Understanding Healthcare Plan Costs and Complexities

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While simple answers to the question of how best to reform healthcare would be convenient, there is nothing simple about either the problems or designing a better system. A thorough understanding of health insurance costs, and the complex drivers of those costs, is essential to crafting meaningful and sustainable reform. The purpose of this paper is to illustrate and clarify some of the intricate interworkings of the factors that cause this complexity, while highlighting the need for an actuarially sound approach to healthcare reform that can consider these variables alongside one another.

Health benefit plans are complex in certain ways because they need to address various dynamics—the need for true insurance against catastrophic events, the balance between premium levels and out-of-pocket cost-sharing costs, the role of healthcare as a tax-deductible employee benefit in the U.S. system, the economic motivation underlying different copays and deductibles, and the various interactive incentives and disincentives at play as people access care. The wide range of service and provider types involved in healthcare, along with the sometimes discretionary nature of their use by patients, adds to the difficulty of achieving effective healthcare plan designs—now and in the future.

Variety in healthcare plan design enables consumers to make choices based on their own personal needs and preferences, and it allows plan sponsors and payors to manage costs and undertake innovation over time. This variety, and the resulting complexity that it necessarily entails, can be found in most parts of the American private health insurance market. Table 1 demonstrates this complexity by indicating some of the variables that contribute to differences in plan design and plan cost. Financial complexity is not unique to commercial insurance—it is also present in our large public programs such as Medicare, as well as in many other mature health markets around the globe, such as in Germany and the Netherlands.[1]

How does the design of healthcare plans, with their inherent complexity, fit into the larger health reform picture?

- First, simplistic reforms that do not recognize important, underlying design considerations may create unwanted, unforeseen consequences. Rather than wish complexity away, efforts might better focus on improving transparency to help all involved better understand how healthcare financing works.

TABLE 1: THE COMPLEXITY OF PLAN DESIGN

COVERAGE PROVISIONS	SERVICE CATEGORY	MMI PPO*	ALTERNATE PPO	HMO-STYLE PLAN	MOST POPULAR FEHBP PLAN**	HDHP
COPAYS	OFFICE VISITS	$20	$40	$15	$20	NA***
	PHY. EXAMS & WELL CHILD	$20	$0	$0	$20/$0	$0
	INPATIENT HOSPITAL	NA***	NA***	$250	$200	NA***
	OUTPATIENT SURGERY	NA***	NA***	$125	NA***	NA***
	EMERGENCY ROOM	$75	$100	$75	$0/NA	NA***
	PRESCRIPTION DRUGS	$10/25%/30%	$10/$40/50%	$10/20/35	20%/30%	NA***
DEDUCTIBLE	ALL OTHER SERVICES	$500	$1,500	NA***	$300	$5,000
COINSURANCE	ALL OTHER SERVICES	15%	25%	NA***	15%	30%
OUT OF POCKET LIMIT	ALL OTHER SERVICES	$3,500	$7,500	NA***	$5,000	$10,000

*   Similar in plan design characteristics to the *Milliman Medical Index* published by Milliman on May 18, 2009.

** The provisions shown for the most popular FEHBP plan are substantially simplified. For example: maternity is paid without deductible or coinsurance, injuries are paid in full but medical emergencies are not, children are treated differently from adults with regard to preventive care, and some dental benefits are provided. For more information on the complexity of the plans offered in FEHBP, go to http://www.opm.gov/insure/health/planinfo/index.asp.

*** NA signifies that the form of cost sharing indicated does not apply to this particular plan of benefits.

• Second, a reformed system should allow for continued innovation within the structure of the healthcare financing marketplace. Indeed, meaningful reform will require carefully crafted plan designs that help weed out and reduce waste.

• Third, while there may be a need for or value in categorizing various levels of benefits—e.g., maximum levels for tax deductibility purposes or minimum levels for low income support—this categorization needs to be multivariate in nature. The Senate Finance Committee, in its paper "Expanding Health Care Coverage: Proposals to Provide Affordable Coverage to All Americans,"[2] has categorized relative benefit levels in one way, which enables flexibility and innovation, but as presented does not deal with variables such as age and area of residence. While there is no universal yardstick for making benefit value measurements, recognition of the demographic and geographic diversity and the delivery system differences in the U.S. healthcare system today is essential. See page 5 for more specific detail on this.

