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Beverly Eaves Perdue, Governor

Lanier M. Cansler, Secretary

July 10, 2009

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 quarterly reports. It is my pleasure to submit the quarterly report at this time.

Please direct all questions concerning this status report to Patti Forest, M.D., Assistant Director for Clinical Policy and Programs, in the Division of Medical Assistance at (919) 855-4260.

Sincerely,

Lanier M. Cansler

LMC:trl

Attachment

cc: Allen Feezor
Dan Stewart
Tara R. Larson
Leza Wainwright
Sharnese Ransome
Jennifer Hoffmann
Legislative Library (2)

# Legislative Report
# Mental Health Drug Management Program Report
## S.L. 2007-323 Section 10.36(d)(28)

**State of North Carolina**

**Department of Health and Human Services**

**Division of Medical Assistance**

**March 2009**

## Table of Contents

## Executive Summary

The main components of the Mental Health Drug Management Program are medication utilization reviews and peer-to-peer consultations. Mental health medication utilization reviews are performed using pharmacy claims data. Pharmacy claims that trigger clinical edits generate informational mailings to prescribers. Peer-to-peer consultations target the prescribers that trigger the clinical edit of prescribing three or more psychotropic drugs concurrently for recipients aged 18 and under. The Division of Medical Assistance has reached out to other state agencies and practicing North Carolina physicians to enhance the focus of the program and for assistance with refining the clinical edits related to mental health medications.

February 2009 actuary data analysis of the Mental Health Drug Management Program shows seasonal trends with a gradual overall increase in the per member per month (PMPM) costs for all mental health drugs since the program began in 2005. The actuary observed an increase in PMPM for adults and a decrease in PMPM for children during the third quarter of calendar year 2008 (Q3 CY 2008) compared to the previous quarter (Q2 CY 2008). The actuary noted that during Q3 CY 2008, the PMPM costs for attention deficit hyperactivity disorder (ADHD) stimulants increased for adults and decreased for children less than 18 years of age supporting the likeliness of seasonal effects. The atypical antipsychotic drug class includes primarily brand name drugs that are associated with higher costs to the Medicaid program. The actuary expects a decrease in PMPM costs for this drug class as more generic products in this class become available.

The Atypical Antipsychotic Policy/Clinical Guideline Workgroup is reviewing the use of antipsychotic medications. This workgroup is a collaborative effort between the Division of Medical Assistance (DMA), the Division of Mental Health, Developmental Disabilities and Substance Abuse Services (DMH/DD/SAS) and North Carolina academic physicians to review the use of antipsychotic medications and to provide educational opportunities for prescribers, including medical residents and mid-career physicians. The workgroup is considering ways to increase utilization of first generation antipsychotics. Generic drug training sessions are planned to reintroduce first generation mental health medications to faculty and residents.

The Medical Risk Management Program is another collaborative mental health initiative between the DMA, DMH/DD/SAS and the Community Care of North Carolina (CCNC) that provides medical and medication data to key health care providers for Medicaid recipients diagnosed with mental illnesses and at high risk for adverse outcomes. The purpose of the project is to promote integrated coordination of behavioral and physical health care needs to improve patient care outcomes.

In addition to the above programs and initiatives, DMH/DD/SAS is promoting a series of articles for the North Carolina Psychiatric newsletter related to best practices for the use of mental health drugs in children.

## Legislative Mandate

Session Law 2007-323, House Bill 1473, Section 10.36(d)(28) directs the Department of Health and Human Services as follows:

*"The Department of Health and Human Services shall not impose prior authorization requirements or other restrictions under the State Medical Assistance Program on medications prescribed for Medicaid recipients for the treatment of (i) mental illness, including but not limited to, medications for schizophrenia, bipolar disorder, or (ii) HIV/AIDS, except that the Department of Health and Human Services shall 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. For individuals 18 years of age and under who are prescribed three or more psychotropic medications, the Department shall implement clinical edits that target inefficient, ineffective, or potentially harmful prescribing patterns. When such patterns are identified, the Medical Director for the Division of Medical Assistance and the Chief of Clinical Policy for the Division of Mental Health, Developmental Disabilities, and Substance Abuse Services shall require a peer-to-peer consultation with the target prescribers. Alternatives discussed during the peer-to-peer consultations shall be based upon:*

*a. Evidence-based criteria available regarding efficacy or safety of the covered treatments; and*

*b. Policy approval by a majority vote of the North Carolina Physicians Advisory Group (NCPAG).*

*The target prescriber has final decision-making authority to determine which prescription drug to prescribe or refill.*

*The Department shall report on the implementation of this subdivision not later than January 1, 2008, and quarterly thereafter to the Senate Appropriations Committee on Health and Human Services, the House of Representatives Appropriations Subcommittee on Health and Human Services, the Fiscal Research Division, and the Joint Legislative Oversight Committee on Mental Health, Developmental Disabilities, and Substance Abuse Services."*

## Background Information

The Division's Mental Health Drug Management Program includes several components. One key initiative implemented in late 2005 is managed by a contracted vendor. The two main components of the vendor's product 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. When a pharmacy claim triggers a clinical edit, the prescriber is mailed information about the occurrence. The information includes a description of the edit and educational material.

### Peer-to-Peer Consultation

The program component of prescriber peer-to-peer consultations was reinstated in December 2008 in accordance with North Carolina Physicians Advisory Group (NCPAG) policy guidelines. Peer-to-peer consultation is another level of intervention undertaken to provide educational information on efficacious and safe behavioral medication prescribing practices. Data from the utilization reviews are used to help identify and target outlier prescribers for peer-to-peer consultation. The consultations are based upon evidence-based criteria approved by the NCPAG.

The NCPAG policy guidelines require that a peer-to-peer consultation occur when a selected prescriber is identifed as having a pattern of prescribing medications for the treatment of a mental illness outside of the established best practice guidelines. The prescriber will be identified for a peer-to-peer consultation if a medication is prescribed to a Medicaid recipient for the treatment of a mental illness and if the prescriber has prescribed three or more psychotropic medications concurrently for a recipient that is 18 years of age and under.

