Agency for Healthcare Research and Quality

MEPS Medical Expenditure Panel Survey

STATISTICAL BRIEF #498

February 2017

Out-of-Pocket Expenditures for Adults with Health Care Expenses for Multiple Chronic Conditions, U.S. Civilian Noninstitutionalized Population, 2014

Anita Soni, PhD, MBA

Highlights

- Among those using medical care, mean per person out-of-pocket expenditures for the U.S. civilian noninstitutionalized adult population who had multiple chronic conditions were more than double for those adults who had no or one chronic condition.
- White, non-Hispanic adults with multiple chronic conditions had the highest per person out-of-pocket expenditures in comparison to black non-Hispanic, Hispanic, Asian non-Hispanic, and other non-Hispanic adults with two or more chronic conditions.
- High income adults with multiple chronic conditions had higher out-of-pocket expenditures than those who had lower family income.
- Among non-elderly adults who received medical care in 2014, those with multiple chronic conditions who were uninsured had higher mean out-of-pocket expenditures per person than those who had only public insurance.

Introduction

As the population of the United States continues to age, the prevalence of chronic conditions will continue to rise. Chronic conditions are those which are persistent and have long lasting effects that impact one's ability to function well beyond an acute phase. While having one chronic condition increases the chances of an individual having higher medical expenses, having more than one may have a multiplicative effect on functioning and the need for health care. Persons with multiple chronic conditions may require, in addition to care for each specific condition, coordination of care to cover all of their health care needs. This increased use of medical care may contribute to persons with multiple chronic conditions having higher out-of-pocket medical expenses. This potentially high level of out-of-pocket health care spending may impose an economic burden on some individuals and families.

While the potential scope of disease and functional limitations that can be attributed to chronic conditions is quite broad, a narrower classification scheme to study common chronic conditions was developed by a working group from the Office of the Assistant Secretary for Health (OASH) in the Department of Health and Human Services (DHHS). The working group identified 20 chronic condition groups that could be identified from many Federal data sources to enable more consistent data analysis. This classification scheme is consistent with the DHHS strategic framework on Multiple Chronic Conditions[1,2]. This Statistical Brief focuses on adults 18 and older who received some medical care in 2014. Persons who have multiple chronic conditions—those who were treated for two or more conditions on that list during 2014 are compared to those who, while they had medical care, reported use associated with only one or no conditions on that list. Adults without health care use in 2014 (about 15 percent of the population) are excluded from the analysis.

The data in this Brief are from the Agency for Healthcare Research and Quality's (AHRQ) Medical Expenditure Panel Survey Household Component (MEPS-HC) for 2014. Estimates are presented on out-of-pocket expenditures for adults, age 18 and older, who had some medical care expenses in 2014. Those who had treatment for multiple chronic conditions as defined above are compared to those who had some medical care but not for multiple chronic conditions. Out-of-pocket spending in this analysis does not include amounts paid for health insurance premiums. Estimates are shown by age, race/ethnicity, family income and insurance coverage. All comparisons discussed in the text are statistically significant at the .05 level [3].

Findings

In 2014, an estimated 64 million adults were treated and had related expenses for two or more chronic conditions (see "Definitions") and an estimated 142 million other adults had medical care expenses but were not treated for two or more of these conditions.

Age

In 2014, adults who had expenses for medical care associated with multiple chronic conditions had more than three times higher mean total treatment expenses compared to those who had no or one chronic condition ($13,031 versus $3,579) (figure 1). Per person out-of-pocket expenditures for adults with multiple chronic conditions were more than twice as high as those for adults who had one or no chronic condition ($1,294 versus $595). Out-of-pocket expenditures for elderly adults with multiple chronic conditions were higher than for non-elderly adults with multiple chronic conditions ($1,437 versus $1,152). Out-of-pocket expenditures for elderly adults with multiple chronic conditions were also higher compared with adults of the same age who had one or no chronic conditions ($1,437 versus $839). Among non-elderly adults, those with multiple chronic conditions reported double the out-of-pocket expenditures of those who had one or no chronic conditions ($1,152 versus $568).

