Chapter 2: How Is Each Health Dollar Spent?

By:
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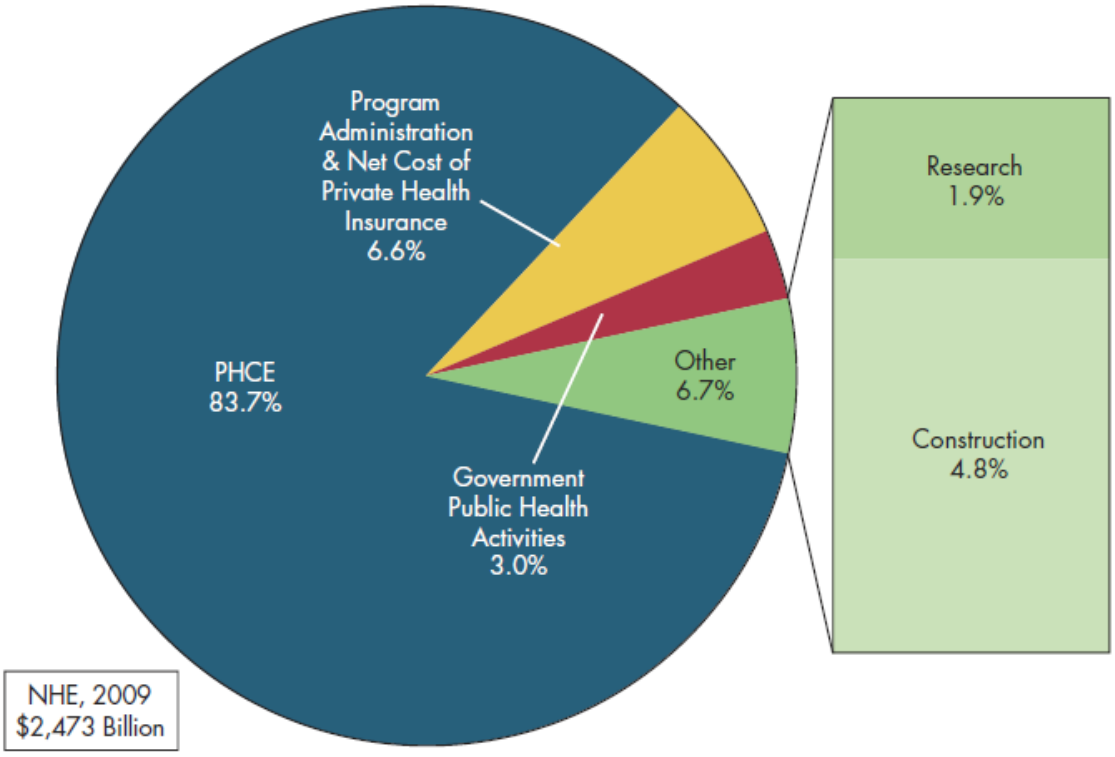
Table of Contents

Chapter 1

2.1 Most Health Spending Is for Personal Services[1]

Different methods exist to measure spending for health care. One measure — the NHE — encompasses all private and public spending having to do with health care. However, 1 in 15 dollars of NHE includes what might be regarded as investment, including expenditures for medical research, construction of new facilities, and purchases of new major equipment (figure 2.1a).

2.1a Five-sixths of NHE is devoted to PHCE



Administrative costs associated with public programs such as Medicare and Medicaid, and private health

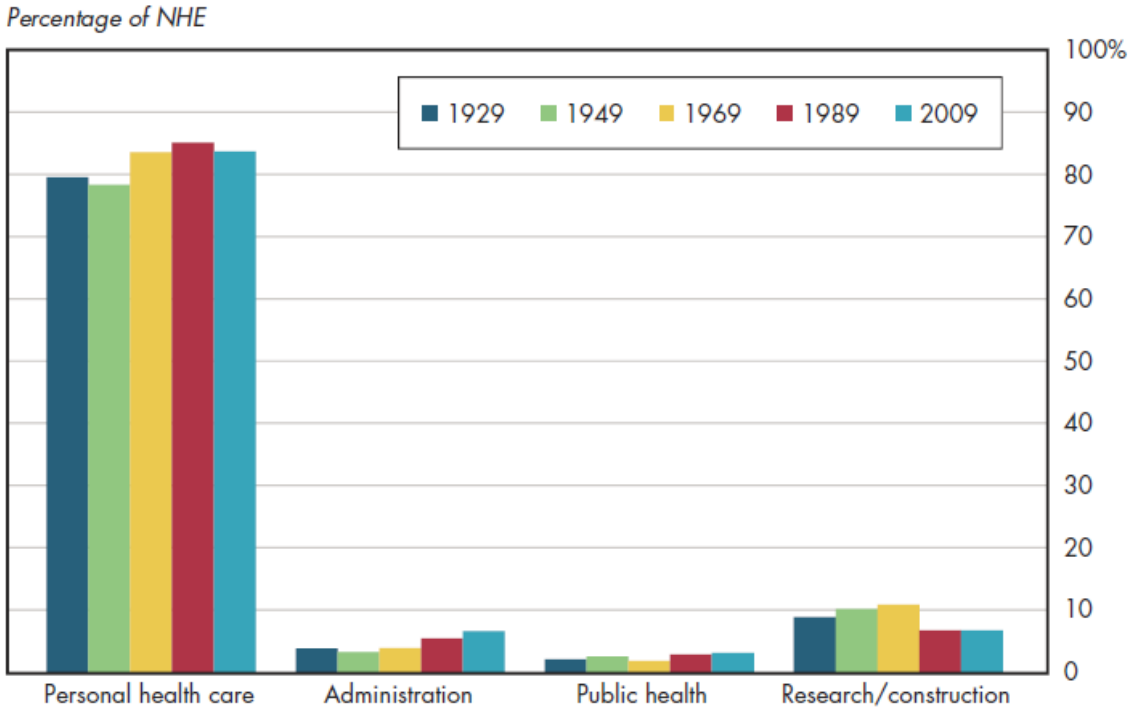
[1]This content is available online at <https://hub.mili.csom.umn.edu/content/m10002/1.2/>.

