North Carolina Department of Health and Human Services
2001 Mail Service Center • Raleigh, North Carolina 27699-2001
Tel 919-733-4534 • Fax 919-715-4645

Michael F. Easley, Governor

Dempsey Benton, Secretary

July 17, 2008

The Honorable Beverly M. Earle, Chairman
Appropriations Subcommittee on Health and Human Services
North Carolina General Assembly
Room 634, Legislative Office Building
Raleigh, NC 27603

Dear Representative Earle:

Section 10.36(d)(28) of S.L. 2007-323 (House Bill 1473), "Drugs – Prior Authorization," required DHHS to "continually review utilization of medications under the State Medical Assistance Program prescribed for Medicaid recipients for the treatment of mental illness, including but not limited to, medications for schizophrenia, bipolar disorder, or major depressive disorder." The Department was required to submit its first report on January 1, 2008 and quarterly thereafter. It is my pleasure to submit the second quarter report of calendar year 2008 at this time.

Please direct all questions concerning this status report to Tara Larson, Chief Clinical Operations Officer in the Division of Medical Assistance at (919) 855-4101.

Sincerely,

Dempsey Benton

DB:tl

Attachment

cc: Dan Stewart
William W. Lawrence, Jr., M.D.
Michael Lancaster, M.D.
Leza Wainwright
Sharnese Ransome
Jennifer Hoffmann
Legislative Library (2)

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Michael F. Easley, Governor

Dempsey Benton, Secretary

July 17, 2008

The Honorable Bob England, M.D., Chairman
Appropriations Subcommittee on Health and Human Services
North Carolina General Assembly
Room 2219, Legislative Building
Raleigh, NC 27601

Dear Representative England:

Section 10.36(d)(28) of S.L. 2007-323 (House Bill 1473), "Drugs – Prior Authorization," required DHHS to "continually review utilization of medications under the State Medical Assistance Program prescribed for Medicaid recipients for the treatment of mental illness, including but not limited to, medications for schizophrenia, bipolar disorder, or major depressive disorder." The Department was required to submit its first report on January 1, 2008 and quarterly thereafter. It is my pleasure to submit the second quarter report of calendar year 2008 at this time.

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Michael F. Easley, Governor

Dempsey Benton, Secretary

July 17, 2008

The Honorable William Purcell, Co-Chair
Appropriations on Health and Human Services
North Carolina General Assembly
Room 625, Legislative Office Building
Raleigh, NC 27603

Dear Senator Purcell:

Section 10.36(d)(28) of S.L. 2007-323 (House Bill 1473), "Drugs – Prior Authorization," required DHHS to "continually review utilization of medications under the State Medical Assistance Program prescribed for Medicaid recipients for the treatment of mental illness, including but not limited to, medications for schizophrenia, bipolar disorder, or major depressive disorder." The Department was required to submit its first report on January 1, 2008 and quarterly thereafter. It is my pleasure to submit the second quarter report of calendar year 2008 at this time.

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Michael F. Easley, Governor

Dempsey Benton, Secretary

July 17, 2008

The Honorable Doug Berger, Co-Chair
Appropriations on Health and Human Services
North Carolina General Assembly
Room 622, Legislative Office Building
Raleigh, NC 27603

Dear Senator Berger:

Section 10.36(d)(28) of S.L. 2007-323 (House Bill 1473), "Drugs – Prior Authorization," required DHHS to "continually review utilization of medications under the State Medical Assistance Program prescribed for Medicaid recipients for the treatment of mental illness, including but not limited to, medications for schizophrenia, bipolar disorder, or major depressive disorder." The Department was required to submit its first report on January 1, 2008 and quarterly thereafter. It is my pleasure to submit the second quarter report of calendar year 2008 at this time.

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Tel 919-733-4534 • Fax 919-715-4645

Michael F. Easley, Governor

Dempsey Benton, Secretary

July 17, 2008

The Honorable Martin Nesbitt, Jr., Co-Chair
Joint Legislative Oversight Committee on MHDDSAS
North Carolina General Assembly
Room 300-B Legislative Office Building
Raleigh, NC 27603

Dear Senator Nesbitt:

Section 10.36(d)(28) of S.L. 2007-323 (House Bill 1473), "Drugs – Prior Authorization," required DHHS to "continually review utilization of medications under the State Medical Assistance Program prescribed for Medicaid recipients for the treatment of mental illness, including but not limited to, medications for schizophrenia, bipolar disorder, or major depressive disorder." The Department was required to submit its first report on January 1, 2008 and quarterly thereafter. It is my pleasure to submit the second quarter report of calendar year 2008 at this time.

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Tel 919-733-4534 • Fax 919-715-4645

Michael F. Easley, Governor

Dempsey Benton, Secretary

July 17, 2008

Lynn Muchmore, Director
Fiscal Research Division
Room 619, Legislative Office Building
Raleigh, NC 27601

Dear Mr. Muchmore:

Section 10.36(d)(28) of S.L. 2007-323 (House Bill 1473), "Drugs – Prior Authorization," required DHHS to "continually review utilization of medications under the State Medical Assistance Program prescribed for Medicaid recipients for the treatment of mental illness, including but not limited to, medications for schizophrenia, bipolar disorder, or major depressive disorder." The Department was required to submit its first report on January 1, 2008 and quarterly thereafter. It is my pleasure to submit the second quarter report of calendar year 2008 at this time.

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Michael F. Easley, Governor

Dempsey Benton, Secretary

July 17, 2008

The Honorable Verla Insko, Chairman
Appropriations Subcommittee on Health and Human Services
North Carolina General Assembly
Room 307-B1, Legislative Office Building
Raleigh, NC 27603

Dear Representative Insko:

Section 10.36(d)(28) of S.L. 2007-323 (House Bill 1473), "Drugs – Prior Authorization," required DHHS to "continually review utilization of medications under the State Medical Assistance Program prescribed for Medicaid recipients for the treatment of mental illness, including but not limited to, medications for schizophrenia, bipolar disorder, or major depressive disorder." The Department was required to submit its first report on January 1, 2008 and quarterly thereafter. It is my pleasure to submit the second quarter report of calendar year 2008 at this time.

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July 17, 2008

The Honorable Verla Insko, Co-Chair
Joint Legislative Oversight Committee on MHDDSAS
North Carolina General Assembly
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Bcc: Mona Moon
Tara Larson
Pat Jeter
Tom D'Andrea
Deborah Landry
Kari Barsness
Gary Kugler

MERCER

MARSH MERCER KROLL
GUY CARPENTER OLIVER WYMAN

May 15, 2008

Review of the Division of Medical Assistance's Mental Health Drug Management Program – May 2008

The State of North Carolina's Division of Medical Assistance (DMA) has engaged Mercer Government Human Services Consulting, part of Mercer Health & Benefits LLC (Mercer), to provide a quarterly update reviewing DMA's Mental Health Drug Management Program. This report documents Mercer's findings for DMA, the Senate Appropriations Committee on Health and Human Services (HHS), House Appropriations Subcommittee on HHS, the Fiscal Research Division and the Joint Legislative Oversight Committee on Mental Health, Developmental Disabilities and Substance Abuse Services (DMH/DD/SAS) regarding the program's ongoing implementation, management and status of outcomes of the continuous utilization reviews, as required by Session Law 2007-323, House Bill 1473, Section 10.36(d)(28).

Background Information

The Mental Health Drug Management Program includes several components, including two that are conducted by DMA's contracted vendor. These two components are utilization reviews and peer-to-peer consultation.