Race/ethnicity

Among adults who had expenses for medical care associated with multiple chronic conditions in 2014, the highest mean per-person out-of-pocket expenditures were for white, non-Hispanic adults ($1,463). This was more than double the amount reported for Hispanic adults ($710) and almost double that reported for black, non-Hispanic adults ($781) (figure 2). Moreover, across all race/ethnicity categories mean per person out-of-pocket expenditures were substantially higher for those with multiple chronic conditions compared with those who had one or no chronic conditions (white, non-Hispanic–$1,463 versus $707; black non-Hispanic–$781 versus $337; Hispanic–$710 versus $398; Asian non-Hispanic–$913 versus $407; and Other non-Hispanic–$1,148 versus $400, respectively).

---

[1] *Preventing Chronic Disease Public Health Research, Practice and Policy*. PCD Collection Multiple Chronic Conditions 2013; 10: April 2013. DOI: http://www.cdc.gov/pcd/collections/pdf/PCD_MCC_Collection_5-17-13.pdf.

[2] Goodman RA, Posner SF, Huang ES, Parekh AK, Koh HK. *Defining and Measuring Chronic Conditions: Imperatives for Research, Policy, Program and Practice*. Prev Chronic Dis 2013; 10: 120239. DOI: http://dx.doi.org/10.5888/pcd10.120239.

[3] A 5 percent statistical significance indicates that statistical errors alone may possibly explain observed differences no more than 5 percent of the time.

Similar differences among racial and ethnic categories were observed for both younger and older adults (figure 3). White, non-Hispanics with multiple chronic conditions treated had the highest out-of-pocket expenditures in both age categories ($1,300 and $1,612, respectively). In both the 18–64 and 65 and older groups, mean per person out-of-pocket expenditures for those with multiple chronic conditions in most race/ethnicity groups were nearly or more than double the means for those who had no or one chronic condition.

Family income
Among adults who had some medical care in 2014 for multiple chronic conditions, higher mean out-of-pocket expenditures were associated with higher income. Adults whose families were in the high income category had higher mean out-of-pocket expenditures than those whose family income was in the poor/near poor, low income or middle income categories ($1,571 versus $859, $1,208, and $1,279, respectively) (figure 4). Among persons without multiple chronic conditions, average out-of-pocket expenditures for those with a family income in the poor/near poor or low income categories were approximately sixty percent of the average for families in the high income category, $432 and $438 versus $728, respectively.

Insurance coverage
Among non-elderly adults with health care expenses in 2014, those with multiple chronic conditions who were uninsured had higher out-of-pocket mean per person expenditures than those with only public insurance ($1,935 versus $635) (figure 5). Non-elderly adults with multiple chronic conditions who had private insurance paid on average $1,287 per person out-of-pocket. Among the non-elderly without multiple chronic conditions, those with private insurance had more than double the mean expenditures per person of those with only public insurance ($610 versus $290).

Among elderly adults with Medicare and supplemental private insurance who had health care expenses in 2014, those with multiple chronic conditions had mean out-of-pocket expenditures nearly double of similar adults with only one or no chronic conditions ($1,685 versus $883).

Among elderly adults who had treatment expenses for multiple chronic conditions, those with Medicare and private insurance had higher average out-of-pocket expenditures than those with Medicare only or those with Medicare and other public insurance ($1,685 versus $1,401 and $437, respectively).

Data Source

The estimates shown in this Statistical Brief are based on data from the MEPS 2014 Full Year Consolidated Data File (HC-171), Medical Conditions File (HC-170), Home Health File (HC-168H), Office-Based Medical Provider Visits File (HC-168G), Outpatient Visits File (HC-168F), Emergency Room Visits File (HC-168E), Hospital Inpatient Stays File (HC-168D), Other Medical Expenses File (HC-168C), Dental Visits File (HC-168B), and Prescribed Medicines File (HC-168A). The study population included in this Statistical Brief consisted of adults who reported any medical expenses in 2014 (TOTEXP14>0). The terms "health care expenses" and "health care use" are used interchangeably in this report.