The policy provides guidance on the identification of a prescriber for a peer-to-peer consultation, provides information sources for development of criteria recommended during a peer-to-peer consultation, and provides alternatives that may be discussed during the peer-to-peer consultation. The targeted prescriber has final decision-making authority to determine which prescription drugs to prescribe. The Division reviews the utilization of medications prescribed for Medicaid recpients for the treatment of mental illness to monitor outcomes from the peer-to-peer consultations. Summary findings and reports are shared with the N.C. Psychiatric Association, the N.C. Council of Child and Adolescent Psychiatry and other appropriate specialty societies and subcommittees that are affected or can influence prescribing behaviors.

## Findings

### Clinical Edits

No significant changes to the clinical edit selection or prescriber mailing procedures occurred during the February 2009 reporting period. Any modifications to the clinical edits will be based on guidance from the NCPAG Mental Health Subcommittee and stakeholder input.

A collaborative approach by directly involving physicians in the practice field and other DHHS agencies will help DMA to effectively revise the focus of this project and clinical edits to make the program more useful to the prescribers, recipients and DMA.

- DMA compiled information and feedback obtained from questionnaires sent in August 2008 to a random selection of prescribers and CCNC Clinical Directors. The information gathered is being used to assist DMA in restructuring the program and work toward the goal of providing prescribers with clinically useful information that will be received as valuable to improving patient care.

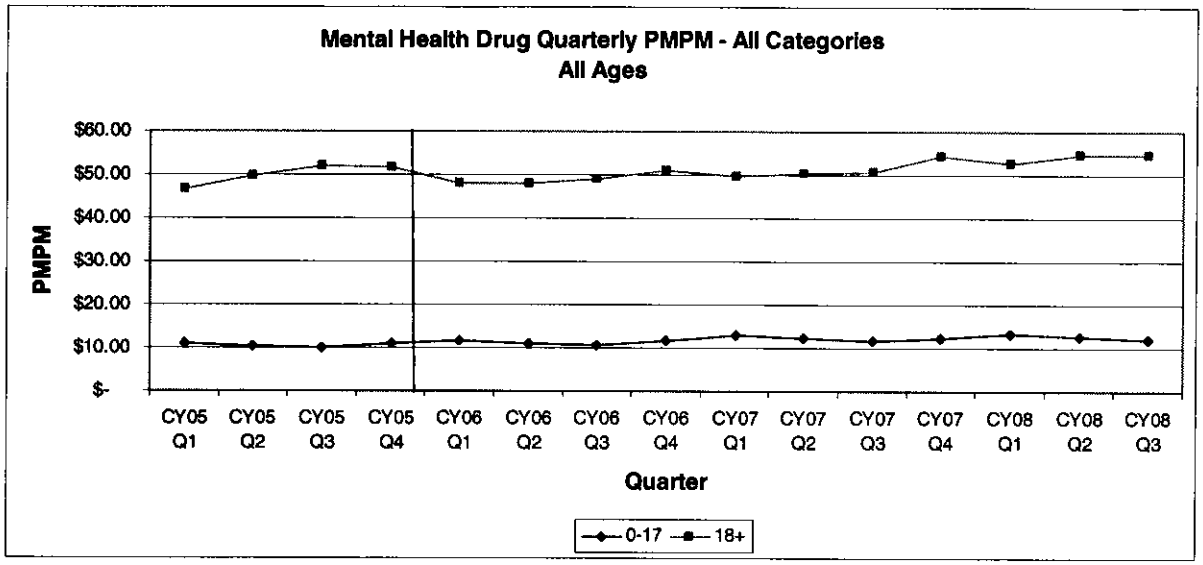
- DMA is currently scheduling a meeting with the vendor, DMA staff, Local Management Entities' (LMEs') psychiatrists, Office of Rural Health and Community Care (ORHCC) staff and other physicians who were participants in the original project's task force to discuss and refine the direction of the clinical editing program.

### Actuary's Data Analysis

As part of this quarterly report, DMA requested their actuary, Mercer, to 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**) included in the clinical edits and mailings.
- Mercer then summarized North Carolina Medicaid pharmacy claims and eligibility data for calendar years (CYs) 2005, 2006, 2007 and the first three quarters (Q1, Q2 and Q3) of CY 2008 (January through September) by the targeted drug categories and by age group (0 to 17 and 18 years of age and older).
- Effective January 1, 2006, dually eligible recipients receive their pharmacy benefit through Medicare instead of Medicaid. To be consistent in evaluating the data across time periods, Mercer excluded recipients who were dually eligible for both Medicaid and Medicare from the entire analysis.

The following graph shows the results of this analysis for all targeted mental health drug categories. The results are combined by age group and are displayed 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 graph. The baseline includes the time period from January 2005 through November 2005. The study period includes the time period from December 2005 through September 2008.

- The overall PMPM costs for all mental health drug categories show annual seasonality with a gradual increase in PMPM costs over the past 33 months. Please refer to **Appendix C** for the PMPM costs by category, age group and calendar quarter.

- The overall PMPM cost for all mental health drug categories for Q3 CY 2008 increased for adults by $0.31, as compared to the previous quarter (Q2 CY 2008). However, the overall PMPM cost for children decreased $0.71 during the same time period.

- The overall PMPM cost for all mental health drug categories for Q3 CY 2008 was $54.83 for adults and $12.01 for children under 18 years of age.
  - For adults, the three top mental health drug categories impacting the Q3 CY 2008 PMPM cost remain the same as in the previous quarter. They are: Atypical Antipsychotics (PMPM = $22.15), Opiates (PMPM = $9.27) and Mood Stabilizers (PMPM = $6.61).
  - For children under 18 years of age, the top three mental health drug categories impacting the Q3 CY 2008 PMPM cost remain the same as in the previous quarter. They are: Atypical Antipsychotics (PMPM = $4.33), ADHD Stimulants (PMPM = $4.30) and Mood Stabilizers (PMPM = $1.56).

- Of note during Q3 CY 2008 is the difference in PMPM costs for ADHD Stimulants between the adults and children under 18 years of age. While the adult PMPM cost rose 5.0% this quarter ($1.26 PMPM in Q3 CY 2008 from $1.20 PMPM in Q2 CY

2008), the PMPM cost for children under 18 years of age decreased by 10.0% to $4.30 PMPM for Q3 CY 2008 from $4.76 PMPM for Q2 CY 2008.
  - This disparity is likely due to the number of children who discontinue the use of ADHD Stimulants during the summer months while they are not in school. 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.

