



The hidden costs of U.S.
health care for consumers:
A comprehensive analysis

Produced by:

**Deloitte Center for Health Solutions,
Washington, D.C.**

**Deloitte Center for Financial Services,
New York, New York**

March 2011



Foreword

This study was jointly conducted by the Deloitte Center for Health Solutions and the Deloitte Center for Financial Services to gauge the total costs that U.S. consumers bear in funding health care products and services. We hypothesized that consumers spend more out of pocket than is typically reported in insurance industry or government reports. This hypothesis was confirmed: We found that the cost to consumers was \$363 billion¹ heretofore not recognized and, in many cases, these are supplemental to traditional costs for doctors, drugs, hospitals, and insurance coverage — no small matter. OOP medical costs include products and services not covered by insurance programs, purchases that are outside of conventional therapies and treatments, and care for others, which accounts for \$199 billion of the total. With costs increasing at seven percent per year and now reaching \$8,300 per capita,² the U.S. health care system is the world's most expensive. Also, in the past five years, health benefits costs have increased by 47 percent while wages have increased just 14 percent.

It is widely acknowledged that the health care industry is expensive and complicated. The recently enacted health care reform law, the Patient Protection and Affordable Care Act (PPACA) of 2010, emphasizes consumer participation in subsidized insurance programs, access to preventive health services without a co-payment, and adherence to treatment recommendations that reduce avoidable costs for complications and hospital readmissions. This study seeks to understand the financial context for the average consumer responding to these stimuli. It explores the most fundamental concept of a free market system — that end users of services — consumers rather than patients — exercise choice by using their money to make health care-related decisions.

We believe a fundamental shift in the U.S. health care industry will be the direct and forceful engagement of consumers in purchasing health care products and services that meet their needs. To that end, this study provides an important view of how consumers engage today. We also believe the importance of this study goes well beyond its direct implications for a rapidly evolving health care industry. At the highest level, the ability of the U.S. economy to recover from recession will be affected by how much money consumers have in their pockets to spend: The more they spend on health care, the less that is available to boost other sectors.

The study's findings are also highly significant for the financial services industry. Billions of health care-related payments are processed annually, and providers face a strategic race as electronic medical records (EMRs) are increasingly linked to payment mechanisms to offer a seamless process for consumers. With greater insight into how and where consumers are spending their money, insurers and banks can reconsider product innovations and savings and credit products linked to different aspects of health consumption.

This is Deloitte's baseline study and we intend to repeat it annually. No doubt, its framework will evolve as new data sources become available. Our goal is to frame "consumer spending in health care" in the context of how dollars are spent and, thereby, to elicit public understanding of the financial implications of the health care industry on the consumer household. It is implicit that the financial services and health care industries need to understand and respond to these trends, providing mechanisms whereby consumer health care spending provides more and better value.



Paul H. Keckley, PhD, Executive Director,
Deloitte Center for Health Solutions,
Washington, D.C.



Andrew Freeman, Executive Director,
Deloitte Center for Financial Services,
New York, New York

¹ Inclusive of estimates of Complementary and Alternative Medicine (CAM). The extent and composition of the CAM sector is not well established, thus if certain categories of CAM are excluded, the figure is \$358 billion.

² Centers for Medicare & Medicaid Services. *National Health Expenditures Projections 2009-2019: Forecast Summary*, September 2010.

Study overview

- The official National Health Expenditure Accounts (NHEA) do not capture all health-related spending. Deloitte’s study, developed in collaboration with Oxford Economics, aims to provide a more comprehensive estimate of U.S. spending on all health-related goods and services. Building upon the NHEA data, this study adopted a broad view of health care expenditures which includes both direct and indirect costs, as well as items such as functional foods and nutritional supplements, complementary and alternative medicine (CAM) goods and services, and the imputed value of unpaid supervisory care provided to sick people by family and friends.
- Detailed estimates in this study are based on 2009 figures. The study is given further depth with data from a phone survey of 1,008 adult U.S. consumers conducted by Harris Interactive in September–October 2010.
- Cost estimates are broken down in five ways: by age (of health care recipient), family income (see Appendix A for definition of family), source of payment, insurance status, and family size. Of these five dimensions, only payment source is regularly covered by the NHEA.
- To some extent, the definition of what constitutes discretionary spending is arbitrary. In drawing the line between health care and other expenditures, we have excluded those categories with more tenuous links to health.

| NHEA areas included in this study | Discretionary expenditures (see Appendix A for full definitions) | Expenditures not included in this study |
|--|---|--|
| <ul style="list-style-type: none"> • Hospital care • Physician and clinical services • Other professional services • Dental services • Other personal health care • Home health care • Nursing home care • Prescription drugs • Durable medical equipment • Non-durable medical products • Government administration and net cost of private health insurance • Government public health activity • Research structures and equipment | <ul style="list-style-type: none"> • Ambulance services • CAM, practitioners, and products • Health-related publications (i.e., magazines and periodicals) • Homes for the elderly • Mental health and substance abuse facilities • Nutritional food products and vitamin/mineral supplements • Other ambulatory services • Supervisory care • Weight-reducing centers | <ul style="list-style-type: none"> • Fitness and recreational sports centers • Herbs and botanicals • Spas, baths, saunas • Meal supplements • Natural and organic food • Natural and organic personal care products • Sports nutrition |

Methodology

This study was commissioned research, undertaken on behalf of Deloitte by Oxford Economics in 2010 and draws upon NHEA data. NHEA data is published annually and covers a broad range of health-related expenditures, including hospital care, prescription drugs, and physician and clinical services. Of note, the NHEA does not capture, or only partially captures, other health-related spending, such as CAM, nutritional products, and supplements.

In our study, NHEA 2008 data was projected for 2009.¹ Cost areas outside of the NHEA were identified and mapped, and information drawn from a variety of industry-based sources was used to produce estimates of health cost in the identified areas. Information from the Medical Expenditure Panel Survey (MEPS) was used to develop estimates by family size and income. The resultant combined dataset represents a broader picture of the health care sector in 2009. This final dataset estimated total expenditure by payment source, age group, family income, and family size for each health service area.

In addition, data is reported from a separate study using a consumer telephone survey method. In this, Harris Interactive, via its Harris Poll National Quorum®, conducted a Deloitte-commissioned telephone survey of 1,008 U.S. adults 18+ years old, September 29–October 4, 2010. Data were weighted, when necessary, to be representative of the total U.S. adult population on the basis of age, sex, race/ethnicity, education, number of adults in the household, and the number of phone lines in the household. The survey results have a sampling error of +/- 3 percentage points at the 95 percent confidence level.

- Among survey questions were the following:
 - In the last 12 months, have you done any of the following specifically in order to pay a medical bill? (Options from which to choose included late payment of utilities/mortgage, failure to pay medical bill, etc.)
 - What percent of your monthly household budget would you estimate is spent on health care services, products or prescription drugs, insurance premiums, co-pays, and deductibles, and other health care out-of-pocket expenses?
 - Would you consider doing any of the following if it would save money for health care? (Options from which to choose included deciding to forgo treatment, use of generic drugs, visiting a retail clinic, etc.)

¹ Since completion of this study, NHEA has published 2009 health care expenditure data. The 2009 NHEA aggregate was \$2,486 billion while our study estimated it to be \$2,472 billion, a difference of just \$12 billion dollars.

Areas of health care costs

This study defined seven major categories and estimated total expenditure and total OOP costs for each category

- **Hospital care***: Hospital care spending covers revenues received for all services provided by hospitals to patients, including: revenues received to cover room and board, ancillary services (such as operating room fees), services of resident physicians, inpatient pharmacy, hospital-based nursing home care, hospital-based home health care, and fees for any other services billed by the hospital.
- **Insurance/Direct administrative costs***: These costs consist of items related to the operation of the health care system, including government administration and public health activity, the net cost of private insurance (premiums) and investment in research, structures, and equipment. The category's distinction is that its expenditures are not directly connected to the treatment and/or prevention of a specific condition or disease in a specific person. (The category is referred to as Direct Administrative Costs in this report.)
- **Long-term care***: The long-term care (LTC) category consists of home health care, nursing home care, mental health/substance abuse facilities, and homes for the elderly.
- **Professional services***: This category includes physician and clinical services, other professional services, dental services, CAM practitioner costs (naturopathy, massage therapy, acupuncture, et al.) ambulance, all other ambulatory, weight-reducing centers
- **Retail products and services**: Among items in this category are durable medical equipment, other non-durable medical products, nutrition/supplements, CAM products, and health publications
- **Prescription drugs***: Prescription drug spending includes retail sales of human-use dosage-form drugs, biologicals, and diagnostic products. Retail prescription drug purchases occur in community pharmacies (both chain and independent pharmacies), grocery store pharmacies, mail-order establishments, and mass-merchandising establishments.
- **Supervisory care**: Millions of people provide unpaid care to a family member or friend. This care, although unpaid, has economic value in that individuals are providing a service which corresponds with care provided by professional nurses and home health care workers.

* Categories where the consumer pays a portion of the payment directly (premiums, co-payments, deductibles) and a third-party payor — government/private — pays the balance.

Key implications

- Consumers are concerned about health-related costs and are acting to avoid higher exposure. Among the hardest-hit consumers are those with medical problems, seniors, and those caring for others. Consumers need help managing health care costs.
- OOP direct costs for health care products and services are a substantial and increasing burden in the average household. Financial tools designed to assist consumers in managing their health care costs must be personalized and easy to use at the point when decisions are made.
- Consumer price sensitivity about providers, prescription drugs, and health insurance plans is likely to increase as costs continue to rise. Stakeholders cannot ignore OOP consumer costs.
- Some OOP costs are the result of consumers' discretionary choices to spend some of their health care dollars on products and services outside the traditional confines of the health care sector. The extent of consumer discretionary costs in non-traditional health-related services is noteworthy.
- As more discretionary dollars are spent on health care, fewer are available for other sectors of the economy, including financial services. At a basic level, this means that there is less cash available for servicing existing debt or for taking on new debt, which implies that future demand for consumer credit might be limited. Medical costs are increasingly implicated in consumers' credit problems.
- There are also significant opportunities for health-related financial product innovations, whether by linking payments directly to services or in health-linked savings and insurance plans.

Key implications (cont.)

