Research Findings #32

Health Care Expenditures for Uncomplicated Pregnancies, 2009

ABSTRACT

This analysis updates AHRQ *Research Findings #27, Health Care Expenditures for Uncomplicated Pregnancies* to produce estimates in 2009 dollars of the expenses associated with an uncomplicated pregnancy, including both the prenatal care and the inpatient delivery, overall and by groups defined by the insurance status of the mother. The prenatal-care expenses are broken out by type, including those for the office-based visits, those for the prescription medicines, and those for all other medical care.

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The estimates in this report are based on the most recent data available at the time the report was written. However, selected elements of MEPS data may be revised on the basis of additional analyses, which could result in slightly different estimates from those shown here. Please check the MEPS Web site for the most current file releases.

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The Medical Expenditure Panel Survey (MEPS)

Background

The Medical Expenditure Panel Survey (MEPS) is conducted to provide nationally representative estimates of health care use, expenditures, sources of payment, and insurance coverage for the U.S. civilian noninstitutionalized population. MEPS is co-sponsored by the Agency for Healthcare Research and Quality (AHRQ), formerly the Agency for Health Care Policy and Research, and the National Center for Health Statistics (NCHS).

MEPS comprises three component surveys: the Household Component (HC), the Medical Provider Component (MPC), and the Insurance Component (IC). Together these surveys yield comprehensive data that provide national estimates of the level and distribution of health care use and expenditures, support health services research, and can be used to assess health care policy implications.

MEPS is the third in a series of national probability surveys conducted by AHRQ on the financing and use of medical care in the United States. The National Medical Care Expenditure Survey (NMCES) was conducted in 1977, the National Medical Expenditure Survey (NMES) in 1987. Beginning in 1996, MEPS continues this series with design enhancements and efficiencies that provide a more current data resource to capture the changing dynamics of the health care delivery and insurance system.

The design efficiencies incorporated into MEPS are in accordance with the Department of Health and Human Services (DHHS) Survey Integration Plan of June 1995, which focused on consolidating DHHS surveys, achieving cost efficiencies, reducing respondent burden, and enhancing analytical capacities. To accommodate these goals, MEPS design features include linkage with the National Health Interview Survey (NHIS), from which the sample for the MEPS-HC is drawn, and enhanced longitudinal data collection for core survey components. The MEPS-HC augments NHIS by selecting a sample of NHIS respondents, collecting additional data on their health care expenditures, and linking these data with additional information collected from the respondents' medical providers, employers, and insurance providers.

Household Component

The MEPS-HC, a nationally representative survey of the U.S. civilian noninstitutionalized population, collects medical expenditure data at both the person and household levels. The HC collects detailed data on demographic characteristics, health conditions, health status, use of medical care services, charges and payments, access to care, satisfaction with care, health insurance coverage, income, and employment.

The HC uses an overlapping panel design in which data are collected through a preliminary contact followed by a series of five rounds of interviews over a two-and-a-half year period. Using computer-assisted personal interviewing (CAPI) technology, data on medical expenditures and use for two calendar years are collected from each household. This series of data collection rounds is launched each subsequent year on a new sample of households to provide overlapping panels of survey data and, when combined with other ongoing panels, will provide continuous and current estimates of health care expenditures.

The sampling frame for the MEPS-HC is drawn from respondents to NHIS, conducted by NCHS. NHIS provides a nationally representative sample of the U.S. civilian noninstitutionalized population, with oversampling of Hispanics and blacks.

Medical Provider Component

The MEPS-MPC supplements and validates information on medical care events reported in the MEPS-HC by contacting medical providers and pharmacies identified by household respondents. The MPC sample includes all hospitals, hospital physicians, home health agencies, and pharmacies reported in the HC. Also included in the MPC are all office-based physicians:

- Providing care for HC respondents receiving Medicaid.
- Associated with a 75 percent sample of households receiving care through an HMO (health maintenance organization) or managed care plan.
- Associated with a 25 percent sample of the remaining households. Data are collected on medical and financial characteristics of medical and pharmacy events reported by HC respondents, including:
    - Diagnoses coded according to ICD-9 (9th Revision, International Classification of Diseases) and DSMIV (Fourth Edition, Diagnostic and Statistical Manual of Mental Disorders).
    - Physician procedure codes classified by CPT-4 (Current Procedural Terminology, Version 4).
    - Inpatient stay codes classified by DRG (diagnosis related group).
    - Prescriptions coded by national drug code (NDC), medication names, strength, and quantity dispensed.
    - Charges, payments, and the reasons for any difference between charges and payments.

