	<b>440</b>	
<b>MC</b>	<b>341</b>	
<b>Total</b>	<b>1120</b>	
<b>Data Source: CHLCare</b>		

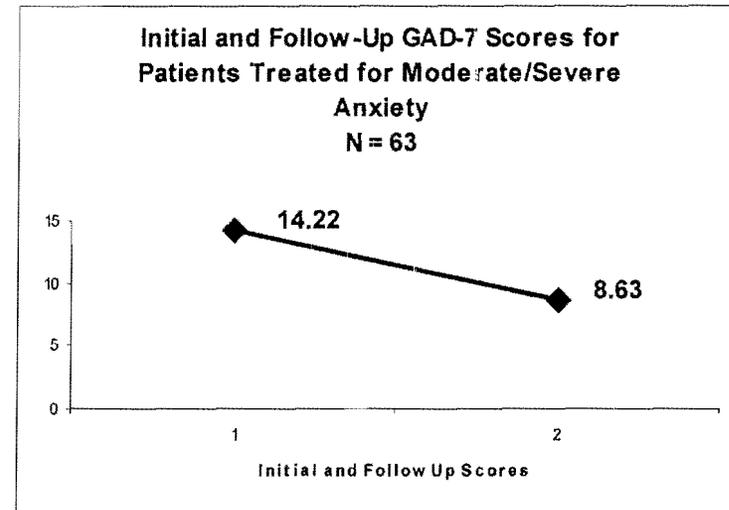
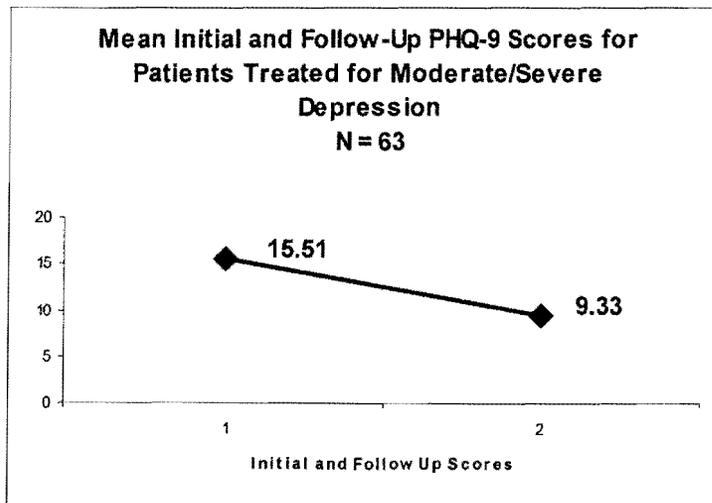
# Services Provided (July-Dec, 2008)

Type of Service	Clinic			Total
	PS <i>n</i> = 132	HC <i>n</i> = 164	MC <i>n</i> = 129	
Initial Screen	46	67	68	181
Evaluation	62	53	43	158
Medication Management/Education	79	153	106	338
Reassessment	165	115	100	380
Social Service Intervention	206	87	129	422
Therapy	9	11	15	35
Crisis Management	7	10	3	20
Telephone Call	436	395	670	1501
Data Source: CHLCare				

# Clinical Outcomes

Group II patients receive treatment in the primary care setting. Based on assessment scores before treatment and during treatment this group of patients appears to be less depressed and anxious after receiving treatment.

- The mean PHQ-9 fell from 15.51 (moderate/severe) to 9.33 (mild)
- The mean GAD-7 fell from 14.22 (moderate) to 8.63 (mild)



July 2008 – December 2008

# Costs

- Cost per program patient: \$435-\$618
- Sharp reduction in cost from FY 07-08 (\$533-\$895)
  - Increased efficiency and
  - Increased number of patients served (spreading fixed costs)
- Current clinical/administrative structure can support additional direct care delivery
  - cost/patient should continue to decrease with limited expansion
- Cost estimates are in line with other collaborative care model costs
- Research on the costs and cost-effectiveness of collaborative care suggests that these models cost from \$125 to \$500 more per patient per year for direct clinical services (Katon & Seelig, 2008).

# Estimated Cost for Serving the Population

- 25,000 uninsured patients
- 30% or 7,500 will have mental health needs
- 50% or 3,750 of those with needs will seek care
- Estimated cost providing behavioral health service for the current Montgomery Care population (25,000) would range from \$1,631,000 to \$2,337,200 (based on per patient costs of \$435 and \$623, respectively).
- \$1,631,000 covers only access to collaborative care treatment teams for all sites with limited psychiatric support.
- \$2,337,200 supports a comprehensive approach to behavioral health care based on the collaborative care model but also including psychiatric consultation, evaluation and treatment, training for primary care providers and coordination of behavioral health services across the Montgomery Care health system.

**Montgomery Cares Behavioral Health Project:  
Mid- Year Evaluation FY 08-09**

**Presented to the Primary Care Coalition, Inc.  
by the Georgetown University Department of Psychiatry  
and Center for Mental Health Outreach**

**February 17, 2009**



## Montgomery Cares Behavioral Health Pilot Team

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Jennifer Pauk, LCSW-C, MPH	Program Director
Sharon Zalewski	Director, Center for Health Care Access

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## **Mid-Year Evaluation Report FY 08-09 Executive Summary**

### **Evaluation Purpose/Questions**

The goal of the current mid-year evaluation of the Montgomery Cares Behavioral Health Pilot (MCBHP) was twofold. First, to summarize data on the patients treated, the services provided, clinical outcomes, and costs of the MCBHP. Second, to assess the perspective of the providers in the three participating clinics on the strengths of the MCBHP and areas of improvement needed.

More specifically, the evaluation sought to answer the following questions:

1. Who did the MCBHP serve?
2. What services did the MCBHP provide?
3. What was the outcome of the treatment?
4. What was the cost of the treatment?
5. What is the primary care provider/staff perspective on the MCBHP?

### **Key Findings**

- There continues to be a high level of need for behavioral health services to treat depression and anxiety disorders in Montgomery County, MD.
- The MCBHP saw 425 unique patients during the first six months of FY 08-09 fiscal year, accounting for 1120 individual encounters.
- Approximately 60% of patients served met diagnostic criteria for depression and anxiety disorders. Another 25% were considered at-risk for mental health disorders due to subthreshold symptoms and/or significant social service needs. The final 16% of patients needed primary psychiatric and/or substance abuse services. MCBHP worked with this group of patients to get them linked to appropriate primary psychiatry and/or substance abuse services in the County.
- Patients that were treated by the MCBHP got better. Patients whose earliest assessment during the current fiscal year exceeded diagnostic thresholds had dropped to below threshold levels of depression and/or anxiety symptoms by their most recent follow-up assessment, on average. This suggests that the clinical

program in place is effectively treating depression and anxiety disorders. In addition, many patients with subthreshold symptoms received referrals and supportive services; we believe that this may have a preventative effect. Patients with more complex mental health or substance abuse were referred to specialty mental health care and/or substance abuse services but also received supportive services.