Utilization Reviews

- This program component includes utilization reviews of medications prescribed for the treatment of mental illness, including, but not limited to, medications for schizophrenia, bipolar disorder and major depressive disorder.
- Using DMA's pharmacy claims data, DMA's contracted vendor conducts continuous utilization reviews by comparing patient-specific medication usage to best clinical practice algorithms through the application of retrospective clinical edits for both adults and children.

Peer-to-Peer Consultation

- Prior to December 2007, the program also included prescriber peer-to-peer consultations. Peer-to-peer consultation is another level of intervention undertaken to provide educational information on efficacious and safe behavioral medication prescribing practices.

- Outlier prescribers were targeted for peer-to-peer consultation. Outliers are prescribers concurrently prescribing 3 or more psychotropic medications for individuals 18 years of age and under.
- DMA and DMH/DD/SAS suspended the peer-to-peer consultation program in response to legislative language requiring the clinical alternatives discussed during the consultations be based upon evidence-based criteria approved by the North Carolina Physician Advisory Group (PAG).

Program Update

For this report, Mercer interviewed a number of key stakeholders at DMA and DMH/DD/SAS to identify and assess the program's implementation progress. Mercer also conducted a high-level data analysis of the total per member per month (PMPM) prescription drug spend on mental health drug categories targeted by the contracted vendor. Based on these interviews, analysis, and additional data and reports provided by DMA and DMH/DD/SAS, Mercer assessed key components of the Mental Health Drug Management Program. A summary of Mercer's findings is provided in the following sections.

Clinical Edits and Prescriber Mailings

- DMA reported to Mercer that the contracted vendor continues to manage the clinical editing and prescriber mailings for the Mental Health Drug Management Program as described in Mercer's March 2008 quarterly report. No significant changes to the clinical edit selection or prescriber mailing procedures have occurred or are pending.

Peer-to-Peer Consultation

- DMA has developed, in conjunction with DMH/DD/SAS, a draft policy for the peer-to-peer consultations that directs the clinical criteria development and its ongoing review.
  - The PAG reviewed the draft policy on April 22, 2008; however, the final decision to adopt the policy was not made during the meeting.

Reporting

Contracted Vendor Reporting

- DMA's contracted vendor continues to provide monthly pharmacy claims utilization reporting by clinical edit to DMA for the total mental health drug utilization. The reports are not specific to the financial or clinical outcomes related to the targeted prescriber interventions (mailings).
  - The pharmacy claims totals of the high-risk clinical edits for children under 18 years of age (e.g., eligible for potential prescriber mailings) reported in Q4 CY2007 (October 1, 2007 through December 31, 2007) and Q3 CY2007 (July 1, 2007

through September 30, 2007) by the contracted vendor are displayed in the following tables. No significant changes are evident between the two time periods.

Q4 CY2007

Clinical Edit Description			Claims Associated with Clinical Edit		
	Patients	Prescribers	Claims	Paid	PUPM[1]
Use of 4 or more psychotropics for 90+ days (13 to 17 years of age)	27	39	513	$90,511	$1,117.43
Use of 3 or more psychotropics for 90+ days (6 to 12 years of age)	112	141	1,739	$279,979	$833.27
Use of 3 or more psychotropics for 90+ days (under 6 years of age)	3	3	46	$5,862	$651.34

[1]PUPM (Per User Per Month): Paid amount divided by patient count divided by number of months in analysis period.

Q3 CY2007

Clinical Edit Description			Claims Associated with Clinical Edit		
	Patients	Prescribers	Claims	Paid	PUPM[1]
Use of 4 or more psychotropics for 90+ days (13 to 17 years of age)	32	44	598	$103,863	$1,081.90
Use of 3 or more psychotropics for 90+ days (6 to 12 years of age)	111	117	1,619	$262,108	$787.11
Use of 3 or more psychotropics for 90+ days (under 6 years of age)	0	0	0	$0	$0.00

[1]PUPM (Per User Per Month): Paid amount divided by patient count divided by number of months in analysis period.

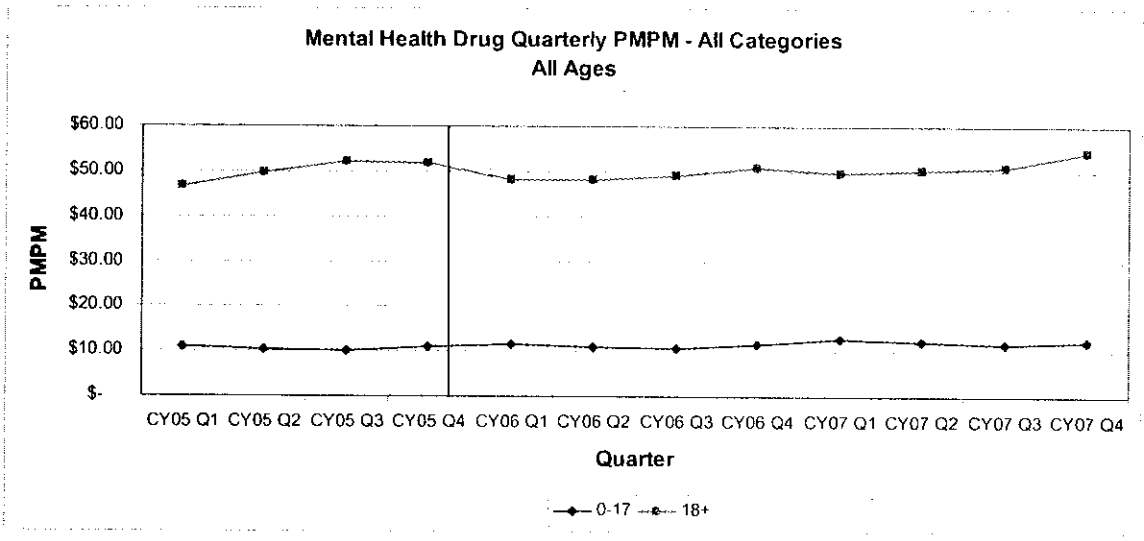
- To better monitor outcomes, DMA and the Behavioral Pharmacy Management System Task Force continue to work with the contracted vendor to refine new ad hoc reporting that focuses on the selected clinical edits. The contracted vendor has presented draft reports to DMA and the Task Force; however, the measures and methodology have not been finalized at the time of the writing of this report.
- DMA's contracted vendor has not provided any additional fiscal analyses of the impact of the clinical edits and prescriber mailings since Mercer's initial program review, the results of which were provided to DMA in January 2008. DMA and the Behavioral Pharmacy Management System Task Force have requested the contracted vendor also

include a fiscal analysis in the ad hoc reporting currently being finalized and implemented.

- The contracted vendor has implemented system enhancements aimed at reducing or eliminating false positives in an effort to realize more clinically relevant interventions.
  - Mercer and DMA staff note that changes to the methodology used to trigger clinical edits and interventions will add challenges to the interpretation of future reports and comparison of results to prior time periods.

Mercer's Data Analysis

- As part of this quarterly report, DMA requested Mercer provide a high-level data analysis of the total PMPM prescription drug spend for the mental health drug categories targeted by DMA's contracted vendor.
  - The contracted vendor provided Mercer with a list of the targeted mental health drug categories (Appendix A) utilized in the clinical edits and mailings.
  - Mercer then summarized North Carolina Medicaid pharmacy claims and eligibility data for CYs 2005, 2006 and 2007 by the targeted drug categories and by age group (0 to 17 and 18+ years of age).
  - Effective January 1, 2006, dually eligible recipients receive their pharmacy benefit through Medicare instead of Medicaid. Therefore, Mercer excluded recipients who were dually eligible for both Medicaid and Medicare from the entire analysis to be consistent in evaluating the data across time periods.
- The following graph shows the results of this analysis for all targeted mental health drug categories combined by age group and by calendar quarter. Additional graphs by drug category are provided in Appendix B.



