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

October 6, 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 third quarter report of calendar year 2008 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,

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

October 6, 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 third quarter report of calendar year 2008 at this time.

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Michael F. Easley, Governor

Dempsey Benton, Secretary

October 6, 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 third quarter report of calendar year 2008 at this time.

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Michael F. Easley, Governor

Dempsey Benton, Secretary

October 6, 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 third 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

October 6, 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 third quarter report of calendar year 2008 at this time.

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Michael F. Easley, Governor

Dempsey Benton, Secretary

October 6, 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 third quarter report of calendar year 2008 at this time.

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Michael F. Easley, Governor

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October 6, 2008

The Honorable Verla Insko, Co-Chair
Joint Legislative Oversight Committee on MHDDSAS
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 third quarter report of calendar year 2008 at this time.

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Michael F. Easley, Governor

Dempsey Benton, Secretary

October 6, 2008

Susan Morgan, Interim Director
Fiscal Research Division
Room 619, Legislative Office Building
Raleigh, NC 27601

Dear Ms. Morgan:

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 third quarter report of calendar year 2008 at this time.

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MERCER

August 19, 2008

Review of the Division of Medical Assistance's Mental Health Drug Management Program – August 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 currently 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 three 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 key stakeholders at DMA and obtained input from DMH/DD/SAS leaders 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 occurred during this reporting period.
- DMA has decided to revise the focus of this project to make it more useful to both the prescribers, recipients and DMA.
  - As an initial step, DMA has developed questionnaires regarding the program. These questionnaires will be sent to providers in the near future to obtain feedback regarding the program.
  - The survey questionnaires will be sent to a random selection of prescribers and Community Care of North Carolina (CCNC) Clinical Directors.
  - The information gathered will assist DMA to refresh the program and to work toward the goal of providing prescribers with clinically useful information that will be received as valuable to patient care.

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 met on June 24, 2008, and provided specific recommendations for peer-to-peer consultation policy language updates, including a section establishing ongoing quarterly monitoring of peer–to-peer consultation outcomes.
- The draft policy has been revised and was posted on DMA's website on July 28, 2008, for a 45-day public comment period.
- DMA's estimated fiscal impact for the peer-to-peer consultation policy is $9,308.00 in savings for State Fiscal Year 2009 (combined federal, State and local savings).

- Based on input from providers and the previous Behavioral Pharmacy Management System Task Force, the utilization of local prescribers as peer consultants, if available, will be a priority when the peer-to-peer consultation policy becomes effective.