insurance plans, amount to only 1/16 of NHE. This might seem low in light of the purportedly high administrative costs associated with U.S. health care. A main reason is that it excludes large provider-related administrative costs embedded in various health services that make up personal health care expenditures (PHCE).

Government public health activity includes spending for surveillance, inoculations, immunizations and vaccinations, disease prevention activities, and public health laboratories. Currently, fewer than three cents of every health dollar goes to public health. This total should not be interpreted as a measure of all preventive health spending. As with administrative costs, the providers of various health services included under PHCE also engage in clinical preventive services. Public health spending does not capture these costs.

The remainder, PHCE, constitutes 5/6 of all health spending. This includes the full continuum of health care services ranging from primary care through long-term care (for example, nursing homes and home health care). PHCE includes inpatient care (for example, in hospitals, nursing homes, and intermediate-care facilities), and all services by medical professionals (for example, doctors, mid-level practitioners, allied health personnel). Finally, it includes ancillary services such as medical and dental laboratories, medications (prescription and non-prescription), durable medical equipment (for example, wheelchairs), non-durable medical products (for example, bandages), and even medical care provided at worksite clinics. The PHCE share of health spending has exceeded 80 percent of NHE for more than 40 years (figure 2.1b).

2.1b For 40 years, spending on personal health care has exceeded 80 percent of national health outlays



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Download Excel tables used to create both figures: Figures 2.1a/2.1b Tables[2] . Figures 2.1a and 2.1b both were created from the following table (the workbook includes all supporting tables used to create this table):

- Table 2.1. U.S. National Health Expenditures by Type of Expenditure: 1929 to 2021

[2]https://hub.mili.csom.umn.edu/content/m10002/latest/2.1TAB.xls

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1.2 References

A. Author's calculations.
B. Department of Health and Human Services. Centers for Medicare and Medicaid Services.
C. Worthington NL. National Health Expenditures, Calendar Years 1929-73. Research and Statistics Note No 1. Office of Research and Statistics 1975.

[3]https://hub.mili.csom.umn.edu/content/m10002/latest/2.1aIMG.ppt
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Chapter 2

2.2 Personal Health Spending Doubled Every 25 Years[1]

In terms of the constant purchasing power of health care, today's per capita spending on personal health care is 9.2 times as large as in 1929—an annual increase of 2.8 percent. Although the PCE denotes spending by individuals and households excluding goods and services used by government and business, PHCE reflects all spending on health services, including those paid by government and business.

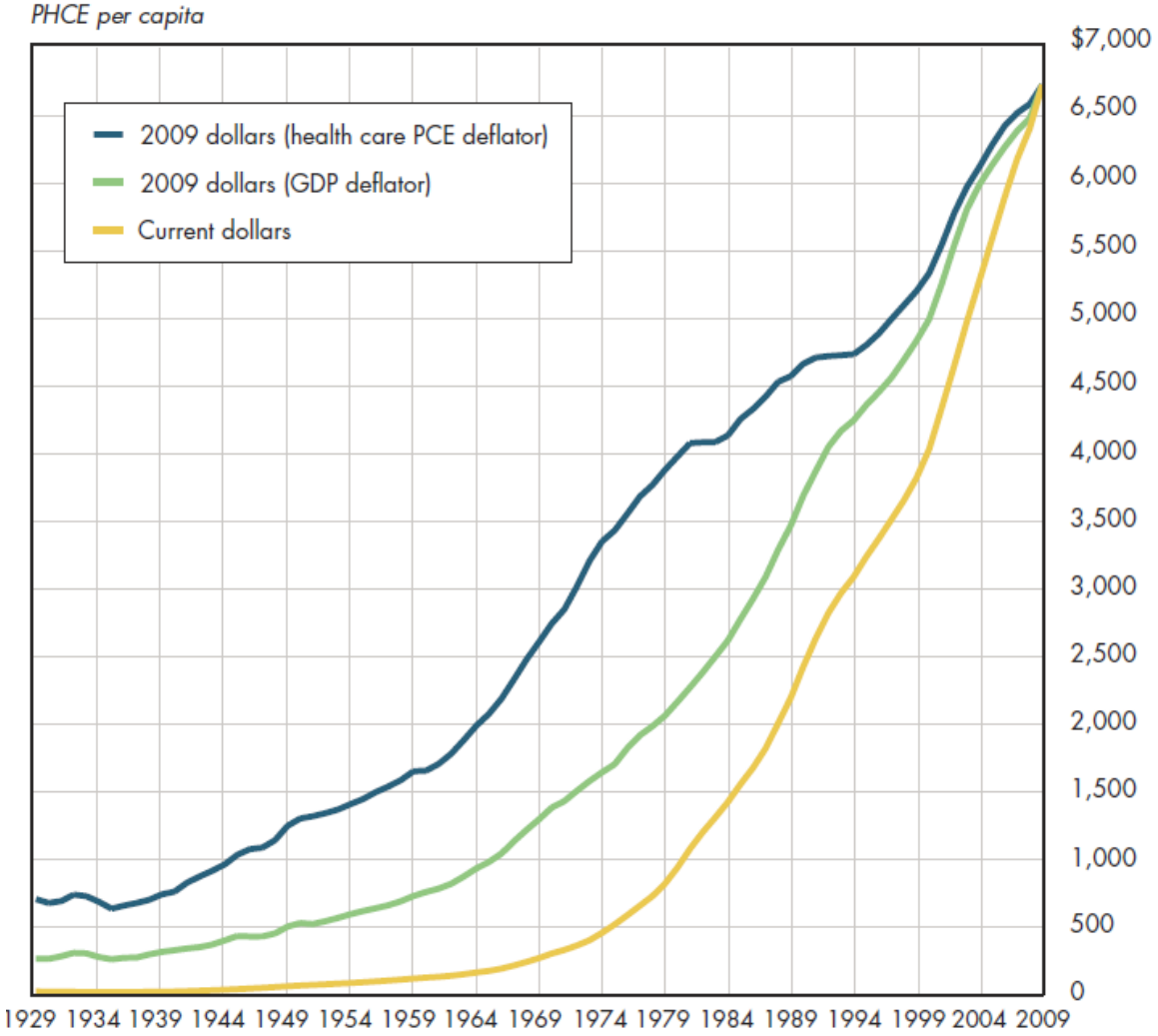
Recall that PHCE excludes current investment in research, new construction, and equipment because their payoffs occur in the future and last more than one year. Realistically, some of the annualized costs of past investments are embedded in the prices paid to medical providers—reflecting funds borrowed to make such investments or funding of depreciation to finance replacement of aging plants and equipment. However, even these costs are understated if they were publicly subsidized.