Definitions

Multiple chronic conditions
In the MEPS-HC, all household respondent reported conditions were coded using ICD-9 codes. These ICD-9 codes were translated into Clinical Classification Software (CCS) codes. A person was considered to have multiple chronic conditions if they had two or more treated conditions and associated CCS codes from the list of chronic conditions developed by a working group of the Office of the Assistant Secretary for Health (OASH) in the Department of Health and Human Services (DHHS): Hypertension, congestive heart failure, coronary artery disease, cardiac arrhythmias, hyperlipidemia, stroke, arthritis, asthma, autism spectrum disorder, cancer, chronic kidney disease, chronic obstructive pulmonary disease, dementia (including Alzheimer's and other senile dementias), depression, diabetes, hepatitis, Human Immunodeficiency Virus (HIV), osteoporosis, schizophrenia, and substance abuse disorders (drug and alcohol).

Expenditures
The MEPS-HC defines total expenses as the sum of payments from all sources to hospitals, physicians, other health care providers (including dental care), and pharmacies for services reported by respondents in the MEPS-HC.

Sources of payment
The MEPS-HC sources of payment are classified into five categories: 1) Out-of-pocket* (i.e., direct payments from individuals and families), 2) Private insurance (including TRICARE for military families), 3) Medicare, 4) Medicaid, and 5) Other.

**Out-of-pocket expenditures*
In MEPS, out-of-pocket expenditures are defined as direct payments from individuals or their families reported to be associated with any health services received. These payments include co-payments and deductibles as well as payments for services not covered by insurance or another source.

Poverty status
Four income groups were defined based on the percentage of the poverty line for total family income, adjusted for family size and composition. The following categories were used:

- *Poor/Near Poor:* Persons in families with incomes less than or equal to the poverty line, including those who reported negative income; and persons in families with incomes over the poverty line through 125 percent of the poverty line;
- *Low income:* Persons in families with incomes over 125 percent through 200 percent of the poverty line;
- *Middle income:* Persons in families with incomes over 200 percent through 400 percent of the poverty line; and
- *High income:* Persons in families with incomes over 400 percent of the poverty line.

Health insurance status
Individuals under age 65 were classified in the following three insurance categories based on household responses to health insurance status questions:

- *Any private health insurance:* Individuals, who, at any time during the year, had private insurance that provided coverage for hospital and physician care, were classified as having private insurance. Coverage by TRICARE (Armed Forces related coverage) was also included as private health insurance. Insurance that provided coverage for a single service only, such as dental or vision coverage, was not included.
- *Public coverage only:* Individuals were considered to have public coverage only if they met both of the following criteria: 1) they were not covered by private insurance at any time during the year, and 2) they were covered by one of the following public programs at any point during the year: Medicare, Medicaid, or other public hospital/physician coverage.
- *Uninsured:* The uninsured were defined as those not covered by private hospital/physician insurance, Medicare, TRICARE, Medicaid, or other public hospital/physician programs at any time during the year.

For individuals 65 and older, the following insurance categories were used:

- *Medicare only:* Individuals who were covered by Medicare only during the year. For analytic purposes, this classification also included a very small number of persons age 65 and over who did not report Medicare coverage.
- *Medicare plus private (including TRICARE):* Individuals who at any time during the year, were covered by a combination of Medicare and TRICARE or private insurance.
- *Medicare plus other public coverage:* Individuals who, at any time during the year, were covered by Medicare and some other type of public insurance. An extremely small proportion of persons age 65 and older did not fall into one of these 3 categories.

About MEPS-HC

The 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 U.S. 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 visit the MEPS Web site at http://www.meps.ahrq.gov/.

References

For a detailed description of the MEPS-HC survey design, sample designs, and methods used to minimize sources of non-sampling errors, 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 Health Care Policy and Research, 1997. http://meps.ahrq.gov/mepsweb/data_files/publications/mr1/mr1.pdf

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 Health Care Policy and Research, 1997. http://meps.ahrq.gov/mepsweb/data_files/publications/mr2/mr2.pdf

Cohen, S. *Design Strategies and Innovations in the Medical Expenditure Panel Survey. Medical Care*, July 2003: 41(7) Supplement: III-5–III-12. CAHPS: https://cahps.ahrq.gov/cahps-database/about/index.html

For more information about specialists and care for people with chronic conditions, see the following publications:

Preventing Chronic Disease Public Health Research, Practice and Policy. PCD Collection Multiple Chronic Conditions 2013; 10: April 2013. DOI: http://www.cdc.gov/pcd/collections/pdf/PCD_MCC_Collection_5-17-13.pdf.

