TRENDS

Health Spending Projections Through 2017: The Baby-Boom Generation Is Coming To Medicare

Accelerating growth in Medicare spending by the end of the projection period is the first sign of the coming demographic shift.

by Sean Keehan, Andrea Sisko, Christopher Truffer, Sheila Smith, Cathy Cowan, John Poisal, M. Kent Clemens, and the National Health Expenditure Accounts Projections Team

ABSTRACT: The outlook for national health spending calls for continued steady growth. Spending growth is projected to be 6.7 percent in 2007, similar to its rate in 2006. Average annual growth over the projection period is expected to be 6.7 percent. Slower growth in private spending toward the end of the period is expected to be offset by stronger growth in public spending. The health share of gross domestic product (GDP) is expected to increase to 16.3 percent in 2007 and then rise throughout the projection period, reaching 19.5 percent of GDP by 2017. [*Health Affairs* 27, no. 2 (2008): w145–w155 (published online 26 February 2008; 10.1377/hlthaff.27.2.w145)]

NATIONAL HEALTH SPENDING is expected to grow 6.7 percent in 2007 and reach $2.2 trillion. Over the projection period in this paper (2007–2017), growth is anticipated to remain steady at around 6.7 percent per year, yielding an estimated $4.3 trillion in health spending in 2017 (Exhibits 1 and 2). Average annual growth for 2005–2016 is 0.2 percentage point lower than projected previously, mostly due to the expectation of slower medical price growth.[1]

Gross domestic product (GDP) growth is expected to average 4.7 percent per year over the projection period. Therefore, health spending growth is expected to outpace economic growth by an average of 1.9 percentage points annually. Although this difference in growth rates is larger than was observed in 2004, 2005, and 2006 (averaging 0.3 percentage point), it is lower than the average difference of 2.7 percentage points over the past thirty years.[2] The differential growth rates are expected to result in a health share of GDP of 16.3 percent in 2007 and 19.5 percent by 2017—nearly one-fifth of the economy (Exhibit 3).

Divergent spending trends in public and private payers' spending, as well as in spending for specific services and goods, underlie the stable outlook for overall growth in national health spending. Although we expect acceleration through 2009 attributable to higher use, private spending growth is expected to decel-

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EXHIBIT 1
National Health Expenditures (NHE), Aggregate And Per Capita Amounts, And Share Of Gross Domestic Product (GDP), Selected Calendar Years 1993–2017

Spending category	1993	2005	2006	2007[a]	2008[a]	2012[a]	2017[a]
NHE (billions)	$912.6	$1,973.3	$2,105.5	$2,245.6	$2,394.3	$3,097.8	$4,277.1
Health services and supplies	853.2	1,843.6	1,966.2	2,095.5	2,234.5	2,895.9	4,007.7
Personal health care	773.6	1,653.7	1,762.0	1,877.6	1,999.1	2,587.5	3,585.6
Hospital care	317.2	605.5	648.2	696.7	747.1	977.9	1,345.7
Professional services	280.7	622.2	660.2	701.1	743.1	953.3	1,297.7
Physician and clinical services	201.2	422.6	447.6	473.0	501.7	636.8	840.0
Other prof. services	24.5	56.2	58.9	61.7	65.1	80.5	105.0
Dental services	38.9	86.6	91.5	96.9	102.4	127.4	169.6
Other PHC	16.2	56.8	62.2	69.6	73.9	108.6	183.1
Nursing home and home health	87.3	168.7	177.6	187.3	198.5	250.1	336.5
Home health care[b]	21.9	47.9	52.7	57.6	62.0	82.7	119.0
Nursing home care[b]	65.4	120.7	124.9	129.7	136.5	167.4	217.5
Retail outlet sales of medical products	88.4	257.3	276.0	292.5	310.4	406.1	605.7
Prescription drugs	51.0	199.7	216.7	231.3	247.0	332.9	515.7
Durable medical equipment	13.5	23.2	23.7	24.5	25.4	29.2	36.6
Nondurable medical products	23.9	34.4	35.6	36.7	38.0	44.0	53.4
Program admin. and net cost of private health insurance	52.7	133.6	145.4	155.1	168.3	220.3	297.7
Government public health activities	26.8	56.3	58.7	62.8	67.1	88.1	124.4
Investment	59.3	129.7	139.4	150.1	159.8	201.9	269.4
Research[c]	16.4	40.6	41.8	42.9	44.0	53.9	72.7
Structures and equipment	42.9	89.1	97.6	107.2	115.8	148.0	196.7
NHE per capita	$3,468.6	$6,648.8	$7,025.9	$7,439.1	$7,867.7	$9,861.9	$13,101.1
Population (millions)	263.1	296.8	299.7	301.9	304.3	314.1	326.5
GDP, billions of dollars	$6,657.4	$12,433.9	$13,194.7	$13,801.7	$14,450.3	$17,514.3	$21,909.7
Real NHE[d]	$1,032.4	$1,746.2	$1,806.3	$1,877.6	$1,962.7	$2,311.8	$2,835.0
Chain-weighted GDP index	0.88	1.13	1.17	1.20	1.22	1.34	1.51
PHC deflator[e]	0.81	1.20	1.25	1.28	1.33	1.52	1.834
NHE as percent of GDP	13.7%	15.9%	16.0%	16.3%	16.6%	17.7%	19.5%