That said, the measured total of PHCE is the best indication of the extent to which the output of the health sector contributes to the satisfaction of the wants of millions of individuals for medical services. However, PHCE surely is a lower bound on annual expenditures whose motivation is to improve health. For many other purchases (for example, food or even automobiles), health and safety considerations can play an important role. In contrast, PHCE-related purchases typically are motivated solely by considerations of health: Patients do not rely on ambulances to commute to work, nor do they seek a doctor's care to satisfy an empty stomach.

On a per capita basis, real PHCE (that is, inflation-adjusted using the GDP price deflator) has grown over the last 80 years at an annualized rate of 4.1 percent. This implies a doubling of real PHCE every 18 years. Whereas real GDP per capita was approximately 5.3 times as large in 2009 as in 1929, real PHCE per capita grew 24-fold during the same period (figure 2.2). Thus, in terms of what can be purchased in the rest of the economy, PHCE grew more than four times as fast as output.

[1]This content is available online at <https://hub.mili.csom.umn.edu/content/m10010/1.2/>.

2.2 The rate of growth in PHCE per capita is much slower when adjusted for the effect of increasing health prices or general inflation



Because health prices have gone up much faster than general prices, this is not the same as saying that real resources devoted to PHCE have grown at that rate. Using the PCE deflator for health care to adjust for prices, today's real per capita PHCE is "only" 9.2 times as large as in 1929.

2.1 Downloads

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2.2 References

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B. Department of Commerce. Bureau of the Census.
C. Department of Health and Human Services. Centers for Medicare and Medicaid Services.
D. Worthington NL. National Health Expenditures, Calendar Years 1929-73. Research and Statistics Note No 1. Office of Research and Statistics 1975.

[4]https://hub.mili.csom.umn.edu/content/m10010/latest/2.2DATA.ppt

Chapter 3

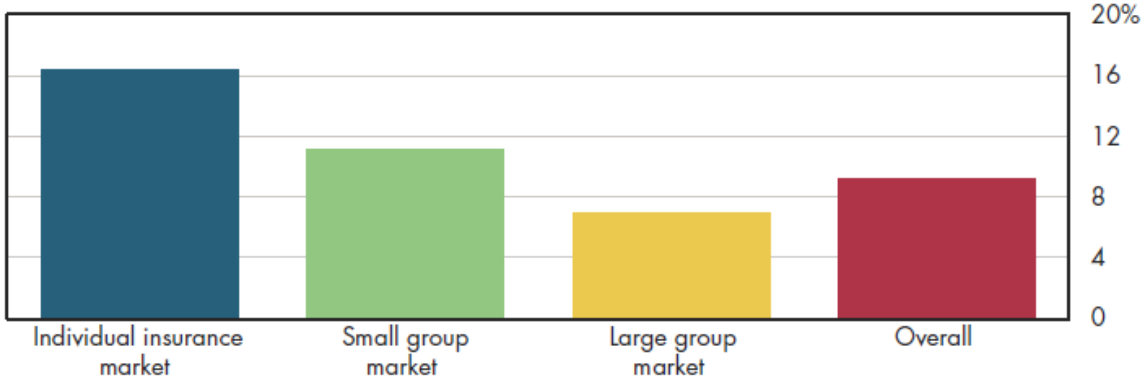
2.3 Insurer Administrative Costs Decline in Group Size[1]

Many misconceptions about insurer administrative expenses are grounded in some kernels of truth. For example, there certainly are economies of scale in the administration of health benefits, although their extent is often exaggerated. Although the unit costs of administering claims varies little across different size groups, the administrative loading factor is much higher for individual (non-group) policies compared with large group policies. For example, an insurance agent might have to spend somewhat more time to market a plan to a large group compared with marketing to an individual. But because this cost can be spread over so many lives, the unit costs of marketing are much lower for the group policy.