- 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 experienced by 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.
  - 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), which was 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 is 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 CY 2005, followed by the implementation of quantity limitations in May 2006. The sharp decline in PMPM costs, which began in Q2 CY 2007, continues due to these market launches and the implementation of SMAC pricing for generic Ambien® (zolpidem). Mercer expects the PMPM costs to continue to decline in the upcoming quarter as utilization increases for Sonata's® (zaleplon) generic equivalent following its market release in June 2008.
  - DMA implemented a prior authorization for brand name Schedule II narcotics in August 2008. As a result, the PMPM cost for opiates (Graph 8) decreased from Q2 CY 2008 to Q3 CY 2008 by 11% for children and 4% for adults as utilization of generic products within this category increased.
  - The continual PMPM cost decline in the Selective Serotonin Reuptake Inhibitor (SSRI) Antidepressant category (Graphs 6 and 7) can primarily be attributed to the availability and utilization of lower-priced generics (e.g., generic Zoloft® launched May 2007). Additionally, the decrease in utilization of antidepressants may be 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.

- The Atypical Antipsychotic category (Graphs 9 and 10) includes a majority of brand name drugs. Mercer expects the PMPM costs for this category to begin to decline during the remainder of CY 2009 as more generic equivalents for Risperdal® are available in the marketplace. The first generic equivalents for Risperdal were approved and launched in the marketplace during June 2008; however, additional generic manufacturers did not enter the market until late fall.

The effect of the introduction of generic equivalents for Lamictal and Depakote in the Mood Stabilizer category (Graphs 4 and 5) can be noted by the decrease in PMPM costs for both children and adults during Q3 CY 2008. Mercer expects the PMPM costs for this category to continue to decline over the next several quarters.

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 included in this analysis may extend outside the treatment of mental illnesses. For example, many of the medications classified as mood stabilizers in this analysis are anticonvulsants and 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**

Most recently, DMH/DD/SAS has sought opportunities to collaborate with and engage North Carolina prescribers in educational activities.

- **Atypical Antipsychotic Policy/Clinical Guideline Workgroup**

  Dr. Michael Lancaster, Chief of Clinical Policy for DMH/DD/SAS, coordinated the Atypical Antipsychotic Policy/Clinical Guideline Workgroup in June 2008. This group of academic physicians meets regularly to review the use of antipsychotic medications (e.g., atypical and typical antipsychotics) and to provide educational

opportunities for other prescribers, including medical residents and mid-career physicians.

One recent outcome of these meetings is the planning of a half-day generic drug training session in May 2009 for faculty and residents of Duke University and the University of North Carolina and anyone who prescribes mental health drugs. The training will include a presentation reintroducing first generation mental health medications and their place in treatment followed by a physician discussion panel. Drug classes covered during the training will include mood stabilizers, antipsychotics, antidepressants, and sleep medications. This training will be recorded so that others not in attendance may review later via the internet.

The Workgroup is also continuing its review of other options to increase generic utilization of first generation antipsychotics; developing guidelines related to the appropriate use of atypical antipsychotics; and developing guidelines related to the assessment and evaluation of antipsychotic therapy.

One option under review is to provide CCNC clinics, state universities and hospitals with generic drug samples or patient starter packs. The workgroup is currently working with DMA to seek funding for the project. Baseline data is also being collected on the use of generic drugs in hospitals to conduct a pre- and post-analysis of prescribing practice following the implementation of the pilot program.

- **Medical Risk Management Program**

DMA, DMH/DD/SAS and CCNC 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 health care needs. The goal of the program is to provide additional information to patients' physicians to improve overall health outcomes. The program's pilot is taking place in the Southern Piedmont Community Care Plan of the CCNC network and Piedmont Behavioral Health Care . The initial cohort is approximately 800 individuals. Provider training and the first mailings to patients' physicians were completed in December 2008. Initial reports have been prepared by the contracted vendor and are being reviewed and discussed by DMA, DMH/DD/SAS and CCNC.

- **Provider Education**

Dr. Lancaster 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. To date, three articles have been published.

## Summary and Conclusion

Based on Mercer's review, the Mental Health Drug Management Program is progressing. The solicitation of feedback from providers and changes underway regarding the management of the program will improve outcomes and increase the overall value of the program. DMA concurs with Mercer that the involvement of providers is imperative to ensure the revised program is deemed valuable by the practice field directly involved with patient care.

- The continuous review of the clinical edit and prescriber mailing program will help to steer the program forward by optimizing the mailings as a method to distribute clinically useful information, thus maximizing positive outcomes and value.

- The peer-to-peer consultation program, which has been designed and implemented in accordance with the session law requirements, will provide valuable information to help influence prescribing behaviors.

- The Atypical Antipsychotic Policy/Clinical Guideline Workgroup will provide guidance, educational opportunities and other tools to optimize the appropriate prescribing of atypical antipsychotics by North Carolina prescribers.

- The MRM program that has been launched 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 care needs.

- 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 medications to children.

## Recommendations

DMA recommends continued 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 result in the largest clinical and financial impact for DMA.

DMA recommends repeal of Session Law 2007-323, Section 10.36(d) (28) prohibiting prior authorization and other restrictions under the State Medical Assistance program on medications prescribed for Medicaid recipients for the treatment of mental illnesses, including but not limited to, medications for schizophrenia, bipolar disorder, and major depressive disorder. Removal of these restrictions will allow implementation of cost effective initiatives such as those being developed by the Antipsychotic Workgroup. In addition, if a preferred drug list is implemented for the Medicaid outpatient pharmacy program, drugs for the treatment of mental illness could be included creating opportunities for supplemental drug rebates from pharmaceutical manufacturers.