Observations

- The contracted vendor began the clinical edits and mailings in December 2005 as noted by the vertical line on the chart. The baseline presented above includes the time period from January 2005 through November 2005. The study period includes the time period from December 2005 through December 2007.
- The overall PMPM costs for all mental health categories show annual seasonality with a gradual increase in PMPM costs over the past two years. Please reference Appendix C for the PMPM costs by category, age group and calendar quarter.

  The overall PMPM cost for all mental health drug categories for Q4 CY2007 was $54.27 for adults and $12.21 for children under 18 years of age.

  - For adults, the 3 top mental health drug categories impacting the Q4 CY2007 PMPM cost include: Atypical Antipsychotics (PMPM = $21.12); Opiates (PMPM = $9.90) and Mood Stabilizers (PMPM = $6.74).
  - For children under 18 years of age, the top 3 mental health drug categories impacting the Q4 CY2007 PMPM include: ADHD Stimulants (PMPM = $4.74), Atypical Antipsychotics (PMPM = $4.04) and Mood Stabilizers (PMPM = $1.57).
- In addition to the continuous mental health utilization reviews (e.g., clinical edits and prescriber mailings), there are many factors, including program eligibility guidelines, utilization management and marketplace factors, potentially influencing each of the drug categories.
  - A number of blockbuster mental health drugs became generically available and were subsequently placed on the State's Maximum Allowable Cost (SMAC) list, resulting in significant cost reductions to the Medicaid program during the baseline and study periods.
    - Additionally, as more generic manufacturers bring products to market, generic pricing will continue to decline on first-time generic products that were approved by the FDA and included on the SMAC list prior to December 2005.
    - In the case of OxyContin® (opiate pain reliever), the drug cost increased beginning in early CY2007 as the generic equivalents were removed from the market and the SMAC price was eliminated due to patent litigation (Graph 8).
  - DMA also implemented Mental Health Drug Management Program utilization management policies that affected the PMPM costs, including quantity limitations for the Sedative Hypnotics category (Graphs 2 and 3) implemented in May 2006.
- Additional items to highlight from the graphs of the individual mental health drug categories presented in Appendix B include the following:
  - The impact of marketplace and DMA policy changes are evident in the Insomnia Agent line of the Benzodiazepines and Insomnia Agents graphs for both adults (Graph 3) and, to a lesser extent, children (Graph 2). Dates to note include the market launches and utilization uptake of Rozerem™ and Lunesta® from Q1 to Q3 CY2005, followed by the implementation of quantity limitations in May 2006. The

PMPM cost continues to decline sharply beginning in Q2 CY2007 due to the market release and implementation of SMAC pricing for generic Ambien® (zolpidem).

- The continual PMPM cost decline in the SSRI Antidepressant category (Graphs 6 and 7) can primarily be attributed to the lower prices associated with generic utilization and new generics entering the marketplace (e.g., generic Zoloft® launched May 2007). Additionally, the potential decrease in utilization of antidepressants is due to safety concerns related to the increased risk of suicidal behavior associated with antidepressant use in children, which prompted a FDA black-box warning issued in 2006.
- As noted previously, the ADHD Stimulants category (Graph 11) has the largest PMPM cost of all drug categories for children. This PMPM cost has fluctuated over time, but the PMPM amount has gradually increased, and the effects of seasonality can be clearly observed in the graph.
    - Alternatively, the PMPM cost associated with the ADHD Stimulant class for adults (Graph 12) has experienced a steady climb over time, increasing from $0.55 PMPM in Q1 CY2005 to $1.12 PMPM in Q4 CY2007.
- The Atypical Antipsychotic category (Graphs 9 and 10) includes a majority of brand name drugs with only one generic drug available in the category. Mercer expects the PMPM costs for this category to begin to decline when more generic equivalents are available in the marketplace. Final approval for a generic equivalent for Risperdal® is expected within the next 6 months.

Limitations of Analysis

- This analysis provides only a historical overview of North Carolina Medicaid's mental health drug costs and utilization. It does not isolate the specific financial or clinical outcomes related to the targeted prescriber interventions (clinical edits and prescriber mailings) conducted by DMA's contracted vendor.
- Mercer utilized the list of targeted mental health drug categories from DMA's contracted vendor. The drugs included in each of the mental health drug categories were selected by the vendor. Mercer notes that the drugs included within the categories do not necessarily include all mental health medications available to Medicaid recipients for treatment. For example, only two drugs were included in the Anticonvulsant category (gabapentin and topiramate). Other anticonvulsants that may also be used to treat various mental illnesses were not included (e.g., Keppra®, Gabitril®).
- It should be noted that utilization of the medications (e.g., mood stabilizers, benzodiazepines, antidepressants, etc.) included in this analysis may extend outside the treatment of mental health related illnesses. For example, many of the medications classified as mood stabilizer in this analysis are anticonvulsants and also are used in the treatment of seizure disorders. Mercer used only pharmacy claims data in this analysis and did not reference medical claims data to identify diagnoses.
- This analysis should not be used for budgeting or forecasting purposes.

Other Mental Health Initiatives

- On July 1, 2007, DMH/DD/SAS implemented the Controlled Substance Reporting Act. This Act requires that all prescriptions for controlled substances (including pain medications and ADHD medications) be submitted at the point of sale, regardless of the payment source. The goal of this Act is to monitor and deter drug-seeking behaviors, emergency prescriptions for pain alleviation and the use of multiple prescribers to acquire medications.
  - Prescribers can register and gain access to this information to assist in patient management and monitoring.
  - DMH/DD/SAS reported to Mercer that this program has experienced a steady increase in participation with 1,200 to 1,300 prescribers registering in the last 6 months. The greatest proportion of the registrants is emergency room and private physicians. A DMH/DD/SAS representative indicated that these types of prescribers are the most likely to be targeted by recipients with drug-seeking behaviors particularly related to controlled substances.
- Most recently, DMH/DD/SAS has sought educational opportunities to engage and collaborate with prescribers throughout North Carolina.
  - DMH/DD/SAS reported that its March 1, 2008 meeting with the North Carolina Council in Child and Adolescent Psychiatry, which provided general education about prescribing practices, was well-received. Future meetings may be scheduled.
    - Dr. Michael Lancaster, Co-Director for DMH/DD/SAS, is working with psychiatrists throughout North Carolina to publish a series of articles for the North Carolina Psychiatric Newsletter on best practices for the use of mental health drugs in children.
  - Dr. Lancaster is also coordinating the Antipsychotic Workgroup meeting to be held within the next quarter. This group of academic physicians will review the use of antipsychotic medications (e.g., atypical and typical antipsychotics) and provide educational opportunities for other prescribers, including medical residents and mid-career physicians.
- DMA, DMH/DD/SAS, and North Carolina's Community Care Networks (CCNCs) are working together on a program facilitated by the contracted vendor called the Medical Risk Management (MRM) program. This program combines medical and prescription drug data to identify high-risk patients, including Medicaid recipients, who have both behavioral and physical healthcare needs. The program's pilot will begin in the Piedmont area, and the goal of the program is to provide additional information to patients' physicians to improve overall health outcomes.