- Per user costs of the MCBHP have decreased considerably this year. A preliminary review of cost data suggests that the MCBHP costs between \$435 and \$566 per user. Per user costs of the MCBHP have decreased approximately 20% to 35% this year, when compared to costs last year. This reflects both the increased efficiency and the increased number of patients served by the MCBHP this year.
- Primary care provider and staff interviews and surveys suggest an overall level of enthusiasm for the MCBHP. Providers varied in their level of comfort and knowledge in treating mental health disorders. They generally thought that training and more engagement with the MCBHP would be helpful. The providers and staff also made suggestions for training strategies and content. The MCBHP has already made efforts to increase engagement and consultation with the addition of a psychiatric resident to the MCBHP team.

## **Recommendations**

The following recommendations are offered:

- Continue the pilot at Proyecto Salud, Holy Cross Hospital Health Center, and Mercy Health Clinic. Staffing should be continued at the same level. However, it may be important to redistribute effort as needed to address the larger patient population at Proyecto Salud.
- A major focus of the next six months should be increasing clinic engagement and expanding training offered to primary care providers and staff. This should be facilitated by the addition of the psychiatric resident who now has clinic hours at two of the three MCBHP clinics and can provide consultation to the primary care providers. In addition, the MCBHP is planning a monthly newsletter to provide primary care providers with cutting edge knowledge and to provide a forum to address provider questions. The providers highlighted a number of areas for future trainings. The MCBHP should consider trainings in the diagnosis and pharmacological management of depression and anxiety disorders within the next six months. All trainings should be videotaped and made available to new clinic staff as they are hired.
- The teams at each clinic continue to struggle to find adequate specialty mental health care for patients with serious and persistent mental illness and/or substance

abuse (Group 3). Further examination of these barriers is warranted in the end of year evaluation.

- The program has recently begun documenting behavioral activation services that are provided to patients. This effort to more greatly account for supportive services provided to patients is extremely important because these interventions likely contribute greatly to patient improvement and account for considerable effort by MCBHP staff. Further, the MCBHP may want to consider the addition of support groups or other group interventions to expand the support services offered.
- Much has been learned during the past three and a half years of this pilot. The accumulated data suggests that the MCBHP provides a very needed service in a cost-efficient way. This service should be expanded to a general benefit to all primary care patients in the Community HealthLink system. It is important to note that since the pilot began, the collaborative care community has matured significantly. There are now technical assistance centers as well as trainings available that will be able to facilitate this expansion.
- The MCBHP has been using CHLCare to collect data for the past six months. This has greatly improved the efficiency of data capture and reporting for the project. However, CHLCare does not capture all of the data that may be useful for the continued monitoring and improvement of the program. Therefore, the MCBHP may wish to include chart reviews of specific quality indicators in future evaluations.

## Mid-Year Evaluation Report FY 08-09

### I. Evaluation Introduction/Background

In response to the high prevalence of depression and anxiety disorders in the population served by the Montgomery Cares Program, the Montgomery Cares Behavioral Health Pilot (MCBHP) was funded in 2005. The Department of Health and Human Services (DHHS), the Primary Care Coalition of Montgomery County, MD, Inc., and the Center for Mental Health Outreach in Georgetown University's Department of Psychiatry worked together to design the project. Since its inception, the MCBHP has been implemented in three Community HealthLink clinics, Proyecto Salud in Wheaton, MD, Holy Cross Hospital Health Center in Silver Spring, MD, and Mercy Health Clinic in Gaithersburg, MD.

The MCBHP's evidence-based collaborative care is a model of care designed to support the efforts of the primary care provider to treat common mental health disorders in the primary care setting. This has been achieved by establishing formal processes and practices to avoid the common pitfalls of typical treatment in primary care related to identification, evaluation, and adequate treatment. Thus, the MCBHP seeks to: 1) identify patients with mental health needs; 2) evaluate the patients to determine diagnoses and appropriate levels of care, and 3) collaborate with primary care providers to provide appropriate treatment including medication, support, social service intervention, and/or referral to primary psychiatric or substance abuse services.

The MCBHP is evaluated twice each year at the mid-year and end-of-year points. The current report presents findings from the mid-year evaluation of the MCBHP for FY 08-09, which includes the activities of the MCBHP from July 1, 2008-December 31, 2008.

### II. Evaluation Overview

The goal of the current mid-year evaluation was twofold. First, to summarize data on the patients treated, the services provided, clinical outcomes, and costs of the MCBHP. Second, to assess the perspective of the providers in the three participating clinics on the strengths of the MCBHP and areas of improvement needed.

More specifically, the evaluation sought to answer the following questions:

#### 1. Who did the MCBHP serve?

This included the number of unique patients served, patient demographics, and presenting problems of the patients at each clinic and for the program as a whole.

## **2. What Services did the MCBHP Provide?**

This included the number of referrals by primary care providers to the MCBHP, the total number of encounters, the total number of encounters by treatment group and the types of services provided. When possible these data were compared to FY 07-08 benchmarks.

## **3. What was the Outcome of the Treatment?**

This included an examination of depression and anxiety outcomes for the program as a whole. Patients were included in these analyses if their first assessment of this fiscal year was above the diagnostic threshold. Future outcome analyses for Group 1 (At-Risk/Subthreshold) and Group 3 (Complex) patients are discussed.

## **4. What was the Cost of the Treatment?**

The clinical, administrative, and pilot costs of the program are provided in addition to the cost per user. These estimates are compared to FY 07-08 benchmarks.

## **5. What is the Primary Care Provider/Staff Perspective on the MCBHP?**

The perspective of primary care providers and staff is summarized based on data from key stakeholder interviews and provider/staff questionnaires. The questionnaires and interviews surveyed provider/staff comfort with treating mental health disorders in the primary care setting, knowledge of mental health disorders and treatment, understanding of the collaborative care model, and preferred content and methods for future training.

## **III. Data Sources and Collection**

The data source for each evaluation question is detailed below:

### **1. Who did the MCBHBP serve?**

### **2. What Services did the MCBHP Provide?**

### **3. What was the Outcome of the Treatment?**

The data source for Evaluation Questions 1-3 (above) was CHLCare, the Community HealthLink clinics' electronic medical record. Data were entered in the course of routine clinical care and extracted for the purpose of the current evaluation. The Program Director and Evaluation Director reviewed the data to identify missing data and obvious inconsistencies or other types of errors. Whenever possible, missing data was entered and errors were corrected. For each analysis below, missing data is reported. Data were analyzed using Microsoft Excel 2008 for Mac and SPSS 16.0 for Mac.

### **4. What was the Cost of the Treatment?**

Cost data were obtained from the Primary Care Coalition's budget tracking.