## Contacts

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# 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 |

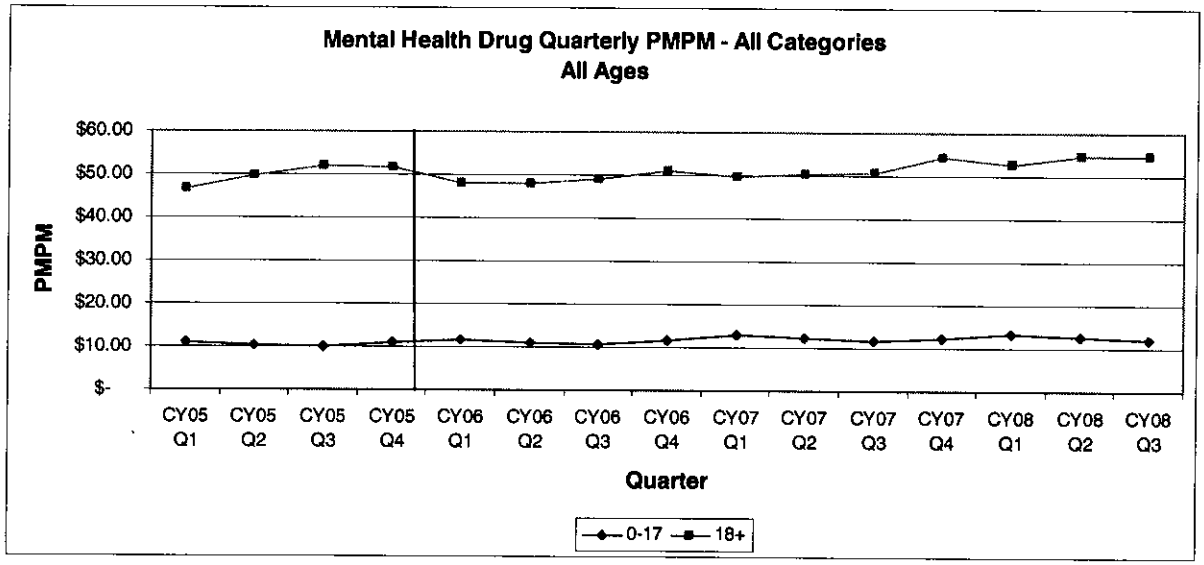
| Antidepressants – TCA (continued) |
|---|
| CLOMIPRAMINE |
| DESIPRAMINE |
| DOXEPIN |
| IMIPRAMINE |
| MAPROTILINE |
| NORTRIPTYLINE |
| PROTRIPTYLINE |
| TRIMIPRAMINE |
| **Antidyskinetics** |
| BENZTROPINE |
| BIPERIDEN |
| PROCYCLIDINE |
| TRIHEXYPHENIDYL |
| **Atypical Antipsychotics** |
| ARIPIPRAZOLE |
| 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 |

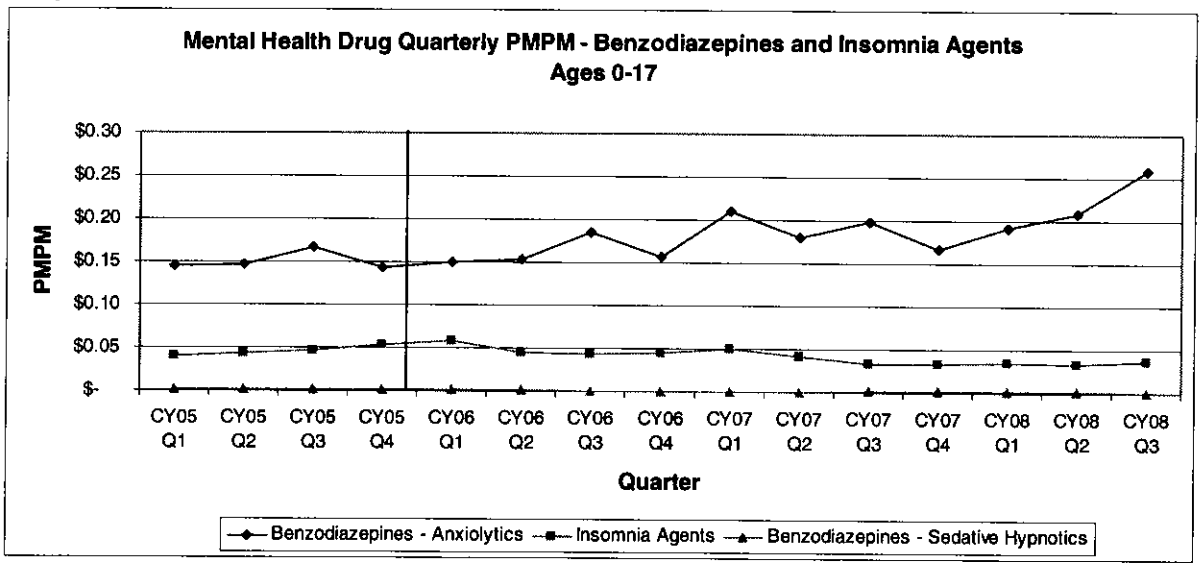
| **Opiate (continued)** |
|---|
| LEVORPHANOL |
| MEPERIDINE |
| METHADONE |
| MORPHINE |
| OPIUM |
| OXYCODONE |
| OXYMORPHONE |
| PENTAZOCINE |
| PROPOXYPHENE |
| REMIFENTANIL |
| SUFENTANIL |
| TRAMADOL |
| **Substance Abuse** |
| ACAMPROSATE |
| BUPRENORPHINE |
| DISULFIRAM |
| NALBUPHINE |
| NALMEFENE |
| 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



