Setting and Valuing Health Insurance Benefits

Chris L. Peterson
Specialist in Health Care Financing

April 6, 2009

Congressional Research Service
7-5700
www.crs.gov
R40491

CRS Report for Congress
Prepared for Members and Committees of Congress

Contents

Tables

Contacts

Introduction

This report briefly describes some of the key concepts and policy issues around specifying and valuing health insurance benefits.

"Actuarial value" is a summary measure of a health insurance plan's benefit generosity. It is expressed as the percentage of medical expenses estimated to be paid by the insurer for a standard population and set of allowed charges. An actuarial value may also be referred to as a "benefit rate." One purpose of an actuarial value is to distill all the benefit and enrollee cost-sharing provisions of a health insurance plan into a single number, for easier comparisons among plans.

For example, under Massachusetts' health reform, individuals purchasing unsubsidized coverage through the Connector[1] have the choice of three benefit levels: Gold, Silver and Bronze.[2] A Gold benefit package must be actuarially equivalent[3] to the Gold package specified by the Connector, with low copayments and no deductible. The Gold benefit package has an estimated actuarial value of 93%.[4] The Silver benefit package that an insurer develops can have greater cost-sharing (e.g., a deductible, higher copayments) but must have an actuarial value between 67% and 81%. The Bronze package must have an actuarial value of roughly 56%.[5]

Actuarial Value Versus Premium

Key Differences

Actuarial values attempt to make benefit package comparisons "apples to apples" by using a standard population and standard assumptions. However, many factors besides benefit generosity affect actual premiums. Actuarial values do not generally take into account many of the factors that can have large impacts on premiums, such as the health of the people actually enrolled in the plan, the varying prices paid by plans for medical goods and services, the breadth of the provider network, the provisions regarding how out-of-network care is paid for (or not), and the use of tools by the plan to reduce health care utilization (e.g., prior authorization for certain tests). Thus, differences between plans' actuarial values may not correspond with their premium differences.[6]

---

[1] The Commonwealth Health Insurance Connector Authority, created by Massachusetts' 2006 health reform legislation, is the "independent state agency that helps Massachusetts residents find health insurance coverage and avoid tax penalties" that they would pay if they did not obtain "affordable" coverage, if available. The Connector's selection of plans is divided into two categories: Commonwealth Care, which consists of plans providing subsidized coverage for those with family income below 300% of poverty; and Commonwealth Choice, consisting of plans for individuals not receiving subsidies for coverage. For more information, see http://www.mahealthconnector.org.

[2] In addition, adults age 18-26 have access to another benefit package, the Young Adult Plans (YAP), which can exclude prescription drugs and have annual limits on payments by the plan for an individual as low as $50,000.

[3] Within 5% of the actuarial value of the package specified by the Connector, according to "Request for Responses: Health Benefit Plans," Commonwealth Health Insurance Connector Authority, December 6, 2006, p. 11.

[4] Jon Kingsdale, Executive Director, Commonwealth Connector, March 26, 2009.

[5] Silver and Bronze values based on Gold actuarial value and the relative values between the benefit packages cited in "Request for Responses: Health Benefit Plans," Commonwealth Health Insurance Connector Authority, December 6, 2006. Silver is to be 72.5% to 87.5% of the Gold benefit value; Bronze is to be 60% of Gold.

[6] For an example, see Roland McDevitt, "Actuarial Value: A Method for Comparing Health Plan Benefits," Watson Wyatt Worldwide for the California HealthCare Foundation, available at http://www.chcf.org/topics/healthinsurance/index.cfm?itemID=133789.

A classic illustration is when comparing the actuarial values and the premiums of a Health Maintenance Organization (HMO) versus a Preferred Provider Organization (PPO). When using in-network providers, cost-sharing for HMOs is relatively low and generally not subject to deductibles. On the other hand, PPOs usually have a general annual deductible and higher out-of-pocket cost-sharing for in-network care. Analyses by Roland McDevitt of Watson Wyatt Worldwide, whose analyses of actuarial values are used in the remainder of this report unless otherwise noted, show that the actuarial value of a typical HMO (assuming only in-network usage) is approximately 93%. The actuarial value of the typical PPO ranges from 80% to 84%.[7]

Although the in-network benefit value of a typical HMO plan is greater than a typical PPO plan, 69% of covered employees in 2008 were enrolled in a PPO, and 23% were enrolled in an HMO.[8] This suggests that many individuals prefer the more flexible PPO structure even if its in-network actuarial value is lower than the typical HMO plan.[9]

In addition, because benefit values are calculated as a percentage of allowed medical expenses, or "claims," they exclude the impact of administrative expenses, another factor that affects premiums. One analysis,[10] prepared under contract by the Small Business Administration (SBA) Office of Advocacy, found that insurers' administrative expenses for health insurance sponsored by small employers—"small group coverage"— amounted to 33%-37% of claims; for large companies' self-insured plans,[11] administrative expenses amounted to 5%-11% of claims. For small group coverage, the cost of commissions were found to make up 4%-11% of premiums, taxes and fees 2-3%, general expenses 10%-11%, and profits 4%-5% of premiums.