SOURCES: Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group; and U.S. Department of Commerce, Bureau of Economic Analysis and Bureau of the Census.

NOTES: Numbers might not add to totals because of rounding. 1993 marks the beginning of the shift to managed care.

[a] Projected.

[b] Freestanding facilities only. Additional services are provided in hospital-based facilities and counted as hospital care.

[c] Research and development expenditures of drug companies and other manufacturers and providers of medical equipment and supplies are excluded from "research expenditures" but are included in the expenditure class in which the product falls.

[d] Deflated using GDP chain-type price index (2000 = 100.0).

[e] Personal health care (PHC) chain-type index is constructed from the producer price index for hospital care, nursing home input price index for nursing home care, and consumer price indices specific to each remaining PHC component (2000 = 100.0).

erate through the end of the projection period from 6.6 percent in 2009 to 5.9 percent by 2017. Growth in public spending, on the other hand, is expected to accelerate toward the end of the projection period as the leading edge of the baby-boom generation becomes eligible for

EXHIBIT 2
National Health Expenditures (NHE), Average Annual Percentage Growth From Prior Year Shown, Selected Calendar Years 1993–2017

Spending category	1993[a]	2005	2006	2007[b]	2008[b]	2012[b]	2017[b]	2006–2017[b]
NHE	11.5	6.6	6.7	6.7	6.6	6.7	6.7	6.7
Health services and supplies	11.7	6.6	6.6	6.6	6.6	6.7	6.7	6.7
Personal health care	11.5	6.5	6.6	6.6	6.5	6.7	6.7	6.7
Hospital care	11.2	5.5	7.0	7.5	7.2	7.0	6.6	6.9
Professional services	12.0	6.9	6.1	6.2	6.0	6.4	6.4	6.3
Physician and clinical services	12.3	6.4	5.9	5.7	6.1	6.1	5.7	5.9
Other prof. services	16.4	7.2	4.9	4.8	5.5	5.4	5.5	5.4
Dental services	9.7	6.9	5.7	5.9	5.7	5.6	5.9	5.8
Other PHC	11.8	11.1	9.5	11.8	6.3	10.1	11.0	10.3
Nursing home and home health	14.3	5.6	5.3	5.4	6.0	5.9	6.1	6.0
Home health care[c]	22.1	6.8	9.9	9.2	7.8	7.5	7.5	7.7
Nursing home care[c]	12.9	5.2	3.5	3.8	5.2	5.2	5.4	5.2
Retail outlet sales of medical products	9.7	9.3	7.3	6.0	6.1	7.0	8.3	7.4
Prescription drugs	10.2	12.0	8.5	6.7	6.8	7.7	9.2	8.2
Durable medical equipment	9.6	4.6	2.3	3.4	3.7	3.5	4.6	4.0
Nondurable medical products	9.0	3.1	3.5	3.0	3.5	3.8	3.9	3.8
Program admin. and net cost of private health insurance	13.7	8.1	8.8	6.6	8.5	7.0	6.2	6.7
Government public health activities	13.7	6.4	4.3	7.0	6.9	7.1	7.1	7.1
Investment	9.2	6.7	7.4	7.7	6.5	6.0	5.9	6.2
Research[d]	9.7	7.8	2.9	2.7	2.6	5.2	6.2	5.2
Structures and equipment	9.1	6.3	9.5	9.8	8.1	6.3	5.9	6.6
NHE per capita	10.4	5.6	5.9	5.9	5.8	5.8	5.8	5.8
Population (millions)	1.0	1.0	1.0	0.7	0.8	0.8	0.8	0.8
GDP, billions of dollars	8.4	5.3	6.1	4.6	4.7	4.9	4.6	4.7
Real NHE[e]	6.0	4.5	3.4	3.9	4.5	4.2	4.2	4.2
Chain-weighted GDP index	5.2	2.1	3.2	2.6	2.0	2.4	2.4	2.4
Personal health care deflator[f]	7.3	3.3	3.4	3.2	3.4	3.4	3.8	3.6

SOURCES: Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group; and U.S. Department of Commerce, Bureau of Economic Analysis and Bureau of the Census.