This paper provides information related to some of the complexities involved in the design of healthcare benefit plans. Of particular importance in this regard is an understanding of differences in cost levels due to plan design. We address this by providing cost relativities among different benefits and by comparing different plans to a typical design for employment-based PPO coverage, the cost of which Milliman calculates annually as part of the *Milliman Medical Index* (MMI). The 2009 MMI cost for the typical American family of four is $16,771, including out-of-pocket health spending.

HOW DO HEALTHCARE PLANS GENERALLY DIFFER FROM ONE ANOTHER?

Healthcare plan design begins with the definition of services that are covered under the plan. Most comprehensive plans today cover the vast majority of services determined to be medically necessary by a licensed physician, although certain specific service types may be excluded under some plans. Other limits and conditions may also apply. For the purposes of comparative results in this paper, a broad and comprehensive scope is assumed (including coverage of preventive care and parity[3] for mental health and substance abuse treatment).

Within the scope of covered services, benefit provisions vary widely. Some plans require copayments for certain types of services at the time the service is rendered. Some plans incorporate a deductible, which must be satisfied before benefit payments commence for the services involved. Following satisfaction of the deductible, coinsurance typically applies (e.g., 80% paid by the plan and the remaining 20% falling to the consumer as an out-of-pocket expense). Separate provisions may apply to out-of-network services or to services subject to prior authorization under an HMO or PPO.

In this paper we compare five variations on healthcare plan design, all of which are commonly found in the employer group market today. Our starting point is a plan very similar to the MMI PPO plan, which is typical of the sorts of plans offered in the large group market. We then compare this alongside the most popular Federal Employees Health Benefits Program (FEHBP) plan, an HMO-style plan, an alternative PPO-style design, and a high-deductible healthcare plan (HDHP). For the sake of clarity, the HDHP does not include a health

savings account. The basic benefit provisions we have assumed for each are shown in Table 1 on page 1.

The benefit details of these plans differ considerably. The first set of variables is the copayments, because those are usually the first dollars that people spend at the point of service on healthcare. Four of the five illustrative healthcare plans cover office visits with a copayment required, but no need to separately satisfy a deductible. Those copayments range from $15 under the relatively rich HMO-style plan to $40 under the relatively lean alternative PPO-style plan. The HDHP does not cover the first dollars of office visit with a copayment (benefits for office visits do not kick in until the deductible has been met).

The next variable underlying the plan design is the deductible. Among the plans analyzed, the deductibles range from $300 in the most popular FEHBP plan to $500 in the MMI-like PPO plan, $1,500 in the alternative PPO-style plan, and $5,000 in the HDHP. Note that the scope of services subject to the deductible varies, depending on other aspects of the benefit structure (in these examples, the deductible does not apply to services which either are covered in full or are subject to copayments).

In terms of coinsurance, which is the amount patients pay after the deductible is exceeded and up to a defined limit (the out-of-pocket maximum), the plans again vary. The amount patients pay in coinsurance associated with the services they actually receive can differ widely, depending on the services used and the plan design.

Between the copayments, deductible, and coinsurance, one gains a sense of the richness of a plan, or actuarial value, which will be a major factor in determining the total cost.

Consider the implications of different designs on patient behavior. Actuarial studies repeatedly show that copayments, deductibles, and coinsurance can significantly influence utilization, with richer plans inviting more use. Under less rich plans, in which the insured has more of a financial stake in his or her own care, there is a direct financial incentive to make cost-conscious decisions, which influence the utilization rate. While this is the philosophy behind the high-deductible, consumer-driven movement, it also holds true in more typical plan designs. People are likely to use more services and to incur more costs under the level of benefits found in the most popular FEHBP plan than the MMI's PPO plan due to the difference in deductible, even though the copays for an office visit in these two plans are identical. Meanwhile, people with the alternative PPO-style benefits or a high-deductible plan are likely to minimize the use of discretionary services.