- Consumer health care costs identified in this study reflect a broader range of goods and services than those traditionally considered in national reporting. In addition to identifying the depth and breadth of consumer costs in health-related services, this study illuminates how consumers are deciding to use their health care dollars, including their considerable interest in products and services outside the traditional confines of the health care sector. Our telephone survey results suggested that consumers are faced with difficult choices, such as paying for health care or paying for other living expenses, and that some devote a considerable proportion of their budget to paying for health care.
- Study findings suggest that there is growing awareness, and increasing use, of alternative and over-the-counter products. Our telephone survey confirms an openness to using generic medicines to save money. This reflects a growing consumer interest in managing personal health, not necessarily within the confines of the traditional health care sector. This study also identifies a high level of interest in functional foods (food fortified with added or concentrated ingredients to a functional level, intended to improve health and/or performance), over-the-counter products, and a wide-variety of CAM products and services. Our telephone survey reveals that many consumers are interested in using alternatives such as self-monitoring technologies and retail clinics to save money.

Study highlights

Total health-related expenditures

- In 2009, total U.S. health care expenditures were an estimated \$2.83 trillion — a 26 percent increase from \$2.25 trillion in 2005. Consumers spent \$363 billion*, or 14.7 percent, more for health care goods and services than is captured in official government accounts. Of this additional sum, \$199 billion can be imputed to the value of unpaid supervisory care given to patients by family or friends. Also, the additional cost was identified in areas not conventionally reported in the NHEA, such as nutritional products/functional foods/supplements (14 percent of all expenditure in additional areas), CAM practitioners (8 percent), and mental health/substance abuse facilities (8 percent).
- U.S. health care spending is dominated by big ticket, “necessary expenditure” items of hospital care, physicians and clinical services, and prescription drugs.
 - Professional care (physician and clinical services, other professional services, dental services, CAM practitioner costs, ambulance, other ambulatory and weight-reducing centers): \$832 billion (29 percent of total expenditures)
 - Hospital care: \$760 billion (27 percent of total expenditures)
 - Administration expenses: \$404 billion (14 percent of total expenditures)
 - Prescription drugs: \$246.3 billion (9 percent of total expenditures)
- In this study, Medicare accounted for 18 percent (\$512.3 billion); Medicaid, 14 percent (\$393.7 billion); Department of Defense, 1.3 percent (\$37 billion); and Other Public Sources, 10 percent (\$289 billion). Insurance companies accounted for 29 percent of expenditures; OOP expenses and other private spending accounted for 13 percent and 14 percent, respectively.

Total discretionary costs for health care

- Total discretionary costs for health care (direct and indirect) totaled \$1,892 per capita in 2009. This consisted of \$904.25 on NHEA items and \$987.73 on items additional to the NHEA. Major categories included OOP spending by consumers on professional services (24 percent), retail products and services (19 percent), LTC (10 percent), prescription drugs (8 percent), and hospital care (4 percent). An indirect cost, the imputed value of supervisory care provided to another, was estimated at \$648.10.

Household impact of additional expenditures

- Higher levels of expenditures relative to income fell on seniors, two-person families, and low-income families. This reflects the reality that incomes of the aged fall as they retire from active participation in the workforce, while health-related spending increases as people progressively require intervention. Hence, an increasing part of the overall costs of health care is the imputed costs of partners looking after an ill or disabled spouse or partner.

* Inclusive of estimates of Complementary and Alternative Medicine (CAM). The extent and composition of the CAM sector is not well established, thus if certain categories of CAM are excluded, the figure is \$358 billion.

Study highlights (cont.)

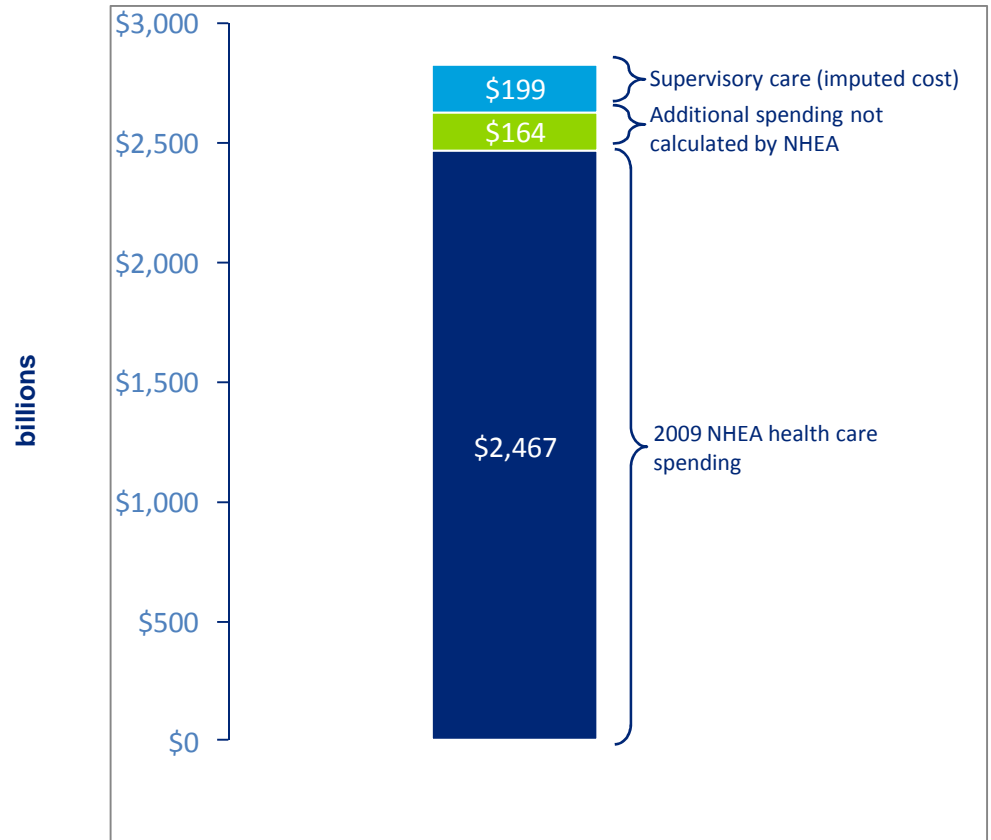
- Over half of the additional costs for health goods or services identified additional to the NHEA were in one key area: the imputed value of providing supervisory care to another (55 percent of additional costs, or an imputed \$199 billion). This is the hidden, but significant, contribution made by family and community caregivers — caring for friends and family members with chronic health problems or disabilities at home, which corresponds to care that might have otherwise been performed by professional nurses or home health care workers.
- The total imputed value of the provision of supervisory care (\$199 billion) is significantly higher than total spending on nursing homes (\$144 billion) and on home health care (\$72 billion), and was only somewhat less than prescription drug spending (\$246 billion).
- Almost all supervisory care was provided to people living in families with lower incomes, with 80 percent (\$161 billion) being provided to people with family incomes of less than \$50,000. 15 percent was provided to people with family incomes between \$50,000 and \$100,000, and only 5 percent was provided to people with family incomes of over \$100,000.
- Individuals living in families earning less than \$10,000 per year accounted for 11 percent of all health care costs in 2009. The shares for families earning \$10,000–\$25,000, \$25,000–\$50,000, and \$50,000–\$100,000 were 21 percent, 25 percent, and 26 percent, respectively.
- One-person family units comprised 24 percent of total health care expenditures, with two-person families accounting for 37 percent.
- Health care costs for people 65+ made up 36 percent of the total (\$1.01 trillion). Senior health care use concentrates on certain types of services, particularly hospitals, long-term care, supervisory care, and physicians/clinical services. Seniors also have a high level of interest in retail products, particularly nutritional products (functional foods), supplements, and over-the-counter products.
- Lower-income groups and smaller family groups (one or two persons) spent the bulk of their health care-related costs on hospital care, other personal care, home health care, nursing home care, and homes for the elderly. These two groups also made significant contributions in the provision of supervisory care to another person.
- Middle-income groups appear to be highly interested in health, wellness, over-the-counter services, and specific types of professional services, such as dental, depending upon age. Physicians and clinical services absorb a high proportion of this group's expenditures, as do retail products and CAM practitioners.

U.S. health care costs are \$363* billion or 14.7 percent higher than reported by the NHEA

Total costs were \$2,830 billion, of which \$363* billion was in areas not captured by the NHEA.

| AREA | billion |
|--|----------------|
| NHEA AREAS | |
| Hospital care | \$761 |
| Physician and clinical services | \$528 |
| Other professional services | \$64 |
| Dental services | \$104 |
| Other personal health care | \$76 |
| Home health care | \$72 |
| Nursing home care | \$144 |
| Prescription drugs | \$246 |
| Durable medical equipment | \$27 |
| Other non-durable medical products | \$41 |
| Total non-personal health care | \$404 |
| Includes government admin and net cost of private health insurance, research, public health, structures, and equipment | |
| ADDITIONAL TO NHEA | |
| Nutrition/supplements | \$55 |
| CAM practitioner costs | \$28 |
| CAM products | \$2 |
| Health publications | \$2 |
| Supervisory care (imputed) | \$199 |
| Other industries not covered by NHEA | |
| Ambulance services (NAICS 62191) | \$10 |
| All other ambulatory (NAICS 62199) | \$20 |
| Mental health/substance abuse facilities (NAICS 6232) | \$29 |
| Weight-reducing centers (NAICS 812191) | \$2 |
| Homes for the elderly (NAICS 623312) | \$16 |
| Total | \$2,830 |

2009 U.S. total health care costs (billions)



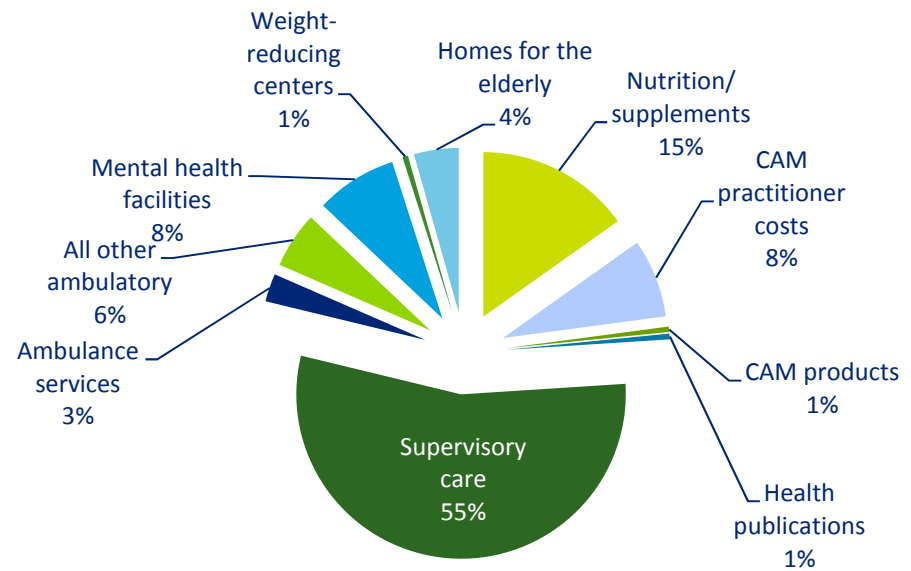
Source: NHEA (Centers for Medicare and Medicaid Services) and Deloitte Analysis

* Inclusive of estimates of Complementary and Alternative Medicine (CAM). The extent and composition of the CAM sector is not well established, thus if certain categories of CAM are excluded, the figure is \$358 billion.