Assume a large employer and a small employer offer a plan with the exact same benefit package—and therefore of the same actuarial value. If average annual health care claims in both firms was $5,000, the impact of administrative expenses could cause the actual premium for the large firm to be $5,250-$5,550 (5%-11% additionally for administrative expenses), while the small firm's could be $6,650-$6,850 (33%-37% additionally for administrative expenses), based on the numbers from the SBA study. As a result, legislative proposals that limit certain tax advantages based on premium amounts rather than benefit values, for example, could have a disparate impact on those with coverage in smaller firms, in high-cost areas, and/or with enrollees who are sicker than average.

---

[7] Based loosely on 2007 characteristics in employer-sponsored health insurance plans, as described in "Employer Health Benefits: 2007 Annual Survey," Kaiser Family Foundation and Health Research and Educational Trust (KFF/HRET). The Watson Wyatt valuation estimates here assume in-network use only by the adult population covered by employer-sponsored coverage as its standardized population, a common practice. The variation in actuarial values for PPO plans reflects some of the variation in benefit packages by firm size, as noted in the 2007 KFF/HRET report.

[8] "Mercer's National Survey of Employer-Sponsored Health Plans 2008," Mercer presentation, Washington, DC, February 18, 2009.

[9] If one incorporated certain assumptions for out-of-network care for both an HMO and PPO plan, the actuarial values may be more similar. However, those assumptions can then be the key driver of the benefit value differences. Thus, in this report, actuarial values reflect only in-network usage.

[10] Rose C. Chu and Gordon R. Trapnell, "Study of the Administrative Costs and Actuarial Values of Small Health Plans," U.S. Small Business Administration's Office of Advocacy, *Small Business Research Summary* No. 224, January 2003, available at http://www.sba.gov/advo/research/rs224.pdf.

[11] Many large employers opt to "self-insure," which means the employer bears the risk (and benefits) of its workers' health care claims. Self-insured employers use health insurers for administrative purposes (e.g., using the insurer's negotiated payment rates, paying claims). Self-insured firms are not subject to state health insurance laws, including premium taxes charged in some states.

Individual Experience in Actuarially Equivalent Plans

Two plans' benefit packages—that is, the benefits covered and the cost-sharing for those benefits—are actuarially equivalent if the percentage of medical expenses paid by the plan for a given population would be approximately the same. However, two plans can be actuarially equivalent while the details of their covered benefits and cost-sharing can be very different. In addition, although the percentage paid by the plan overall may be similar between the two plans, an individual's experience in each plan could differ substantially.

For example, consider two actuarially equivalent plans. Plan A has a $400 deductible, after which 20% coinsurance is charged, with an out-of-pocket maximum of $5,000. Plan B has a deductible of $2,500, after which the plan pays 100% (out-of-pocket maximum of $2,500). Both have an actuarial value of 80%; that is, if a standardized population of adults enrolled in job-based coverage had this benefit package, both plans would be expected to pay 80% of the medical expenses incurred for that population.

Now consider the experience of two individuals—one who has total medical expenses of $2,500 for a broken leg, compared to one who has $25,000 for outpatient cancer treatments. For the person with the broken leg, Plan A would pay a *higher* percentage than Plan B—67% rather than 0%. For the cancer patient, however, Plan A would pay a *lower* percentage than Plan B—80% rather than 90%.

Thus, while the actuarial value reflects the overall percentage of medical expenses paid by the plan for a given population, it is not necessarily indicative of what will be paid on behalf of a particular individual. People with a choice of actuarially equivalent plans must still determine which benefit package would be best for them individually, also taking into account the premiums and the other characteristics that affect premiums (as previously discussed, breadth of provider networks, etc.).

The only way to guarantee that individuals' cost-sharing is equivalent between plans is if the plans are identical in the benefits covered and the cost-sharing permitted for each covered benefit. However, this requires the body governing plans to specify the benefit package without variation. While this may make it easier for enrollees to compare plans and their premiums, it would limit plans' ability to design benefit package that some individuals might prefer or that might be used to encourage more appropriate use of health care, for example.