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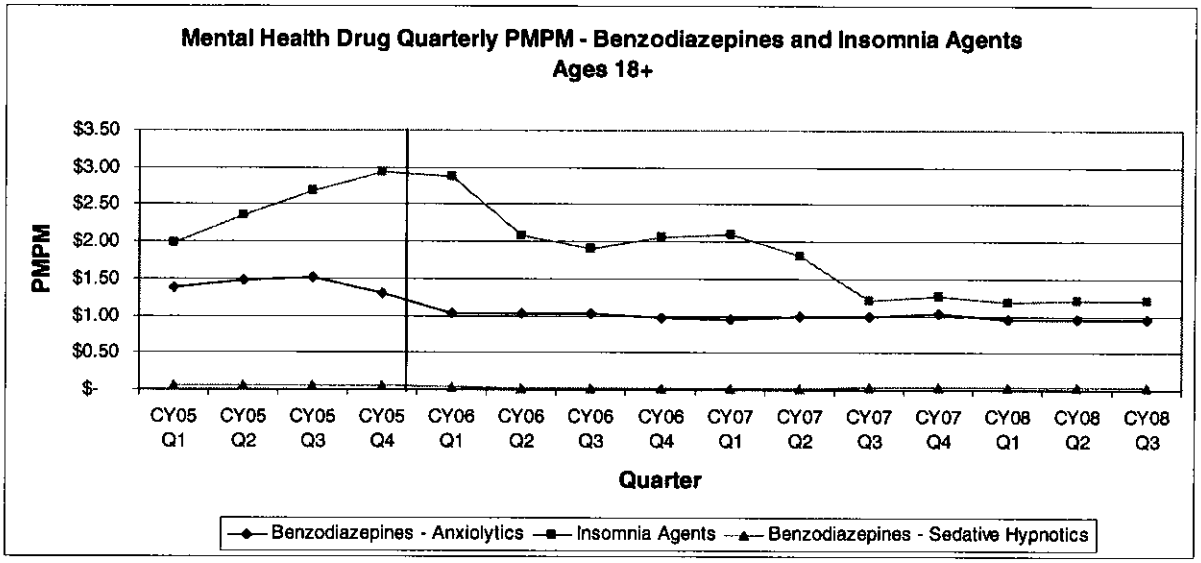


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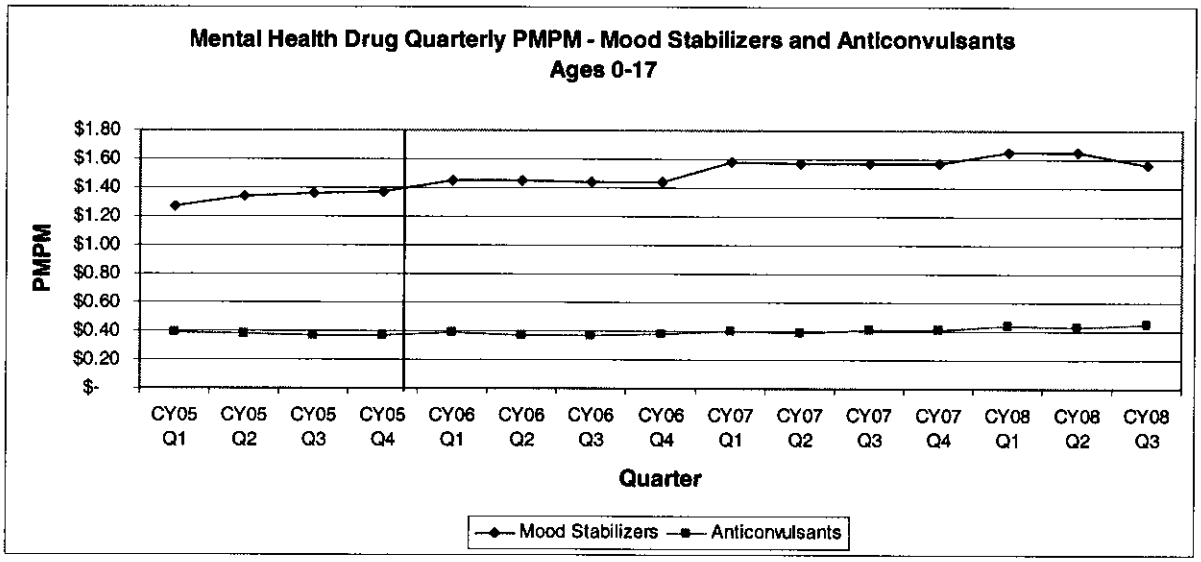