Goodman RA, Posner SF, Huang ES, Parekh AK, Koh HK. *Defining and Measuring Chronic Conditions: Imperitives for Research, Policy, Program and Practice*. Prev Chronic Dis 2013; 10: 120239. DOI: http://dx.doi.org/10.5888/pcd10.120239.

Beatty, PW, Hagglund KJ, Neri MT, Dhont KR, Clark MJ, and Hilton SA. *A*ccess to Health Care Services Among People with Chronic or Disabling Conditions: Patterns and Predictors. *Archives of Physical Medicine and Rehabilitation,* October 2003, 84(10):1417–25.

Wagner, EH, Austin BT, Davis C, Hindmarsh M, Schaefer J, and Bonomi A. Improving Chronic Illness Care: Translating Evidence into Action. *Health Affairs*, November-December 2001, 20(6):64–78.

Zulman DM, Asch SM, Martins SB, Kerr EA, Hoffman BB, Goldstein MK. *Quality of Care for Patients with Multiple Chronic Conditions: The Role of Comorbidity Interrelatedness*. J Gen Intern Med. 2014; 29(3):529–537.

Meraya AM, Raval AD, Sambamoorthi U. *Chronic Condition Combinations and Health Care Expenditures and Out-of-Pocket Spending Burden among Adults, Medical Expenditure Panel Survey, 2009 and 2011*. Prev Chronic Dis. 2015;12:E12.

HCUP Clinical Classifications Software (CCS): Healthcare Cost and Utilization Project (HCUP). U.S. Agency for Healthcare Research and Quality, Rockville, MD. http://www.hcup-us.ahrq.gov/toolssoftware/ccs/AppendixASingleDX.txt

Suggested Citation

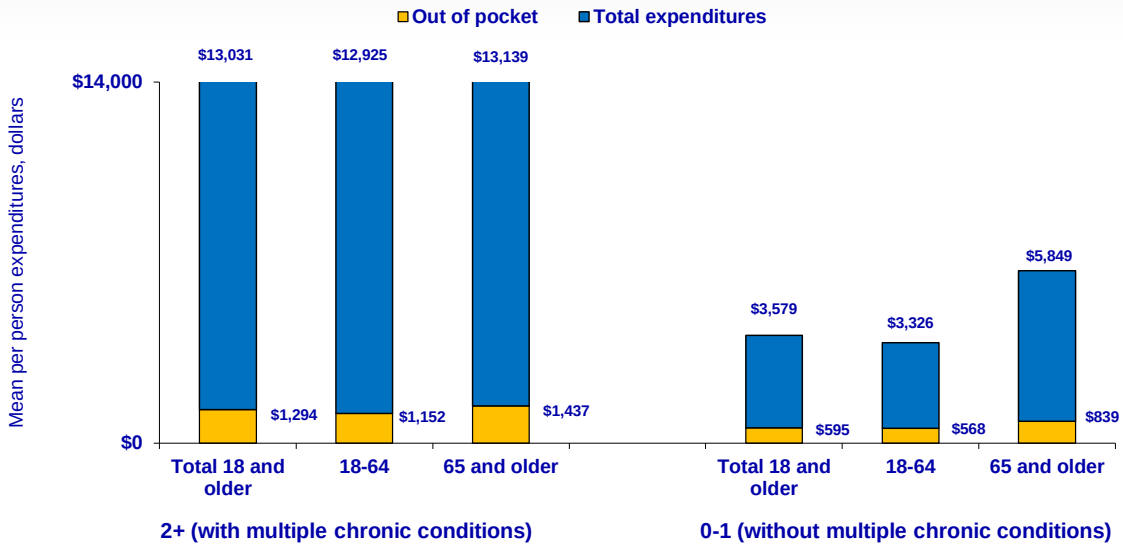
Soni, A. *Out-of-Pocket Expenditures for Adults with Multiple Chronic Conditions, U.S. Civilian Noninstitutionalized Population, 2014*. Statistical Brief #498. February 2017. Agency for Healthcare Research and Quality, Rockville, MD.
http://www.meps.ahrq.gov/mepsweb/data_files/publications/st498/stat498.pdf