Milliman research on consumer-driven healthcare validates the theory that high-deductible plans result in reduced utilization. With an HDHP, this utilization is reflected in the savings generated—as much as 4.5% after risk adjustment.[4]

Even outside the HDHP paradigm, cost sharing can be used to motivate certain behavior. Comparing the emergency room copayments among these plans clearly demonstrates the various levels of disincentive for unnecessarily using the ER. Someone with a $100 ER copayment and a $20 office visit copayment may be more likely to schedule an office

visit versus going straight to the ER. The idea of using copayments to motivate certain care choices and discourage other care choices (such as going to the ER for nonemergency conditions) is the underlying idea behind value-based insurance design (VBID), which is an emerging plan design idea in the commercial health insurance marketplace today.[5]

HOW DO THESE PLANS COMPARE IN TERMS OF TOTAL COST?

Total cost depends on a number of factors that begin with plan design and then take into account specific characteristics of the population insured. Factors can include age, gender, and other demographics as well as health status and habits. Tables 2 and 3 give a sense of the range of costs associated with different people across different plan designs. There are several ways to compare cost, including the per-member per-month (PMPM) measure often used by insurers and other plan sponsors.

Table 2 calculates the cost of the various plans relative to the MMI plan, based on cost levels expected for a cross-section of the U.S. labor force population (including spouses and dependent children). As this table shows, the HDHP plan we have defined has benefit costs that are about half those of the comparison MMI plan, while the HMO-style benefits would produce expected costs that are 15% higher than the MMI (before any savings due to care management). Table 3 compares PMPM cost levels between the overall average for the U.S. labor force (including workers, spouses, and children) versus those for a 30-year-old male and for a 60-year-old female. The

expected cost under the MMI plan for the 30-year-old male would be just more than half the overall average; and the expected cost for the 60-year-old female would be more than two-and-a-half times the overall average.

While conventional wisdom acknowledges that people become more expensive as they get older, the degree to which they do so is not always appreciated. For example, the expected cost under the MMI plan for a 60-year old female would be more than four-and-a-half times that for a 30-year old male. Also, recognize that these are averages

TABLE 2: RANGE OF COSTS AMONG DIFFERENT PLANS

PLAN DESIGN	PMPM VALUE*	RATIO TO MMI PPO
MMI PPO	$275	1.00
ALTERNATE PPO	$214	0.78
HMO-STYLE PLAN	$317	1.15
MOST POPULAR FEHBP PLAN	$285	1.04
HDHP	$141	0.51

*For the U.S. as a whole and a demographic cross-section of the labor force population (including spouses and dependent children).

TABLE 3: RANGE OF COSTS AMONG DIFFERENT POPULATIONS

AGE/GENDER	PMPM FOR MMI PPO*	RATIO TO LABOR FORCE
LABOR FORCE	$275	1.00
MALE, AGE 30	$155	0.56
FEMALE, AGE 60	$717	2.60

*For the U.S. as a whole.

How Does Geographic Location Affect Costs?

The *Milliman Medical Index* calculates the different costs for a typical family of four living in 14 different major metropolitan areas. This year, the MMI indicated that the average cost for a family living in Miami has exceeded $20,000 ($20,282) while the cost of care for a family living in Phoenix is still below $15,000 ($14,857).[6] The extent of regional cost disparity has often been cited as a major contributor to the relatively high overall cost of healthcare in the United States.

To further illustrate this disparity, consider the cost relativities among these five plans between a typical member (or cross-section) of the labor force in Manhattan, N.Y., and a typical member of the labor force in Manhattan, Kansas.

The difference in PMPM cost is attributable to differences in both utilization levels and reimbursement rates. Contributors to differences in utilization levels include physician practice patterns, as well as differences in population health status. Demographics do not play a role in the differences in the costs shown in this table, because our analysis is based on normative demographic composition. Reimbursement rate differences reflect the differences in payment levels from health plans, which can be due to regional variation in the general cost of doing business, differing labor costs, local regulations regarding hospital staffing levels and institutional resource development, competitive dynamics, or other reasons.