Reporting

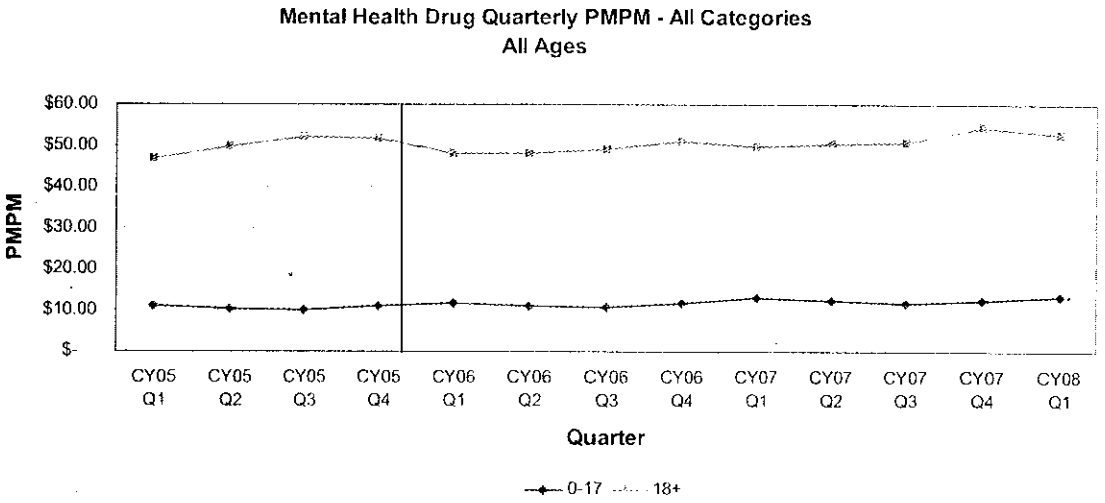
Contracted Vendor Reporting

- DMA's contracted vendor has provided 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). However, DMA has worked with the contracted vendor to refine new ad hoc reporting that focuses on the selected clinical edits and monitoring of outcomes.
  - The contracted vendor has presented draft reports to DMA; however, the measures and methodology have not been finalized at the time of the writing of this report.
  - Further reporting modifications are on hold until the focus of the project is redefined.
- As part of the revised program focus, DMA is seeking input and reviewing the possibility of providing comparative information or benchmark reporting to providers and CCNC networks based on the provider prescribing habits.

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 calendar years (CYs) 2005, 2006, 2007 and the first quarter (Q1) CY 2008 (January – March) by the targeted drug categories and by age group (0-17 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 March 2008.
- The overall PMPM costs for all mental health categories show annual seasonality with a gradual increase in PMPM costs over the past 27 months. 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 Q1 CY 2008 decreased for adults by $1.44 PMPM as compared to the previous quarter (Q4 2007). However, the overall PMPM cost for children increased $1.00 PMPM during the same time period.

  The overall PMPM cost for all mental health drug categories for Q1 CY 2008 was $52.83 for adults and $13.21 for children under 18 years of age.

  - For adults, the three top mental health drug categories impacting the Q1 CY 2008 PMPM cost remain the same as the previous quarter and include: Atypical Antipsychotics (PMPM = $20.87); Opiates (PMPM = $9.76) and Mood Stabilizers (PMPM = $6.50).
  - For children under 18 years of age, the top three mental health drug categories impacting the Q1 CY 2008 PMPM remain the same as the previous quarter and include: Atypical Antipsychotics (PMPM = $4.51) and Mood Stabilizers (PMPM = $1.65) and ADHD Stimulants (PMPM = $5.07).

- Of note during Q1 CY 2008 is the difference in PMPM costs for the Atypical Antipsychotics between the adults and children under 18 years of age. While the adult PMPM costs dropped slightly this quarter ($20.87 in Q1 CY 2008 from $21.12 in Q4 CY 2007), the PMPM costs for children under 18 years of age increased by 11.6% to $4.51 for Q1 CY 2008 from $4.04 for Q4 CY 2007.
- 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.
  - 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 CY 2005, followed by the implementation of quantity limitations in May 2006. The PMPM cost continues to decline sharply beginning in Q2 CY 2007 due to the market release and implementation of SMAC pricing for generic Ambien® (zolpidem). We expect the PMPM costs to continue to decline in future quarters 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. After implementation, we expect the PMPM costs for opiates (Graph 8) to decrease as utilization of generic products within this category increases.
  - 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.
- 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. The generic equivalent for Risperdal® was approved and launched in the marketplace during June 2008.

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 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 educational opportunities to engage and collaborate with prescribers throughout North Carolina.

Atypical Antipsychotic Policy/Clinical Guideline Workgroup

- Dr. Lancaster coordinated the Antipsychotic Workgroup and the first meeting was held June 6, 2008. 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.

As an outcome of this meeting, it was proposed that an educational forum be scheduled through the North Carolina Area Health Center (AHEC) to provide a presentation reintroducing first generation antipsychotics and their place in treatment.

The workgroup is also reviewing other options to increase generic utilization of first generation antipsychotics, guidelines related to off-label use of atypical antipsychotics and guideline development related to the assessment and evaluation of antipsychotic therapy.