## **5. What is the Primary Care Provider/Staff Perspective on the MCBHP?**

Data were obtained via key stakeholder interviews and provider/staff questionnaires. These data are intended to serve as a baseline against which to measure increased comfort, knowledge, and engagement following educational/training activities that the MCBHP is planning for the second half of the current fiscal year. The Program Director and the Evaluation Director jointly wrote the semi-structured interview and the questionnaire. The questionnaire and interview covered similar topics, with the interview intending to get more in-depth information. They covered provider/staff comfort with treating mental health disorders in the primary care setting, knowledge of mental health disorders and treatment, understanding of the collaborative care model, and preferred content and methods for future training.

The Evaluation Director worked with either the clinic director or administrator at each clinic to formulate a plan to distribute the questionnaires to all clinical staff. MCBHP or clinic staff collected the completed questionnaires.

The Program Director identified two key stakeholders at each clinic, typically a primary care provider and an administrator. The Evaluation Director approached each interviewee by phone or email to explain the purpose of the interview. It was deemed important to have the interviews conducted by a third-party who had not previously met the interviewees and had no preformed opinions about the MCBHP. The interviews were conducted by Priscilla Dass-Brailsford, PhD, a clinical psychologist completing a sabbatical at Georgetown University Department of Psychiatry. She has expertise in interviewing and qualitative data analysis. Dr. Dass-Brailsford wrote a comprehensive summary of each interview. Each interview summary was reviewed by Dr. Dass-Brailsford and the Evaluation Director. Dr. Dass-Brailsford then wrote an overall summary of the key stakeholder interviews, which was then reviewed by the Evaluation Director.

#### IV. Data Summary for July 1, 2008-December 31, 2008

##### 1. Who did the MCBHP Serve?

###### Number of Unique Patients Served

An important goal of the MCBHP during the current fiscal year was to increase the number of patients seen by the program in order to meet a greater proportion of the need for behavioral health services. In order to do so, goals were set based on each sites' projected total clinic population and estimates of need. It is estimated that 30% of patients at each clinic has a depressive and/or an anxiety disorder that could be treated by the MCBHP. It is likely that only half or 15% would seek services. Goals were set for each clinic in November 2008. For PS, the goal was set at 8% of the total clinic population. For HC and MC, the goal was set at 15% of the total clinic population. These goals were higher because the total clinic population at HC and MC are significantly smaller. Table 1 lists the number of unique patients served by each clinic and the program as a whole as well as progress toward the FY08-09 goal.

The MCBHP served a total of 425 patients during the first six months of the FY 08-09. This level is close to 50% of the goal for the year, and is just below the total of 490 unique patients who received services in FY 07-08. Based on these numbers, it is expected that the program will meet or exceed the FY08-09 goal by June 2009 as the program is now fully staffed and several measures have been taken to increase the number of patients served. These include allocating additional staff time to providing services at the largest site, PS, as well a focusing more on actively screening patients at each clinic. These measures have already impacted the productivity as is evident when data is examined by month.

<b>Table 1. Unique Patients Served Compared to Productivity Goals</b>				
<b>Clinic</b>	<b>Unique Patients Served FY 07-08 (% of clinic population)</b>	<b>Unique Patients Served July-Dec 08</b>	<b>Goal for FY 08-09 (% of projected clinic population)</b>	<b>Progress Toward Goal</b>
<b>PS</b>	197 (5%)	132	383 (8%)	34.46%
<b>HC</b>	214 (15%)	164	261 (15%)	62.83%
<b>MC</b>	79 (11%)	129	250 (15%)	51.60%
<b>Total</b>	490 (7%)	425*	894	47.54%
<b>Data Source:</b> CHLCare				
*In addition, an additional 48 unique patients received phone calls only.				

With regard to the individual clinics, PS has made 34.46% progress toward its goal. This is lower than expected and is likely due to the period of time when the clinic was not fully staffed. PS had a part-time non bi-lingual care manager for the first three months of the current fiscal year; and then it took three months to find a replacement care manager. During this time, the care managers from other sites provided some limited services. A family support worker was the main source of continuity during this time. HC and MC have reached 62.83 and 51.60%, respectively, of their goals for the fiscal year. This is higher than expected. These clinics are expected to exceed their goals by June 2009.

### Patient Demographics

Table 2 details the demographic characteristics of the patients seen by the MCBHP at each clinic. A brief summary of key demographic data follows.

- The average age of the patients served by the MCBHP at each clinic was in the early to mid 40's.
- The vast majority of patients served at each clinic were women.
- Although intended to be separate variables in the EMR, race and ethnicity were combined into one variable for this evaluation as these data were frequently entered as mutually exclusive (i.e., data was entered for one variable and entered as 'unknown' for the other). This was particularly true for the Latino patients at each clinic who were entered as 'Hispanic/Latino' for ethnicity and 'unknown' or 'other' for race. At each clinic, the most frequently represented race/ethnicity group was Latino. However, HC had significantly more variability in race/ethnicity.
- At PS and HC, the largest group of patients was single. At MC, the largest group of patients was married.
- Eighty percent or more patients at each clinic were immigrants, based on their country of origin data with PS having the highest proportion (94%).

<b>Table 2. Demographics of Patients Served</b>			
<b>Characteristic</b>	<b>Clinic</b>		
	<b>PS</b>	<b>HC</b>	<b>MC</b>
<b>No. of Patients</b>	132	164	129
<b>Mean Age (SD)</b>	46.96 (11.78)	42.48 (7.56)	44.10 (11.91)
<b>Gender</b>			
<b>Female</b>	78.03%	71.34%	82.95%
<b>Male</b>	21.21%	28.66%	17.05%
<b>Unknown</b>	0.76%	0.00%	0.00%

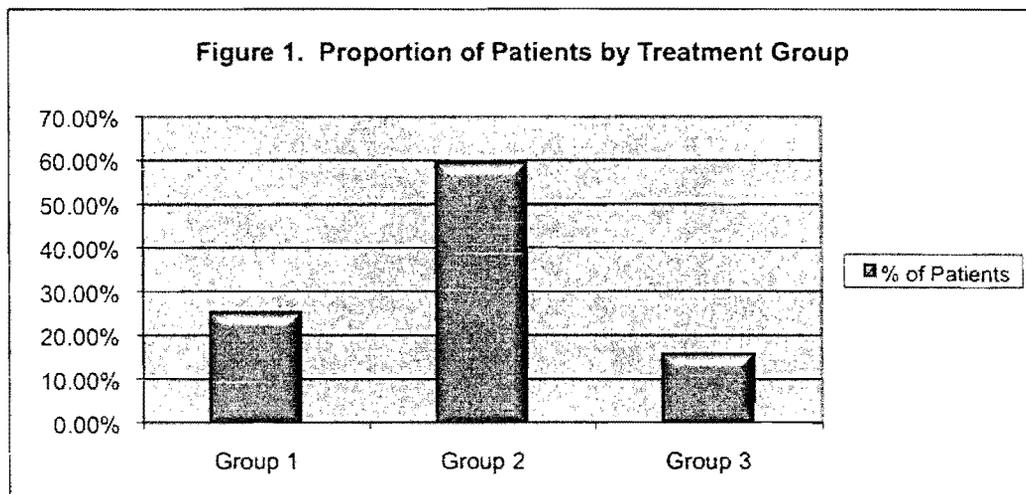
**Table 2 (continued). Demographics of Patients Served**