The MPC is conducted through telephone interviews and mailed survey materials.

Insurance Component

The MEPS-IC collects data on health insurance plans obtained through private and public sector employers. Data obtained in the IC include the number and types of private insurance plans offered, benefits associated with these plans, premiums, contributions by employers and employees, and employer characteristics.

Establishments participating in the MEPS-IC are selected through two sampling frames:

- A Bureau of the Census list frame of private sector business establishments.
- The Census of Governments from the U.S. Census Bureau.

Data from these sampling frames are collected to provide annual national and state estimates of the supply of private health insurance available to American workers and to evaluate policy issues pertaining to health insurance. Since 2000, the Bureau of Economic Analysis has used national estimates of employer contributions to group health insurance from the MEPS-IC in the computation of Gross Domestic Product (GDP).

The MEPS-IC is an annual panel survey. Data are collected from the selected organizations through a prescreening telephone interview, a mailed questionnaire, and a telephone follow-up for non-respondents.

Survey Management

MEPS data are collected under the authority of the Public Health Service Act. They are edited and published in accordance with the confidentiality provisions of this act and the Privacy Act. NCHS provides consultation and technical assistance.

As soon as data collection and editing are completed, the MEPS survey data are released to the public in staged releases of summary reports and microdata files. Summary reports and microdata files are available through the Internet on the MEPS Web site: http://www.meps.ahrq.gov/

For more information, visit the MEPS Web site or email MEPSProjectDirector@ahrq.hhs.gov.

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Health Care Expenditures for Uncomplicated Pregnancies, 2009

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Introduction

This analysis updates AHRQ *Research Findings #27, Health Care Expenditures for Uncomplicated Pregnancies,* using data pooled from three panels of the Medical Expenditure Panel Survey Household Component (MEPS-HC) to produce estimates in 2009 dollars of expenses associated with an uncomplicated pregnancy, including both the prenatal care and the inpatient delivery. Medical expenditures are defined in MEPS as payments to hospitals, physicians, pharmacies, and other health care providers for services provided, and include direct payments by individuals, private and public insurance plans, and other miscellaneous payment sources.

In this report, the average expenditure per pregnancy is shown for the prenatal-care portion of the pregnancy, for the delivery portion, and for the total for all women and groups defined by insurance status—those with private insurance in the month of delivery and in the eight months prior, those with Medicaid in the month of delivery and in the eight months prior, and all other women. Additionally, the prenatal-care portion of the pregnancy expenses are broken out by the type of expense—those for office-based visits, for prescription drug purchases and for all other medical services and equipment. Finally, for each of the expenses, the average percentage of the expenses paid out of pocket, paid by private insurance,[1] paid by Medicaid, and paid by all other sources[2] is shown.

Methods

The MEPS-HC collects data from a nationally representative sample of households through an overlapping panel design. A new panel of sample households is selected each year and five rounds of data are collected from it covering a two-year period. Due to the very small sample sizes of women who were in the survey for the course of a full-term pregnancy, we pooled data across three MEPS panels—Panel 11 (2006–2007), Panel 12 (2007–2008), and Panel 13 (2008–2009). Women from these Panels who met each of the following three criterion were included in the analysis: 1) had an inpatient event where the reported reason for the hospitalization was "to give birth", 2) the Clinical Classification Code (CCS)[3] for the event was 196 ("normal pregnancy and delivery"), and 3) were in the survey for at least 38 consecutive weeks (period of a full term pregnancy) prior to the date of delivery. This definition necessarily excluded all non inpatient deliveries as well as all inpatient deliveries with complications—e.g., hypertension or diabetes complicating childbirth, early labor or prolonged delivery, and malpositioned, obstructed or forceps deliveries. Deliveries by Caesarean section were included in the analysis unless they had been coded as a complication of birth (CCS code of 195).