NOTES: Numbers might not add to totals because of rounding. 1993 marks the beginning of the shift to managed care. Growth rates are calculated consistent with the National Health Expenditure Accounts methodology. For example, the 2016 growth rate above is equal to the level of 2016 expenditures over the level of 2011 expenditures raised to the one-fifth power (the average growth over five years); 2016 growth rate is shorthand for 2011–2016 growth rate.

[a] Average annual growth from 1970 through 1993.

[b] Projected.

[c] Freestanding facilities only. Additional services are provided in hospital-based facilities and counted as hospital care.

[d] Research and development expenditures of drug companies and other manufacturers and providers of medical equipment and supplies are excluded from "research expenditures" but are included in the expenditure class in which the product falls.

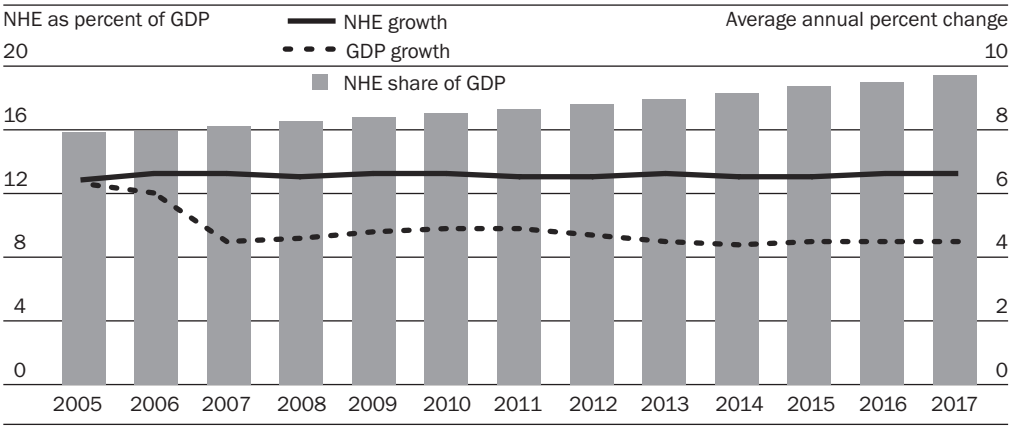
[e] Deflated using gross domestic product (GDP) chain-type price index (2000 = 100.0).

[f] Personal health care (PHC) chain-type index is constructed from the producer price index for hospital care, nursing home input price index for nursing home care, and consumer price indices specific to each remaining PHC component (2000 = 100.0).

Medicare. From the sectoral perspective, prescription drug spending growth is projected to decelerate in 2007, driven by slower price growth, but is expected to accelerate through 2017 as utilization increases. On the other hand, hospital spending is expected to accelerate in 2007 because of higher Medicaid payment rates and then to decelerate toward the end of the projection period in a lagged response to projected lower growth in income.

Medicare Part D is expected to have little impact on overall health spending growth dur-

EXHIBIT 3
National Health Expenditures (NHE) As A Share Of Gross Domestic Product (GDP) And Average Annual Growth In NHE Versus Growth In GDP, 2005–2017



SOURCE: Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group.
NOTES: The left axis (NHE share of GDP) relates to the gray-shaded bars. The right axis (percent change in GDP and NHE) relates to the two line graphs.

ing the projection period. Per capita prescription drug spending growth is assumed to be identical for Medicare beneficiaries and for the population as a whole.[3] However, Medicare Part D enrollment growth is expected to increase at a faster rate than population growth; thus, aggregate Medicare drug spending is expected to grow faster than overall drug spending over the projection period.

Because the Medicare projections are based on current law, they are likely understated, as they include the effect of negative physician payment updates for the last ten years of the projection. Consequently, we include a simulation of a spending scenario that imposes annual Medicare physician payment updates of 0.0 percent. The simulation revealed a relatively small impact on total national health spending but a larger impact on Medicare spending.

Model And Assumptions

These projections are generated within a "current-law" framework that incorporates actuarial, econometric, and judgmental inputs. The econometric models used to project private spending are reviewed annually.[4] The Medicare projections are primarily based on the 2007 Medicare Trustees report, and the Medicaid spending projections are consistent with that report's assumptions.[5] The projections for both private and public spending use the economic and demographic assumptions from the 2007 Medicare Trustees report, updated to reflect the latest historical data.[6] The prescription drug projection reflects the latest Medicare Part D cost estimates and the assumptions that appear in the president's fiscal year 2009 budget.[7]

Projections are inherently subject to uncertainty. Models are estimated based on historical trends and relationships in health spending; any structural break in these relationships is generally unpredictable. These projections also rely on assumptions about macroeconomic conditions and health-sector parameters and their relationship to health care spending, with the degree of uncertainty increasing along with the projection horizon. Therefore, we qualify our projections subject to these uncertainties and how they might affect our results.