Characteristic	Clinic		
	PS	HC	MC
<b>Race/Ethnicity</b>			
Latino	91.67%	53.05%	77.52%
Black or African American	3.79%	22.56%	5.43%
Caucasian	4.55%	4.88%	10.85%
Asian	0.00%	0.00%	4.65%
Native Hawaiian	0.00%	1.22%	0.00%
Other	0.00%	1.83%	0.78%
Unknown	0.00%	16.46%	0.78%
<b>Marital Status</b>			
Single	33.33%	42.07%	24.03%
Married	28.79%	38.41%	47.29%
Separated/Divorced/Widowed	22.73%	12.20%	27.13%
Accompanied	9.85%	1.22%	0.00%
Unknown	5.30%	6.10%	1.55%
<b>Employed</b>			
Employed	53.79%	28.66%	59.69%
Unemployed	25.00%	28.66%	38.76%
Retired	0.00%	0.61%	0.00%
Unknown	21.21%	42.08%	1.55%
<b>English Proficiency</b>			
Proficient	13.64%	18.29%	22.48%
Some/Limited Proficiency	18.94%	21.34%	48.06%
Not Proficient	60.61%	14.02%	27.91%
Unknown	6.82%	46.34%	1.55%
<b>Proportion of Immigrants</b>			
% Immigrants	93.75%	79.70%	88.89%
<b>Countries of Origin</b>			
No. of Countries of Origin	20	31	26
Most Frequent Countries of Origin (El Sal = El Salvador) (Guat = Guatemala)	40.15% El Sal 8.33% Peru 6.82% Guat	20.73% El Sal 16.46% USA 7.32% Guat	25.58% El Sal 15.50% Peru 10.85% USA
Data Source: CHLCare			

## Presenting Problems

Patient diagnoses appeared to be consistent with those reported in prior years. More specifically, the most prevalent diagnosis was major depressive disorder. Generalized anxiety disorder and posttraumatic stress disorder were also common with many patients meeting criteria for more than one diagnosis.

After receiving an evaluation by the MCBHP team, patients were categorized into one of three treatment groups based on their diagnoses. Group 1 (At-Risk/Subthreshold) included patients who had subthreshold levels of symptoms or possibly no symptoms but who had social service needs. Group 2 (Treatment) included patients who met diagnostic criteria for depression, anxiety, and/or PTSD and who are appropriately treated in the primary care setting. Group 3 (Complex Patients) included patients with serious mental illness (e.g., schizophrenia, bipolar disorder) or an alcohol or substance use disorder that was not appropriately treated in the primary care setting. These patients were referred to primary mental health and/or substance abuse services. Figure 1 shows the proportion of patients treated by the MCBHP in each of the three groups.



For the MCBHP as a whole, these data demonstrate that, of the patients who receive a complete evaluation, approximately 60% of the patients fall into Group 2. This is consistent with the collaborative care model, which emphasizes the treatment of patients with common mental health disorders that are appropriately treated in the primary care setting. The data are suggestive of an appropriate fit of the model to the patient population across the three clinics.

Approximately 25% of patients evaluated by the MCBHP presented with subthreshold levels of symptoms and/or had social service needs only. These data underscore the need for the social service component of the MCBHP.

Approximately 16% of patients evaluated by the MCBHP had a psychiatric need beyond the scope of the MCBHP. These data underscore the importance of the availability of primary psychiatric and substance abuse services in the community.

Table 3 shows the proportion of patients at each clinic and for the program overall who were placed into each of the three treatment groups.

<b>Table 3. Proportion of Patients by Treatment Group for Each Clinic</b>				
<b>Clinic</b>	<b>No. of Patients Categorized</b>	<b>Group 1 At-Risk Patients (%)</b>	<b>Group 2 Treatment (%)</b>	<b>Group 3 Complex Patients (%)</b>
<b>PS</b>	<b>86</b>	19 (22.09%)	55 (63.95%)	12 (13.95%)
<b>HC</b>	<b>90</b>	19 (21.11%)	58 (64.44%)	13 (14.44%)
<b>MC</b>	<b>72</b>	24 (33.33%)	34 (47.22%)	14 (19.44%)
<b>Total</b>	<b>247</b>	62 (25.10%)	146 (59.11%)	39 (15.79%)
<b>Data Source: CHLCare</b>				

When the clinics are examined individually, there is some variability in the relative proportion of patients in each treatment group. MC had relatively fewer patients in Group 2 and more in both Groups 1 and 3.

## **2. What Services did the MCBHP Provide?**

The following section describes the encounter and service level data provided by the MCBHP during the first six months of the 08-09 fiscal year. Data related to patients referred into the program by primary care providers are presented first. Subsequently, data is provided regarding the number of encounters provided by the MCBHP and the types of services provided.

**Referrals by PCPs to the MCBHP**

The primary manner of entry into the program during this time period is through referral by a primary care provider. Table 4 lists the numbers of patients referred to the MCBHP at each clinic and to the program overall.

During the first six months of FY 08-09, the MCBHP received 260 patient referrals from the primary care staff. If referrals continue at this rate, one would expect to have 520 referrals at the end of the current fiscal year. This would represent a 30% increase in referrals over the number of referrals during the prior fiscal year. This suggests that the program has become more accepted by the primary care staff and is more integrated into the routine practice of the primary care providers. It also is suggestive of the recognition of the need for behavioral health services by the primary care providers and staff.

<b>Table 4. Number of Patients Referred by PCPs</b>	
<b>Clinic</b>	<b>Number of Referrals July-Dec 08</b>
<b>PS</b>	90
<b>HC</b>	85
<b>MC</b>	85
<b>Total</b>	260
<b>Data Source: Staff Records</b>	

**Total Number of Encounters**

The total number of encounters is an important measure of productivity. An encounter is defined as any service provided by MCBHP personnel that involves face to face patient contact and includes: screening, evaluation, medical management/education, social service visits, behavioral activation, therapy, and crisis management. Thus, the encounter data excludes telephone calls. Table 5 lists the total number of encounters at each clinic and for the MCBHP program as a whole.

The program as a whole logged 1120 encounters during the first six months of FY 08-09. If the MCBHP continues to log encounters at this rate, one would expect a total of 2240 encounters by the end of the fiscal year. This would represent a 23% increase in the number of encounters over the number of encounters during the prior fiscal year.