Medicaid Medical Directors Learning Network

- DMA will be participating in the Medicaid Medical Directors Learning Network (MMDLN) Atypical Antipsychotics (AAPS) Use in Children project. The project will study atypical antipsychotic use in children with special attention to intra-/inter-state differences in demographics, dosage, age, poly-pharmacy, poly-prescribing, adherence and other compliance markers. At the time of this report, 20 state Medicaid programs were involved.
- According to the study documents, the following sequence of activities is proposed to enjoin states to share data:
  - Clarify the data definition
  - Collect data
  - Examine data side-by-side among states
  - Finalize a guidebook for states to conduct their own analyses
- The data for this project is slated to be compiled for a tentative November 2008 meeting of project participants.

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 healthcare needs. The goal of the program is to provide additional information to patients' physicians to improve overall health outcomes.

  The program's pilot is under development in the Southern Piedmont network.

Provider Education

- DMH/DD/SAS reported that its March 1, 2008 meeting with the North Carolina Council in Child and Adolescent Psychiatry was well received. The meeting's focus was to provide general education about prescribing practices. 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.

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 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.

- The revision of the clinical edit and prescriber mailing program, based on prescriber and Clinical Director survey feedback, 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 proposed peer-to-peer consultation policy, which has been drafted in accordance with the session law requirements and incorporates recommendations from the PAG, should help to increase provider participation.
- 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.
- DMA's participation in the MMDLN's Atypical Antipsychotics Use in Children project will compliment DMA's Mental Health Drug Management Program by examining common issues among state Medicaid programs. By engaging in the project and reviewing the outcomes, DMA will be able to identify and incorporate "best practices" into its program to improve mental health prescribing for North Carolina children.
- The MRM program currently being piloted 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.
- 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.
- 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

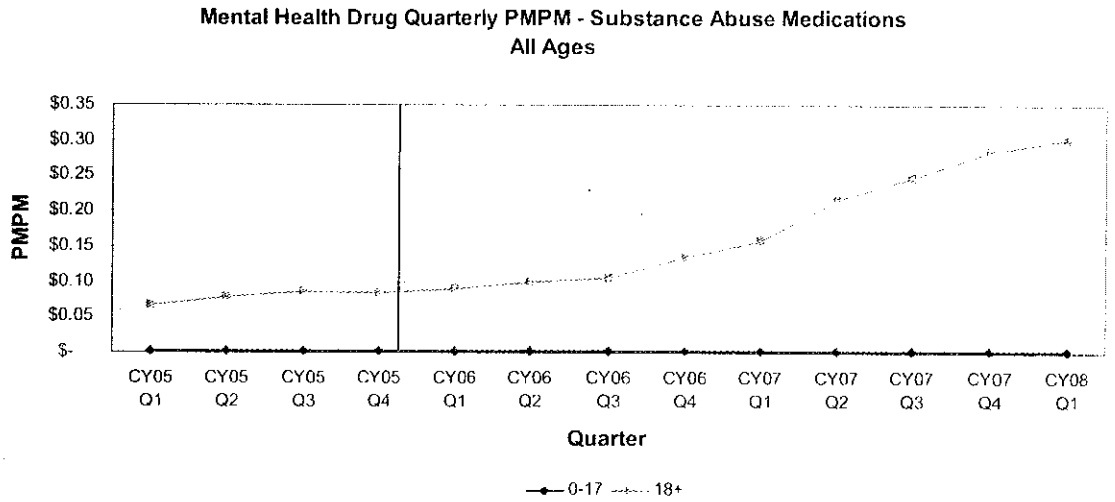
Antidepressants – TCA (continued)
CLOMIPRAMINE
DESIPRAMINE
DOXEPIN
IMIPRAMINE
MAPROTILINE
NORTRIPTYLINE
PROTRIPTYLINE
TRIMIPRAMINE
Antidyskinetics
BENZTROPINE
BIPERIDEN
PROCYCLIDINE
TRIHEXYPHENIDYL
Atypical Antipsychotics
ARIPIPRAZOLE
CLOZAPINE
OLANZAPINE
PALIPERIDONE
QUETIAPINE
RISPERIDONE
ZIPRASIDONE
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