In eight of the past nine years, these projections have correctly predicted the direction of growth in the first year of the period. On average over that time, they have slightly overestimated first-year growth by 0.2 percentage point. A more comprehensive accuracy analy-

sis is on the Web site of the Centers for Medicare and Medicaid Services (CMS).[8]

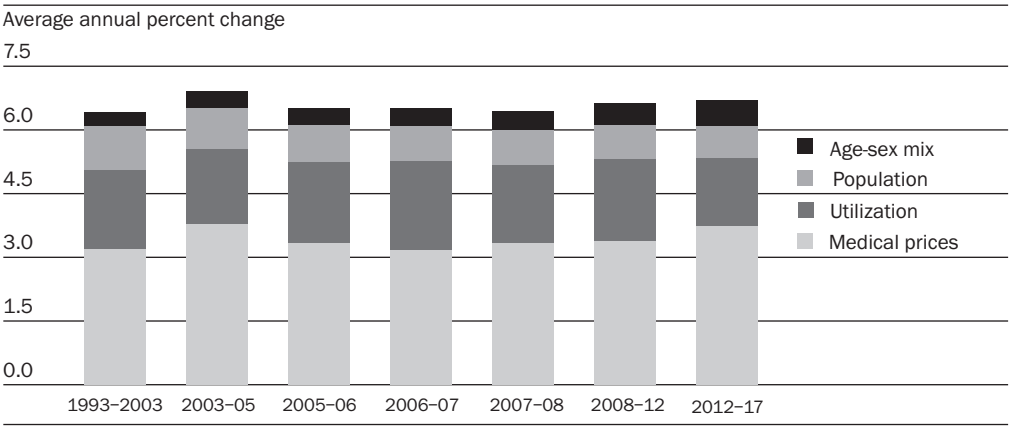
Factors Contributing To Growth

The primary drivers of personal health care spending growth during the projection period are medical prices and utilization, followed by smaller impacts from population growth and the age-sex mix (Exhibit 4). Medical prices are projected to decelerate from 3.4 percent in 2006 to 3.2 percent in 2007, led by much slower growth in prescription drug prices (from 3.5 percent in 2006 to an expected 1.4 percent in 2007). In 2008 and beyond, medical price growth is anticipated to rebound. For the 2012–2017 period, price growth is expected to account for 3.8 percentage points of the 6.7 percent growth (57 percent) in personal health care spending, versus 3.2 of the 6.6 percent growth (49 percent) in 2007.

Since 1995, widespread selective contracting associated with the expansion of managed care has mitigated growth in medical price inflation.[9] During that time, this output price inflation has averaged slower growth than the CMS index of medical input prices. The slower growth in medical price inflation relative to growth in input costs also reflects declines in real physician incomes relative to those of other professional and technical occupations.[10] For the projection period, the impact of selective contracting is assumed to be less than in the managed care era, and growth in physician incomes is assumed to gradually converge with income growth for other professional and technical occupations. As a result, medical price inflation is expected to steadily rise relative to input price inflation, growing 0.6 percentage point faster by 2017.[11]

Utilization, which includes both the volume and intensity of services, is primarily influenced by trends in real household income and, to a lesser extent, the substitution effect associated with relative medical price inflation and shifts in insurance coverage. The impact of growth in real per capita disposable personal income reflects not only the effect on use of medical care by individual households, but also changes in the nature and extent of insurance coverage and the impact on provider incentives associated with methods of payment. These effects occur with a lag, reflecting the multiple intermediaries between the consumer of health care and the bill payer. Rising disposable income growth (on average) from 2002 to 2007 continues to suggest a mild accel-

EXHIBIT 4
Factors Accounting For Growth In Personal Health Care Spending, Selected Calendar Years 1993–2017



SOURCE: Centers for Medicare and Medicaid Services, Office of the Actuary.
NOTES: Utilization includes quality and mix of services. As a residual, this factor also includes any errors in measuring prices or total spending. Medical prices reflect a chain-weighted index of the price for all personal health care deflators. Growth rates are calculated consistent with the National Health Expenditure Accounts methodology.

eration in utilization through 2007. However, the expectation of slower disposable income growth from 2008 to 2017 is the primary driver for the slowing growth in utilization toward the end of the projection period.[12]

The impact of the population aging is expected to account for a relatively small share of future health care spending growth on a per enrollee basis but to have a substantial influence on the public share of spending growth, as the leading edge of the baby-boom generation becomes eligible for Medicare.[13] The effect of the changing age-mix of the population is expected to account for 0.4 percentage point of growth in 2007 and 0.6 percentage point in 2017. The effect of population growth on spending growth is expected to be constant throughout the projection period, adding 0.8 percentage point annually. By comparison, Medicare enrollment growth alone is projected to contribute 2.9 percentage points to growth in Medicare spending by 2017.