The majority (55 percent) of the \$363* billion in additional health care costs are the imputed costs of supervisory care

- An estimated 60 percent of the imputed supervisory care was provided to people over 65 years of age.
- Almost all supervisory care was provided to people in the lower income bands. Around 80 percent (imputed value of \$161 billion) of supervisory care was provided to people with family incomes of less than \$50,000.
- Supervisory care is most likely provided by a spouse or partner of the recipient, with two-person families accounting for around 45 percent (\$90 billion) of total imputed costs of supervisory care.
- Nutritional items/supplements were important for young adults (25–44 years) and for seniors (65+ years). The young adult age group spent \$10.16 billion on nutritional items and supplements. Seniors spent \$26.93 billion on these items.
- Around 70 percent of spending on nutrition industry items was for functional foods, a category which includes such items as enriched cereals, breads, sports drinks, bars, fortified snack foods, baby foods, and prepared meals.

Distribution of additional health care costs



Note: Figures may not add to 100 percent due to rounding.

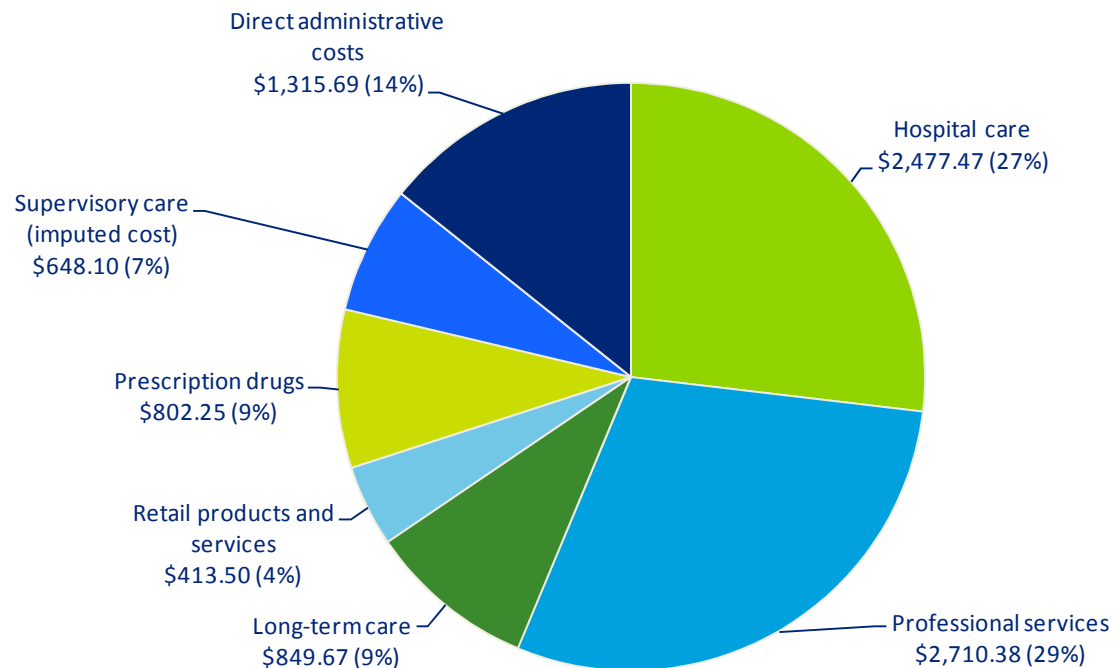
Source: NHEA (Centers for Medicare and Medicaid Services) and Deloitte Analysis

* Inclusive of estimates of Complementary and Alternative Medicine (CAM). The extent and composition of the CAM sector is not well established, thus if certain categories of CAM are excluded, the figure is \$358 billion.

This study estimated 2009 U.S. per capita health care costs to be \$9,217; professional services (29 percent) and hospital care (27 percent) were the biggest categories

- Per capita U.S. health care costs in 2009 totaled \$9,217.02.
- Professional services accounts for 29 percent of 2009 per capita health expenditures.
- Hospital care accounts for 27 percent of 2009 per capita health care costs.

Distribution of per capita expenditures

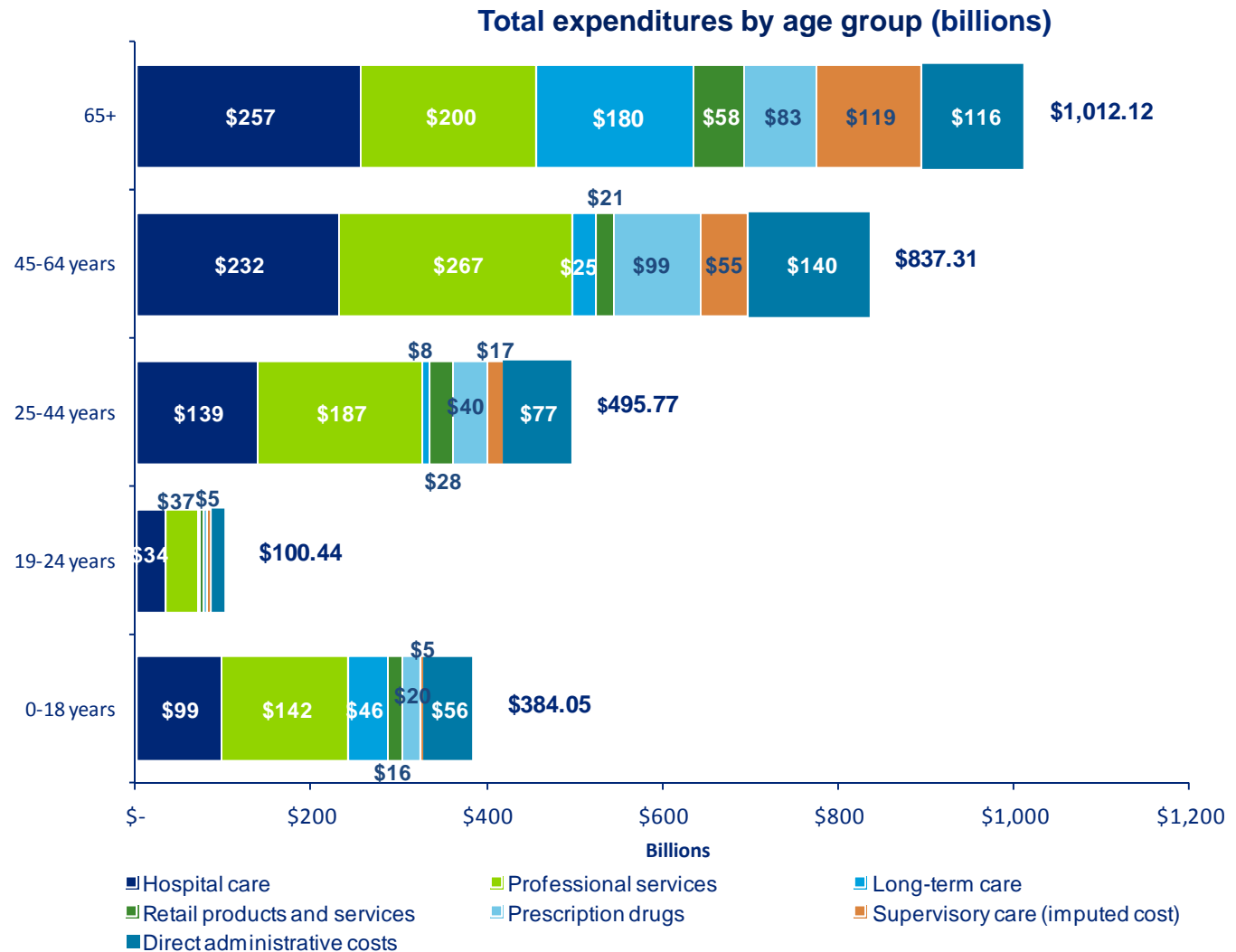


Note: Figures may not add to 100 percent due to rounding.