[1] The private insurance category includes TRICARE.
[2] The other sources of payment include Medicare, Veterans Affairs/CHAMPVA, other federal sources (e.g., Indian Health Service), other state and local sources (e.g., community clinics, state/local health departments and state programs other than Medicaid), worker's compensation, and other unclassified sources (e.g., automobile/homeowner's insurance).
[3] The CCS groups clinically similar ICD codes. The ICD-9 codes grouped under CCS code 196 include 650, 651, V22, V24, V27, V72, and V91. See http://www.hcup-us.ahrq.gov/toolssoftware/ccs/ccs.jsp for more information on the CCS.

The delivery expenditures are those associated with the woman's inpatient event and include payments both to the facility and to any separately billing doctors. Prenatal care expenditures were obtained by compiling the medical events from office-based visits, prescription drug purchases, hospital emergency room, outpatient and inpatient visits (excluding the inpatient visit for the delivery) and home health visits that linked to the normal pregnancy/delivery condition on the inpatient event. This method insured that the expenditures related to separate pregnancies by the same mother were accounted for separately, and that only the expenditures related to the pregnancy were included. For instance, a mother's purchases of a prenatal vitamin were included, but not her purchases of a diuretic if it linked to a separate condition (e.g., essential hypertension). Expenditures that linked to the pregnancy as well as a separate condition were included.

Using detailed information collected in MEPS about the type of insurance carried by each sample person in each month, the pregnancies were classified according to the type of insurance she carried in the month of delivery and in the eight months prior. A pregnancy was classified as privately insured if the woman had private insurance or Armed Forces–related coverage (TRICARE) for the entire period of the pregnancy and delivery. A pregnancy was classified as Medicaid insured if the woman had Medicaid for the entire period of the pregnancy and delivery. All other pregnancy/deliveries were classified as other and included those with no insurance or some mixture of insurance types during the pregnancy and delivery.

The MEPS longitudinal weights were used to produce the design-based estimates in this report over the reference period (2006–2009). The expenditures in 2006–2008 for the hospital-related events (inpatient, emergency room, and outpatient) were adjusted to 2009 dollars using either the Producer Price Index (for the hospital-related events: e.g., emergency room, inpatient, outpatient) or the Consumer Price Index (for the non hospital-related events: e.g., office-based visits, prescription drug purchases, home health visits). All differences discussed in the text are statistically significant at the .05 level.

Highlights

- The average expense (in 2009 dollars) for an uncomplicated pregnancy in 2006–2009 was $9,705.
- Averaging $7,873, the delivery accounted for the vast majority of the pregnancy-related expense.
- The average expense for pregnancy (overall as well as for the prenatal care and delivery portions of the pregnancy) was higher for women with private insurance compared to those on Medicaid.
- The percentage of expenses paid by private insurance was lower than the percentage paid by Medicaid; therefore, the privately insured paid a higher percentage out of pocket.

Findings

Table 1 shows selected characteristics of women with normal pregnancies in 2006–2009. Comparable to the panels used in Research Findings #27, more than half (55 percent) were ages 25–34, two-thirds (66 percent) were non-Hispanic other (mainly white), two-thirds (67 percent) were married, and more than a quarter (28 percent) were living below the federal poverty line. Privately insured women, compared to those on Medicaid, were more likely to be ages 25–34 (62 verses 41 percent), more likely to be non-Hispanic other (80 versus 41 percent), more likely to be married (88 versus 27 percent), and much less likely to be living in poverty (4 versus 69 percent).