Total spending growth expected over the entire period is slightly slower than last year's, driven primarily by reestimation of the model for real per capita spending; lower historical data for spending, prices, and input costs; and lower projections of medical price inflation. Contributing to the lower price growth is monthly employer payroll data from the Current Employment Survey, which show a sharp deceleration in average hourly earnings for the health sector in 2007, particularly for nonsupervisory hospital employees.[14] Also, the prices for one key physician input cost, malpractice insurance premiums, are projected to grow more slowly than in the recent past and contribute to reduced medical price inflation.[15]

Funding Outlook, By Payer

■ **Medicare.** In 2007, Medicare spending growth is projected to slow to 6.5 percent, following 18.7 percent growth in 2006 associated with the introduction of Medicare Part D (Exhibit 5). This expected deceleration is also influenced by a smaller increase in Medicare Advantage (MA) plan payments as a result of risk adjustments and is expected to produce slower growth across most sectors, including physicians and prescription drugs.[16] After 2007, Medicare spending growth is anticipated to rebound, then accelerate to a greater degree in the last half of the projection period, driven by higher growth in Medicare enrollment. Medicare spending is expected to account for just over one-fifth (20.7 percent) of national health spending by 2017.

Medicare enrollment is projected to continue to shift from fee-for-service (FFS) toward managed care over the next decade. By 2017, 27.5 percent of eligible Medicare beneficiaries are expected to enroll in an MA plan, compared to 16.4 percent in 2006. This expected shift is driven in part by the increased availability of new plans and added benefits in MA plans, such as lower cost sharing.

The Medicare spending growth pattern for physician services reflects the physician payment updates required in current law under the Sustainable Growth Rate (SGR) system. The SGR system mandates the adjustment of future physician payment updates for any differences between past target and actual spending levels.[17] Since 2003, scheduled negative updates have been avoided through legislative changes; however, the resulting higher actual physician spending has not been accompanied by a higher physician spending target, which leads to projected physician payment cuts over the projection period. Since these projections assume no legislative changes to the physician payment system, the physician projections are likely understated.

Given the high probability of legislative intervention to prevent the SGR-mandated physician payment cuts, the effects of alternative payment update scenarios were explored in a supplemental memo to the 2007 Medicare Trustees report.[18] Based on this analysis, the potential impact of a 0.0 percent update scenario on the NHE projections was examined.[19] Such an update for 2008–2017 would yield total Medicare spending that is 6.4 percent higher and Medicare physician spending that is 25.3 percent higher in 2017 than anticipated under current-law assumptions (Exhibit 6). The projected effect on aggregate health spending measures, however, would be

EXHIBIT 5
National Health Expenditures (NHE), By Source Of Funds, Amounts, And Average Annual Growth From Prior Year Shown, Selected Calendar Years 1993–2017

Source of funds	1993	2005	2006	2007[a]	2008[a]	2012[a]	2017[a]
NHE (billions)	$912.6	$1,973.4	$2,105.4	$2,245.3	$2,394.1	$3,097.8	$4,277.0
Private funds	512.5	1,076.6	1,135.2	1,206.8	1,285.0	1,643.2	2,197.9
Consumer payments	440.7	932.7	980.0	1,038.7	1,104.2	1,408.6	1,879.6
Out-of-pocket payments	145.2	247.1	256.5	269.3	282.6	350.6	464.3
Private health insurance	295.5	685.6	723.4	769.4	821.7	1,058.0	1,415.3
Other private funds	71.8	143.9	155.3	168.1	180.8	234.6	318.3
Public funds	400.1	896.8	970.3	1,038.5	1,109.1	1,454.6	2,079.1
Federal	279.2	639.2	704.9	753.0	806.7	1,065.3	1,536.2
Medicare	150.0	338.0	401.3	427.3	460.7	610.5	884.0
Medicaid[b]	76.8	179.1	175.7	190.7	203.7	273.4	402.3
Other federal[c]	52.5	122.0	127.9	135.0	142.3	181.4	249.9
State and local	120.9	257.7	265.4	285.5	302.4	389.3	543.0
Medicaid[b]	45.6	134.4	134.9	147.5	157.6	212.6	315.0
Other state and local[c]	75.2	123.3	130.5	138.0	144.9	176.7	227.9
Total Medicaid[d]	122.4	313.5	310.6	338.2	361.2	486.0	717.3