Source: NHEA (Centers for Medicare and Medicaid Services) and Deloitte Analysis

Seniors account for 36 percent of total costs, at \$1.01 trillion, but are only 13 percent of the U.S. population

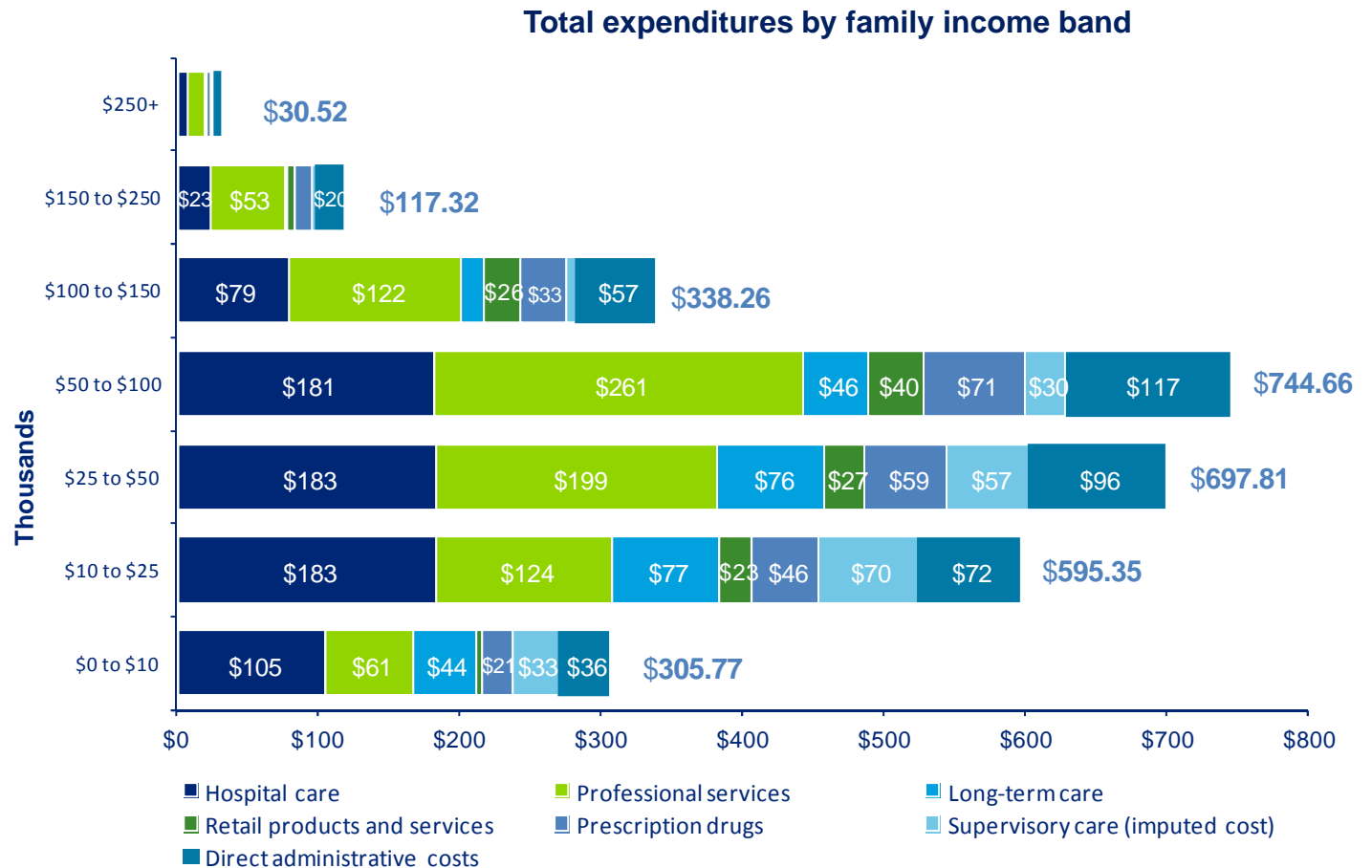
- After seniors, with 36 percent of total health care-related expenditures, Baby Boomers are the next largest expenditure group, with 30 percent.
- Gen Y is the age category with the smallest expenditure, at just 4 percent.
- Costs to seniors were primarily for hospital care, professional services, long-term care and the imputed cost of supervisory care.
- Boomers' expenditures were for hospital care and professional services.



Source: NHEA (Centers for Medicare and Medicaid Services) and Deloitte Analysis

Nearly 83 percent of the \$2.83 trillion in 2009 U.S. health care costs are attributed to those with family incomes of \$100K or less, who comprise 89 percent of the total population

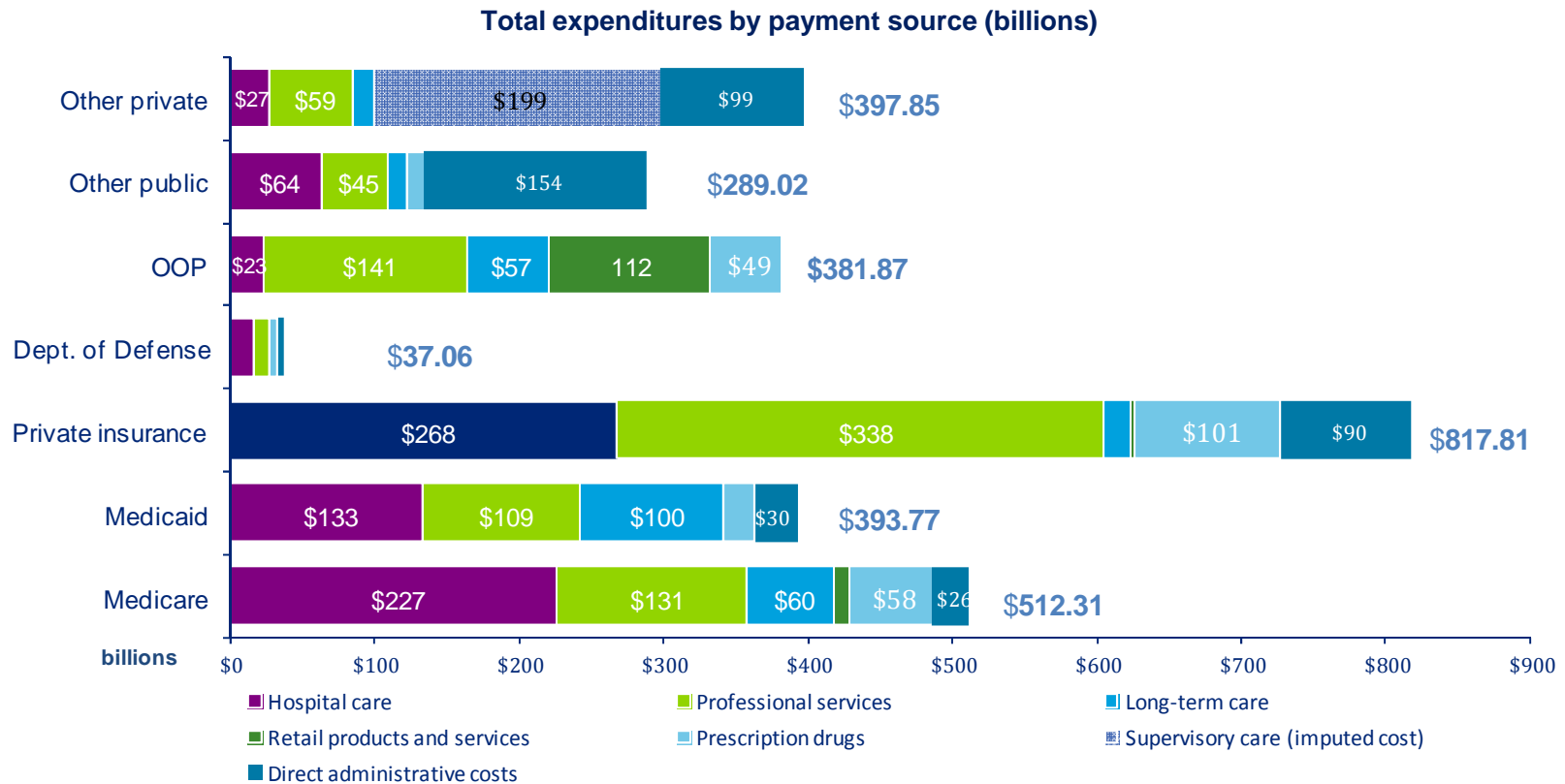
- Individuals living in families earning less than \$10,000 per year accounted for 11 percent of all health care expenditures in 2009.
- The shares for families earning \$10,000–\$25,000, \$25,000–\$50,000, and \$50,000–\$100,000 were 21 percent, 25 percent, and 26 percent, respectively.
- 17 percent of total health care costs were incurred by those with incomes over \$100,000.



Source: NHEA (Centers for Medicare and Medicaid Services) and Deloitte Analysis

Total discretionary costs of health care: OOP (direct costs) accounted for 13 percent of total expenditures; indirect costs (specifically, the imputed value of supervisory care) accounted for 7 percent

- In 2009, Medicare accounted for 18 percent (\$512.3 billion) of total spend; Medicaid, 14 percent (\$393.7 billion); Department of Defense, 1.3 percent (\$37 billion); and Other Public sources, 10 percent (\$289 billion). Insurance companies accounted for 29 percent of expenditures, with OOP¹ expenses and other private spending accounting for 13 percent and 14 percent, respectively. Half of the “other private”² spending was the imputed value of supervisory care.



- The study classified the source of payment for certain health care services and products as being OOP. This included nutrition/supplements, CAM practitioner and products, health publications, weight-reducing centers, and a proportion of total expenditures in ambulance services, all other ambulatory care, mental health/substance abuse facilities, and homes for the elderly.
- The imputed value of supervisory care was allocated to “other private sources of payment,” a category that includes sources of payment such as philanthropic revenues, corporate support, and investment income.

Total discretionary costs for health care totaled \$1,892 per capita

These include direct costs (co-pays, deductibles, premiums, direct purchases) and indirect costs for supervisory care (lost wages, replacement costs).

| Total discretionary per capita | | | | |
|----------------------------------|-----------------|--------------------|-----------------------------------|-------------------|
| | Direct Costs | Direct Costs | Indirect Costs (imputed value) | |
| NHEA Categories | NHEA | Additional to NHEA | | TOTAL |
| Hospital care | \$76.15 | - | - | \$76.15 |
| Professional | \$352.01 | \$105.90 | - | \$457.91 |
| Long-term care | \$142.93 | \$41.14 | - | \$184.07 |
| Retail | \$173.55 | \$192.60 | - | \$366.15 |
| Prescription drugs | \$159.61 | - | - | \$159.61 |
| Supervisory care (imputed cost) | - | - | \$648.10 | \$648.10 |
| Subtotal | \$904.25 | \$339.64 | \$648.10 | |
| Total by overall category | | | | \$1,891.99 |

Total discretionary spending for health care (OOP direct costs per capita) calculated by NHEA = \$904.25

Total discretionary spending for health care (OOP direct costs and indirect costs [imputed value supervisory care]) per capita calculated in categories additional to the NHEA = \$987.73