Table 1. Characteristics of women with uncomplicated pregnancy by insurance status

	Overall		Privately insured		Medicaid	
	Percentage	SE	Percentage	SE	Percentage	SE
Overall						
Overall	100.0	0.0	100.0	0.0	100.0	0.0
Age category						
<25	30.2	2.3	16.4	2.7	55.7	5.3
25–34	55.3	2.4	62.0	3.4	40.7	5.2
35+	14.5	1.9	21.6	3.2	3.6	1.6 *
Race/ethnicity						
Hispanic	20.2	2.0	12.4	2.2	28.5	4.5
Non-Hispanic black	13.3	1.6	7.7	1.7	30.1	5.0
Non-Hispanic other	66.4	2.5	79.9	2.7	41.3	5.6
Marital status						
Married	66.9	2.4	88.1	2.1	26.7	5.0
Not married	33.1	2.4	11.9	2.1	73.3	5.0
Poverty status						
<100% FPL	27.9	2.4	3.7	1.2 *	69.3	5.4
100%+ FPL	72.1	2.4	96.3	1.2	30.7	5.4

*RSE < .3

Table 2 shows the percentage with expenses and the average (mean and median) expense (in 2009 dollars) for an uncomplicated pregnancy during 2006–2009. All of the pregnancies (100 percent) had an expense for either the prenatal care or the delivery, and the mean expense was $9,705, but half of the pregnancies were under roughly $8,170 (median). Ninety-eight percent of the pregnancies had prenatal-care expenses and, among those with expenses the mean was $2,711. About 90 percent had delivery expenses, and among them the mean was $7,873. Compared to those on Medicaid, the expenses of the privately insured were about $1,100 higher for the prenatal care ($3,353 versus $2,230) and over $3,200 higher for the delivery ($9,549 versus $6,333).

Table 2. Average expense (in 2009 dollars) for uncomplicated pregnancy, by insurance status

	Total		Prenatal		Delivery	
	Estimate	SE	Estimate	SE	Estimate	SE
Overall						
Percentage with expenses	100.0	0.0	97.5	1.0	89.7	1.4
Conditional mean	9,705	331	2,711	172	7,873	286
Conditional median	8,170	309	1,397	102	6,789	216
Privately insured						
Percentage with expenses	100.0	0.0	97.0	1.6	91.1	1.9
Conditional mean	11,955	532	3,353	262	9,549	447
Conditional median	10,186	433	1,828	225	8,235	271
Medicaid						
Percentage with expenses	100.0	0.0	96.2	2.5	85.7	3.7
Conditional mean	7,574	479	2,230	271	6,333	364
Conditional median	6,250	465	1,362	172	5,767	223

Table 3 shows the average of the percent of the expenses paid by private insurance, by Medicaid, out of pocket, and by all other sources. Overall, on average about half (49.0 percent) of all pregnancy expenses were paid by private insurance, a third (32.5 percent) was paid by Medicaid, 7.6 percent was paid out of pocket, and the rest, 10.9 percent, was paid by other sources. Women with private insurance on average paid 9.6 percent of the overall pregnancy expenses out of pocket (17.2 percent of the prenatal care expenses and 9.8 percent of the delivery expenses), while their private insurance paid 84.8 percent (76.9 percent of prenatal care and 85.4 percent of the delivery). Women on Medicaid paid less out of pocket (0.6 percent overall, 2.1 percent of the prenatal care and 0.4 percent of the delivery) and Medicaid paid a larger share of the expenses (89.2 percent overall, 87.7 and 90.2 percent for the prenatal care and delivery, respectively).

Table 3. Mean percentage of expenditures by source of payment, overall and by insurance status

	Total		Prenatal		Delivery	
	Estimate	SE	Estimate	SE	Estimate	SE
Overall						
Percentage paid by private insurance	49.0	2.3	43.9	2.5	50.6	2.4
Percentage paid by Medicaid	32.5	2.3	31.0	2.3	32.2	2.5
Percentage paid out of pocket	7.6	0.8	14.3	1.4	7.2	0.9
Percentage paid by other source	10.9	1.2	10.8	1.3	10.0	1.3
Privately insured						
Percentage paid by private insurance	84.8	1.4	76.9	2.1	85.4	1.7
Percentage paid by Medicaid	0.0	0.0	0.0	0.0	0.0	0.0
Percentage paid out of pocket	9.6	1.0	17.2	1.7	9.8	1.4
Percentage paid by other source	5.6	1.3	5.9	1.4	4.8	1.2
Medicaid						
Percentage paid by private insurance	0.0	0.0	0.0	0.0	0.0	0.0
Percentage paid by Medicaid	89.2	2.8	87.7	2.7	90.2	3.3
Percentage paid out of pocket	0.6	0.2	2.1	0.6	0.4	0.2*
Percentage paid by other source	10.2	2.8	10.2	2.5	9.4	3.3*