Conclusion

Based on Mercer's interviews with DMA and DMH/DD/SAS staff, our review of reports and other information provided, and our high-level data analysis, Mercer believes the Mental Health Drug Management Program is progressing. Mercer believes the changes being

discussed and made regarding the management of the program will improve outcomes and increase the overall value of the program.

- The ad hoc reporting requested from the contracted vendor will assist DMA's management team in monitoring the fiscal and clinical impacts of the clinical edits selected for the targeted populations. This information will help to steer the program toward utilizing the edits that maximize positive outcomes and value.
- The suggested policy changes for the peer-to-peer consultations, which have been drafted in accordance with the session law requirements and have been discussed by the PAG, should help to increase provider participation.
- The increase in prescribers registering as a result of the Controlled Substance Reporting Act is promising and should result in improved health outcomes.
- DMH/DD/SAS's continued educational outreach efforts to child psychiatrists and other prescribers throughout North Carolina will help to promote best practices in prescribing patterns.
- The pilot MRM program to be implemented in the Piedmont region will likely result in better coordination of health care services and medication protocols for an at-risk population, including Medicaid recipients, with behavioral and physical health needs.
- Based on Mercer's review of the historical pharmacy claims data, Mercer recommends that DMA continue to focus on the utilization and management of mental health drugs in the following categories: Atypical Antipsychotics, Mood Stabilizers, Opiates and ADHD treatments. A targeted approach, particularly focusing on these categories, will provide DMA the largest clinical and financial impact.

Appendix A – Targeted Mental Health Drug Classes

ADHD Stimulants
AMPHETAMINE
DEXMETHYLPHENIDATE
DEXTROAMPHETAMINE
METHAMPHETAMINE
METHYLPHENIDATE
MODAFINIL
PEMOLINE
Anticonvulsants
GABAPENTIN
TOPIRAMATE
Antidepressants – Other
BUPROPION
DULOXETINE
MIRTAZAPINE
NEFAZODONE
VENLAFAXINE
Antidepressants – MAOI
ISOCARBOXAZID
PHENELZINE
SELEGILINE
TRANYLCYPROMINE
Antidepressants – SSRIs
CITALOPRAM
ESCITALOPRAM
FLUOXETINE
FLUVOXAMINE
PAROXETINE
SERTRALINE
Antidepressants – TCA
AMITRIPTYLINE
AMOXAPINE

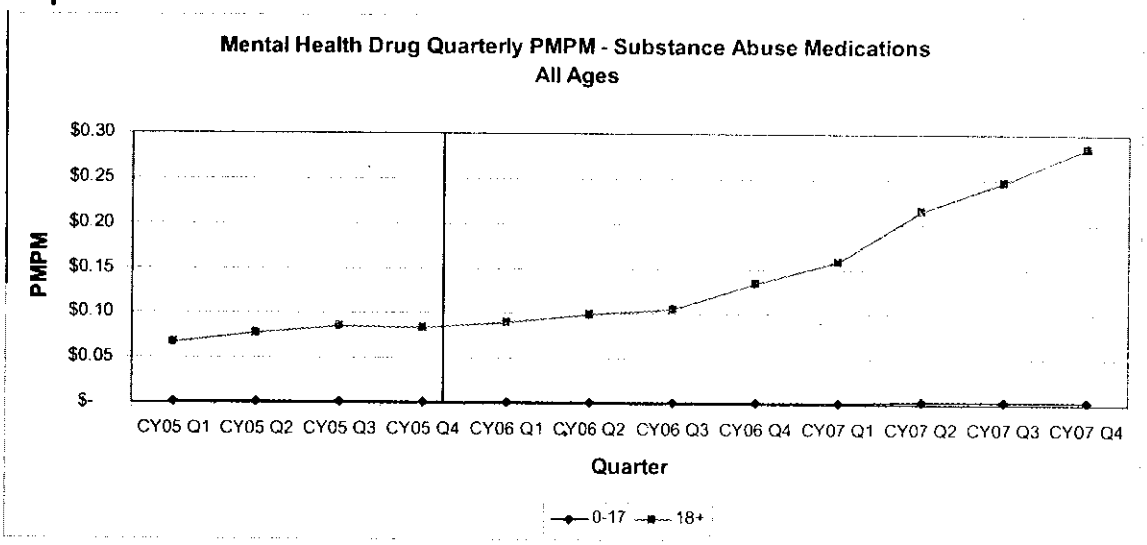
Antidepressants – TCA (continued)
CLOMIPRAMINE
DESIPRAMINE
DOXEPIN
IMIPRAMINE
MAPROTILINE
NORTRIPTYLINE
PROTRIPTYLINE
TRIMIPRAMINE
Antidyskinetics
BENZTROPINE
BIPERIDEN
PROCYCLIDINE
TRIHEXYPHENIDYL
Atypical Antipsychotics
ARIPIPRAZOLE
CLOZAPINE
OLANZAPINE
PALIPERIDONE
QUETIAPINE
RISPERIDONE
ZIPRASIDONE
Benzodiazepines – Anxiolytics
ALPRAZOLAM
CHLORDIAZEPOXIDE
CLONAZEPAM
CLORAZEPIC ACID
DIAZEPAM
HALAZEPAM
LORAZEPAM
OXAZEPAM

Benzodiazepines – Sedative Hypnotics
ESTAZOLAM
FLURAZEPAM
MIDAZOLAM
QUAZEPAM
TEMAZEPAM
TRIAZOLAM
Insomnia Agents
AMOBARBITAL
BUSPIRONE
BUTABARBITAL
CHLORAL HYDRATE
DEXMEDETOMIDINE
ESZOPICLONE
MEPROBAMATE
RAMELTEON
SECOBARBITAL
TRAZODONE
TRYPTOPHAN
ZALEPLON
ZOLPIDEM
Mood Stabilizers
CARBAMAZEPINE
DIVALPROEX SODIUM
LAMOTRIGINE
LITHIUM
OXCARBAZEPINE
VALPROIC ACID
Non-Stimulant ADHD
ATOMOXETINE
Opiate
BUTORPHANOL
CODEINE
DIHYDROCODEINE
FENTANYL
HYDROCODONE
HYDROMORPHONE