TABLE 4: GEOGRAPHIC LOCATION

AREA AND AGE/GENDER	MEASURE	MMI PPO	ALTERNATE PPO	HMO-STYLE PLAN	POPULAR FEHBP PLAN	HDHP
U.S., LABOR FORCE IN MANHATTAN, NY	PMPM	$319	$252	$370	$330	$172
U.S., LABOR FORCE IN MANHATTAN, KS	PMPM	$245	$185	$285	$254	$122

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for the age. Obviously, a 60-year-old with chronic conditions can be expected to experience significantly higher costs than shown here.

HOW DOES THE HEALTH OF A PERSON AFFECT PLAN CHOICE?

Selection is the notion that people will make economic choices to their own benefit when they choose an insurance plan. In this context, to their own benefit refers to the person's need for insurance. Typically, people with high morbidity—that is, people with relatively higher expected claim costs in the coming year—are more inclined to select richer plans. They do so because they anticipate significant healthcare spending and they want to choose the plan that costs them the least out of pocket. Conversely, people who expect a lower morbidity—that is, people who don't think they're going to spend much on healthcare costs because of their age, health, etc.—usually choose relatively less rich benefit plans. This pattern is not absolute, but it holds up over a large population of insured.

For most healthier people, the cost sharing is not a large concern, although the share of health insurance premium that they are

Reimbursement Rates

Not all health plans pay providers at the same rates, creating another layer of complexity. The Centers for Medicare and Medicaid Services can pay less for Medicare services than commercial insurers because of the strength that comes with its size (it is the largest payor in many if not all U.S. markets) and because of the fact that it is backed by the power of federal law. The same principles apply to state Medicaid programs, although the relatively low levels of reimbursement, even compared to Medicare, have led to problems in a number of geographic areas with access to certain types of providers. In private commercial healthcare plans, the largest insurers can generally negotiate better rates than smaller payors, and typically enjoy competitive advantages as a result.

The fact that large government programs such as Medicare and Medicaid generally pay lower rates than commercial insurance plans creates a pattern of differential revenue levels to providers, which can produce a variety of consequences. For example, hospital payment rates for Medicare and Medicaid are determined unilaterally by those respective public programs. By contrast, most private healthcare plan payment schedules are negotiated. Cost-shifting to nongovernment plans and/or other steps to balance revenue against costs occur because of the overall budget needs and revenue desires of individual hospitals—which vary based on such factors as their mix of patients, their underlying cost structure, and the efficiency of their operations.[7]

There is no easy solution given the need for fair and adequate payment to providers and the need for improved efficiencies and lower costs that do not impair access or quality. Both the potential revenue shortfalls and the need for increased efficiency are real. This added layer of complexity overlays the other variables at work to create a sometimes confounding interplay that demonstrates the shortcomings of simple solutions.

required to pay may be. These people may seek savings with a plan that requires them to pay a lower premium. This becomes important when considering plans like the most popular FEHBP plan and the MMI plan. The availability of a relatively rich benefit program, as is the case with these two examples, is more likely to attract sicker people, while healthier people are more likely to choose a less rich plan with lower associated premium costs. (This dynamic is discussed in more detail in an interview published last year.[8])

HOW DO DIFFERENCES IN PROVIDER PAYMENT LEVELS AFFECT COSTS?

Network and provider choice is another dimension that is important in figuring costs. When employees (or individuals purchasing their own insurance) are choosing a benefit plan from a list of potential choices, price will be a factor, and depending on their socioeconomic status, it may be the main factor. But the doctors and hospitals in the plan's network may also be a factor. Often in the employer group market, provider options must meet certain minimum standards for an employer to even offer a particular benefit plan to its employees. For example, Phoenix has a number of hospitals, but there are three prestigious, tertiary, relatively expensive hospital systems—these are the hospitals with a reputation for excellence in treating complicated conditions and for performing highly specialized surgeries. A plan serving the Phoenix market usually must include two of these three hospitals in its network or find itself at a strong disadvantage from a competitive standpoint.