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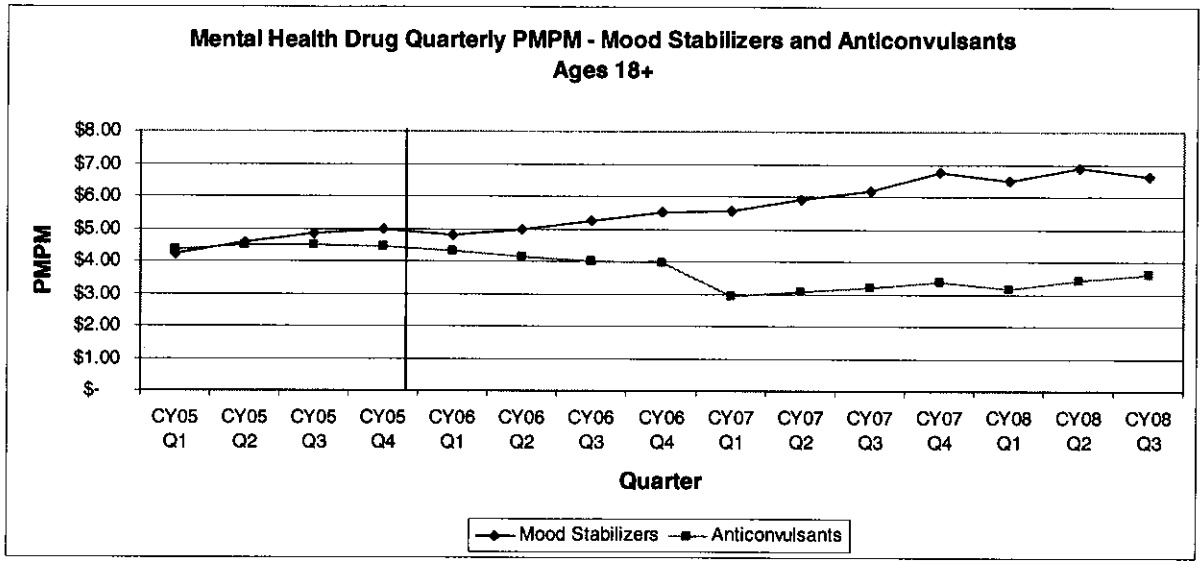
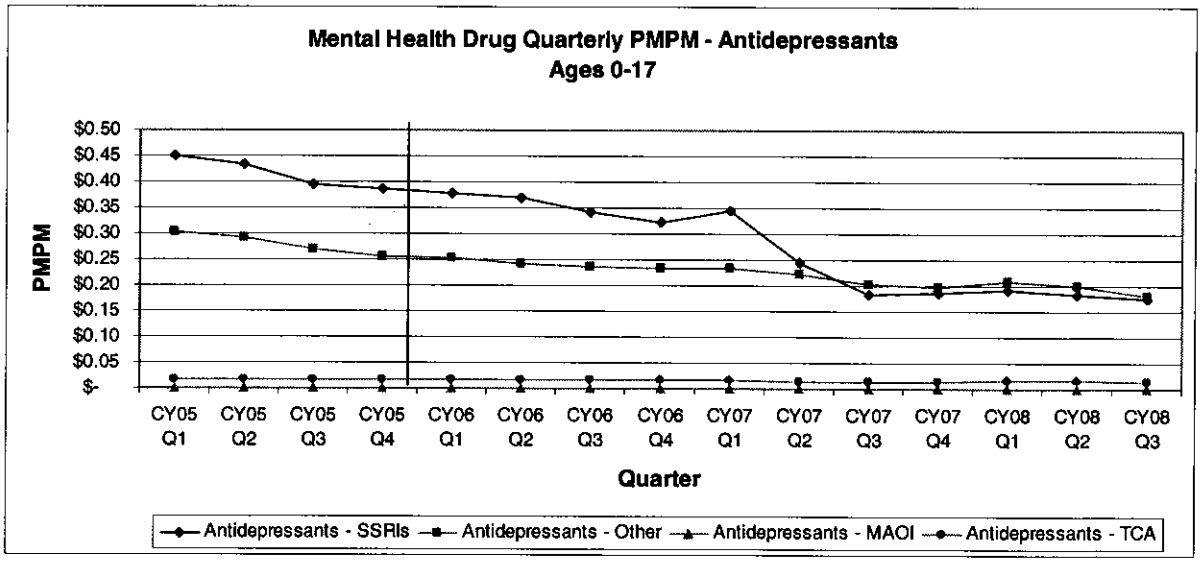
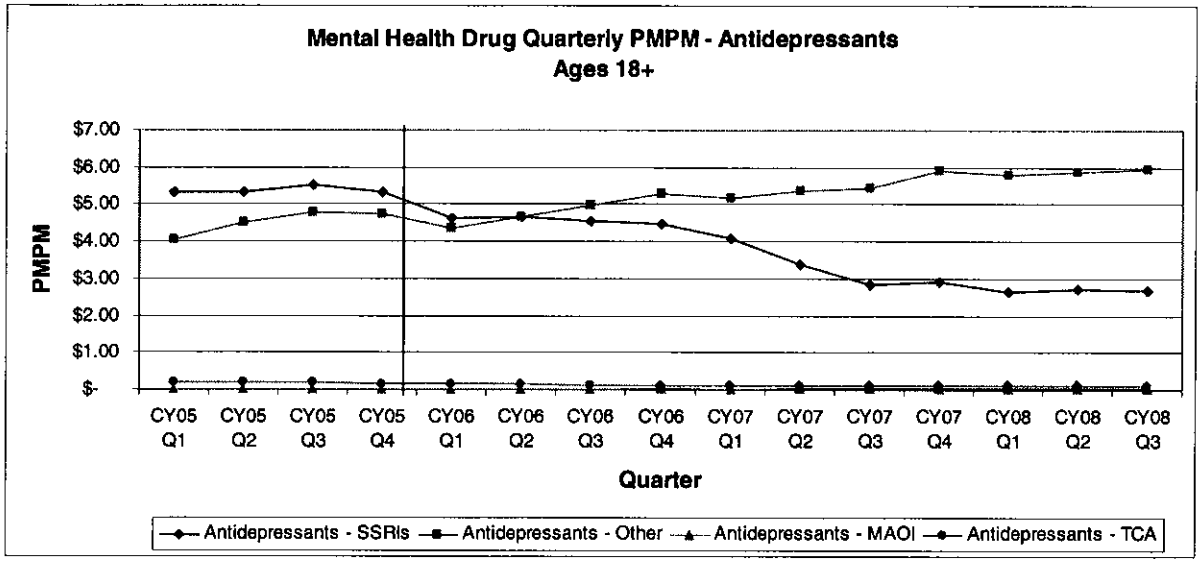


