STATISTICAL BRIEF #199

February 2008

The Top Five Therapeutic Classes of Outpatient Prescription Drugs Ranked by Total Expense for the Medicare Population Age 65 and Older in the U.S. Civilian Noninstitutionalized Population, 2005

Anita Soni, PhD

Introduction

This Statistical Brief provides a summary of the top five therapeutic classes of outpatient prescription drugs when ranked by total expense for Medicare beneficiaries age 65 and older, as reported by households in the U.S. civilian noninstitutionalized population in calendar year 2005. The brief also provides estimates for the Medicare population age 65 and older on the percentage of annual prescribed drug expenses the top five therapeutic classes represented, the percentage of those with a prescribed drug expense having an expense in these classes of drugs, and the mean expense in these classes of drugs.

The estimates in this brief are derived from the Household Component of the 2005 Medical Expenditure Panel Survey (MEPS-HC). Only prescribed medicines purchases in an outpatient setting are included in the estimates. Insulin and diabetic supplies and equipment are included in MEPS prescribed medicines estimates. Over-the-counter medicines are excluded from these estimates, as are prescription medicines administered in an inpatient setting, clinic, or physician's office. All differences discussed in the text are statistically significant at the 0.05 level.

Findings

In 2005, when ranked by total expenses, the top five therapeutic classes for prescribed drugs purchased by the Medicare population age 65 and older totaled $48.4 billion and accounted for 69.0 percent of the $70.2 billion total prescription drug expenses by elderly Medicare beneficiaries (estimates not shown). Cardiovascular agents ($16.6 billion) and metabolic agents ($15.4 billion) ranked first and second in terms of total expenses and were higher than total expenses for the remaining top five therapeutic classes: central

Highlights

- In 2005, for Medicare beneficiaries age 65 and older, the top five therapeutic classes ranked by total expense were cardiovascular agents ($16.6 billion), metabolic agents ($15.4 billion), central nervous system agents ($6.8 billion), gastrointestinal agents ($5.3 billion), and hormones ($4.4 billion).

- Annual expenditures for the top five therapeutic classes ranked by total expense totaled $48.4 billion and represented 69.0 percent of annual expenditures spent on prescription drugs by the Medicare population age 65 and older ($70.2 billion) in 2005.

- Approximately three-quarters of Medicare beneficiaries age 65 and older with a prescribed drug expense had a cardiovascular agent expense (75.9 percent) in 2005, a higher percentage than any other top five therapeutic classes of drugs.

- In 2005, cardiovascular agents accounted for nearly a quarter (23.6 percent) of prescription drug spending by Medicare beneficiaries age 65 and older.

- The average drug expense per prescription for gastrointestinal agents ($96.94) and metabolic agents ($89.33) was higher than the average expense for the other top five therapeutic classes of drugs (cardiovascular agents, $46.92, central nervous system agents, $55.48, and hormones, $51.62) in 2005.

nervous system agents ($6.8 billion), gastrointestinal agents ($5.3 billion), and hormones (4.4 billion) (figure 1).

In 2005, annual expenses for cardiovascular agents represented almost a quarter (23.6 percent) of total prescription drug expenses by the Medicare population age 65 and older. This percentage was followed closely by metabolic agents (21.9 percent) which was higher than the percentage for any of the remaining three of the top five therapeutic classes (central nervous system agents, 9.7 percent, gastrointestinal agents, 7.5 percent, and hormones, 6.3 percent) (figure 2).

In 2005, three-fourths of Medicare beneficiaries age 65 and older with a prescribed drug expense purchased at least one cardiovascular agent (75.9 percent), a greater percentage than the remaining four categories in the top five therapeutic classes of prescription drugs ranked by total expense. In addition, more than half (53.7 percent) of the Medicare beneficiaries age 65 and older with a prescribed drug expense purchased at least one metabolic agent. Among the top five therapeutic classes, the lowest percentage of Medicare beneficiaries age 65 and older with a prescribed drug expense purchased gastrointestinal agents (27.1 percent). Purchases of a central nervous system agent (47.4 percent) and hormones (36.6 percent) ranked third and fourth respectively in the top five therapeutic classes of prescribed drugs among Medicare beneficiaries age 65 and older with a prescribed drug expense purchase (figure 3).