The administrative costs for small groups (2-50 employees in figure 2.3a) therefore fall in between those for individuals and large groups. The weighted average— accounting for the far larger number of individuals covered by large groups relative to small groups or non-group policies—is slightly more than nine cents of every premium dollar.

2.3a Because of economies of scale, administrative costs in the individual insurance market are at least twice as much as in the large group market

Administrative costs as a percentage of health insurance premiums



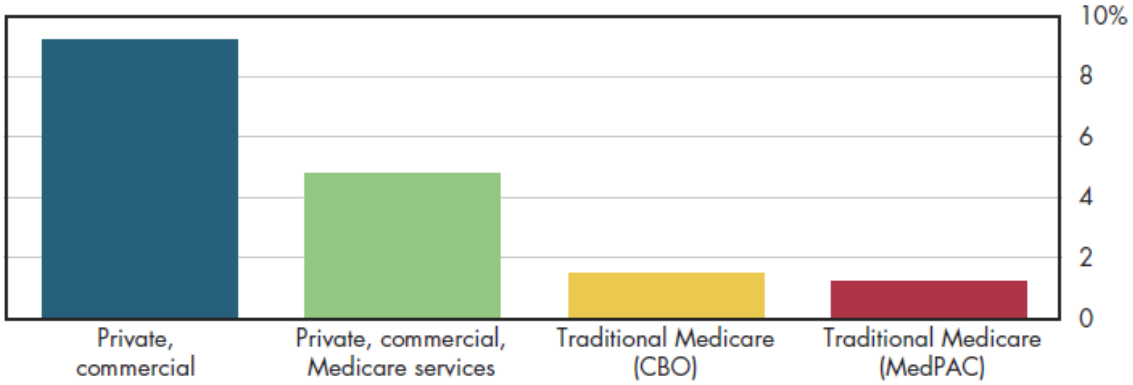
This amount is much higher than the administrative share of costs ascribed to traditional Medicare (where services are paid on a fee-for-service basis). However, that is an apples-to-oranges comparison for two reasons. First, administrators of Medicare's private health plans do not have to perform as many functions as do their private counterparts (for example, marketing and provider rate negotiations). When only Medicare administrative services are taken into account, the administrative costs for private plans are

[1]This content is available online at <https://hub.mili.csom.umn.edu/content/m10011/1.2/>.

cut approximately in half (figure 2.3b). The second reason is that the average dollar amount per Medicare claim is much higher than for private insurance because the elderly and disabled use hospital and nursing home services far more than do children or non-elderly adults.

2.3b If private health insurance covered a similar mix of services as Medicare does, this alone would cut average administrative costs by half

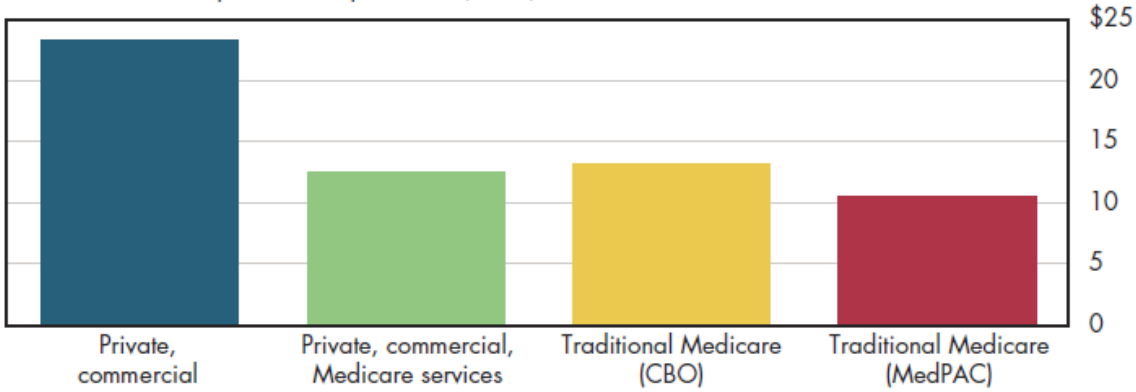
Administrative costs as a percentage of health insurance premiums/health spending (2009)



Thus, an alternative way of assessing administrative costs compares administrative costs per member per month. On average, private commercial health plans spend a little less than $25 monthly — approximately twice the amount for traditional Medicare (figure 2.3c). However, when only Medicare-comparable administrative costs are taken into account, the private plans have administrative costs per member per month almost indistinguishable from those experienced by Medicare carriers.

2.3c On a per-member per-month basis, Medicare's purported cost advantage over private plans is small or non-existent

Administrative costs per member per month (2009)



Note: Both the Congressional Budget Office (CBO) and the Medicare Payment Advisory Commission (MedPAC) have done analyses of Medicare administrative costs that are reflected in the figures above.

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- Figure 2.3c Editable Slide (can be formatted as desired)[8]

3.2 References

A. Sherlock DB. Administrative Expenses of Health Plans. Prepared for the Blue Cross Blue Shield Association. http://www.bcbs.com/issues/uninsured/Sherlock-Report-FINAL.pdf (accessed February 2010).