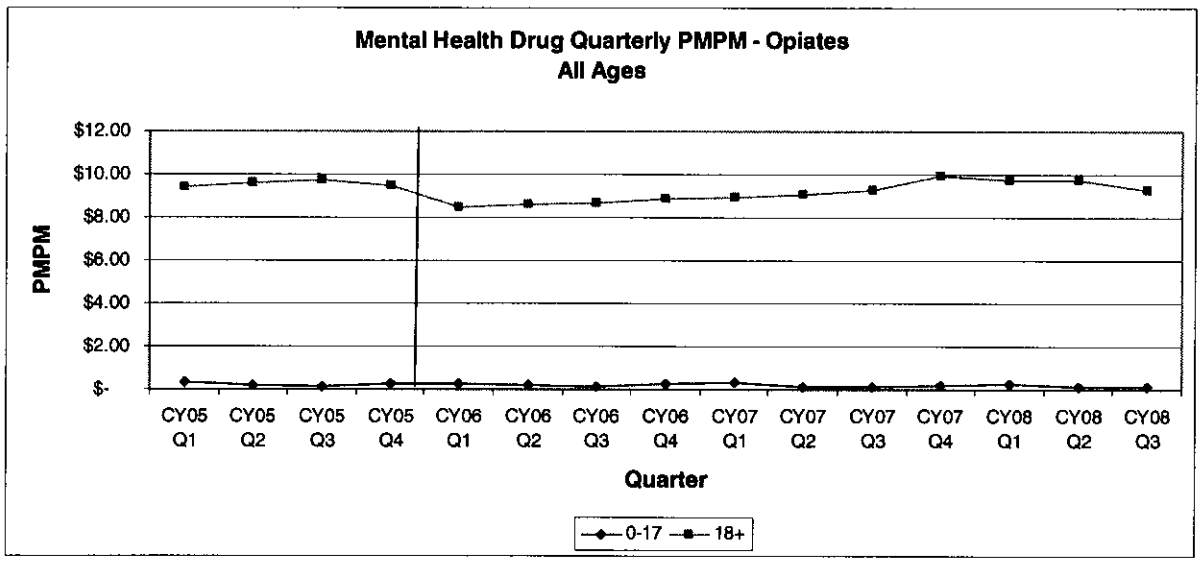

## Graph 6



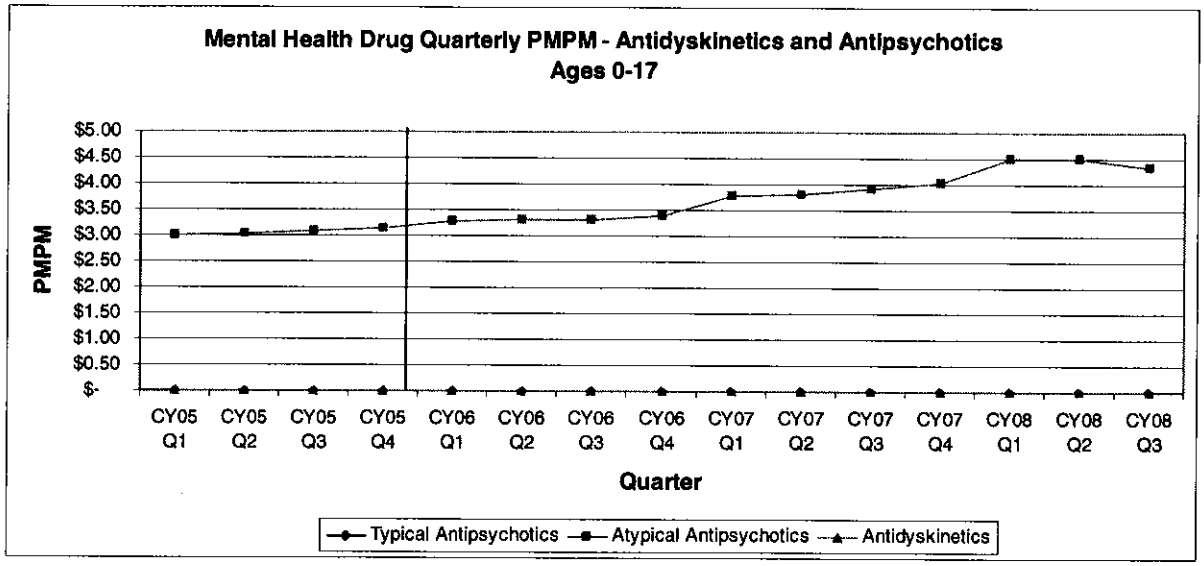
## Graph 7



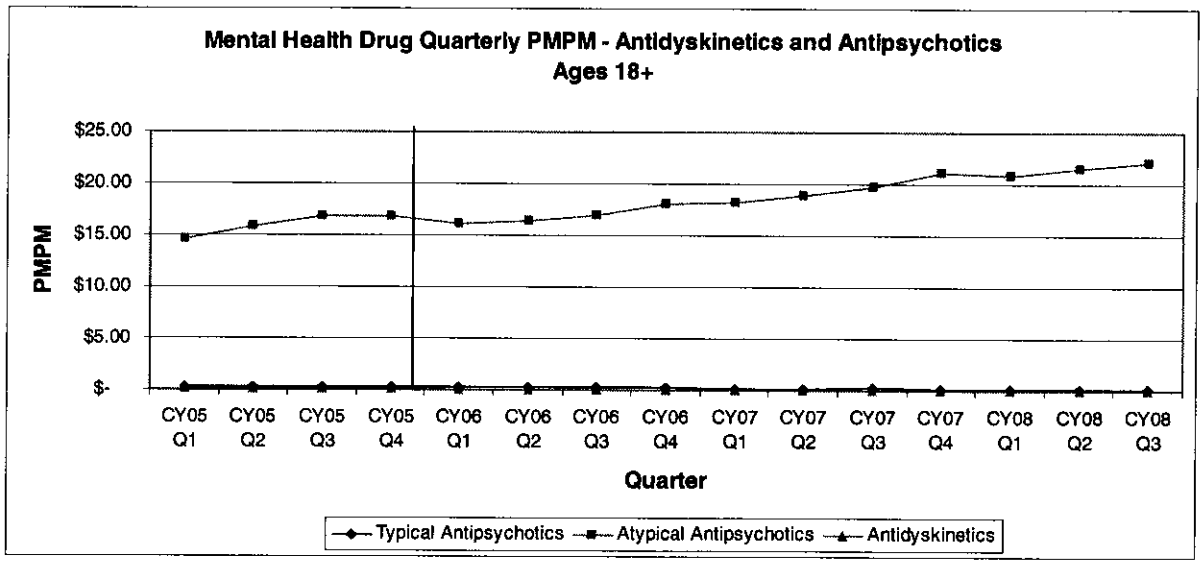

## Graph 8



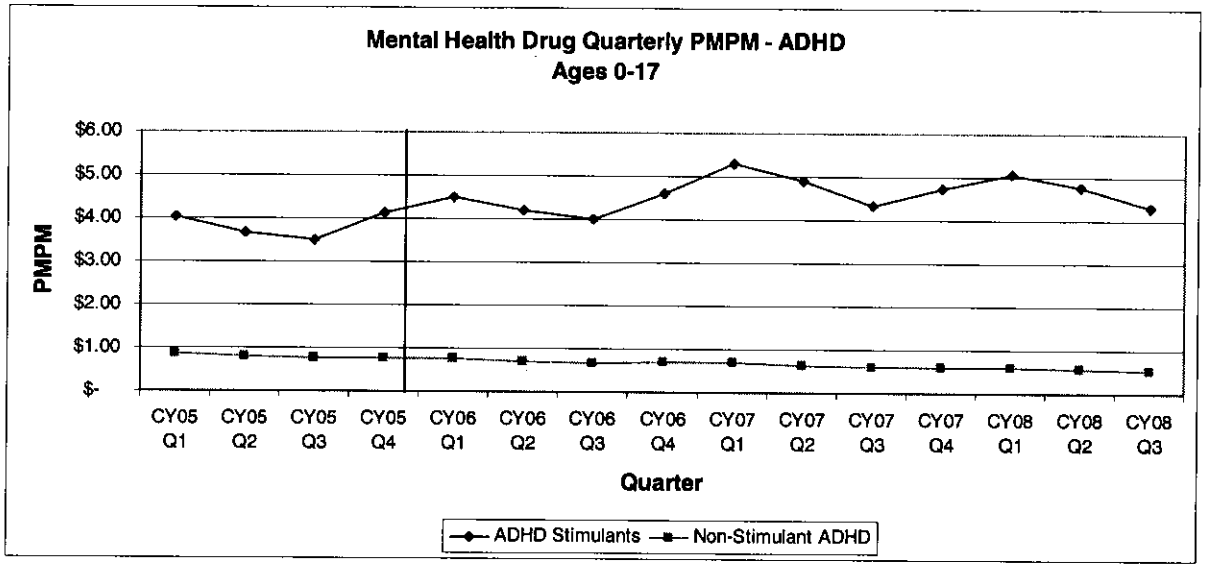
## Graph 9



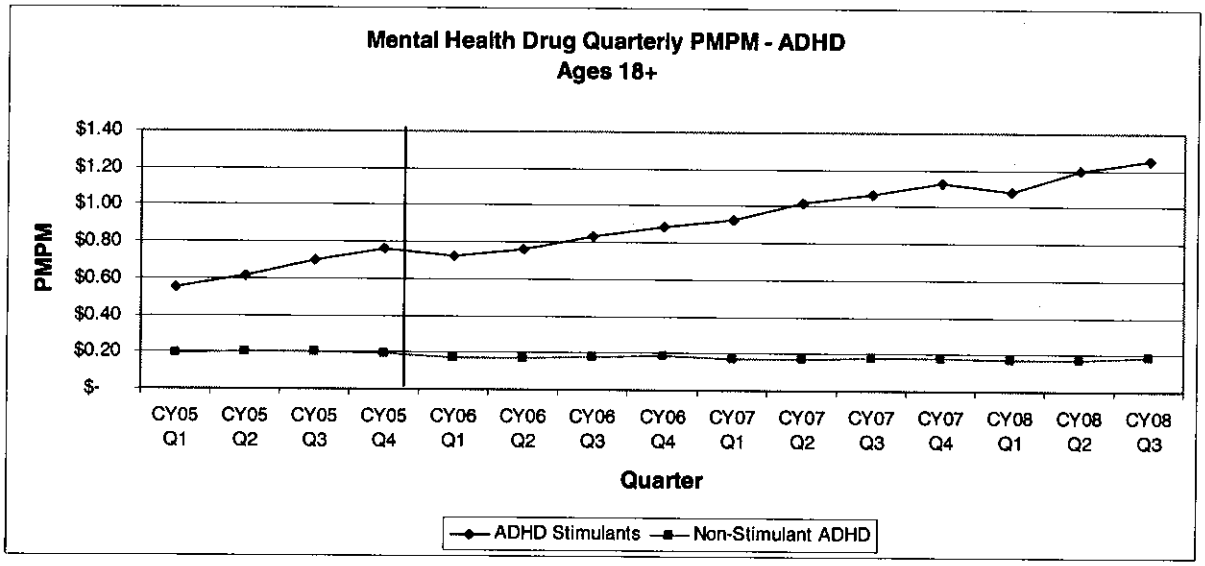

## Graph 10



## 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 | CY08 Q1 | CY08 Q2 | CY08 Q3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | $ 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 | $ 0.30 | $ 0.37 | $ 0.50 |
| 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 | $ 0.19 | $ 0.21 | $ 0.26 |
| | | 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 | $ 0.94 | $ 0.95 | $ 0.96 |
| 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 | $ 0.03 | $ 0.03 | $ 0.04 |
| | | 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 | $ 1.18 | $ 1.20 | $ 1.21 |
| 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 | $ 1.65 | $ 1.65 | $ 1.56 |
| | | 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 | $ 6.50 | $ 6.90 | $ 6.61 |
| 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 | $ 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 | $ 0.03 | $ 0.03 | $ 0.04 |
| 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 | $ 0.19 | $ 0.18 | $ 0.17 |
| | | 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 | $ 2.66 | $ 2.71 | $ 2.67 |
| 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 | $ 0.21 | $ 0.20 | $ 0.18 |
| | | 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 | $ 5.78 | $ 5.89 | $ 5.94 |
| 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 | $ 0.00 | $ 0.00 | $ 0.00 |