* RSE < .3

Table 4 shows the average prenatal-care expenses for office-based visits, prescription drugs, and all other medical care. About 85 percent of the pregnancies had an office-based visit expense, and among them the mean was $1,811. About half (53 percent) had prescription drug expenses, and the mean among them was $358. Only 14 percent had other medical expenses (e.g., from emergency room, outpatient or inpatient visits or home health care), related to the prenatal care, and their mean expense was $1,553. The average office-based visit expense was higher among the privately insured ($2,403 versus $1,216 for those on Medicaid); but the expenses for prescription drugs and other medical care were not statistically different between the three groups.

Table 4. Average prenatal care expenses for office visits, prescription drugs, and other care, by insurance status

	Office visits		Prescription drugs		Other	
	Estimate	SE	Estimate	SE	Estimate	SE
Overall						
Percentage with expenses	85	1.8	53	2.7	14	1.8
Conditional mean (in 2009 dollars)	1,811	138.9	358	75.4	1,553	444.5
Conditional median (in 2009 dollars)	989	111.8	57	6.2	553	105
Privately insured						
Percentage with expenses	86	2.6	52	3.7	12	2.3
Conditional mean (in 2009 dollars)	2,403	217.3	358	79.9	1,850	832.8*
Conditional median (in 2009 dollars)	1,379	151.8	60	9.3	612	99.7
Medicaid						
Percentage with expenses	78	4.9	55	5.4	15	3.9
Conditional mean (in 2009 dollars)	1,216	135.7	550	301.5 *	991	344.4*
Conditional median (in 2009 dollars)	914	142.5	53	10.2	304	40

RSE < .3

Table 5 presents the average percent of prenatal expenses paid by the various sources. Overall, on average 46.0 percent of the office-based visit expenses were paid by private insurance, 30.2 percent were paid by Medicaid, 14.3 percent were paid out of pocket, and the rest, 9.5 percent, were paid by other sources. For prescription drugs, the percentage paid by private insurance was lower (23.0 percent) and the percentage paid out of pocket was higher (43.0 percent) than for office visits. The privately insured, compared to the Medicaid group, paid a higher percentage of expenses paid out of pocket (16.2 versus 2.3 percent for office based expenses, 60.5 versus 10.0 percent for prescription drugs, and 15.4 versus 1.1 percent for other medical expenses).

Table 5. Average percentage of the prenatal care expenses paid by source, by insurance status

	Office visits		Prescription drugs		Other	
	Estimate	SE	Estimate	SE	Estimate	SE
Overall						
Percentage paid by private insurance	46.0	2.7	23.0	2.6	42.8	6.4
Percentage paid by Medicaid	30.2	2.6	28.6	3.2	39.9	6.5
Percentage paid out of pocket	14.3	1.6	43.0	3.2	8.6	3.5*
Percentage paid by other source	9.5	1.3	5.3	1.3	8.7	3.9*
Privately insured						
Percentage paid by private insurance	78.3	2.2	36.0	4.1	84.3	6.7
Percentage paid by Medicaid	0.0	0.0	0.0	0.0	0.0	0.0
Percentage paid out of pocket	16.2	1.7	60.5	4.2	15.4	6.7*
Percentage paid by other source	5.5	1.3	3.5	1.4*	0.3	0.3*
Medicaid						
Percentage paid by private insurance	0.0	0.0	0.0	0.0	0.0	0.0
Percentage paid by Medicaid	90.5	2.4	83.2	4.5	77.1	13.6
Percentage paid out of pocket	2.3	0.7*	10.0	2.2	1.1	0.8*
Percentage paid by other source	7.2	2.1	6.8	4.2*	21.8	13.6*

* RSE < .3

Data Source

The estimates in this analysis are based on data obtained from the 2006–2009 annual full year consolidated person-level and event-level data as well as the longitudinal weights from the Panel 11–Panel 13 longitudinal data. These files are available at http://www.meps.ahrq.gov/mepsweb/data_stats/download_data_files.jsp.