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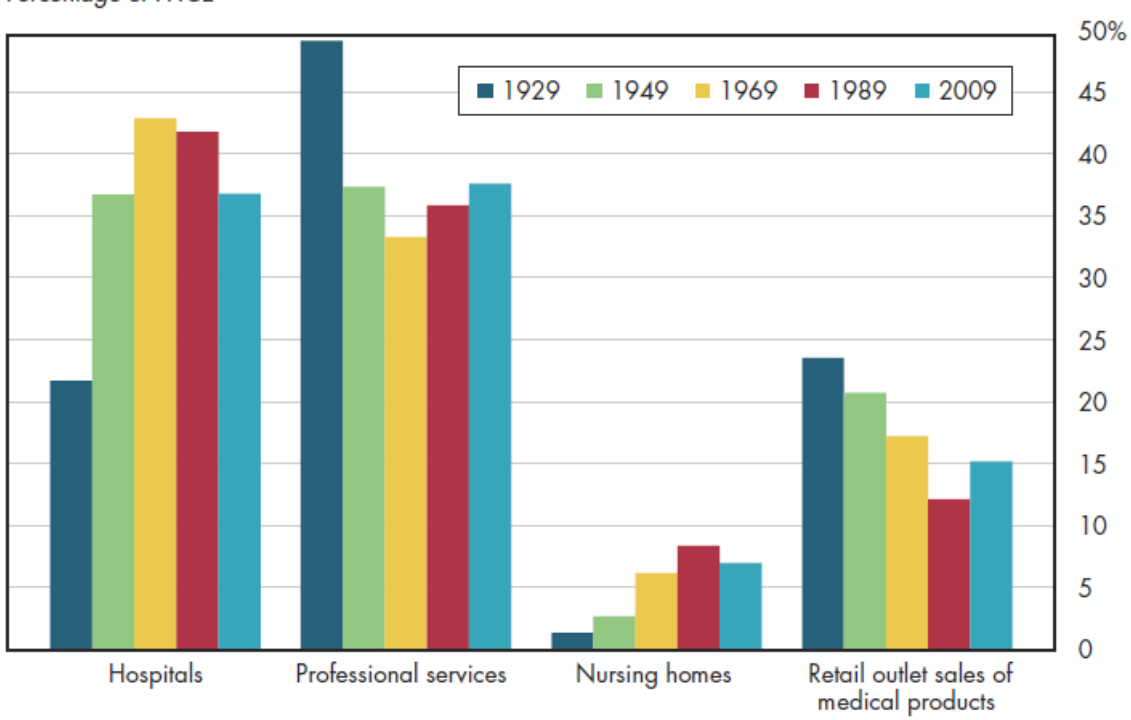
Chapter 4

2.4 Trends for Components of Health Spending, 1929 to 2009[1]

The dominance of health facilities during the 1960s through 1980s has given way to a shift toward outpatient care in recent decades. Hospital care accounted for just slightly more than 20 percent of PHCE in 1929, but this share peaked at 48 percent in 1982 and has declined to less than 40 percent today (figure 2.4a). Nursing home care accounted for only slightly more than a penny per PHCE dollar in 1929, but this amount peaked in 1998 at 8.9 cents, after which it now has declined to seven cents. Combined "institutional" spending on hospitals and nursing homes was less than 25 percent of spending in 1929, but it too peaked at 56 cents per dollar of PHCE in 1982, declining to approximately 44 cents today.

[1]This content is available online at <https://hub.mili.csom.umn.edu/content/m10012/1.1/>.

2.4a Professional services, once accounting for almost half of all health costs, currently account for the largest single share of spending