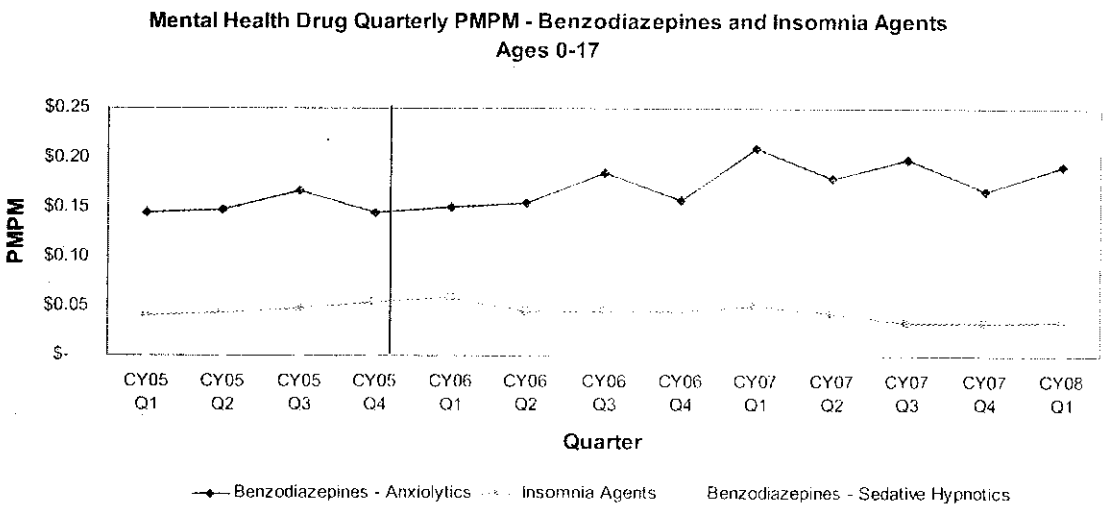
Opiate (continued)
LEVORPHANOL
MEPERIDINE
METHADONE
MORPHINE
OPIUM
OXYCODONE
OXYMORPHONE
PENTAZOCINE
PROPOXYPHENE
REMIFENTANIL
SUFENTANIL
TRAMADOL
Substance Abuse
ACAMPROSATE
BUPRENORPHINE
DISULFIRAM
NALBUPHINE
NALMEFENE
NALOXONE
NALTREXONE
Typical Antipsychotics
CHLORPROMAZINE
FLUPHENAZINE
HALOPERIDOL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