Average annual growth	1993[e]	2005	2006	2007[a]	2008[a]	2012[a]	2017[a]	2006–2017[a]
NHE	11.5%	6.6%	6.7%	6.6%	6.6%	6.7%	6.7%	6.7%
Private funds	11.0	6.4	5.4	6.3	6.5	6.3	6.0	6.2
Consumer payments	10.9	6.4	5.1	6.0	6.3	6.3	5.9	6.1
Out-of-pocket payments	8.0	4.5	3.8	5.0	4.9	5.5	5.8	5.5
Private health insurance	13.7	7.3	5.5	6.4	6.8	6.5	6.0	6.3
Other private funds	11.1	6.0	7.9	8.3	7.5	6.7	6.3	6.7
Public funds	12.2	7.0	8.2	7.0	6.8	7.0	7.4	7.2
Federal	12.7	7.1	10.3	6.8	7.1	7.2	7.6	7.3
Medicare	13.8	7.0	18.7	6.5	7.8	7.3	7.7	7.4
Medicaid[b]	15.4	7.3	−1.9	8.5	6.8	7.6	8.0	7.8
Other federal[c]	9.0	7.3	4.9	5.5	5.4	6.3	6.6	6.3
State and local	11.3	6.5	3.0	7.6	5.9	6.5	6.9	6.7
Medicaid[b]	13.6	9.4	0.4	9.3	6.8	7.8	8.2	8.0
Other state and local[c]	10.3	4.2	5.8	5.8	5.0	5.1	5.2	5.2
Total Medicaid[d]	14.6	8.2	−0.9	8.9	6.8	7.7	8.1	7.9

SOURCE: Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group.

NOTES: Numbers might not add to totals because of rounding. 1993 marks the beginning of the shift to managed care. Growth rates are calculated consistent with the National Health Expenditure Accounts methodology. For example, the 2017 growth rate above is equal to the level of 2017 expenditures over the level of 2012 expenditures raised to the one-fifth power (the average growth over five years); 2017 growth rate is shorthand for 2012–2017 growth rate.

[a] Projected.

[b] Includes Medicaid and State Children's Health Insurance Program (SCHIP) expansion (Title XIX).

[c] Includes Medicaid SCHIP expansion (Title XXI).

[d] Subset of public funds; includes both the federal portion and the state and local portions of Medicaid.

[e] Average annual growth from 1970 through 1993.

smaller. In 2017, total national health spending would be 0.7 percent higher than under current law, and the health share of GDP would increase by 0.2 percentage point.

■ **Medicaid.** Medicaid spending is projected to increase 8.9 percent in 2007, the highest single-year growth rate since 2003 (9.1 percent), driven by growth in hospital (11.4 percent), home health care (13.7 percent), and other personal care services (including home and community-based services; 14.4 percent). According to a survey of state Medicaid offi-

EXHIBIT 6
Projected National Health Expenditures (NHE) Under Current Law And 0 Percent Medicare Physician Payment Update Scenario, Selected Years 2007–2017

Spending category and scenario	2007	2008	2009	2011	2013	2015	2017
Total NHE, 0% update scenario	$2,245.6	$2,397.4	$2,560.0	$2,965.9	$3,321.7	$3,780.5	$4,308.7
Total NHE, current law	$2,245.6	$2,394.3	$2,555.1	$2,905.1	$3,305.0	$3,757.0	$4,277.1
Percent difference	0.0%	0.1%	0.2%	0.4%	0.5%	0.6%	0.7%
Total physician, 0% update scenario	$473.0	$504.4	$536.9	$609.7	$688.8	$773.0	$866.2
Total physician, current law	$473.0	$501.7	$532.8	$601.0	$675.1	$753.6	$840.0
Percent difference	0.0%	0.5%	0.8%	1.4%	2.0%	2.6%	3.1%
Total Medicare, 0% update scenario	$427.3	$465.3	$502.7	$586.4	$685.6	$800.6	$940.2
Total Medicare, current law	$427.3	$460.7	$495.0	$568.5	$656.4	$758.8	$884.0
Percent difference	0.0%	1.0%	1.6%	3.2%	4.5%	5.5%	6.4%
Medicare physician, 0% update scenario	$98.0	$106.8	$114.9	$133.1	$154.6	$178.9	$207.8
Medicare physician, current law	$98.0	$102.5	$108.2	$118.9	$132.2	$147.4	$165.8
Percent difference	0.0%	4.2%	6.2%	11.9%	17.0%	21.4%	25.3%

SOURCE: Centers for Medicare and Medicaid Services, Office of the Actuary.