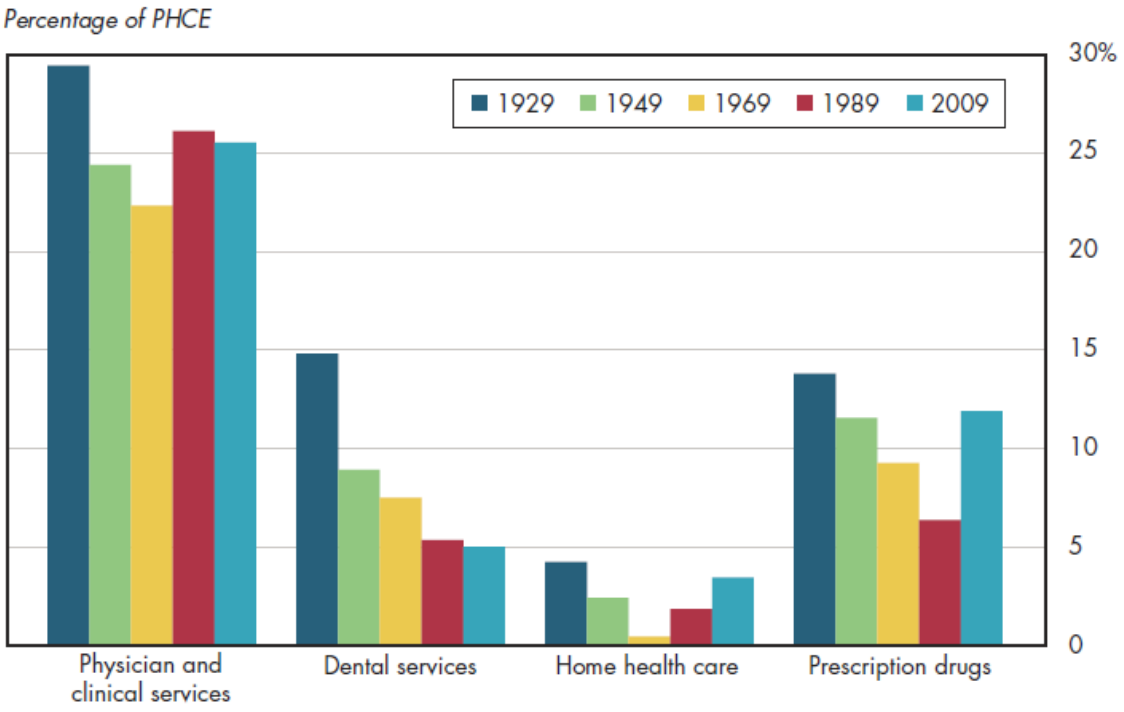


The services of health professionals, in contrast, declined from almost half of all spending in 1929 to a low of 31 cents per PHCE dollar in 1982, followed by a subsequent rise to 38 percent. Medicare began paying a flat rate per hospital stay that varied based on a patient's diagnosis in 1983. This so-called prospective payment system (PPS) provided a strong incentive to discharge patients early, resulting in a sizable decline in hospital use among the elderly in the years that followed.

Sales of non-durable medical products such as band-aids declined steadily from almost 25 percent of PHCE in 1929 to slightly more than 10 percent by 1989, but then rose to 15 percent by the year 2009. In contrast to the other medical services shown, where pricing often is far from transparent and health insurance coverage far more common, these medical products generally are sold in retail outlets such as drugstores or grocery stores, where pricing is transparent and competition fierce.

Although physician and clinical services hovered for decades at approximately 25 percent of PHCE, the dental services share of spending declined steadily (figure 2.4b). Although dental insurance coverage has expanded gradually, the out-of-pocket share of dental care is more than four times the corresponding share (less than 10 percent) of physician and clinical services that is not financed through third-party payers. Similarly, 60 percent of pharmaceuticals were paid for out-of-pocket as of 1988, compared with 20 percent by 2009. This helps explain the patterns shown.

2.4b Although the share of PHCE accounted for by dental services has declined steadily, trends for other components are mixed



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4.2 References

A. Author's calculations.
B. Department of Health and Human Services. Centers for Medicare and Medicaid Services.
C. Worthington NL. National Health Expenditures, Calendar Years 1929-73. Research and Statistics Note No 1. Office of Research and Statistics 1975.

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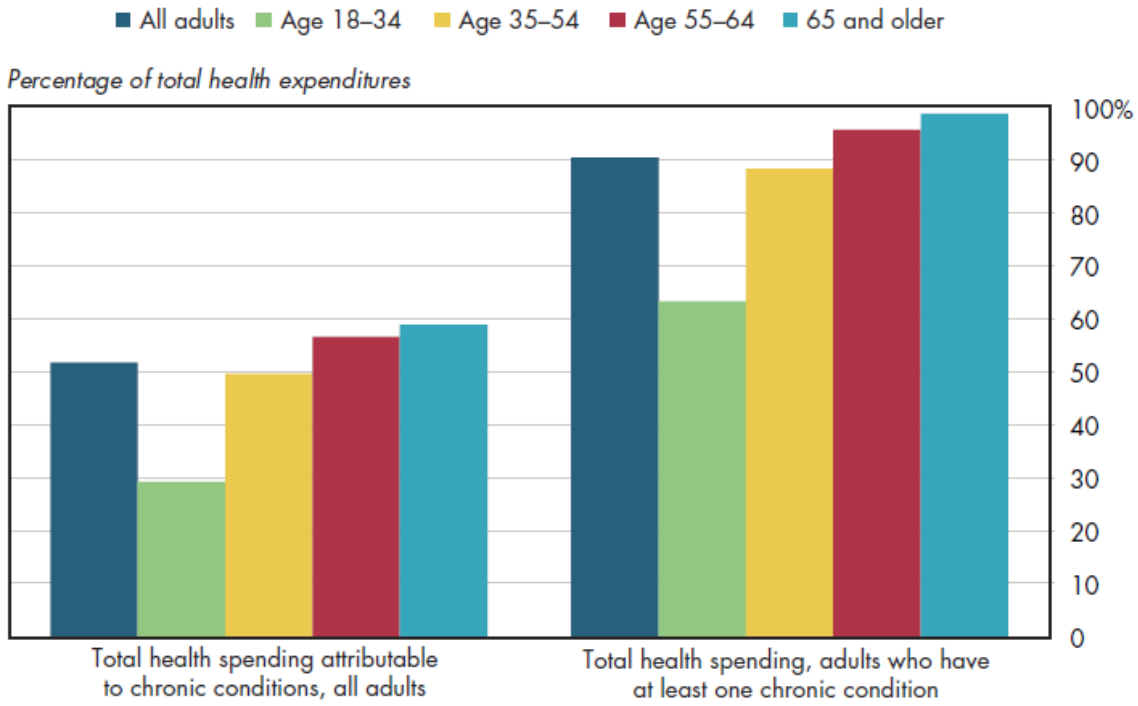
[6]https://hub.mili.csom.umn.edu/content/m10012/latest/2.4bDATA.ppt

Chapter 5

2.5 Chronic Diseases Account for Big and Increasing Share of Health Spending[1]

Just over half of adult health spending pays for chronic conditions. However, this average masks a lot of variation across age groups. For adults younger than age 35, just less than 30 percent of spending is specifically attributable to treating chronic conditions. In contrast, among the elderly, the share of PHCE having to do with chronic conditions is approximately double this level (figure 2.5a).