Illustrative Benefit Packages and Values

Table 1 describes certain illustrative benefit packages and, using the benefit valuation model at Watson Wyatt Worldwide, estimated actuarial values for those benefit packages—again, using a standardized population of adults[12] enrolled in job-based coverage that use only in-network providers receiving standardized payment rates. Although actuarial values necessarily provide different information than premiums, these actuarial values are useful for analyzing differences between insurance products based solely on their benefit and cost-sharing design.

[12] It should be noted that the illustration in **Table 1** includes the Medicaid benefit available to *children*. Covered benefits for adults in Medicaid are generally not as comprehensive. However, the Medicaid children's benefit package is used because it provides a real-world example of a 100% actuarial value.

Table 1. Illustrative Benefit Packages and Estimated Actuarial Values, 2007

Illustrative Benefit Package	Summary of Illustrative Benefit Package (Certain Covered Benefits and Enrollee Cost-Sharing)	Estimated Actuarial Value
Traditional Medicaid for children	Federal Medicaid statute requires that covered children have access to any "necessary" health service[a] without any cost-sharing[b]	100%
Typical employer-sponsored Health Maintenance Organization (HMO)	No deductible. $20 copays for office visits. $250 inpatient hospitalization copay. No cost-sharing for lab or x-ray. Three tiers of copayments for prescription drugs ($10 for generic, $25 for brand-name drugs on the plan's formulary, $45 for brand-name drugs not on the formulary).	93%
FEHBP[c] Blue Cross-Blue Shield Standard Option (Preferred Provider Organization, PPO)	$250 annual deductible. $15 copays for office visits. $100 inpatient hospitalization copay plus 10% coinsurance. 10% coinsurance for lab and x-ray. 25% coinsurance for prescription drugs. $4,000 overall out-of-pocket maximum.	87%
Typical employer-sponsored PPO (small/large firms[d])	$700/$400 annual deductible. 20% coinsurance for office visits, inpatient hospitalization, lab and x-ray. Three tiers of copayments for prescription drugs ($10, $25, $45). $3,500/$2,000 overall out-of-pocket maximum.	80%-84%
Typical employer-sponsored Health Savings Account (HSA)-qualified high-deductible health plan (HDHP)	$1,500 annual deductible. 20% coinsurance for office visits, inpatient hospitalization, lab, x-ray, and prescription drugs. $3,000 overall out-of-pocket maximum.	76% excluding contribution by employer to HSA 93% including employer HSA contribution of $750 in actuarial value
Medicare Parts A, B and D	$100 annual deductible then 20% coinsurance for office visits. $893 inpatient hospitalization copay. 20% coinsurance for lab and x-ray. For prescription drugs, a $265 deductible, followed by 25% coinsurance until total allowed charges total $2,400, after which the member pays 100% coinsurance until total allowed charges reach $5,451, after which the member pays 5% coinsurance. No overall out-of-pocket maximum.	76%

Source: Watson Wyatt Worldwide and Congressional Research Service (CRS) analyses. Estimated actuarial values provided by Roland McDevitt, director, Health Research, Watson Wyatt Worldwide, using a standard population of adults enrolled in job-based health insurance using only in-network/preferred providers.

Note: Actuarial value here is defined as the percentage of health care expenses paid by the plan. It measures benefit generosity using a standard population and standard prices for items and services. As discussed in the text of this report, actuarial values may be a poor predictor of actual premiums in a particular plan. Actuarial values do not take into account such factors as the health of the people actually enrolled in the plan, the prices paid by the plan for medical goods and services, and the breadth of the provider network. For example, although Medicaid for children covers all health care services with no cost-sharing (hence the 100% actuarial value), there are questions about the adequacy of provider payments and provider networks for Medicaid enrollees—issues not captured in an actuarial value.

a. Early and Periodic Screening, Diagnostic and Treatment Services (EPSDT) in Medicaid, Sec. 1905(r) of the Social Security Act.

b. 42 CFR 447.53(b)(1) states that children "are excluded from cost-sharing."

c. Federal Employees Health Benefits Program

d. Watson Wyatt defines small firms here as those with 3-199 workers.

Author Contact Information

Chris L. Peterson
Specialist in Health Care Financing
cpeterson@crs.loc.gov, 7-4681

Acknowledgments

Roland McDevitt, director, Health Research, Watson Wyatt Worldwide, contributed to this report.