NOTE: The Medicare current-law expenditure projections reflect the direct impact of the substantial reductions in physician payment rates that would be required under the current-law Sustainable Growth Rate (SGR) provisions. Secondary SGR impacts on Parts A, B, and D are not reflected; accordingly, these projections do not represent our best estimate of the actual Medicare expenditures that would result under current law. Such secondary impacts could include (1) substantially reduced beneficiary access to physician services, (2) a significant shift in enrollment to Medicare Advantage plans, (3) an increase in emergency room services, (4) an increase in mortality rates, and/or (5) an increase in hospital services. We have excluded secondary impacts because of their speculative nature, the minimal likelihood that the physician payment reductions will occur in practice, and to retain the usefulness of the current-law baseline for hospital and other nonphysician expenditure categories.

cials, states were expected, as a result of improved fiscal conditions, to increase provider payment rates more so than in recent years and to have fewer provider rate freezes or cuts.[20] Following the Part D–related decrease in prescription drug spending in 2006, an expected acceleration to 8.0 percent growth in 2007 is expected to be another key contributor to the overall increase in Medicaid spending.

Medicaid spending is expected to grow at an average rate of 7.9 percent per year for the projection period and to increase as a share of national health spending from 14.8 percent in 2006 to 16.8 percent in 2017. Home health care and other personal care are expected to be the fastest-growing services, reflecting Medicaid's role as a major payer in long-term care and the continued interest in using home and community-based as opposed to institutional care.

■ **Private health insurance.** In 2006, private health insurance premiums per enrollee grew just 5.2 percent, largely because of the introduction of Medicare Part D. For 2007, these premiums are expected to grow 6.0 percent. Growth in underlying medical benefits is expected to remain steady at approximately 6.2 percent in 2007 and 2008, close to the growth experienced in 2005 and 2006.[21] In 2007, the net cost of private health insurance (the difference between premiums and benefits) is expected to grow below the rate of growth in benefits, a trend evident since 2004. This trend has helped slow growth in premiums. As a result, the net cost ratio (net cost of private health insurance divided by total premiums) declined from 13.5 percent in 2003 to 12.3 percent in 2006 and is projected to decline further in 2007 to 12.1 percent.

A mild cycle in premium growth is expected over the projection period, with acceleration to 6.9 percent in 2009 followed by a gradual slowdown to 5.9 percent by 2017.[22] This trend is partially driven by the expected pattern of growth in medical benefits. However, premiums are also expected to be affected by cyclical fluctuations in insurers' profit margins and administrative costs (captured in the net cost ratio), commonly known as the un-

derwriting cycle.[23] A milder underwriting cycle is expected as better information systems dampen the variation caused by sequential under- and overprediction of medical trends.

■ **Out-of-pocket spending.** The growth in out-of-pocket payments is projected to continue to remain below that of the growth in both aggregate national health spending and private health insurance spending in 2007 (Exhibit 5). Over the remainder of the period and in response to projected slowing economic growth, employers could shift more costs to employees through benefit buy-downs and increased cost sharing, resulting in a convergence of the growth rates for out-of-pocket and private insurance spending.[24] The impact of consumer-directed health plans on out-of-pocket spending has been, and is expected to remain, minor.

Medical Services Spending Outlook, By Sector

■ **Prescription drugs.** Aggregate prescription drug spending growth is expected to be 6.7 percent in 2007, a slowdown of 1.8 percentage points (Exhibit 2). This deceleration is directly related to drug price growth, which is expected to decelerate 2.1 percentage points to 1.4 percent. The comparatively low price growth can be attributed mainly to factors relating to generic drugs: (1) generic equivalents of many top-selling drugs have become available; (2) the prices of the generic forms of Zocor and Zoloft fell sharply at the beginning of 2007, when their six-month exclusivity periods ended; and (3) price competition for generics in retail outlets has intensified.[25] Prescription drug use is expected to accelerate slightly in 2007, partially due to the effect of Medicare beneficiaries' having Part D coverage for all of 2007 (some only had coverage for as few as eight months in 2006).