2.5a Approximately half of adult health spending is for chronic conditions; 90 percent of spending is for adults who have at least one such condition



Approximately 60 percent of civilian adults not living in institutions have at least one chronic condition. Again, this ranges from a low of 36 percent of young adults to approximately 92 percent of the elderly.

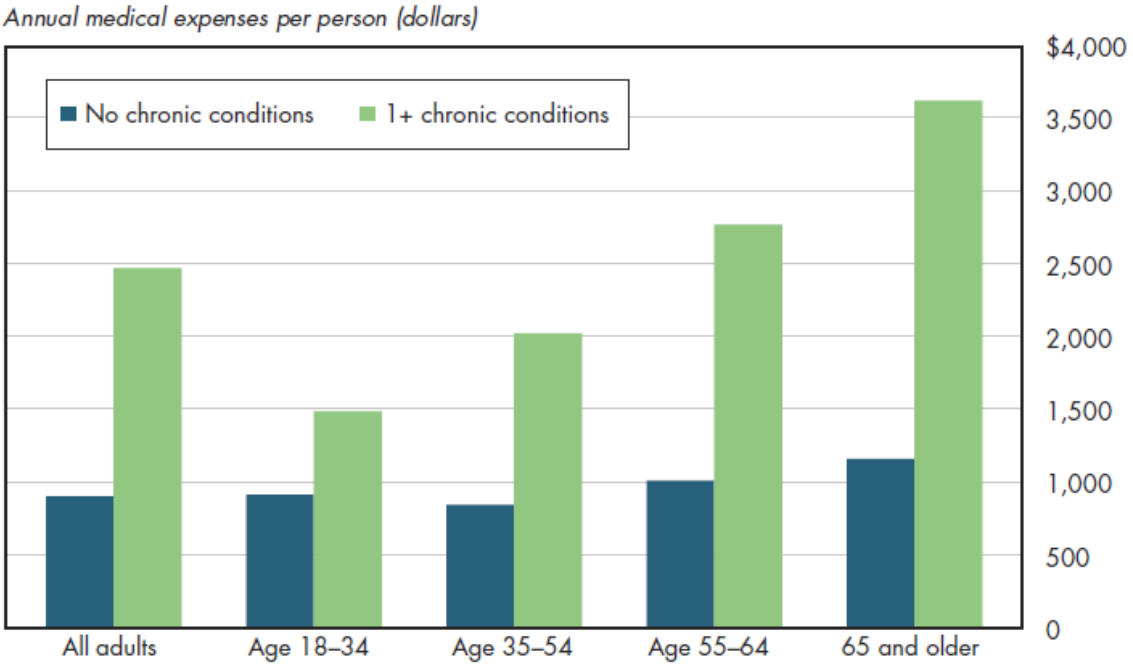
[1]This content is available online at <https://hub.mili.csom.umn.edu/content/m10013/1.1/>.

Consequently, those with at least one chronic condition account for more than 60 percent of total PHCE among young adults and 99 percent among the elderly.

Chronic conditions are one reason that health expenditures increase so dramatically by age — something that will be examined in more detail (refer to figure 12.4a). Among adults having no chronic conditions, annual health expenses in 2005 averaged less than $1,000 per person, with elderly individuals experiencing only slightly higher spending than their adult counterparts in the lowest age category.

Average spending for those who had one or more chronic conditions was approximately 2.5 times as high as for those who had no such conditions—ranging from approximately 1.5 for young adults to almost 3.5 for the elderly (figure 2.5b). This rising differential with age reflects two mutually reinforcing effects. First, average spending per person for a given number of conditions rises with age. Thus, among adults with just one chronic condition, per capita spending for elderly adults is more than triple the annual spending incurred by their counterparts in the young adult age group. Some of this difference reflects the high cost of dying.

2.5b Compared with those who have no chronic illness, annual health costs are two to three times as much for adults who do have one or more chronic conditions



Note: Estimates exclude expenses for dental care, or other medical equipment and services.

Second, the average number of chronic conditions per person also rises with age. The prevalence of two or more chronic conditions is more than five times as large for elderly adults compared with young adults (hence the reason for pre-existing conditions to matter so much in accurately pricing health insurance coverage). Set- ting prices based solely on age captures some of the variation that arises because of age-related differences in the rate and cost of chronic conditions. However, even within a fixed age group, the number and nature of chronic conditions results in large cost differences.

5.1 Downloads

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- Table 2.5. Adult Health Expenditures for Chronic Conditions, 2005

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5.2 References

A. Machlin S, JW Cohen and K Beauregard. Health Care Expenses for Adults with Chronic Conditions, 2005. Statistical Brief #203. May 2008. Agency for Health-care Research and Quality. Rockville MD. http://www.meps.ahrq.gov/mepsweb/data_files/publications/st203.pdf (accessed November 14, 2010).