<b>Table 5. Total Number of Encounters</b>	
<b>Clinic</b>	<b>No. of Encounters July-Dec 08</b>
<b>PS</b>	339
<b>HC</b>	440
<b>MC</b>	341
<b>Total</b>	1120
<b>Data Source: CHLCare</b>	

### Number of Encounters by Treatment Group

The number of encounters per treatment group and per capita encounters per treatment group for each clinic and the program as a whole are presented in Table 6. These data give a sense of relative effort expended on each group.

<b>Table 6. Number of Encounters by Treatment Group</b>				
<b>Clinic</b>	<b>Total Encounters</b>	<b>Group 1 At-Risk (%)</b>	<b>Group 2 Treatment (%)</b>	<b>Group 3 Complex Patients (%)</b>
<b>PS</b>	<b>282</b>	54 (19.15%)	194 (68.79%)	34 (12.06%)
<b>PS per capita encounters</b>		2.84	3.53	2.83
<b>HC</b>	<b>323</b>	59 (18.27%)	230 (71.21%)	34 (10.53%)
<b>HC per capita encounters</b>		3.11	3.97	2.62
<b>MC</b>	<b>285</b>	64 (22.46%)	172 (60.35%)	49 (17.19%)
<b>MC per capita encounters</b>		2.67	5.06	3.50
<b>Total</b>	<b>890</b>	177 (19.89%)	596 (66.97%)	117 (13.15%)
<b>Overall per capita encounters</b>		2.85	4.08	3.00
<b>Data Source: CHLCare</b>				

For the program as a whole, the most effort was expended on Group 2 patients. Patients in Group 2 accounted for approximately 67% of the total encounters. Patients in Group 2 had 4.08 encounters, on average. This is compared to 2.85 per capita visits for Group 1 patients and 3.00 for Group 3 patients. These data underscore the fact that the MCBHP is treating a wide spectrum of patients. However, it is important to note that the count of encounters does not reflect the time spent or intensity of each encounter. Thus, it is possible that Group 2 encounters may reflect more time and intensity than the encounters for Groups 1 or 3.

When the clinic level data are examined, Group 2 had the highest number of encounters compared to other groups at each clinic. However, the number of encounters for Group 1

and Group 3 patients varied. For PS, patients in Group 1 had more encounters than patients in Group 3. However, because there were more Group 1 patients, the per capita number of evaluations was approximately the same for both groups. For HC, the total number of encounters and per capita encounters were higher for Group 1 as compared to Group 3. For MC, Group 1 patients accounted for more total encounters but per capital encounters were higher for Group 3.

### Types of Services Provided

To further understand the services provided by the MCBHP during the first six months of FY 08-09, Table 7 lists the number of each type of service provided by each clinic and the program as a whole.

<b>Table 7. Types of Services Provided</b>				
	<b>Clinic</b>			
<b>Type of Service</b>	<b>PS n = 132</b>	<b>HC n = 164</b>	<b>MC n = 129</b>	<b>Total</b>
<b>Initial Screen</b>	46	67	68	181
<b>Evaluation</b>	62	53	43	158
<b>Medication Management/Education</b>	79	153	106	338
<b>Reassessment</b>	165	115	100	380
<b>Social Service Intervention</b>	206	87	129	422
<b>Therapy</b>	9	11	15	35
<b>Crisis Management</b>	7	10	3	20
<b>Telephone Call</b>	436	395	670	1501
<b>Data Source: CHLCare</b>				

For the MCBHP as a whole, the most frequently provided intervention service was social service intervention, followed by reassessments and medication management/education. Therapy and crisis management were provided relatively infrequently. Within the past two months, an additional customized procedure code was added to CHLCare to capture behavioral activation services. Behavioral activation is a low-intensity psychotherapy that is conducted by both the care managers and the family support workers. Thus, data from

the end of year evaluation should more accurately reflect the amount of support services that the MCBHP is providing.

Telephone calls were extremely high, suggesting that a large amount of effort expended by the staff is not accounted for by the encounter data (which reflects only face-to-face visits). This is an essential component of collaborative care.

When the data is examined at the clinic level, social service intervention, reassessments, and medication management/education continue to be the three most frequently provided intervention services. However, their relative frequency varied. For PS, social service intervention and reassessments were far more common than medication management/education. The relatively fewer medication management/education services may reflect the fact that the clinic had a part-time non bi-lingual case manager for the first three months and then it took three months to find a replacement care manager. During this time, the care managers from other sites provided some limited services. A family support worker was the main source of continuity during this time. Thus, activities only performed by the care manager are fewer.

### ***3. What was the Outcome of the Treatment for Each Treatment Group?***

#### **Group 1 Outcomes**

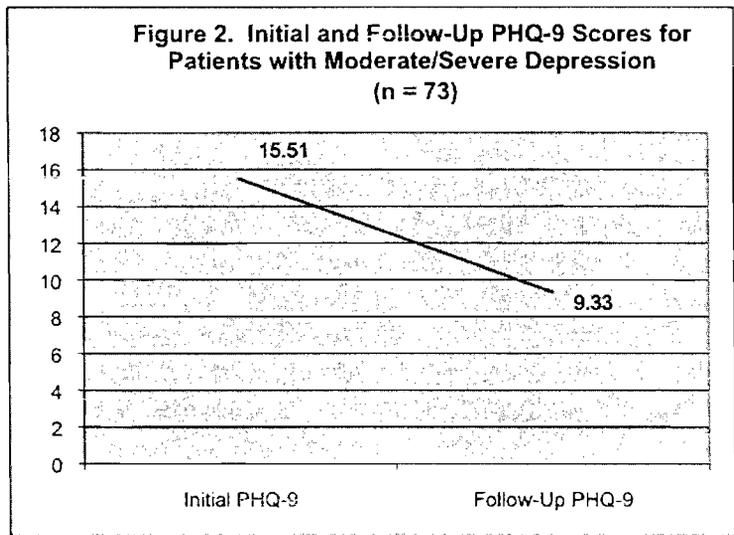
By the end of year evaluation, outcome data for Group 1 will be available. This will include information on the type and frequency of social service referrals made, more detailed information regarding support services offered (e.g., behavioral activation), and reassessments of Group 1 patients to ensure that their symptoms did not worsen.

#### **Group 2 Outcomes**

***Depression Outcomes.*** Depression was assessed using the PHQ-9, a brief assessment of depression typically used in primary care (Kroenke, Spitzer, & Williams, 2001; Spitzer, Kroenke, & Williams, 1999; Spitzer et al., 1994). In order to assess progress or improvement, two or more lab values were required. Of the 271 patients that had at least one PHQ-9 score registered as a lab-value in CHLCare, 128 had two or more PHQ-9 scores. In order to have adequate variability to detect progress, only patients whose first score was over the clinical threshold (PHQ-9 = 10) were included in the analyses. This left 73 patients who had both multiple scores and the first score above the clinical threshold. When more than two scores were present, the analysis included the first and most recent scores.