Drug spending growth is expected to remain about the same in 2008 as in 2007, although its composition is expected to change. Price growth is projected to rebound somewhat from its 2007 rate, while use is projected to decelerate slightly. From 2008 to 2017, price growth is expected to average 3.7 percent, with a gradual acceleration in utilization growth. Lower treatment guidelines are likely to underlie higher use in some specific therapeutic classes (such as cholesterol and high blood pressure).[26] Also, expanding indications could increase utilization growth, especially among specialty drugs that are priced much higher than nonspecialty drugs.[27] Contributions to higher spending growth resulting from recent increases in utilization have been moderated by corresponding growth in the generic dispensing rate. Since growth in generic use is expected to level off during the projection period, the impact of rising utilization rates could become increasingly more influential on total spending growth. Finally, despite the recent difficulties facing drug manufacturers on new drug approvals, the number of new drugs coming onto the market is expected to mildly accelerate over the projection period, partially offsetting spending declines for drugs that lose patent protection.

■ **Hospitals.** Overall hospital spending growth is expected to be 7.5 percent in 2007, an increase of 0.4 percentage point (Exhibit 2). Higher reimbursement rates are expected to cause Medicaid spending for hospital care to accelerate sharply to 11.4 percent in 2007.[28] Medicare spending growth, on the other hand, is projected to remain at 5.1 percent in 2007, a result of continued projected slower inpatient use and the risk adjustments to MA rates. Growth in hospital spending by private payers is expected to decelerate in 2007, partially as a result of slowing hospital price growth.

Total hospital spending growth is then projected to gradually slow from 7.2 percent in 2008 and eventually fall to 6.4 percent by 2017, as the expected slowdown in private spending growth outpaces faster public spending growth. Private hospital spending growth is expected to remain relatively stable through 2011 and then decelerate over the remainder of the projection period, to 5.6 percent in 2017. Medicare spending growth, conversely, is expected to accelerate from 7.1 percent in 2011 to 8.0 percent by 2017. The slowdown in private spending growth and the acceleration in Medicare spending growth coincide with the

period in which the leading edge of the baby-boom generation will become eligible for Medicare. In 2008 and beyond, Medicaid spending growth rates for hospital care are expected to increase 6.5 percent per year, on average.

■ **Physician services.** Spending for physician and clinical services is expected to continue its recent decelerating trend and slow 0.2 percentage point to 5.7 percent in 2007 (Exhibit 2). For the entire projection period, physician spending growth is anticipated to average 5.9 percent per year, compared to the 6.6 percent average annual growth rate during 1995–2006. In the 0.0 percent Medicare physician payment update scenario, average annual growth for the period projects to 6.2 percent. Several developments are anticipated to have competing effects on the pattern of growth in physician spending. For instance, projected shortages of primary care physicians and the continued mergers of practices are expected to apply upward pressures, while possible changes to benefit structure in the form of higher cost-sharing requirements are anticipated to mitigate spending growth.[29]

Medicaid as a share of physician spending is expected to increase slightly over the projection period from 7.1 percent in 2006 to 7.9 percent by 2017. Conversely, under current law, Medicare's share of physician spending is anticipated to decrease from 20.6 percent in 2006 to 19.7 percent in 2017. However, using the 0.0 percent Medicare physician payment update scenario, the share of physician spending paid by Medicare would be expected to increase to 24.0 percent by 2017.

■ **Long-term care.** Home health care spending is projected to grow 9.2 percent in 2007, a slowdown of 0.7 percentage point (Exhibit 2). Despite this expectation of slowing growth, home health is still projected to be among the fastest-growing health care sectors in 2007 and over the projection period, with anticipated average growth of 7.7 percent per year. Medicare and Medicaid are expected to drive this rapid expansion as the public share of home health care is expected to increase from 75 percent in 2006 to 84 percent in 2017.

Nursing home spending growth is projected to increase 0.4 percentage point in 2007 to 3.8 percent and then to accelerate to an average annual growth rate of 5.3 percent through 2017. Medicaid is expected to remain the largest payer, paying for about 43 percent of all such care during the projection period. The impact of the baby-boom generation on nursing home spending is likely to be small, even at the end of the projection period, since nursing home use is highest for people age eighty-five and older and the oldest baby boomers will be just seventy-one in 2017.[30]

Concluding Comments

With the implementation of Medicare Part D behind us, a focal point of the next ten years will be the impending movement of the baby boomers into Medicare. Expected trends later in the projection period, such as accelerating growth in Medicare enrollment, are a first sign of this shift. Although the difference in rates between health spending growth and overall economic growth is projected to be lower over the next decade than the previous thirty years, on average, cost pressures continue to mount. As a result, health is projected to consume an expanding share of the economy, which means that policymakers, insurers, and the public will face increasingly difficult decisions about the way health care is delivered and paid for.

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