* * *

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 email us at MEPSProjectDirector@ahrq.hhs.gov or send a letter to the address below:

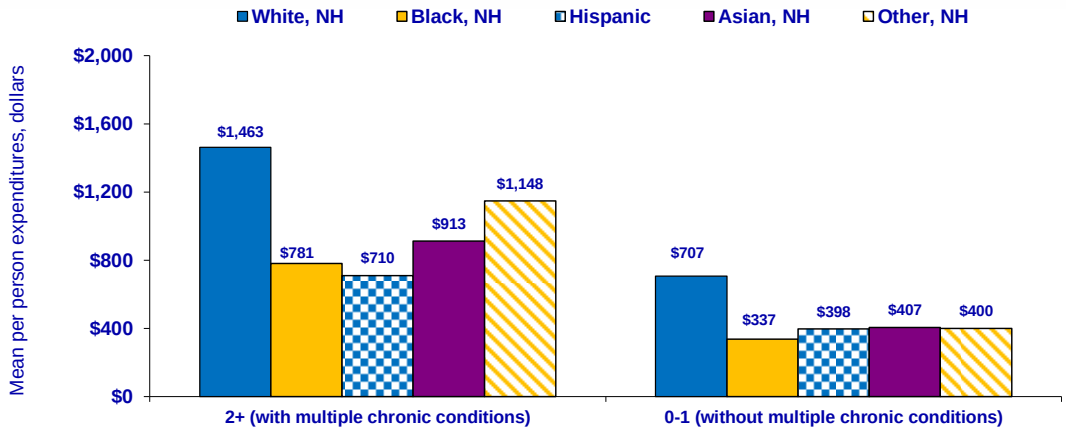
Joel W. Cohen, PhD, Director
Center for Financing, Access, and Cost Trends
Agency for Healthcare Research and Quality
5600 Fishers Lane, Mailstop 07W41A
Rockville, MD 20857

Figure 1. Mean per person expenditures (total and out of pocket) for adults with health care expenses by number of chronic conditions treated and age, 2014



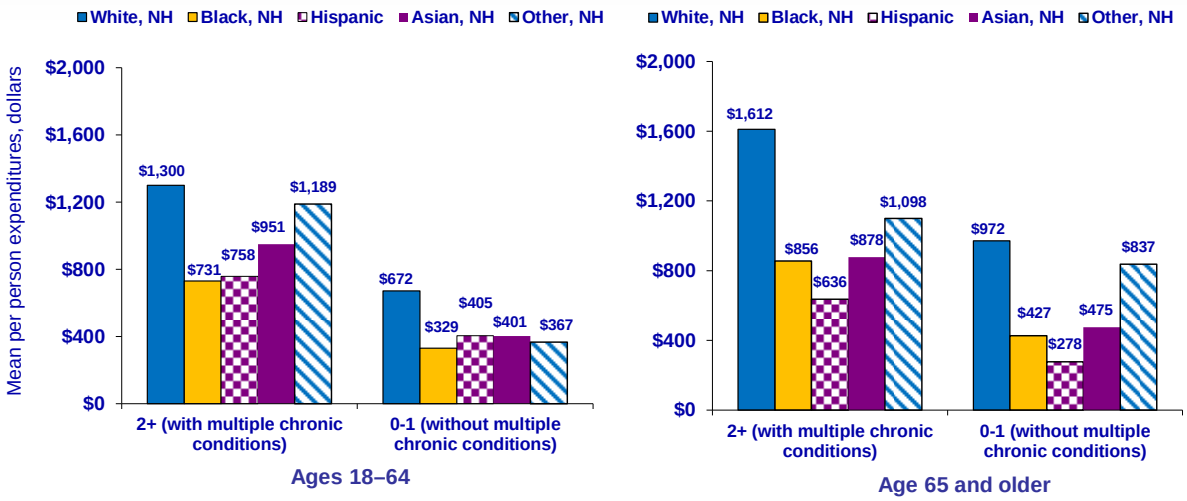
Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2014

Figure 2. Mean per person out-of-pocket expenditures for adults with health care expenses by number of chronic conditions treated and race/ethnicity, 2014