Among the top five therapeutic classes for Medicare beneficiaries age 65 and older in 2005, cardiovascular agents had the lowest average expense per prescription ($46.92). The highest average expense per prescription was for the gastrointestinal agents ($96.94). The average expenses for metabolic agents ($89.33) were higher than the average expenses for the central nervous system agents ($55.48) and hormones ($51.62) (figure 4).

Data Source

The estimates in this Statistical Brief were derived from the MEPS 2005 Prescribed Medicines file (HC-094A).

Definitions/Methodology

Therapeutic classes were assigned to drugs using Multum Lexicon variables from Cerner Multum, Inc. Please note, the therapeutic class of central nervous system agents includes the large subclass of analgesics; and the therapeutic class of psychotherapeutic agents includes the large subclass of antidepressants.

For the 2005 data, Cerner Multum made changes to the Multum Lexicon therapeutic classification system. As an example, antihyperlipidemic agents, which had been its own therapeutic class in the 2003 and 2004 data, were reclassified as a therapeutic subclass of the new therapeutic class, metabolic agents. Changes to the Multum Lexicon therapeutic classification system should be kept in mind when comparing therapeutic class rankings from year to year.

For additional information on these and other Multum Lexicon variables, as well as the Multum Lexicon database itself, refer to the following Web site: multum.com/Lexicon.htm.
Due to an insufficient sample size needed to draw reliable estimates, the therapeutic class, biologicals, was excluded from the top five drugs expenditure calculations.

About MEPS-HC

MEPS-HC is a nationally representative longitudinal survey that collects detailed information on health care utilization and expenditures, health insurance, and health status, as well as a wide variety of social, demographic, and economic characteristics for the civilian noninstitutionalized population. It is cosponsored by the Agency for Healthcare Research and Quality and the National Center for Health Statistics.

For more information about MEPS, call the MEPS information coordinator at AHRQ (301-427-1656) or visit the MEPS Web site at http://www.meps.ahrq.gov/.

References

For a detailed description of the MEPS-HC survey and sample design, and methods used to minimize sources on nonsampling error, see the following publications:

Cohen J. *Design and Methods of the Medical Expenditure Panel Survey Household Component*. MEPS Methodology Report No. 1. AHCPR Pub. No. 97-0026. Rockville, MD: Agency for Healthcare Policy and Research, 1997. http://www.meps.ahrq.gov/mepsweb/data_files/publications/mr1/mr1.shtml

Cohen S. *Sample Design of the 1996 Medical Expenditure Panel Survey Household Component*. MEPS Methodology Report No. 2. AHCPR Pub. No. 97-0027. Rockville, MD: Agency for Healthcare Policy and Research, 1997. http://www.meps.ahrq.gov/mepsweb/data_files/publications/mr2/mr2.shtml

Cohen, S. Design Strategies and Innovations in the Medical Expenditure Panel Survey. *Medical Care*, July 2003: 41(7) Supplement: III-5–III-12.

Suggested Citation

Soni, A. *The Top Five Therapeutic Classes of Outpatient Prescription Drugs by Total Expense for the Medicare Population Age 65 and Older in the U.S. Civilian Noninstitutionalized Population, 2005*. Statistical Brief #199. February 2008. Agency for Healthcare Research and Quality, Rockville, MD. http://www.meps.ahrq.gov/mepsweb/data_files/publications/st199/stat199.pdf

# # #

AHRQ welcomes questions and comments from readers of this publication who are interested in obtaining more information about access, cost, use, financing, and quality of health care in the United States. We also invite you to tell us how you are using this Statistical Brief and other MEPS data and tools and to share suggestions on how MEPS products might be enhanced to further meet your needs. Please e-mail us at mepspd@ahrq.gov or send a letter to the address below:

Steven B. Cohen, PhD, Director
Center for Financing, Access, and Cost Trends
Agency for Healthcare Research and Quality
540 Gaither Road
Rockville, MD 20850

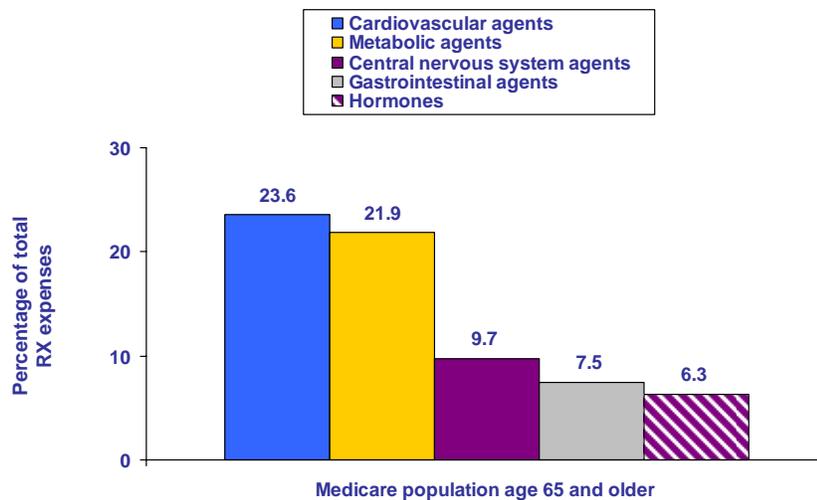## Figure 1. Top five therapeutic classifications for prescribed drugs ranked by total expense for Medicare population age 65 and older, 2005
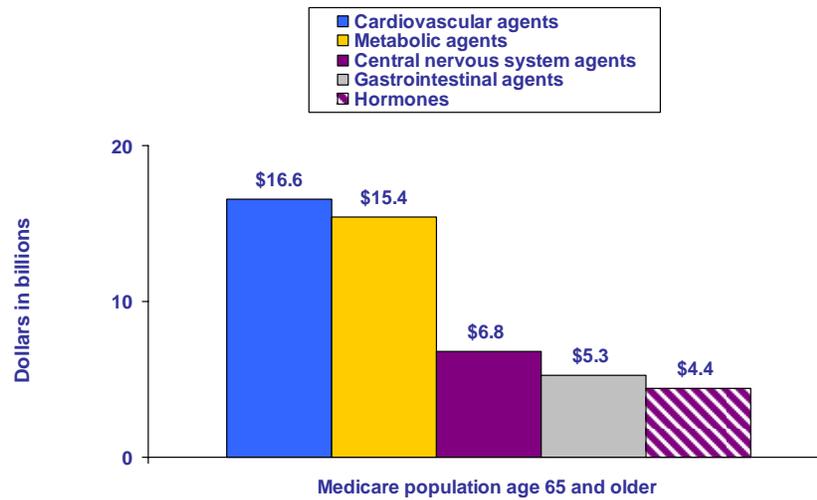
Legend:
- Cardiovascular agents
- Metabolic agents
- Central nervous system agents
- Gastrointestinal agents
- Hormones

Dollars in billions

- $16.6
- $15.4
- $6.8
- $5.3
- $4.4

Medicare population age 65 and older

Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2005

Figure 2. Percentage of total prescribed drug expenses by the Medicare population age 65 and older that the top five therapeutic classes ranked by total expense represent, 2005

Legend:
- Cardiovascular agents
- Metabolic agents
- Central nervous system agents
- Gastrointestinal agents
- Hormones

Percentage of total RX expenses

- 23.6
- 21.9
- 9.7
- 7.5
- 6.3

Medicare population age 65 and older

Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2005

Statistical Brief #199: The Top Five Therapeutic Classes of Outpatient Prescription Drugs Ranked by Total Expense for the Medicare Population Age 65 and Older in the U.S. Civilian Noninstitutionalized Population, 2005