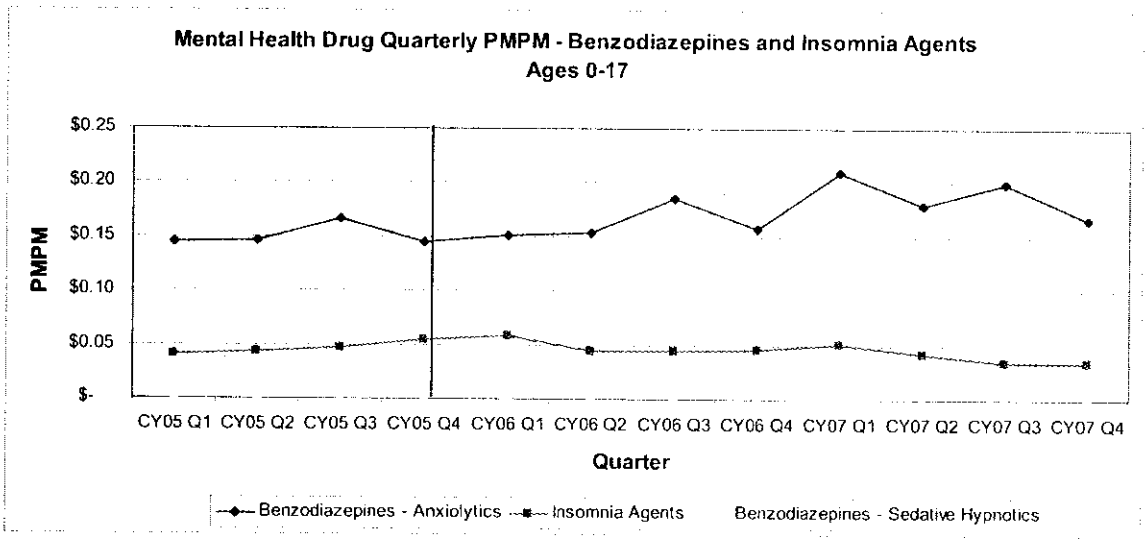
Opiate (continued)
LEVORPHANOL
MEPERIDINE
METHADONE
MORPHINE
OPIUM
OXYCODONE
OXYMORPHONE
PENTAZOCINE
PROPOXYPHENE
REMIFENTANIL
SUFENTANIL
TRAMADOL
Substance Abuse
ACAMPROSATE
BUPRENORPHINE
DISULFIRAM
NALBUPHINE
NALMEFENE
NALOXONE
NALTREXONE
Typical Antipsychotics
CHLORPROMAZINE
FLUPHENAZINE
HALOPERIDOL
LOXAPINE
MESORIDAZINE
MOLINDONE
PERPHENAZINE
THIORIDAZINE
THIOTHIXENE
TRIFLUOPERAZINE