Source: NHEA (Centers for Medicare and Medicaid Services) and Deloitte Analysis

Per capita costs by age

- High level of imputed value of supervisory care attributed to seniors
- Nutrition/supplements are a big outlay for seniors, as are physicians and clinicians; prescription drugs are for Boomers

| NHEA OOP (direct costs) | | | | | | | | | | | |
|-------------------------|---------------|---------------------------------|-----------------------------|-----------------|------------------|-------------------|--------------------|---------------------------|------------------------------------|-----------------|--|
| By age group | Hospital care | Physician and clinical services | Other professional services | Dental services | Home health care | Nursing home care | Prescription drugs | Durable medical equipment | Other non-durable medical products | Total (Rounded) | |
| Per capita | | | | | | | | | | | |
| 0–18 years | \$ 45.07 | \$ 95.66 | \$ 18.22 | \$ 125.15 | \$ 20.62 | \$ 1.44 | \$ 40.88 | \$ 23.02 | \$ 47.59 | \$ 417.64 | |
| 19–24 years | \$ 50.14 | \$ 112.82 | \$ 19.03 | \$ 114.21 | \$ - | \$ - | \$ 56.18 | \$ 35.75 | \$ 89.14 | \$ 477.26 | |
| 25–44 years | \$ 78.34 | \$ 174.98 | \$ 38.51 | \$ 110.35 | \$ 1.81 | \$ 1.20 | \$ 105.78 | \$ 43.32 | \$ 158.13 | \$ 712.43 | |
| 45–64 years | \$ 96.37 | \$ 239.36 | \$ 52.66 | \$ 189.34 | \$ 25.83 | \$ 36.53 | \$ 228.27 | \$ 56.69 | \$ 71.18 | \$ 996.23 | |
| 65+ | \$ 110.69 | \$ 197.87 | \$ 39.42 | \$ 210.26 | \$ 75.81 | \$ 855.18 | \$ 441.49 | \$ 106.39 | \$ 343.69 | \$ 2,380.81 | |

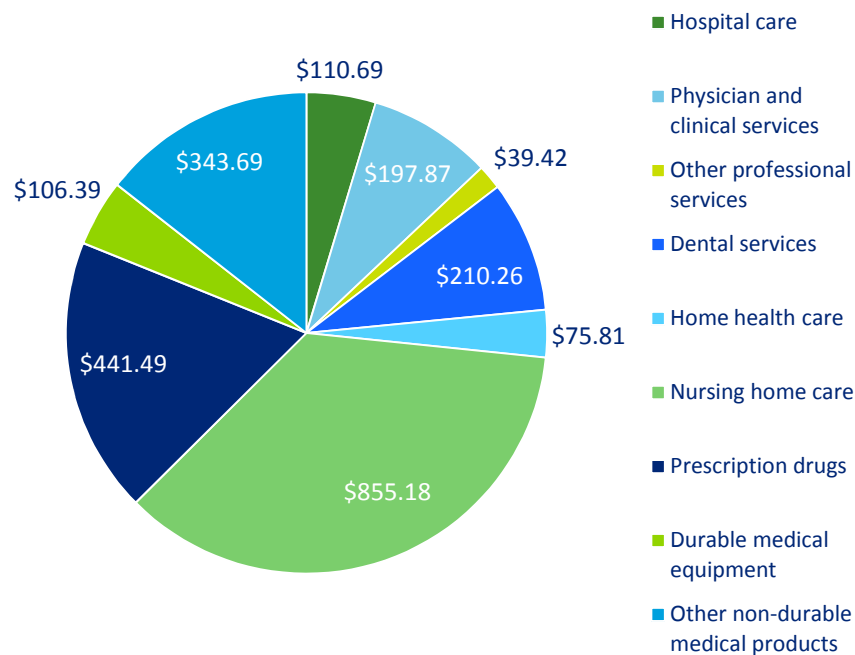
| OOP (direct costs) Additional to NHEA | | | | | | | | | | | Indirect Costs | Total (Rounded) |
|---------------------------------------|-----------------------|--|--|---------------------|-----------|----------------------|---------------|-------------------------|-----------------------|----------------------------|-----------------|-----------------|
| By age group | Nutrition/supplements | Complementary and alternative practitioner costs | Complementary and alternative products | Health publications | Ambulance | All other ambulatory | Mental Health | Weight-reducing centers | Homes for the elderly | Supervisory Care (imputed) | Total (Rounded) | |
| Per capita | | | | | | | | | | | | |
| 0–18 years | \$ 105.73 | \$ 30.57 | \$ 4.20 | \$ 3.84 | \$ 1.88 | \$ 1.28 | \$ 0.75 | \$ 4.20 | \$ - | \$ 54.90 | \$ 207.34 | |
| 19–24 years | \$ 69.18 | \$ 41.78 | \$ 2.79 | \$ 2.32 | \$ 3.67 | \$ 1.75 | \$ 0.03 | \$ 2.79 | \$ - | \$ 154.14 | \$ 278.43 | |
| 25–44 years | \$ 122.27 | \$ 87.73 | \$ 4.93 | \$ 4.33 | \$ 2.72 | \$ 3.67 | \$ 0.53 | \$ 4.81 | \$ - | \$ 203.02 | \$ 434.02 | |
| 45–64 years | \$ 95.36 | \$ 153.94 | \$ 3.78 | \$ 3.40 | \$ 2.81 | \$ 6.44 | \$ 7.99 | \$ 3.78 | \$ - | \$ 691.99 | \$ 969.51 | |
| 65+ | \$ 680.56 | \$ 137.98 | \$ 27.29 | \$ 24.26 | \$ 0.83 | \$ 5.77 | \$ 36.86 | \$ 27.04 | \$ 263.58 | \$ 3,014.11 | \$ 4,218.28 | |

Source: NHEA (Centers for Medicare and Medicaid Services) and Deloitte Analysis

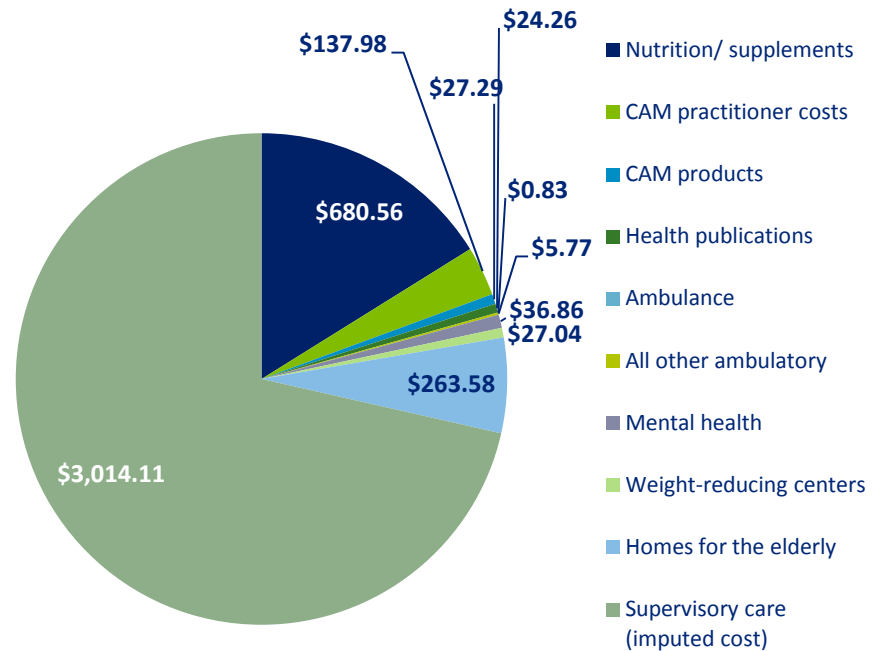
Personal care, including supervisory care and nursing home care, dominated the 65+ years total personal discretionary spending for health care

- Nearly half of the total discretionary costs per capita for seniors age 65+ years was in imputed costs of supervisory care.
- Other key items of total discretionary costs per capita for seniors include nursing home care, purchase of nutritional products and supplements, prescription drug expenses, and other non-durable medical products .

Personal discretionary spending (OOP direct costs) per capita, NHEA Items, 65+ years



Personal discretionary spending (OOP direct costs and indirect costs) per capita, additional to NHEA items, 65+ years



Total OOP cost (direct and indirect) by family income

- Substantially lower spending in dollar terms in the two highest income bands
- Substantially higher spending as a percent of income for lower-income families
- Impact of lower retiree incomes and higher impact of imputed value of supervisory care

| NHEA OOP (direct costs) | | | | | | | | | | |
|-------------------------|---------------|---------------------------------|-----------------------------|-----------------|------------------|-------------------|--------------------|---------------------------|------------------------------------|-----------------|
| Income (thousands) | Hospital care | Physician and clinical services | Other professional services | Dental services | Home health care | Nursing home care | Prescription drugs | Durable medical equipment | Other non-durable medical products | Total (Rounded) |
| Per family | | | | | | | | | | |
| \$0 to \$10 | \$ 660.74 | \$ 365.43 | \$ 55.84 | \$ 305.78 | \$ 342.94 | \$ 1,830.45 | \$ 791.07 | \$ 127.82 | \$ 295.95 | \$ 4,776.02 |
| \$10 to \$25 | \$ 245.48 | \$ 536.52 | \$ 102.58 | \$ 427.51 | \$ 237.07 | \$ 1,265.34 | \$ 934.51 | \$ 208.56 | \$ 647.82 | \$ 4,605.38 |
| \$25 to \$50 | \$ 229.38 | \$ 596.36 | \$ 123.16 | \$ 452.69 | \$ 72.98 | \$ 389.55 | \$ 658.47 | \$ 162.28 | \$ 423.39 | \$ 3,108.27 |
| \$50 to \$100 | \$ 269.91 | \$ 732.84 | \$ 165.74 | \$ 641.39 | \$ 32.23 | \$ 172.05 | \$ 575.42 | \$ 198.80 | \$ 474.71 | \$ 3,263.10 |
| \$100 to \$150 | \$ 427.59 | \$ 760.81 | \$ 162.76 | \$ 793.31 | \$ 76.21 | \$ 406.76 | \$ 525.51 | \$ 245.75 | \$ 729.12 | \$ 4,127.82 |
| \$150 to \$250 | \$ 258.96 | \$ 752.47 | \$ 144.38 | \$ 657.14 | \$ 6.64 | \$ 35.45 | \$ 396.80 | \$ 172.55 | \$ 216.35 | \$ 2,640.74 |
| \$250+ | \$ 137.98 | \$ 509.42 | \$ 91.71 | \$ 633.69 | \$ 14.62 | \$ 78.03 | \$ 255.92 | \$ 109.92 | \$ 218.53 | \$ 2,049.83 |