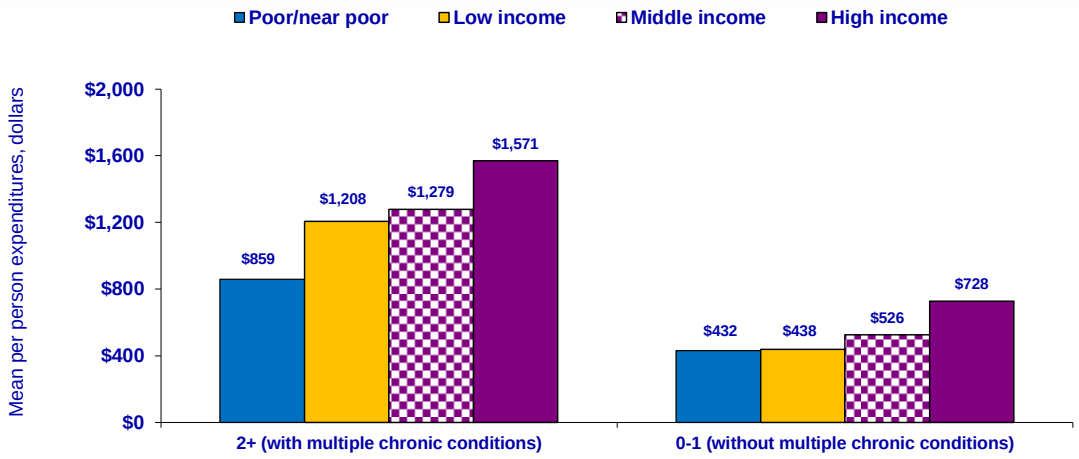
Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2014

Figure 3. Mean per person out-of-pocket expenditures for adults with health care expenses by number of chronic conditions treated, by race/ethnicity and age, 2014



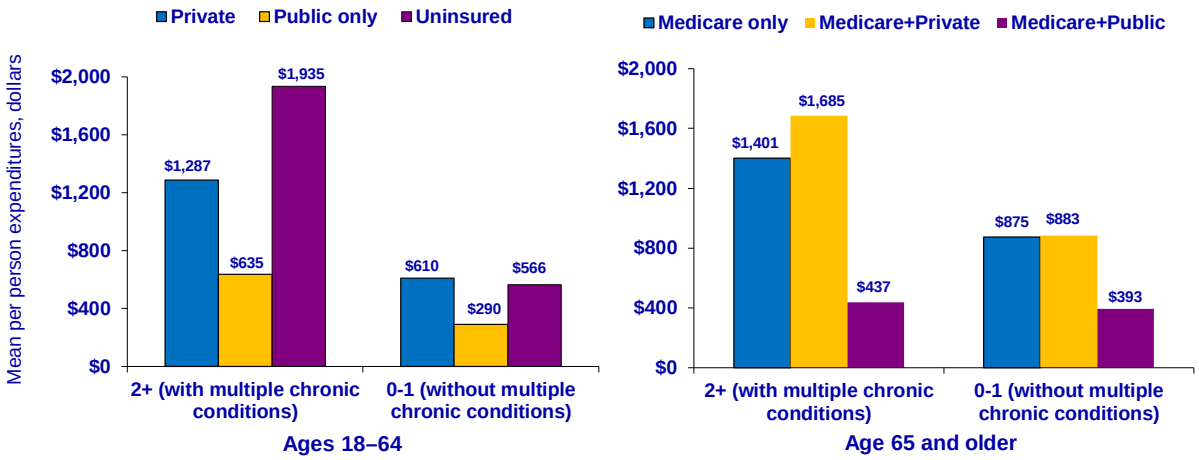
Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2014

Figure 4. Mean per person out-of-pocket expenditures for adults with health care expenses by number of chronic conditions treated and family income, 2014



Source: Agency for Healthcare research and Quality, Medical Expenditure Panel Survey, Household Component, 2014

Figure 5. Mean per person out-of-pocket expenditures for adults with health care expenses by number of chronic conditions treated, insurance status and age, 2014



Source: Agency for Healthcare research and Quality, Medical Expenditure Panel Survey, Household Component, 2014