Appendix B – Targeted Mental Health Drug Categories PMPM Graphs

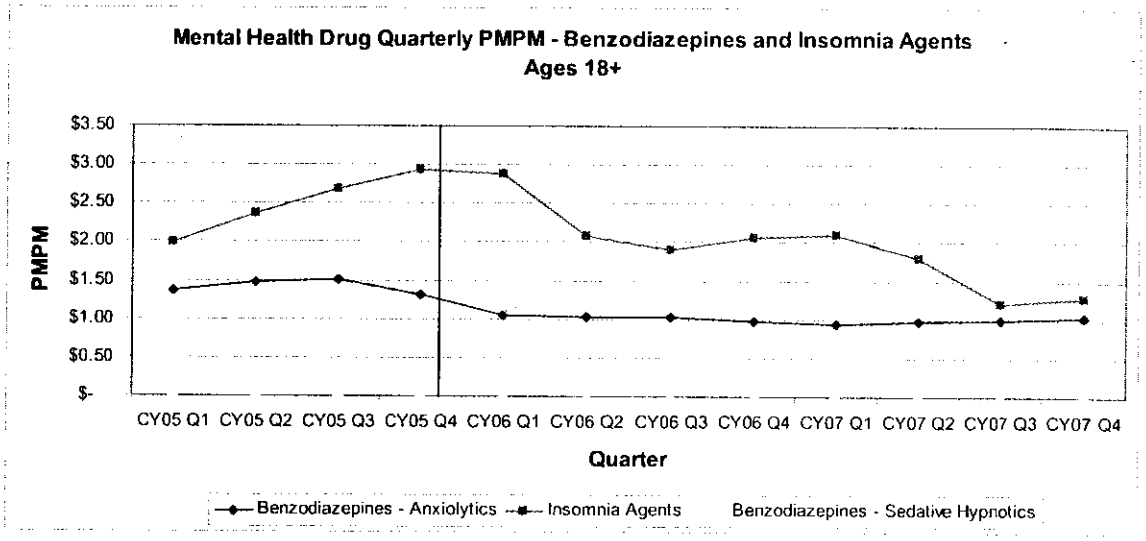
Graph 1



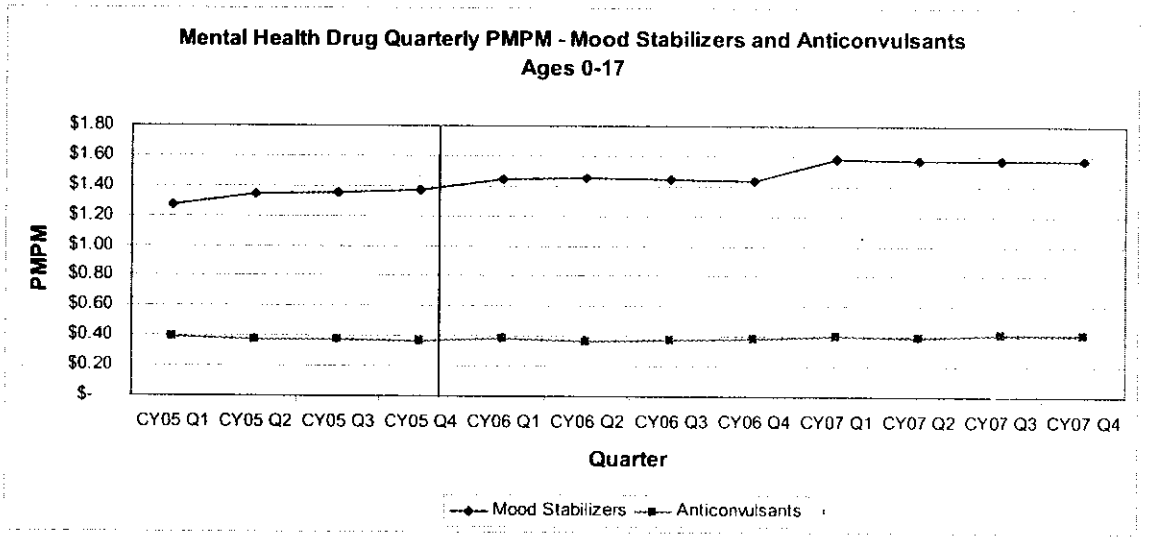
Graph 2



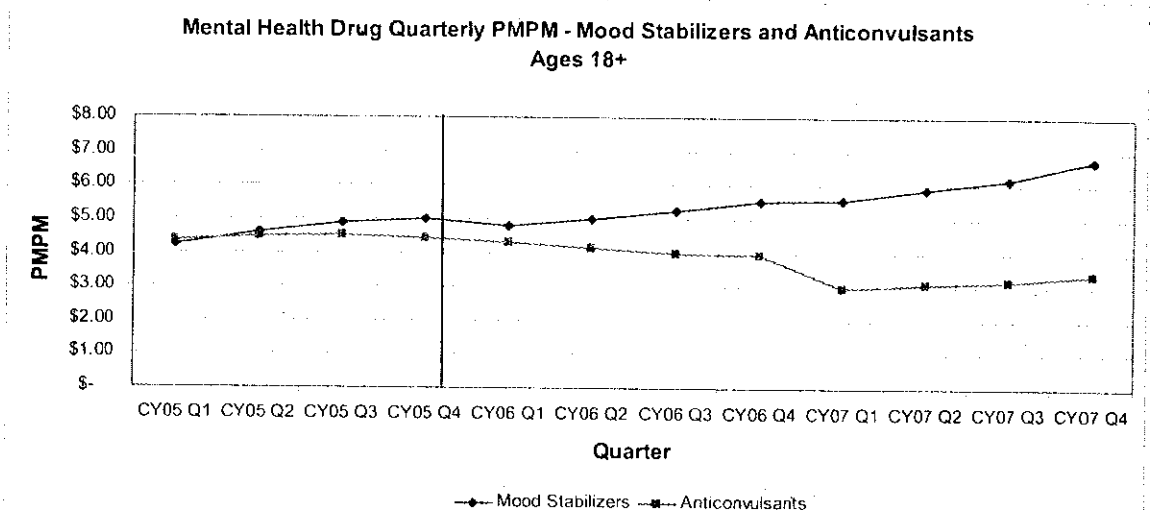
Graph 3



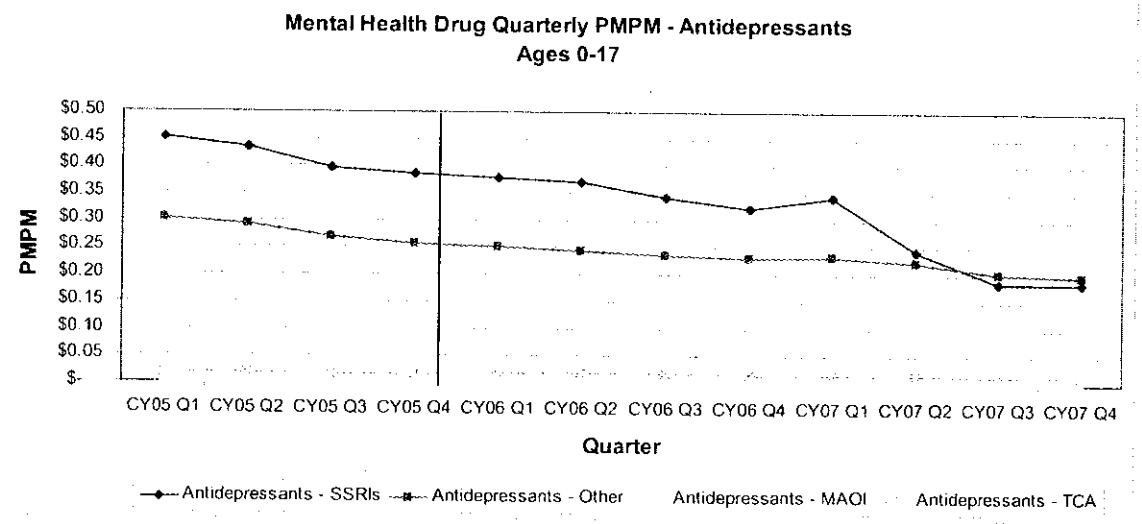
Graph 4



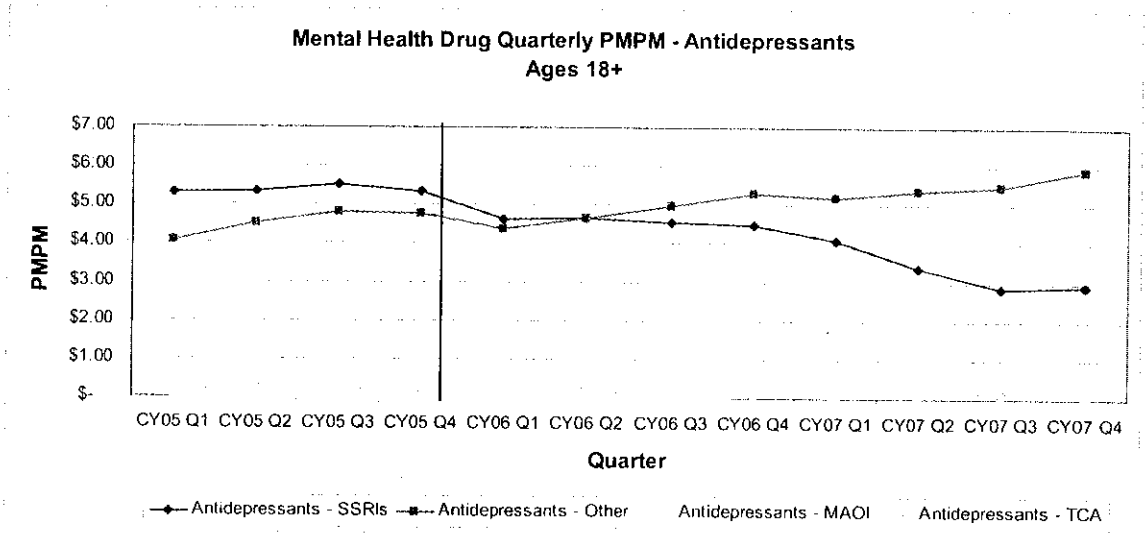
Graph 5



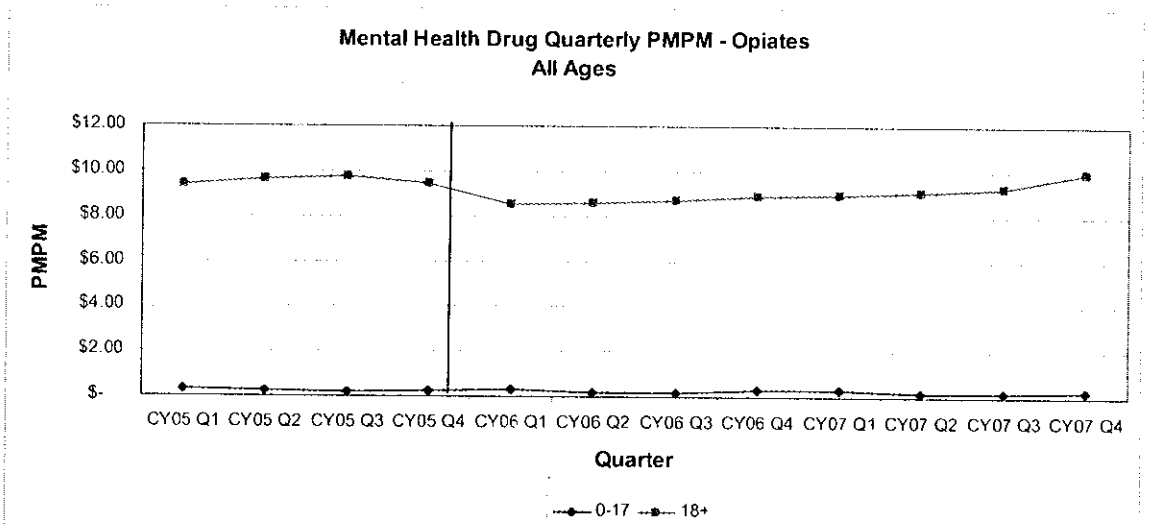
Graph 6