| OOP (direct costs) additional to NHEA | | | | | | | | | | Indirect Costs | |
|---------------------------------------|-----------------------|--|--|---------------------|-----------|----------------------|---------------|-------------------------|-----------------------|----------------------------|-----------------|
| Income (thousands) | Nutrition/supplements | Complementary and alternative practitioner costs | Complementary and alternative products | Health publications | Ambulance | All other ambulatory | Mental Health | Weight-reducing centers | Homes for the elderly | Supervisory care (imputed) | Total (Rounded) |
| Per family | | | | | | | | | | | |
| \$0 to \$10 | \$ 425.27 | \$ 145.03 | \$ 17.21 | \$ 14.75 | \$ 4.92 | \$ 4.92 | \$ 108.16 | \$ 17.21 | \$ 683.38 | \$ 8,050.64 | \$ 9,471.48 |
| \$10 to \$25 | \$ 930.56 | \$ 268.31 | \$ 37.18 | \$ 33.16 | \$ 8.04 | \$ 11.05 | \$ 75.37 | \$ 37.18 | \$ 356.75 | \$ 7,081.70 | \$ 8,839.31 |
| \$25 to \$50 | \$ 608.18 | \$ 321.94 | \$ 24.52 | \$ 21.85 | \$ 8.00 | \$ 13.33 | \$ 22.92 | \$ 23.99 | \$ 109.80 | \$ 3,056.87 | \$ 4,211.40 |
| \$50 to \$100 | \$ 681.86 | \$ 433.11 | \$ 27.38 | \$ 24.30 | \$ 6.56 | \$ 18.13 | \$ 10.41 | \$ 27.00 | \$ 48.59 | \$ 1,140.04 | \$ 2,417.37 |
| \$100 to \$150 | \$ 1,046.84 | \$ 424.88 | \$ 41.81 | \$ 37.54 | \$ 20.48 | \$ 17.92 | \$ 23.89 | \$ 41.81 | \$ 113.81 | \$ 538.35 | \$ 2,307.31 |
| \$150 to \$250 | \$ 311.17 | \$ 377.18 | \$ 12.57 | \$ 11.00 | \$ 6.29 | \$ 15.72 | \$ 1.57 | \$ 12.57 | \$ 9.43 | \$ 256.17 | \$ 1,013.67 |
| \$250+ | \$ 313.56 | \$ 241.20 | \$ 14.47 | \$ 9.65 | \$ 9.65 | \$ 9.65 | \$ 4.82 | \$ 14.47 | \$ 24.12 | \$ 434.15 | \$ 1,075.74 |

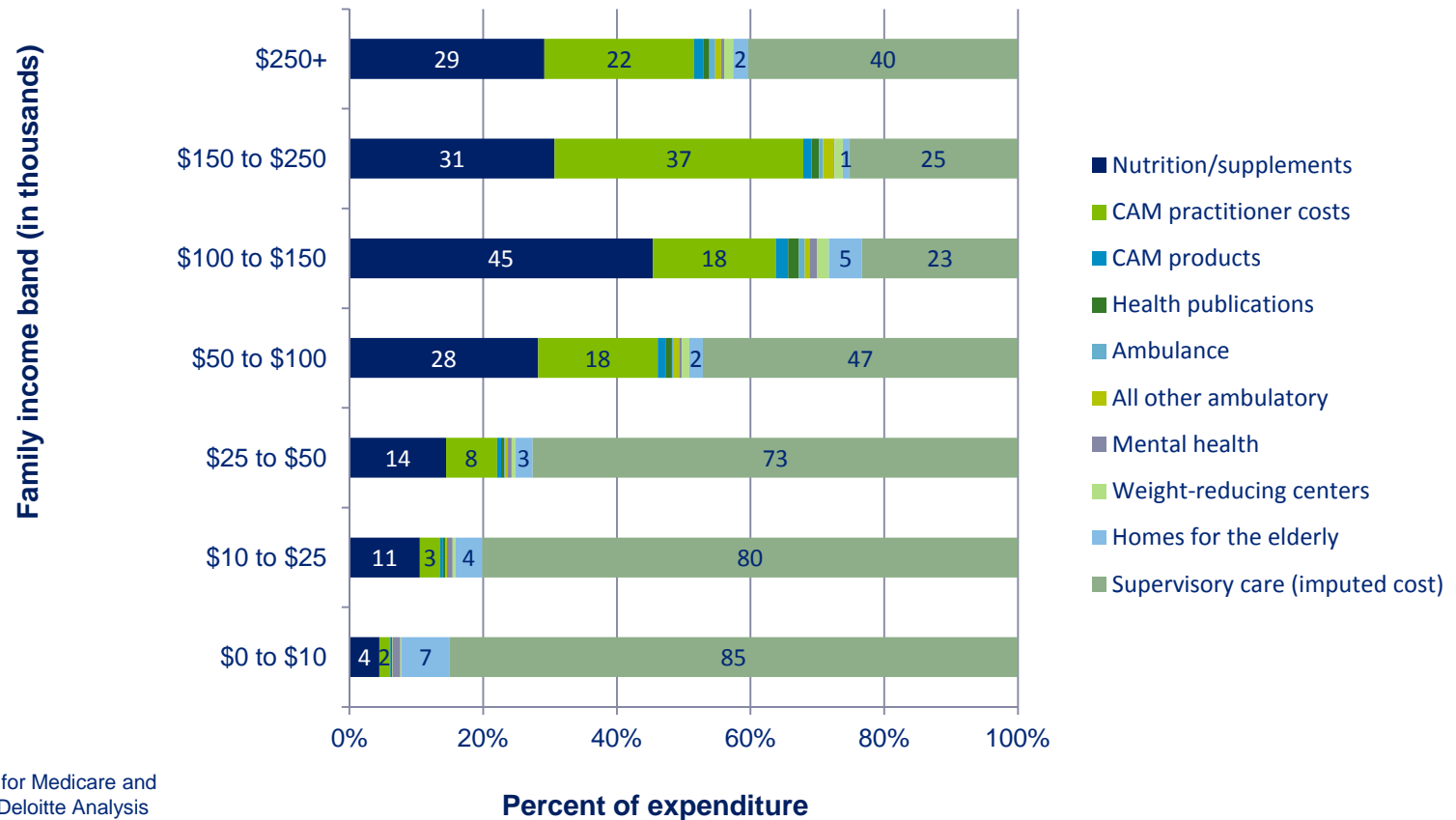
Source: NHEA (Centers for Medicare and Medicaid Services) and Deloitte Analysis

Total discretionary cost for health care by family income band

Higher income bands had more spending on supplements and alternative practitioners

- The imputed value of supervisory care is concentrated in the lower family income bands of \$50,000 or less. Expenditures in the higher family income bands were focused on functional foods/nutrition/supplements and the use of CAM practitioners.

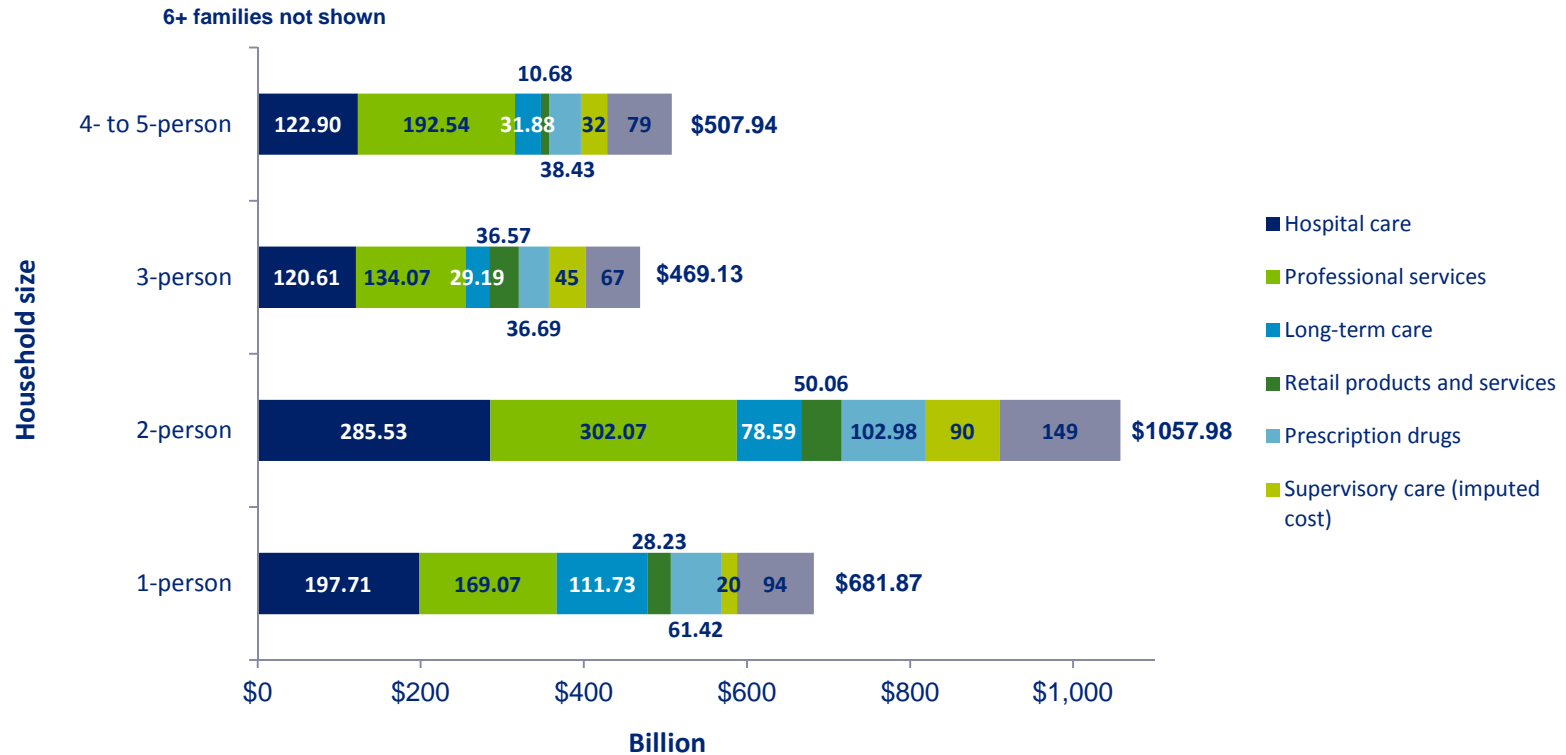
Additional to NHEA Items, total discretionary cost (direct and indirect) by family income band



Source: NHEA (Centers for Medicare and Medicaid Services) and Deloitte Analysis

Two-person families accounted for about 45 percent (\$90 billion) of imputed value of supervisory care, by far the largest share of any family size

Total personal discretionary spending (direct and indirect) by family size (billions)



- The higher proportion of supervisory care value attributed to two-person families is most likely due to care provided by spouses/partners of recipients.
- Two-person families account for nearly 42 percent (\$102.98 billion) of total spending on prescription drugs. Hospital care, physician and clinical services, and prescription drugs are the highest spending areas for all family sizes.
- Overall, one-person family units make up 24 percent of total health care spending, with two-person families accounting for 37 percent. Three-person and four- to-five-person families have approximately the same share of total spend, at 17 percent and 18 percent, respectively.