| | | 18+ | $ 0.00 | $ 0.00 | $ 0.00 | $ 0.00 | $ 0.01 | $ 0.02 | $ 0.03 | $ 0.02 | $ 0.03 | $ 0.02 | $ 0.02 | $ 0.02 | $ 0.02 | $ 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 | $ 0.44 | $ 0.43 | $ 0.45 |
| | | 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 | $ 3.16 | $ 3.42 | $ 3.62 |
| 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 | $ 0.28 | $ 0.16 | $ 0.14 |
| | | 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 | $ 9.76 | $ 9.71 | $ 9.27 |
| 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 | $ 0.02 | $ 0.02 | $ 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 | $ 0.13 | $ 0.13 | $ 0.13 |
| 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 | $ 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 | $ 0.18 | $ 0.19 | $ 0.20 |
| 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 | $ 4.51 | $ 4.50 | $ 4.33 |
| | | 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 | $ 20.87 | $ 21.58 | $ 22.15 |
| 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 | $ 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 | $ 0.06 | $ 0.06 | $ 0.06 |
| 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 | $ 5.07 | $ 4.76 | $ 4.30 |
| | | 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 | $ 1.08 | $ 1.20 | $ 1.26 |
| 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 | $ 0.61 | $ 0.57 | $ 0.55 |
| | | 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 | $ 0.17 | $ 0.17 | $ 0.19 |
| **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** | **$ 13.21** | **$ 12.72** | **$ 12.01** |
| | | **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** | **$ 52.83** | **$ 54.52** | **$ 54.83** |