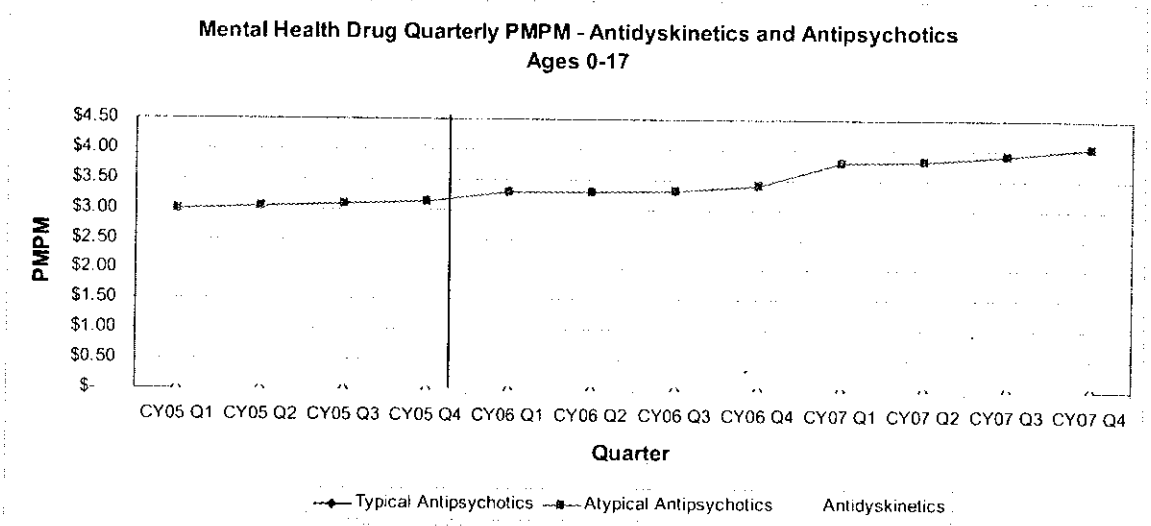
Graph 7



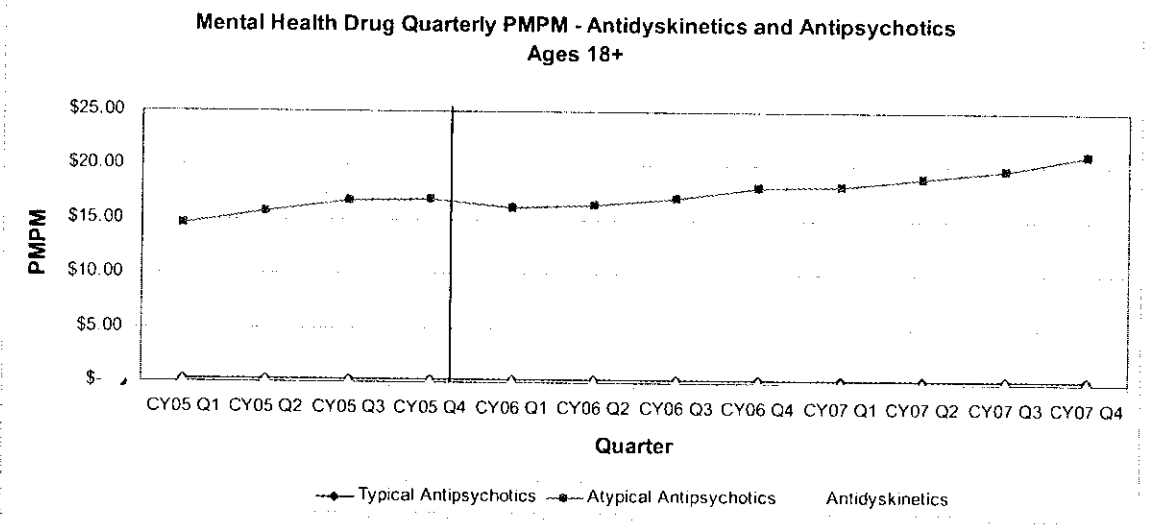
Graph 8



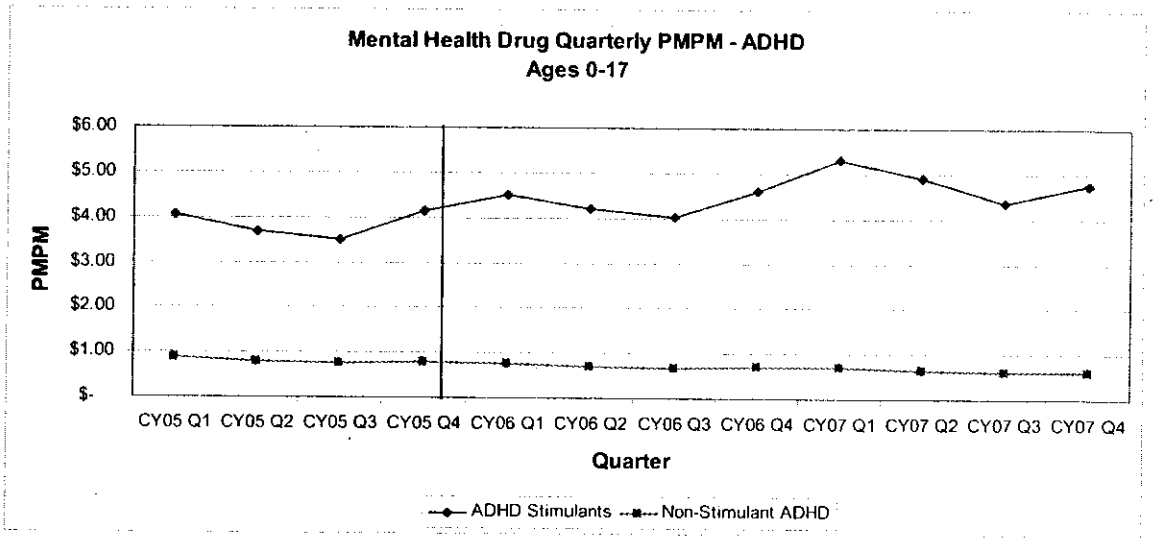
Graph 9



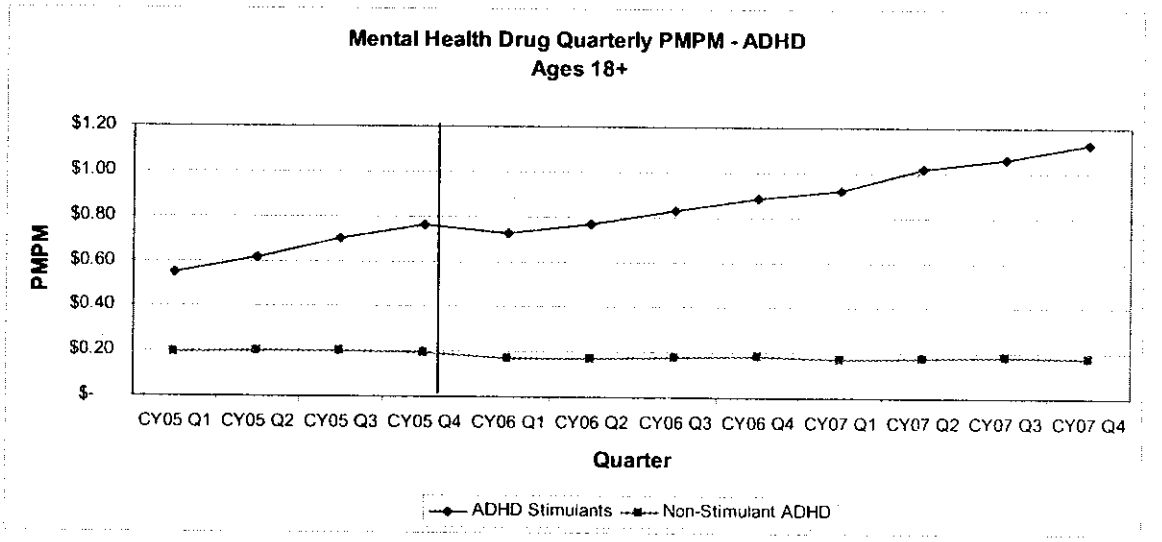
Graph 10



Graph 11



Graph 12



MERCER

MARSH MERCER KROLL
GUY CARPENTER OLIVER WYMAN

Appendix C - Targeted Mental Health Drug Categories PMPM Costs by Quarter and by Age Group