Appendix B – Targeted Mental Health Drug Categories PMPM Graphs

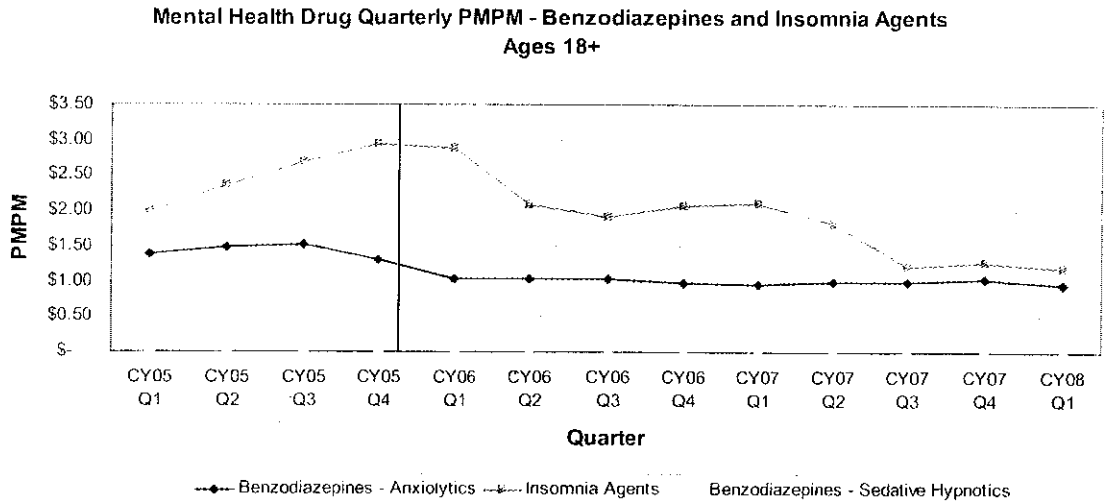
Graph 1



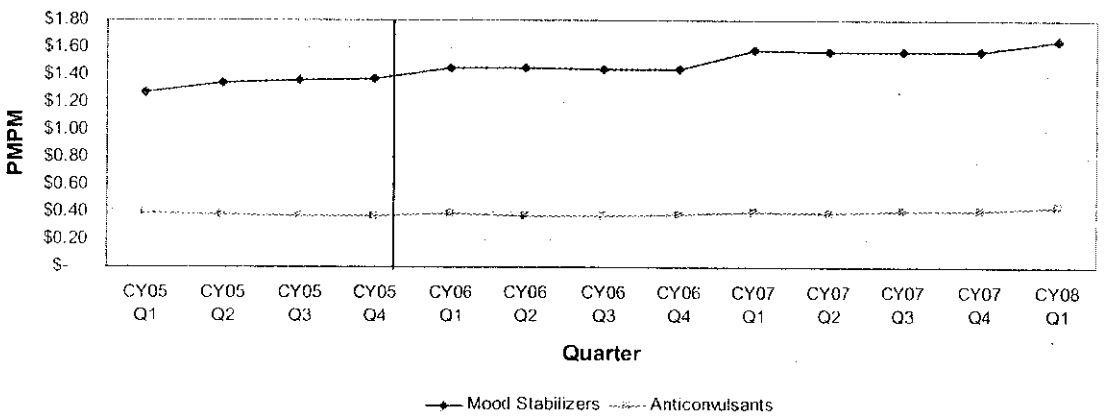
Graph 2



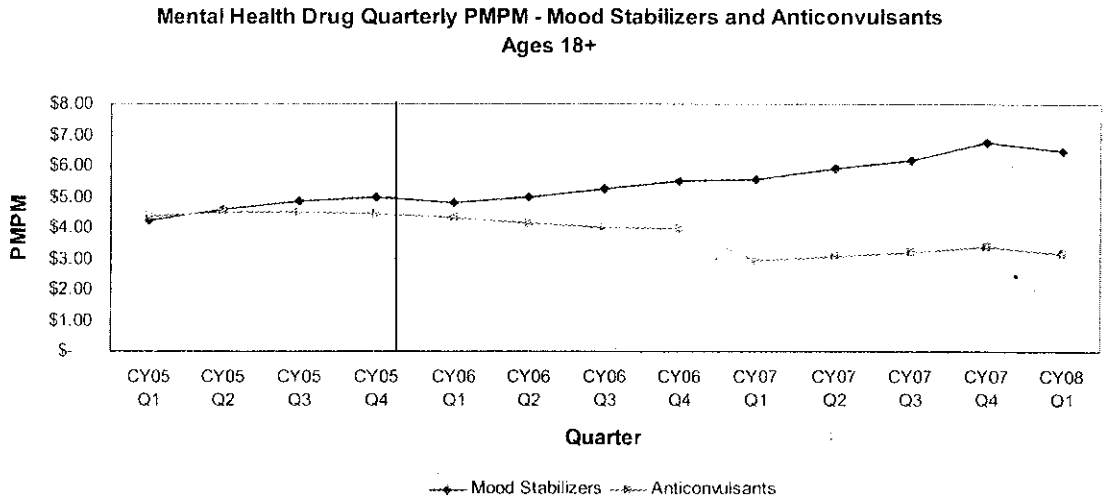
Graph 3



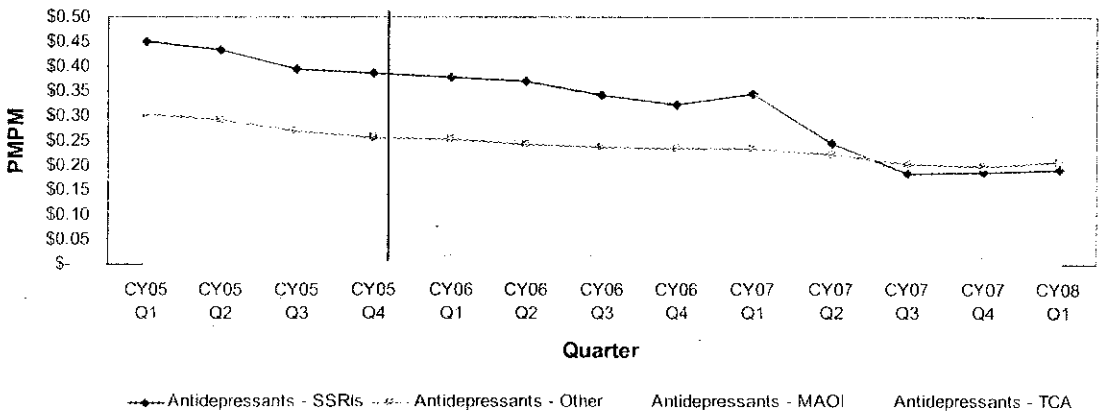
Graph 4



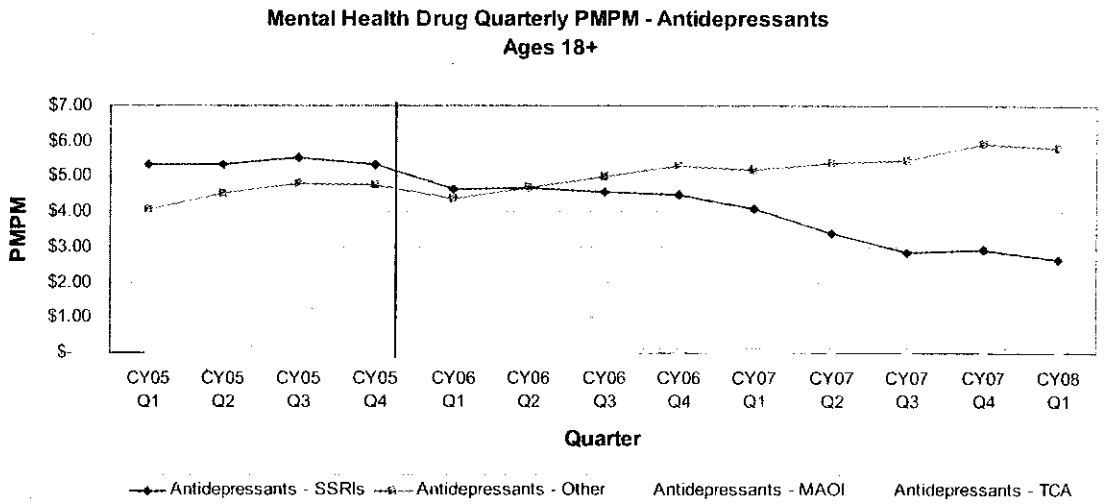
Graph 5



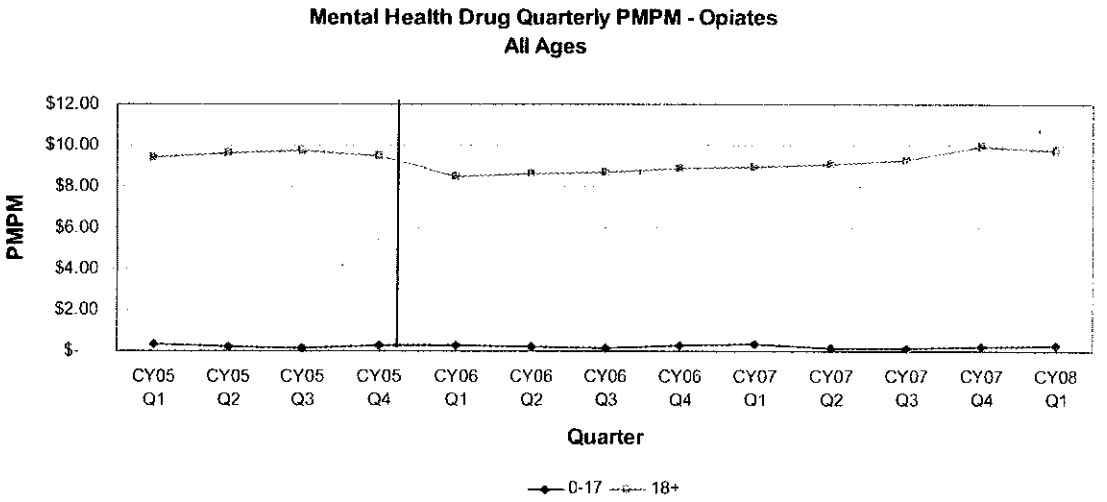
Graph 6



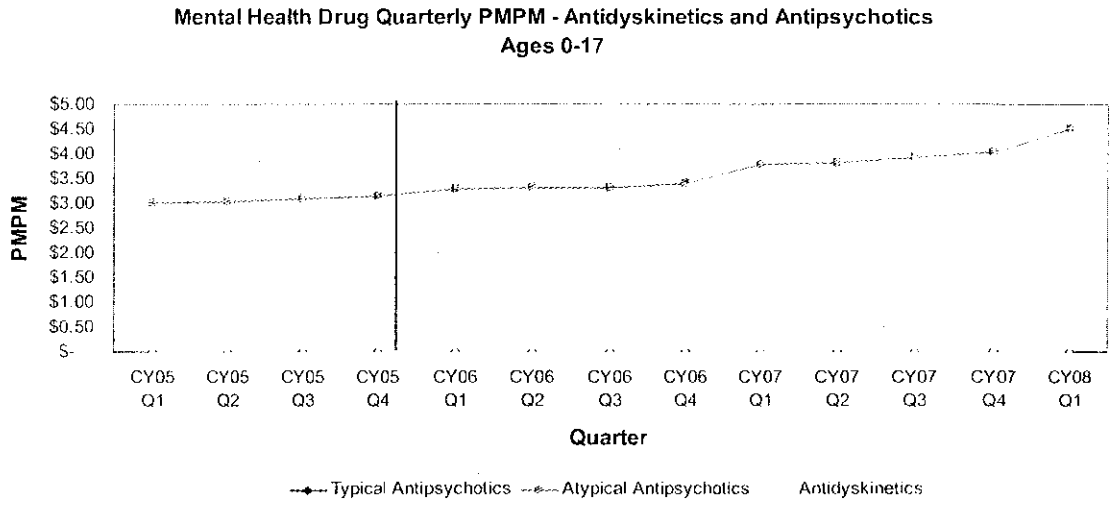
Graph 7



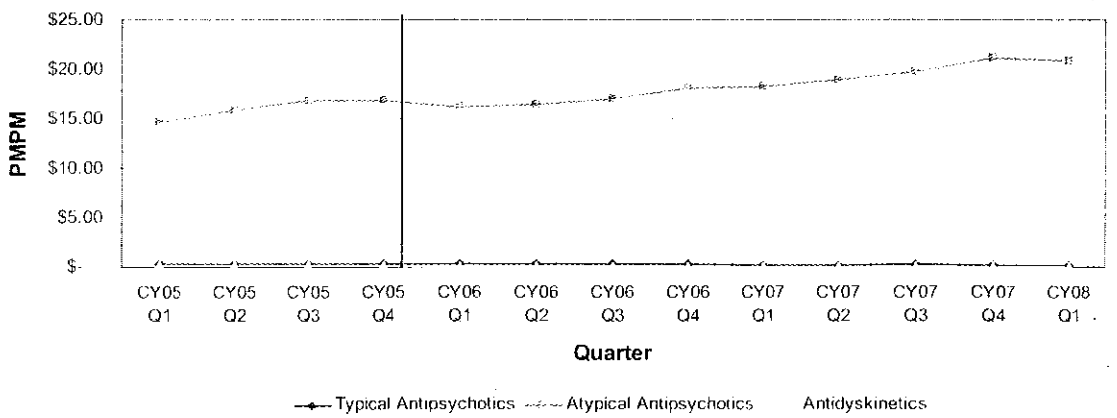
Graph 8



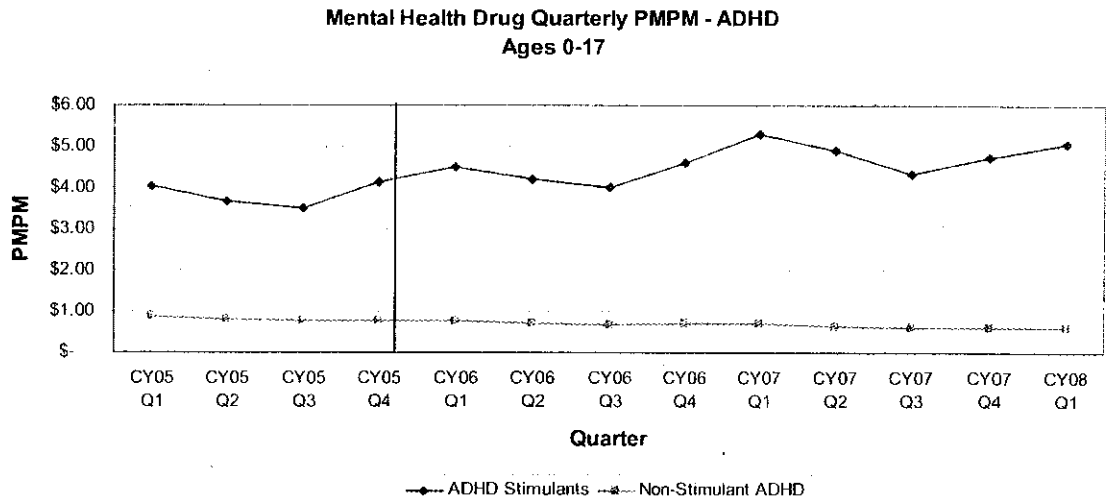
Graph 9



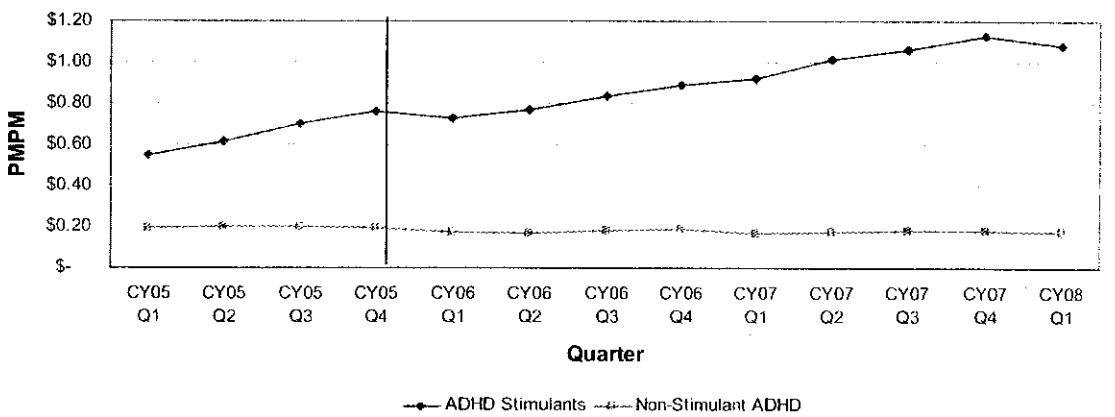
Graph 10



Graph 11



Graph 12



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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
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
		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
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
		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
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
		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
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
		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
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
		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
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
		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
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
		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
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
		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	$ 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
		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
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
		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
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
		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
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
		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
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
		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
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
		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
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
		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
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
		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
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
		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