Source: NHEA (Centers for Medicare and Medicaid Services) and Deloitte Analysis

Additional evidence: Telephone survey suggests that consumers are concerned about health care costs and may be taking steps to minimize impact

Telephone survey suggests respondents were concerned about:

Impact of health care costs

- Juggling other bills and expenses in order to pay a medical bill
- Choosing not to pay the medical bill or to renegotiate the terms
- Tend to be younger, more likely to be female, in fair health, lower income, and divorced/separated

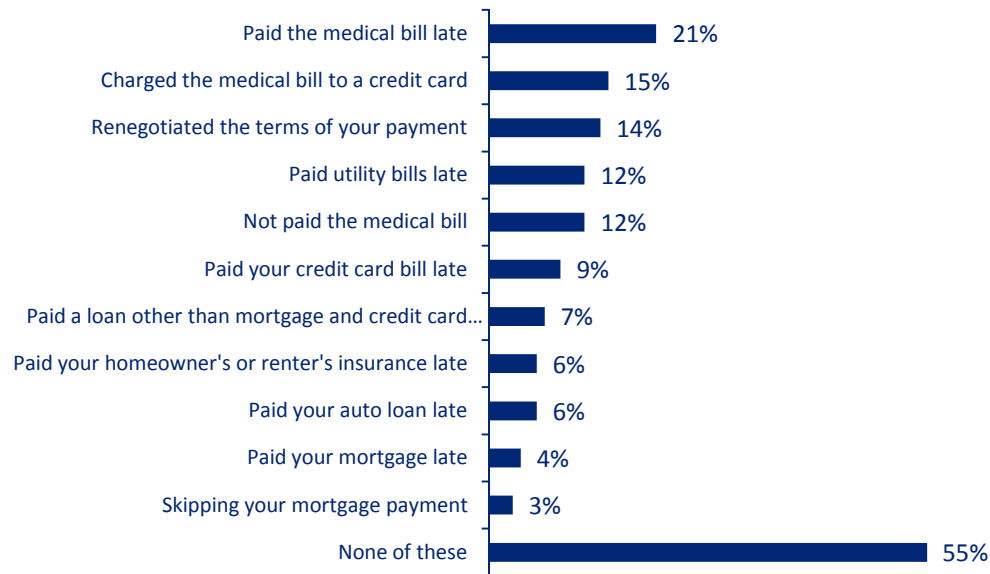
Saving health care dollars

- Strong interest in using generic drugs instead of brand-name prescription drugs
- Almost equally strong interest in seeking alternative sources of advice or information at no cost
- Interest in using non-traditional locations, such as retail clinics
- Willingness to forgo tests or treatment or to fill prescriptions in order to save money

Source: Harris Poll National Quorum® telephone survey of 1,008 U.S. adults 18+ years, September 29–October 4, 2010

One in five adults surveyed said they paid a medical bill late in the past 12 months

Question: In the last 12 months, have you done any of the following specifically in order to pay a medical bill?



- 28 percent of those with incomes less than \$25K, 25 percent of \$25–50K, and 26 percent of \$50–75K said they paid the medical bill late, which is statistically different from \$100K and above (9 percent).
- 32 percent of those divorced/separated said they did not pay the medical bill, which is statistically different from married (9 percent) and single/never married (10 percent).
- 34 percent of those with Medicaid and 29 percent of the individually insured said they renegotiated the terms of their payment, which is statistically different from employer-sponsored coverage (10 percent), Medicare (9 percent), and Military (1 percent).

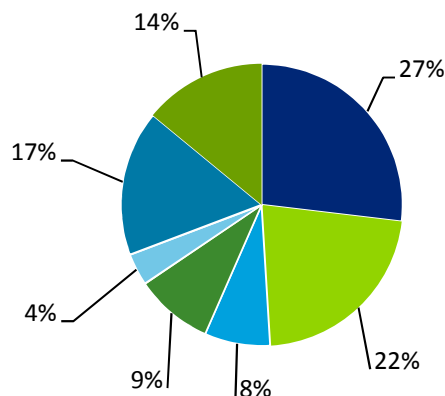
Source: Harris Poll National Quorum® telephone survey of 1,008 U.S. adults 18+ years, September 29–October 4, 2010

| | Paid the medical bill late |
|--------------------------------------|----------------------------|
| Total | 21% |
| Males 18–44 | 29% |
| Males 45–64 | 10% |
| Males 65+ | 7% |
| Females 18–44 | 29% |
| Females 45–64 | 24% |
| Females 65+ | 6% |
| High school graduate or less | 20% |
| Some college/graduate | 22% |
| Postgraduate | 18% |
| < \$50K | 26% |
| \$50–100K | 21% |
| >\$100K | 9% |
| Employed | 22% |
| Unemployed | 19% |
| Retired | 6% |
| Working women | 24% |
| Working women w/child | 32% |
| Married | 19% |
| Single/never married | 20% |
| Divorced/separated/widowed | 26% |
| White | 19% |
| Black | 30% |
| Hispanic | 20% |
| Other | 15% |
| Northeast | 14% |
| Midwest | 22% |
| South | 24% |
| West | 20% |
| Employer insured | 20% |
| Individually insured | 24% |
| Gov't (Medicare, Medicaid, Military) | 16% |
| Uninsured | 32% |
| Health: Excellent/very good | 18% |
| Health: Fair/poor | 29% |

27 percent of adults estimate that 5 percent or less of their household budget is spent on health care; 17 percent say 26 percent or more is spent on health care

Question: What percent of your monthly household budget would you estimate is spent on health care services, products or prescription drugs, insurance premiums, co-pays, deductibles, and other health care OOP expenses?

- 5% or less
- 11-15%
- 21-25%
- 6-10%
- 16-20%
- 26% or higher
- Don't know/refused to answer



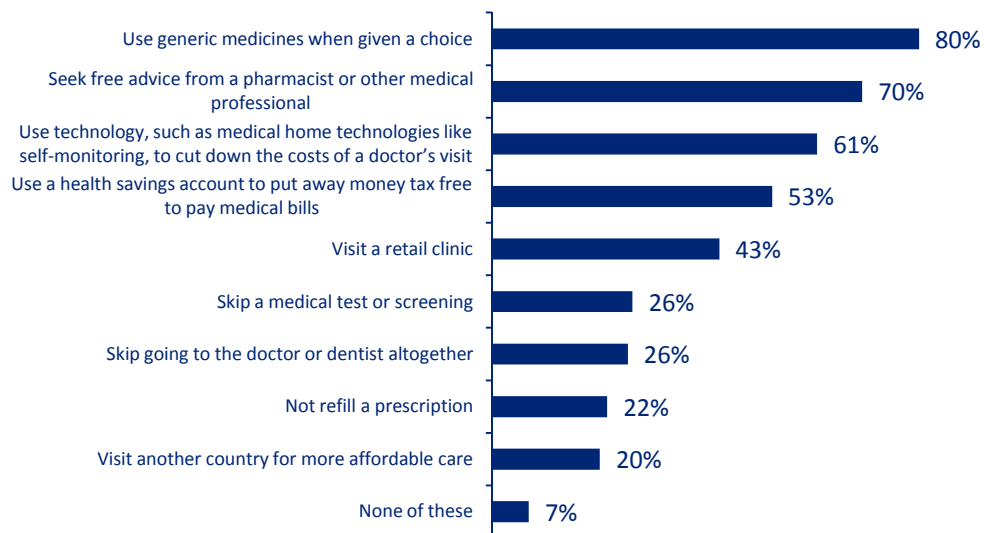
- 25 percent of females 18–44 years old estimate that 26 percent or more of their household budget is spent on health care, which is statistically different from males 45–64 (13 percent), males 65 and above (11 percent), and females 45–64 (14 percent).
- 32 percent of financially prepared respondents estimate that 5 percent or less of their household budget is spent on health care, which is statistically different from those not financially prepared (20 percent).

Source: Harris Poll National Quorum® telephone survey of 1,008 U.S. adults 18+ years, September 29–October 4, 2010

| | <5% | 6–15% | 16–25% | >26% |
|--------------------------------------|------------|------------|------------|------------|
| Total | 27% | 30% | 13% | 17% |
| Male 18–44 | 28% | 36% | 10% | 15% |
| Male 45–64 | 29% | 31% | 12% | 13% |
| Male 65+ | 27% | 30% | 13% | 11% |
| Female 18–44 | 25% | 26% | 11% | 25% |
| Female 45–64 | 29% | 26% | 19% | 14% |
| Female 65+ | 18% | 29% | 12% | 16% |
| High school graduate or less | 21% | 25% | 11% | 21% |
| Some college/graduate | 32% | 34% | 14% | 13% |
| Postgraduate | 32% | 34% | 14% | 10% |
| <\$50K | 24% | 23% | 15% | 23% |
| \$50–100K | 24% | 39% | 13% | 14% |
| >\$100K | 42% | 34% | 8% | 7% |
| Employed | 29% | 36% | 11% | 13% |
| Unemployed | 24% | 22% | 14% | 21% |
| Retired | 23% | 30% | 17% | 13% |
| Working women | 26% | 30% | 15% | 18% |
| Working women w/child | 30% | 32% | 17% | 16% |
| Married | 31% | 34% | 14% | 11% |
| Single/never married | 23% | 28% | 6% | 27% |
| Divorced/separated/widowed | 21% | 23% | 15% | 20% |
| White | 28% | 30% | 15% | 14% |
| Black | 31% | 21% | 8% | 30% |
| Hispanic | 18% | 39% | 3% | 17% |
| Other | 26% | 29% | 11% | 26% |
| Northeast | 25% | 35% | 12% | 15% |
| Midwest | 30% | 24% | 14% | 21% |
| South | 27% | 27% | 13% | 16% |
| West | 25% | 34% | 12% | 16% |
| Employer insured | 28% | 36% | 13% | 14% |
| Individually insured | 24% | 28% | 14% | 20% |
| Gov't (Medicare, Medicaid, Military) | 26% | 26% | 12% | 16% |
| Uninsured | 32% | 14% | 10% | 25% |
| Health: Excellent/very good | 30% | 32% | 13% | 12% |
| Health: Fair/poor | 19% | 18% | 14% | 26% |

A majority of adults surveyed said they would consider using generic medicines, seeking free advice, and using technology if it would save money for health care

Question: Would you consider doing any of the following if it would save money for health care?