Category #	Category	Age Group	CY05 Q1	CY05 Q2	CY05 Q3	CY05 Q4	CY06 Q1	CY06 Q2	CY06 Q3	CY06 Q4	CY07 Q1	CY07 Q2	CY07 Q3	CY07 Q4
0	Substance Abuse Medications	0-17	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
		18+	$ 0.07	$ 0.08	$ 0.09	$ 0.08	$ 0.09	$ 0.10	$ 0.10	$ 0.13	$ 0.16	$ 0.22	$ 0.25	$ 0.28
1	Benzodiazepines - Anxiolytics	0-17	$ 0.15	$ 0.15	$ 0.17	$ 0.14	$ 0.15	$ 0.15	$ 0.18	$ 0.16	$ 0.21	$ 0.18	$ 0.20	$ 0.17
		18+	$ 1.37	$ 1.47	$ 1.51	$ 1.31	$ 1.04	$ 1.03	$ 1.04	$ 0.98	$ 0.95	$ 0.98	$ 0.99	$ 1.02
2	Insomnia Agents	0-17	$ 0.04	$ 0.04	$ 0.05	$ 0.05	$ 0.06	$ 0.04	$ 0.04	$ 0.05	$ 0.05	$ 0.04	$ 0.03	$ 0.03
		18+	$ 1.99	$ 2.36	$ 2.69	$ 2.93	$ 2.88	$ 2.08	$ 1.90	$ 2.05	$ 2.09	$ 1.80	$ 1.21	$ 1.27
3	Mood Stabilizers	0-17	$ 1.27	$ 1.34	$ 1.36	$ 1.37	$ 1.45	$ 1.45	$ 1.44	$ 1.44	$ 1.58	$ 1.57	$ 1.57	$ 1.57
		18+	$ 4.21	$ 4.57	$ 4.85	$ 4.98	$ 4.81	$ 4.98	$ 5.23	$ 5.52	$ 5.58	$ 5.90	$ 6.17	$ 6.74
4	Benzodiazepines - Sedative Hypnotics	0-17	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
		18+	$ 0.05	$ 0.06	$ 0.06	$ 0.05	$ 0.03	$ 0.03	$ 0.02	$ 0.03	$ 0.03	$ 0.03	$ 0.03	$ 0.03
5	Antidepressants - SSRIs	0-17	$ 0.45	$ 0.43	$ 0.40	$ 0.39	$ 0.38	$ 0.37	$ 0.34	$ 0.32	$ 0.34	$ 0.24	$ 0.18	$ 0.19
		18+	$ 5.31	$ 5.32	$ 5.51	$ 5.35	$ 4.63	$ 4.66	$ 4.56	$ 4.47	$ 4.10	$ 3.37	$ 2.84	$ 2.90
6	Antidepressants - Other	0-17	$ 0.30	$ 0.29	$ 0.27	$ 0.26	$ 0.25	$ 0.24	$ 0.24	$ 0.23	$ 0.23	$ 0.22	$ 0.20	$ 0.20
		18+	$ 4.04	$ 4.50	$ 4.79	$ 4.76	$ 4.37	$ 4.67	$ 4.99	$ 5.30	$ 5.19	$ 5.35	$ 5.46	$ 5.91
7	Antidepressants - MAOI	0-17	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
		18+	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.01	$ 0.02	$ 0.03	$ 0.02	$ 0.03	$ 0.02	$ 0.02
8	Anticonvulsants	0-17	$ 0.39	$ 0.38	$ 0.37	$ 0.37	$ 0.39	$ 0.37	$ 0.37	$ 0.38	$ 0.40	$ 0.39	$ 0.41	$ 0.41
		18+	$ 4.35	$ 4.47	$ 4.50	$ 4.44	$ 4.31	$ 4.15	$ 3.98	$ 3.94	$ 2.96	$ 3.09	$ 3.18	$ 3.36
9	Opiate	0-17	$ 0.33	$ 0.21	$ 0.17	$ 0.27	$ 0.29	$ 0.18	$ 0.16	$ 0.28	$ 0.31	$ 0.17	$ 0.16	$ 0.23
		18+	$ 9.39	$ 9.60	$ 9.76	$ 9.46	$ 8.50	$ 8.61	$ 8.68	$ 8.88	$ 8.93	$ 9.06	$ 9.29	$ 9.90
10	Antidepressants - TCA	0-17	$ 0.02	$ 0.02	$ 0.02	$ 0.02	$ 0.02	$ 0.02	$ 0.02	$ 0.02	$ 0.02	$ 0.01	$ 0.01	$ 0.01
		18+	$ 0.18	$ 0.20	$ 0.20	$ 0.17	$ 0.14	$ 0.14	$ 0.13	$ 0.14	$ 0.12	$ 0.12	$ 0.13	$ 0.12
11	Typical Antipsychotics	0-17	$ 0.01	$ 0.01	$ 0.01	$ 0.01	$ 0.01	$ 0.01	$ 0.01	$ 0.01	$ 0.01	$ 0.01	$ 0.01	$ 0.01
		18+	$ 0.24	$ 0.25	$ 0.26	$ 0.25	$ 0.24	$ 0.24	$ 0.21	$ 0.22	$ 0.19	$ 0.20	$ 0.21	$ 0.21
12	Atypical Antipsychotics	0-17	$ 2.99	$ 3.04	$ 3.09	$ 3.13	$ 3.29	$ 3.30	$ 3.31	$ 3.40	$ 3.78	$ 3.81	$ 3.91	$ 4.04
		18+	$ 14.57	$ 15.77	$ 16.74	$ 16.82	$ 16.10	$ 16.40	$ 16.96	$ 18.04	$ 18.15	$ 18.86	$ 19.67	$ 21.12
13	Antidyskinetics	0-17	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
		18+	$ 0.08	$ 0.08	$ 0.08	$ 0.07	$ 0.07	$ 0.07	$ 0.07	$ 0.06	$ 0.06	$ 0.06	$ 0.07	$ 0.07
14	ADHD Stimulants	0-17	$ 4.04	$ 3.68	$ 3.50	$ 4.13	$ 4.50	$ 4.22	$ 4.01	$ 4.59	$ 5.29	$ 4.89	$ 4.35	$ 4.74
		18+	$ 0.55	$ 0.61	$ 0.70	$ 0.76	$ 0.73	$ 0.76	$ 0.83	$ 0.88	$ 0.92	$ 1.02	$ 1.06	$ 1.12
15	Non-Stimulant ADHD	0-17	$ 0.88	$ 0.80	$ 0.76	$ 0.78	$ 0.75	$ 0.69	$ 0.65	$ 0.69	$ 0.69	$ 0.63	$ 0.60	$ 0.61
		18+	$ 0.19	$ 0.20	$ 0.20	$ 0.20	$ 0.17	$ 0.17	$ 0.18	$ 0.18	$ 0.17	$ 0.17	$ 0.18	$ 0.18
GRAND TOTAL		**0-17**	**$ 10.88**	**$ 10.39**	**$ 10.15**	**$ 10.92**	**$ 11.54**	**$ 11.05**	**$ 10.78**	**$ 11.56**	**$ 12.91**	**$ 12.18**	**$ 11.64**	**$ 12.21**
		18+	**$ 46.59**	**$ 49.54**	**$ 51.95**	**$ 51.64**	**$ 48.11**	**$ 48.09**	**$ 48.91**	**$ 50.86**	**$ 49.62**	**$ 50.25**	**$ 50.76**	**$ 54.27**