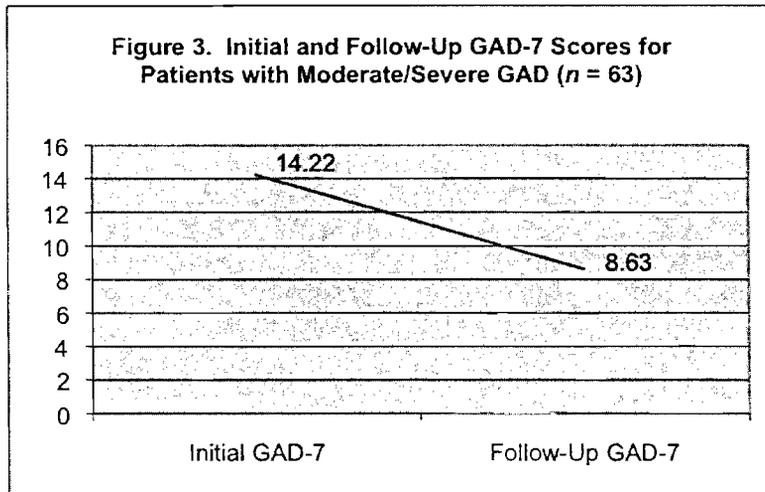
The mean initial PHQ-9 score was 15.51 ( $sd = 3.90$ ), which falls within the moderate/severe range (see Figure 2). The mean follow-up PHQ-9 score was 9.33 ( $sd = 6.42$ ), which falls within the mild range and is below the threshold of 10 that the MCBHP considers for successful treatment. The difference between the initial PHQ-9 and the follow-up PHQ-9 scores was statistically significant,  $t(72) = 8.09, p < .001$ . This difference

remained significant when the analysis controlled for the number of days between the initial and follow-up PHQ-9 scores,  $p < 0.1$ . The significance of the PHQ-9 score decreasing over time suggests that patients, on average, were less depressed at the time of follow-up.



**Generalized Anxiety Disorder Outcomes.** Generalized Anxiety Disorder was assessed using the GAD-7 (Spitzer, Kroenke, Williams, & Lowe, 2006). Of the 272 patients that had at least one GAD-7 score registered as a lab-value in CHLCare, 121 had two or more GAD-7 scores. In order to have adequate variability to detect progress, only patients whose first score was over the clinical threshold (GAD-7 = 10) were included in the analyses. This left 63 patients who had both multiple scores and the first score above the clinical threshold. When more than two scores were present, the analysis included the first and most recent scores.

The mean initial GAD-7 score was 14.22 ( $sd = 3.55$ ), which falls within the moderate range (See Figure 3). The mean follow-up GAD-7 score was 8.63 ( $sd = 5.41$ ), which falls within the mild range and is below the threshold of 10 that the MCBHP considers for successful treatment. The difference between the initial GAD-7 and the follow-up GAD-7 was statistically significant,  $t(62) = 7.80$ ,  $p < .001$ . This difference remained significant when the analysis controlled for the number of days between the initial and follow-up GAD-7 scores,  $p < .05$ . The significance of the GAD-7 score decreasing over time suggests that patients, on average, were less anxious at the time of follow-up.



**Group 3 Outcomes**

By the end of year evaluation, outcome data for Group 3 will be available. This will include an analysis of patients in this group including diagnosis and outcome of referrals to specialty mental health and/or substance abuse treatments. It is anticipated that this data will be more robust at the end of year after having a psychiatric resident working in the program for six months as he will be evaluating many of the Group 3 patients prior to referral.

**4. What was the Cost of the Treatment?**

A preliminary review of cost data suggests that the MCBHP costs between \$435-\$566 per user. This represents a sharp reduction of costs compared to estimates from FY 07-08, which ranged from \$533 to \$895 per user. This reflects both the increased efficiency and the increased number of patients utilizing MCBHP this year. These cost estimates are in line with estimates of other collaborative care programs. Research on the costs and cost-effectiveness of collaborative care suggests that these models cost from \$125 to \$500 more per patient per year for direct clinical services (Katon & Seelig, 2008).

**5. What is the Primary Care Provider/Staff Perspective on the MCBHP?**

**Provider Interviews**

The purpose of this part of the evaluation was to gather information from the primary care providers about the MCBHP located at their clinics. The data was gathered through an interview process conducted primarily via the telephone. Each participant was asked the same 10 questions and the interviews lasted about 30-60 minutes. Six individuals were

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interviewed; 3 were primary care providers and 3 were clinic administrators. The interviews were analyzed for common themes and important perspectives, which are described below.

***Need for Behavioral Health Care.*** Most of the participants saw more benefits than challenges in treating depression and anxiety disorders in the primary care setting. Several described themselves as major supporters of the MCBHP, which they viewed as essential for the overall well-being of their patients. The one stop health care model where patients receive all their services in one place was perceived as positive.

Depression was seen as having a serious impact on patients and their families. The physicians believed that if the depression was successfully treated, other physical problems would dissipate. In addition, many felt that for patients who returned repeatedly with minor complaints, it was more cost effective to get a behavioral health consultation as soon as possible to get to the root of the patient's problem.

The interviewees felt there were many benefits to integrating services for uninsured patients. The patients knew and trusted their providers, had developed strong relationships with them and having all patient services in one medical record supported high quality care. When medicating a patient, the providers preferred to review a complete and comprehensive medical chart; this was especially important when medications had interaction effects (heart palpitations and other physical side effects could be monitored).

Interviewees described the population they worked with as having a low level of education and literacy, having chronic medical problems and a tendency to combine mental and physical health problems. The stigma of having mental health problems was an additional barrier to treatment seeking; having MCBHP on site increased patient compliance. Since the patient population was largely low income, they did not follow through with referrals because of transportation and other financial issues. Providing mental health care at the same site where physical care was provided made it more likely that patients followed through with recommendations.

***Diagnosis and Treatment.*** The providers had the understanding that they made an initial determination of whether a patient needed mental services/support and referred them to MCBHP staff for an evaluation. The primary care provider later wrote the prescription based on the feedback from the MCBHP staff. This was considered a team effort. Having close proximity to the MCBHP was viewed as ideal – the providers could start patients on a medication and then refer them to MCBHP who provided follow-up.

The comfort primary care providers felt in diagnosing and treating anxiety and depression was variable. Some described themselves as being “around for a long time” and having familiarity with psychiatric issues. Some had received training in using the PHQ-9 and the GAD-7. However, they indicated that with patients who had complex problems they were not totally confident about their assessment. In these cases, the MCBHP served an important role in helping them to reach an appropriate diagnosis.