- 65 percent of those with Medicaid would consider skipping a medical test or screening if it would save money for health care, which is statistically different from employer-sponsored coverage (26 percent), Medicare (20 percent), Military (18 percent), and uninsured (26 percent).
- 65 percent of those with Medicaid and 44 percent of the individually insured would consider not going to the doctor or dentist altogether if it would save money for health care, which is statistically different from employer-sponsored coverage (20 percent), Medicare (16 percent), and Military (9 percent).

Source: Harris Poll National Quorum® telephone survey of 1,008 U.S. adults 18+ years, September 29–October 4, 2010

| | Use generic medicines | Seek free advice |
|--------------------------------------|-----------------------|------------------|
| Total | 80% | 70% |
| Males 18–44 | 70% | 60% |
| Males 45–64 | 86% | 73% |
| Males 65+ | 79% | 64% |
| Females 18–44 | 80% | 75% |
| Females 45–64 | 88% | 77% |
| Females 65+ | 81% | 66% |
| High school graduate or less | 75% | 65% |
| Some college/graduate | 83% | 73% |
| Postgraduate | 91% | 79% |
| < \$50K | 78% | 70% |
| \$50–100K | 81% | 67% |
| >\$100K | 89% | 78% |
| Employed | 80% | 71% |
| Unemployed | 80% | 68% |
| Retired | 83% | 66% |
| Working women | 85% | 80% |
| Working women w/child | 89% | 86% |
| Married | 85% | 72% |
| Single/never married | 71% | 66% |
| Divorced/separated/widowed | 81% | 69% |
| White | 80% | 70% |
| Black | 83% | 62% |
| Hispanic | 80% | 72% |
| Other | 72% | 70% |
| Northeast | 76% | 65% |
| Midwest | 86% | 75% |
| South | 83% | 70% |
| West | 75% | 67% |
| Employer insured | 83% | 73% |
| Individually insured | 88% | 72% |
| Gov't (Medicare, Medicaid, Military) | 78% | 65% |
| Uninsured | 73% | 66% |
| Health: Excellent/very good | 77% | 66% |
| Health: Fair/poor | 84% | 69% |

Appendix A — Definitions

All other ambulatory services

- Establishments primarily engaged in collecting, storing, and distributing blood and blood products, and storing and distributing body organs.

Ambulance services

- Engaged in providing transportation of patients by ground or air, along with medical care.

Complementary and Alternative Medicine

- The National Center for Complementary and Alternative Medicine suggest that 'defining CAM is difficult, because the field is very broad and constantly changing'. CAM is generally thought to encompass a broad range of activities including natural products such as diet supplements; mind-body medicine such as yoga, acupuncture; manipulative and body-based practices including spinal manipulation and massage; and other CAM practices including movement therapies, traditional healers, manipulation of energy fields and traditional medicine systems including traditional Chinese medicine and Ayurvedic medicine.

Dental services

- Services provided by Offices of Doctors of Dental Surgery (DDS), Doctors of Dental Medicine (DMD), or Doctors of Dental Science (DDSc).

Durable medical equipment

- Retail sales of items such as contact lenses, eyeglasses, and other ophthalmic products, surgical and orthopaedic products, medical equipment rental, oxygen, and hearing aids.

Family

- As used in this study, defined as a group of two or more persons who are related by birth, marriage, or adoption and who are living together. Persons not living with any relatives are considered single-person families. The definition of a "family" differs from "household" as defined by the U.S. Census Bureau.

Functional foods

- Food fortified with added or concentrated ingredients to a functional level, which improves health and/or performance or products marketed for their "inherent" functional qualities.

Government administration, government public health activity, research and investment

- Administrative expenses associated with government programs and the net cost of the private health insurance plans that administer these programs; research and public health.

Home health care

- Private sector establishments primarily engaged in providing skilled nursing services in the home, along with a range of the following: personal care services, homemaker and companion services, physical therapy, medical social services, medications, medical equipment and supplies, counseling, 24-hour home care, occupation and vocational therapy, dietary and nutritional services, speech therapy, audiology, and high-tech care, such as intravenous therapy.

Hospital care

- Revenues received for all services provided by hospitals to patients. Thus, expenditures include revenues received to cover room and board, ancillary services such as operating room fees, services of resident physicians, inpatient pharmacy, hospital-based nursing home care, hospital-based home health care, and fees for any other services billed by the hospital.

Nursing home care

- Services provided by freestanding nursing homes.

Appendix A — Definitions (cont.)

Other non-durable medical products

- Non-prescription drugs and medical sundries.

Other personal health care

- Covers two types of expenditures: industrial in-plant and government expenditures for medical care not specified by type of service. Examples of this type of non-traditional site include community centers, senior citizens centers, schools, and military field stations.

Other private sources of payment

- Includes sources of payment such as philanthropic revenues, corporate support, and investment income.

Other professional services

- Spending for services provided by health practitioners other than physicians and dentists. Professional services include those provided by private-duty nurses, chiropractors, podiatrists, optometrists, and physical, occupational, and speech therapists, among others.

Prescription drugs

- Retail sales of human-use dosage-form drugs, biologicals, and diagnostic products. Retail prescription drug purchases occur in community pharmacies (which include both chain and independent pharmacies), grocery store pharmacies, mail-order establishments, and mass-merchandising establishments.

Physician and clinical services

- Services rendered in establishments of health professionals composed of the offices of physicians and outpatient care centers, plus the portion of medical laboratory services that are billed independently by the laboratories.

Residential mental retardation, mental health, and substance abuse facilities

- Providing residential care (but not licensed hospital care) to people with mental retardation, mental illness, or substance-abuse problems.

Total discretionary cost for health care

- Research literature suggests that the economic value of supervisory care is significant and unrecognized, occurring outside of the market economy. Provision of unpaid personal care to another by a friend or family member is important in a rapidly aging community with a shortage of labor skilled in the care of people who need assistance due to frailty, disability, terminal, or chronic illness. Estimation of a dollar value of supervisory care is imprecise. Valuation methods include estimates of the opportunity costs related to workforce participation and leisure forgone by the caregiver, or estimation of the replacement cost, (i.e., the cost of purchasing the care).
- This study used an estimation of replacement cost to value supervisory care, a cost which the literature suggests would be primarily borne by family members if they were to purchase care. Total discretionary cost of health care consists of direct costs such as co-pays, premiums, deductibles and direct purchases, and indirect costs including lost wages and replacement costs. This provides a more comprehensive assessment of the impact of health care costs at the personal or family level.

Weight-reducing centers

- Establishments primarily engaged in providing nonmedical services to assist clients in attaining or maintaining a desired weight.

Appendix B

Bibliography — Supervisory care

- Arno, P.S., C. Levine, and M. Memmott. “The Economic Value of Informal Caregiving,” *Health Affairs*, 1999 18, (2) 182-188
- Congressional Budget Office. *Financing Long-Term Care for the Elderly*, April 2004. The Congress of the United States
- Koopmanschap M.A., J.N. van Exel, B. van den Berg, and W.B. Brouwer. “An overview of methods and applications to value informal care in economic evaluations of health care,” *Pharmacoeconomics*, 2008 26(4) 269-80
- Mentzakis E., M. Ryan, and P. McNamee. “Using discrete choice experiments to value informal care tasks: exploring preference heterogeneity,” *Health Econ*, published online August 26, 2010

Want to learn more?

Deloitte's health care expenditures study models total U.S. health care spending, including a range of items not identified in the NHEA, such as costs related to nutritional supplements, CAM treatments, and imputed spend on care given by unpaid care providers. The highlights discussed here are just a small sampling of the data points and trends that were unearthed. Deloitte is currently sharing these insights with clients and helping them to strategize ways the study results can help their businesses. For more information or to arrange an appointment to discuss these and other findings from the study, please contact:

Paul H. Keckley, PhD
Executive Director
Deloitte Center for Health Solutions
Tel: +1 202 220 2150
pkeckley@deloitte.com

Andrew Freeman
Executive Director
Deloitte Center for Financial Services
Tel: +1 212 436 4676
aldfreeman@deloitte.com

This presentation contains general information only and is based on the experiences and research of Deloitte practitioners. Deloitte is not, by means of this presentation, rendering business, financial, investment, or other professional advice or services. This presentation is not a substitute for such professional advice or services, nor should it be used as a basis for any decision or action that may affect your business. Before making any decision or taking any action that may affect your business, you should consult a qualified professional advisor. Deloitte, its affiliates, and related entities shall not be responsible for any loss sustained by any person who relies on this presentation.

Deloitte.

The Deloitte Center for Health Solutions (DCHS) is the health services research arm of Deloitte LLP. Our goal is to inform all stakeholders in the health care system about emerging trends, challenges and opportunities using rigorous research. Through our research, roundtables and other forms of engagement, we seek to be a trusted source for relevant, timely and reliable insights.

To learn more about the DCHS, its research projects and events, please visit: www.deloitte.com/centerforhealthsolutions.

About Deloitte

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee, and its network of member firms, each of which is a legally separate and independent entity. Please see www.deloitte.com/about for a detailed description of the legal structure of Deloitte Touche Tohmatsu Limited and its member firms. Please see www.deloitte.com/us/about for a detailed description of the legal structure of Deloitte LLP and its subsidiaries.

Copyright © 2011 Deloitte Development LLC. All rights reserved.
Member of Deloitte Touche Tohmatsu Limited

Insights. Research. Connections.

Headquartered in New York City, the Deloitte Center for Financial Services provides insight and research to help improve the business performance of banks, private equity, hedge funds, mutual funds, insurance and real estate organizations operating globally. The Center helps financial institutions understand and address emerging opportunities in risk and information technology, regulatory compliance, growth and cost management.

To learn more about the Center, its projects and events, please visit us at www.deloitte.com/us/cfs.