Beyond health plan marketability, network issues also play a key role in the determination of the cost of a health plan. Other considerations being equal, health plans that pay doctors and hospitals more will be more expensive than health plans that pay them less. As a rule of thumb, the price that a health plan negotiates to pay its providers is largely a function of two variables:

- First, how much clout that health plan has in the marketplace: how big it is, with how much market share, and how many members it can steer toward certain providers.

- Second, the exclusivity of the network. If it has a narrow network, the health plan generally can negotiate a steeper price discount than for a broad network. Some plans have developed what they call tiered plans, including three levels: in-network preferred, in-network nonpreferred, and out-of-network tiers. The in-network preferred tier has better benefits because the health plan has been able to negotiate steeper discounts with those providers due to the smaller size of the network.

These two variables are not always present at the same time. Some plans are able to achieve the best discounts from providers in their market simply because of their size or other factors, even though they are not particularly exclusive in their networking. But the interplay of the two variables often has implications for the overall cost of a health plan.

HOW DO ALL THESE MOVING PARTS FIT TOGETHER?

The dynamics described in this paper build interactively upon one another. There are at least five different variables at work—the person's health, benefit design and how it affects selection and utilization,

provider choice, location, and then, of course, the final cost. These variables can work in either similar or opposing directions, which is why oversimplifying a discussion of how to reform healthcare can be perilous. Reform proposals that overlook any one variable can be seriously misleading. We hope the critical importance of actuarial modeling will be recognized in the reform debate.

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Divergence in Actuarial Values

Different healthcare benefit plans have different actuarial values, which have been defined by some as the ratio of benefit costs to allowed cost (i.e., the cost of covered services, prior to member cost-sharing). In other words, the actuarial value (using that definition) represents the portion of the total cost of covered benefits that are paid by a health insurance plan.

The Senate Finance Committee recently released a paper providing benchmarks of actuarial value that, under proposed legislation, different plan types would be expected to meet or exceed (See Table 5). Milliman has compared the five illustrative plans in this paper to the Committee's benchmarks. The Milliman calculation, applied to these five plans in use today (See Table 6), puts some perspective on the Committee's values. The range of the committee's proposed benchmarks is significantly higher than what is produced by our five illustrative plans.

Both the alternate PPO plan and the HDHP fall well short of the lowest option under the committee's scale. Our MMI plan, typical in benefit level to many large employer plans, would fall within the lowest option category; and the most popular FEHBP plan would only rank as a low-option plan. Even the HMO-style benefits would not qualify as a high-option plan. There may be some disconnect between the actuarial value benchmarks being discussed by Congress and what is prevalent in the market.

The calculated actuarial values shown above are representative of the U.S. labor force population overall (including spouses and dependent children). The calculated actuarial values for a 60-year-old female are somewhat higher than those shown, and they are lower for a 30-year-old male. Likewise, they are higher for Miami, Fla., and lower for Phoenix, Ariz., and higher for Manhattan, N.Y., and lower for Manhattan, Kan. If actuarial values such as these were to be used for establishing health plan minimums (or maximums), normalization to some standard demographic and geographic basis would be necessary.

If such benchmarks were passed into law, plans with benefits like the alternative PPO and the HDHP would be classified as underinsured, and the participants in them would have to buy up to achieve the benchmark—a situation that would have significant cost consequences in terms of increased premiums.

TABLE 5: SENATE FINANCE COMMITTEE ACTUARIAL VALUE BENCHMARKS

PLAN DESIGN	RATIO
HIGH OPTION	.93
MEDIUM OPTION	.87
LOW OPTION	.82
LOWEST OPTION	.76

TABLE 6: CALCULATED ACTUARIAL VALUE FOR SAMPLE PLANS COVERING U.S. LABOR FORCE

PLAN DESIGN	RATIO
HMO-STYLE PLAN	.91
MOST POPULAR FEHBP PLAN	.83
MMI PPO	.80
ALTERNATE PPO	.65
HDHP	.48*

* These plans are often accompanied with a health savings account (HSA), an important caveat in comparing the HDHP alongside other benefits.