Primary care providers appreciated the assistance of the MCBHP team with patients who had failed to improve on a medication and required a change in treatment regimen. They also valued the MCBHP staff's close follow-up of patients. In addition, many indicated that as primary care providers they did not have the time to devote to a more conclusive understanding of a patient's issues. In these situations, MCBHP staff was seen as invaluable.

Comfort prescribing medications for depression and anxiety disorders also varied. Some providers described being uneasy prescribing medication based on discussions with MCBHP staff and the recommendation of a psychiatrist who had not met directly with the patient; they had to rely on the assessment of MCBHP staff.

**Interactions with MCBHP Staff.** All providers reported extremely positive interactions with the MCBHP staff. They shared a close, collaborative working relationship and viewed MCBHP staff as accessible, open and flexible. Having them on site was described as tremendously helpful for uninsured patients who would not seek mental health services otherwise or would have a hard time negotiating the system because of language, and other cultural challenges.

However, several physicians wished there was a larger behavioral health staff available for those who needed help; especially with patients who were torture victims and those who needed trauma-focused counseling. Although they were able to give patients medication, they did not always have adequate staff for follow-up and psychotherapy. They also believed that support groups were an idea worth exploring because so many of their patients were socially isolated. An additional challenge was not having a psychiatrist on site to guide the process when complications arose.

**Increasing Knowledge.** Interviewees identified many strategies to increase the knowledge of primary care providers related to the diagnosis and treatment of depression and anxiety disorders. Ongoing workshops in which CME's were provided were viewed as attractive. Newsletters that informed staff about cutting edge medications and interventions, case conferences, and consultation with the consulting psychiatrist were also perceived as valuable ways of increasing their knowledge. Finally, participants indicated that there should be a mechanism to bring new primary care staff up to speed.

## Provider Surveys

All primary care clinical staff was given the opportunity to answer a provider survey in an attempt to try to gain a broader perspective on provider views. Nineteen completed surveys were returned. Table 8 provides information about survey respondents.

<b>Table 8. Survey Respondent Characteristics (n = 19)</b>	
<b>Clinic</b>	21.1% PS 31.6% HC 47.4% MC
<b>Gender</b>	63.2% Female
<b>Discipline</b>	31.6% MD 5.3% CNRP 31.6% RN 15.8% Medical assistant/tech 15.8% Other
<b>Mean years in practice (SD)</b>	25.24 (16.42) Range 2-54 years

Respondents were asked to estimate the proportion of patients in their practice that had issues with depression and/or anxiety. The mean estimate was 42.69% ( $sd = 19.55$ ).

Respondents were then asked to rate their overall comfort and knowledge of various facets of the care of depression and anxiety disorders in the primary care setting. Table 9 summarizes the results

<b>Table 9. Provider Ratings of Comfort and Knowledge Regarding Depression and Anxiety Disorders and their Treatment in the Primary Care Setting</b>			
	<b>Low</b>	<b>Moderate</b>	<b>High</b>
Comfort in assessing and diagnosing depression and anxiety disorders	15.8%	36.9%	47.4%
Comfort in treating depression and anxiety disorders	42.2%	42.1%	10.6%
Understanding of recommended treatment guidelines for depression and anxiety disorders	26.3%	42.1%	31.5%
Understanding of how to prescribe SSRIs	38.9%	31.6%	26.3%
Understanding of common side effects of SSRIs	36.8%	31.6%	31.6%
Understanding of common SSRI drug interactions	44.4%	26.3%	26.3%
How dangerous are SSRIs in terms of side effects, toxicity, and overdose potential?	50.0%	21.0%	26.3%

Provider responses suggest a high degree of variability with the comfort in and knowledge of treatment of depression and anxiety disorders in the primary care setting. This may reflect differences in discipline. However, the sample size was too small to do meaningful comparisons by type of provider. Because of the collaborative nature of the MCBHP, it is important for all clinical staff to be comfortable and knowledgeable about depression and anxiety disorders and their treatment. These results point to topics for the educational/training activities of the MCBHP during the next six months.

The survey also asked about attitudes toward the treatment of depression and anxiety disorders in primary care. Some of the attitudes were favorable and some were less favorable. Table 10 shows the proportion of respondents that agreed with each attitudinal statement.

<b>Table 10. Attitudes toward the Treatment of Depression and Anxiety Disorders in the Primary Care Setting</b>	
<b>Favorable attitudes</b>	<b>% Agree</b>
Treating depression and anxiety disorders helps patients be better able to self-manage their chronic medical conditions	94.4%
Treating mental health problems reduces overall health care costs	88.9%
Many patients seek care in primary care settings because they have depression and anxiety	88.9%
Depression and anxiety disorders can be effectively treated in the primary care setting	77.8%
<b>Not favorable attitudes</b>	<b>% Agree</b>
Treating depression and anxiety disorders increases visit length and primary care providers don't have time for this	22.2%
Treating depression and anxiety disorders should only be done by specialty mental health providers	11.1%

In each case, more than 75% of respondents endorsed the favorable attitudes and less than 25% of respondents endorsed the less favorable attitudes. These results suggest that the majority of the primary care respondents believe that the treatment of depression and anxiety disorders is germane to the primary care settings.

The survey also queried respondents on their preferred means of education and communication. Table 11 lists the strategies in order of preference.

<b>Table 11. Preferences for Education and Communication Strategies</b>	
	<b>% Endorsed as Potentially Helpful</b>
Patient education materials	66.7%
Luncheon education meetings	55.6%
Email updates	50.0%
Access to psychiatric consultation by phone	44.4%
Luncheon education meetings	55.6%
Treatment team meetings that are attended by MCBHP and primary care staff	44.4%

Finally, respondents were asked to indicate their level of interest in various educational content. The topics that were endorsed by greater than 50% of the sample are listed below in Table 12.

<b>Table 12. Preferred Educational Topics</b>	
	<b>% Endorsed as Potentially Helpful</b>
Pharmacology update for anxiety disorders	83.3%
Pharmacology update for depression disorders	77.8%
Treatment guidelines for anxiety disorders	72.2%
Treatment guidelines for depression	72.2%
Cultural aspects of diagnosis and treatment of depression and anxiety disorders	66.7%
Assessment and diagnosis of anxiety disorders	61.1%
Relationship between mental health and chronic medical conditions	61.1%
Assessment and diagnosis of depression	55.6%

## V. Conclusions and Discussion

### Summary

The results of the current mid-year evaluation suggest that there continues to be a high level of need for behavioral health services to treat depression and anxiety disorders in Montgomery County, MD. The MCBHP saw 425 unique patients during the first six months of FY 08-09 fiscal year, accounting for 1120 individual encounters. Approximately 60% of patients served met diagnostic criteria for depression and anxiety disorders. Another 25% were considered at-risk for mental health disorders due to subthreshold symptoms and/or significant social service needs. The final 16% of patients needed primary psychiatric and/or substance abuse services. MCBHP worked with this group of patients to get them linked to appropriate services in the County.