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[4]https://hub.mili.csom.umn.edu/content/m10013/latest/2.5aDATA.ppt
[5]https://hub.mili.csom.umn.edu/content/m10013/latest/2.5bIMG.ppt
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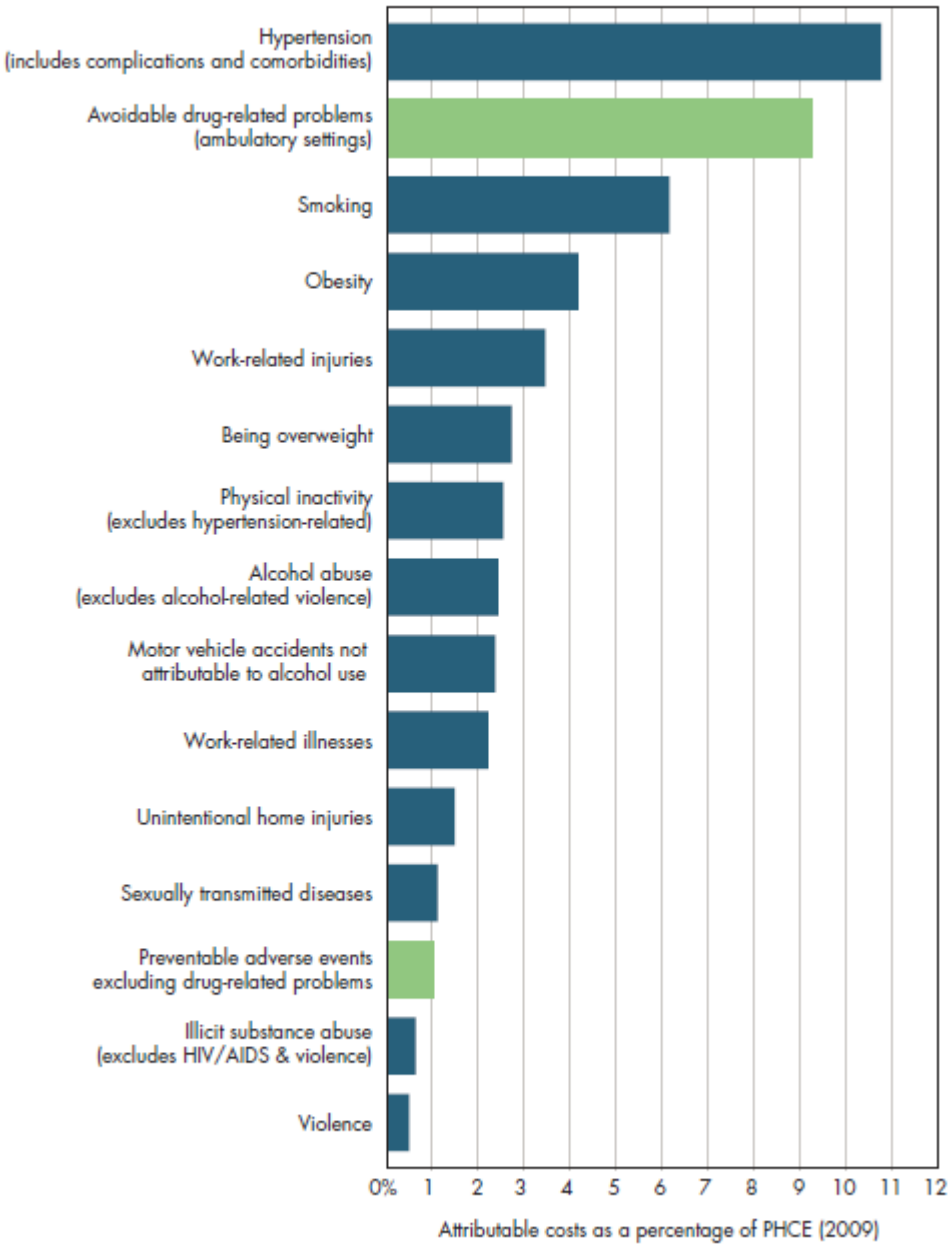
Chapter 6

2.6 Half or More of Personal Health Spending Is Avoidable[1]

Accounting for expenditures based on disease classification clouds the extent to which much health spending is avoidable. Consider the underlying causes of diseases that give rise to health spending. Figure 2.6 lists 15 such causes, together with estimates of the share of 2009 PHCE attributable to these causes. These are approximate estimates calculated by estimating the fraction of PHCE devoted to underlying causes in a reference year (usually 2000 or later, but in some cases as early as 1992). This fraction was assumed to be identical in 2009.

[1]This content is available online at <https://hub.mili.csom.umn.edu/content/m10014/1.2/>.

2.6 Probably half or more of health spending has to do with behavior, lifestyle, or other avoidable causes



Note: Every effort has been made to create mutually exclusive categories, but in some cases, some duplication across categories is unavoidable.

Another caveat is that there might be some overlap between categories. Although every effort was made to create categories that were mutually exclusive, limitations in how data were reported sometimes precluded doing this in every case where it was needed. Taken at face value, these 15 categories collectively account for just over half of PHCE. In light of the minimal duplication that remains, it appears almost certain that these categories collectively account for a minimum of 40 percent of PHCE.

Figure 2.6 defines behavior broadly, including efforts by individual people to live healthier lives. It also

can include actions taken to improve health system performance (shown in green, for example, reducing medical errors), other worksite activities to improve worker safety, transportation safety efforts to improve the quality of roads and/or automobiles, or even efforts to improve nutrition for schoolchildren.

Note that the data represent the gross amount of health spending that hypothetically could be avoided in a perfect world. Because we do not live in a perfect world, it is not possible to eradicate every dollar of avoidable spending. Although individual efforts to "try harder" can yield fruitful results virtually without costs, any serious effort to influence spending of this magnitude would require an investment of resources to alter systems (for example, electronic medical records to reduce medication errors) or behaviors (for example, smoking cessation aids). Although it never would make sense to spend a dollar to save less than a dollar, some of these initiatives might well use a sizable fraction of the potential savings. Thus, it would be imprudent to spend hundreds of billions in potential savings before ascertaining the actual net savings attainable.

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