Figure 3. Percentage of the Medicare population age 65 and older with a prescribed drug expense having an expense in the top five therapeutic classes ranked by total expense, 2005

Legend:
- Cardiovascular agents
- Metabolic agents
- Central nervous system agents
- Gastrointestinal agents
- Hormones

Percentage of population with RX expense

- Cardiovascular agents: 75.9
- Metabolic agents: 53.7
- Central nervous system agents: 47.4
- Gastrointestinal agents: 27.1
- Hormones: 36.6

Medicare population age 65 and older

Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2005
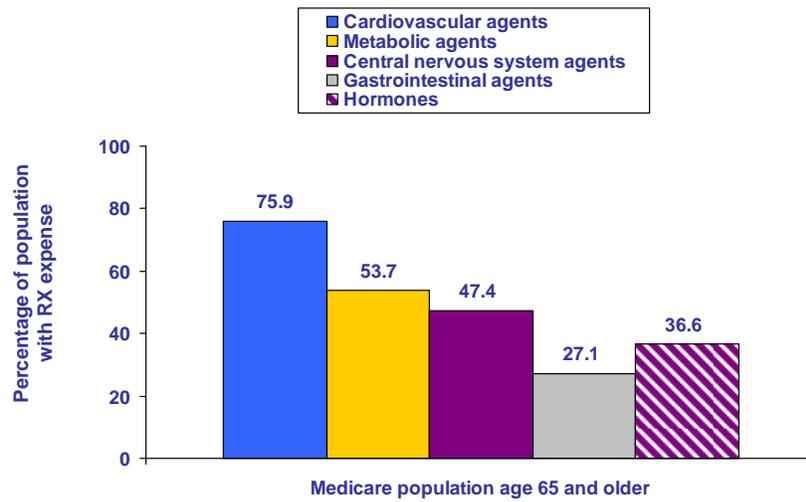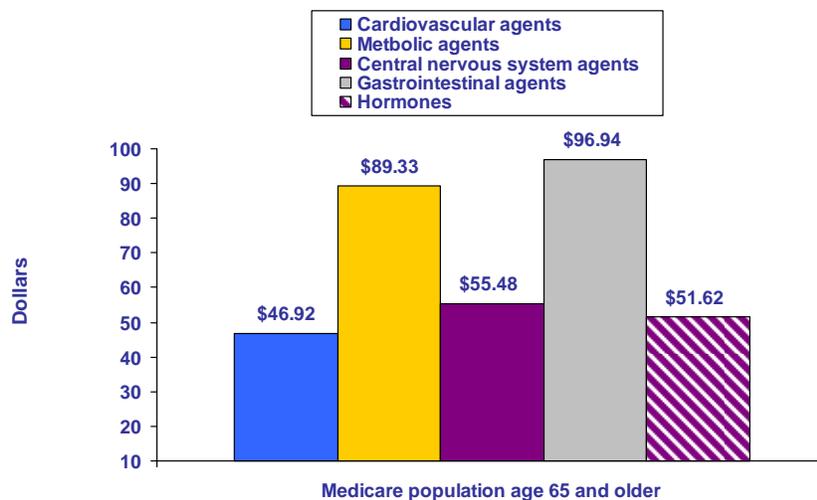
Figure 4. Average expense per prescription for the top five therapeutic classes of prescribed drugs ranked by total expense for the Medicare population age 65 and older, 2005

Legend:
- Cardiovascular agents
- Metbolic agents
- Central nervous system agents
- Gastrointestinal agents
- Hormones

Dollars

- Cardiovascular agents: $46.92
- Metbolic agents: $89.33
- Central nervous system agents: $55.48
- Gastrointestinal agents: $96.94
- Hormones: $51.62

Medicare population age 65 and older

Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2005

Statistical Brief #199: The Top Five Therapeutic Classes of Outpatient Prescription Drugs Ranked by Total Expense for the Medicare Population Age 65 and Older in the U.S. Civilian Noninstitutionalized Population, 2005