Importantly, patients that were treated by the MCBHP got better. Patients whose earliest assessment during the current fiscal year exceeded diagnostic thresholds had dropped to below threshold levels of depression and/or anxiety symptoms by their most recent follow-up assessment, on average. This suggests that the clinical program in place is effectively treating depression and anxiety disorders. In addition, many patients with subthreshold symptoms received referrals and supportive services; we believe that this may have a preventative effect. Patients with more complex mental health or substance abuse were referred to specialty mental health care and/or substance abuse services but also received supportive services.

Per user costs of the MCBHP have decreased approximately 20% to 35% this year, when compared to costs last year. This reflects both the increased efficiency and the increased number of patients served by the MCBHP this year.

Primary care provider and staff interviews and surveys suggest an overall level of enthusiasm for the MCBHP. Providers varied in their level of comfort and knowledge in treating mental health disorders. They generally thought that training and more engagement with the MCBHP would be helpful. The providers and staff also made suggestions for training strategies and content. The MCBHP has already made efforts to increase engagement and consultation with the addition of the psychiatric resident to the MCBHP team.

## **Programmatic Improvements**

Programmatically, the MCBHP has made significant progress towards the recommendations made in the FY 07-08 evaluation. These recommendations included the implementation of utilization benchmarks, increasing clinic and provider engagement, transitioning to data capture via CHLCare, and reducing charting redundancy. Each is discussed briefly below.

**Utilization Benchmarks.** To increase the proportion of need for behavioral health services being met, it was recommended that utilization goals for each clinic be established and strategies to meet those benchmarks employed. Utilization benchmarks were established in November 2008 and at the time of this report, it appears that the clinics are well on their way to meeting these benchmarks, thus increasing the proportion of need being met. The MCBHP has also begun to employ strategies to increase the program's penetration of the program into the clinic population. These strategies include expanding access to patients through screening more patients and shifting staff time to PS (the clinic with the largest patient population).

**Clinic and Provider Engagement.** To improve the collaborative aspect of the treatment model, it was recommended to conduct a survey of provider knowledge, beliefs, and attitudes about the MCBHP to guide future engagement activities. In addition to the survey, six in-depth interviews with clinic providers and administrators were conducted. This information will be utilized to inform engagement activities in the second half of the current fiscal year. These activities will include a monthly newsletter targeting the staff and providers at the clinics to inform them about evidence-based care for depression and anxiety disorders, collaborative care and to respond to their requests for information solicited in the provider survey.

**Data Collection.** Modifications were recommended to improve CHLCare's ability to provide clinically useful information as well as provide adequate evaluation data. These modifications were made during the first half of the current fiscal year. As a result, the majority of the data for the current evaluation were obtained via CHLCare. Although much improved, CHLCare does not have disease management functionality. Should the MCBHP be expanded in the future, a key priority would be to invest in the expansion of CHLCare in this direction.

**Reduce Charting Redundancy.** Recommendations were made to reduce charting redundancy and increase the organization of the paper charts. In recognition of the amount of time clinical staff were spending documenting encounter and clinical data, efforts were made to streamline the data collection process, which included eliminating charting redundancy. The MCBHP has established uniform data requirements and definitions. This was greatly facilitated by the above referenced improvements to CHLCare. However, paper charting continues to be necessary and is unfortunately, highly variable in quality and organization. The MCBHP intends to establish standards for charting and

documentation. This will be monitored by a quality improvement initiative that will include a chart auditing system. The standards and auditing system will be developed during the next six months.

## **VI. Actionable Recommendations**

The following recommendations are offered:

- Continue the pilot at Proyecto Salud, Holy Cross Hospital Health Center, and Mercy Health Clinic. Staffing should be continued at the same level with an effort made to redistribute effort as needed to address the larger patient population at Proyecto Salud.
- A major focus of the next months should be increasing clinic engagement and expanding training offered to primary care providers and staff. This should be facilitated by the addition of the psychiatric resident who now has clinic hours at two of the three MCBHP clinics and can provide consultation to the primary care providers. In addition, the MCBHP is producing a new program manual, updating all assessment forms and planning a monthly newsletter to provide primary care providers with cutting edge knowledge and to provide a forum to address provider questions. All of these materials should be made available via the PCC website to clinic providers and staff. The providers also highlighted a number of areas for future trainings. The MCBHP should consider trainings in the diagnosis and pharmacological management of depression and anxiety disorders within the next six months. All trainings should be videotaped and made available to new clinic staff.
- The teams at each clinic struggle to find adequate specialty mental health care for patients with serious and persistent mental illness and/or substance abuse (Group 3). Further examination of these barriers is warranted in the end of year evaluation.
- The program has recently added coding in CHL Care that more clearly documents the social services, referrals and behavioral activation services that are provided to patients. This effort to more greatly account for supportive services provided to patients is extremely important because they likely contribute greatly to patient improvement. Further, the MCBHP may want to consider the addition of support groups or other group interventions to expand the support services offered.
- Much has been learned during the past three and a half years of this pilot. The accumulated data suggests that the MCBHP provides a very needed service in a cost-efficient way. This service should be expanded to a general benefit to all primary care patients in the Community HealthLink system. It is important to note that since the pilot began, the collaborative care movement has matured significantly. There

are now technical assistance centers as well as trainings available that facilitate this expansion.

- The MCBHP has been using CHLCare to collect data for the past six months. This has greatly improved the efficiency of data capture and reporting for the program. However, CHLCare does not capture all of the data that may be useful to continue to monitor and improve the quality of the program and will ensure that year to year comparisons are easier to make since the data system being used will be consistent. Therefore, the MCBHP may wish to include chart reviews of specific quality indicators in future evaluations.

## VII. References

- Katon, W. J., & Seelig, M. (2008). Population-based care of depression: Team care approaches to improving outcomes. *Journal of Occupational and Environmental Medicine, 50*, 459-467.
- Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine, 16*, 606-613.
- Spitzer, R. L., Kroenke, K., & Williams, J. (1999). Validation and utility of a self-report version of PRIME-MD: The PHQ primary care study. *Journal of the American Medical Association, 282*, 1737-1744.
- Spitzer, R. L., Kroenke, K., Williams, J. B., & Lowe, B. (2006). A brief measure for assessing generalized anxiety disorder: the GAD-7. *Archives of Internal Medicine, 166*(1092-1097).
- Spitzer, R. L., Williams, J. B., Kroenke, K., Linzer, M., deGruy, F. V., Hahn, S. R., et al. (1994). Utility of a new procedure for diagnosing mental disorders in primary care. The PRIME-MD 1000 study. *Journal of the American Medical Association, 272*, 1749-1756.