

Early Consumer Testing of Actuarial Value Concepts

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Executive Summary

This study finds that consumers are very interested in knowing the *value* of their health plan choices; in other words, whether their options are a good value for their premium dollars. However, determining value is very difficult for consumers. The typical health plan has too many cost-sharing features for consumers to figure out how much coverage the plan is offering. Difficulties stem from the fact that many of the terms are unfamiliar to consumers, and the fact that it is difficult for consumers to weigh the myriad features so they can be compared across plans.

Actuarial value is a concept that could help consumers with this value equation. Actuarial value is a measure widely used by insurers but unfamiliar to consumers. It measures the share of claims costs a health plan would cover if a standard population of both healthy and sick people were enrolled in it. Remaining costs are covered by the enrollees through the cost-sharing provisions. Another way to think about actuarial value is that it is a measure of the health plan's generosity or overall financial protection. As an example, a typical large employer health plan has an actuarial value of about 85%. This means that the health plan covers about 85% of claims, across a standard population, with the enrollees paying the rest.

The 2010 Affordable Care Act (ACA) calls for actuarial value to be used with consumers for the first time in 2014. The Act requires plans sold in the individual and small group markets to conform to one of four "metal" tiers (platinum, gold, silver, bronze) representing four levels of actuarial value (90%, 80%, 70%, and 60%), plus a catastrophic plan design. The ACA also requires a new disclosure indicating whether or not a plan covers at least 60% of total allowed costs. This study examines consumer reactions to these actuarial value concepts.

We found that consumers readily understood, used, and favored the "metal tier" designations called for by the ACA. The tiers provided an important "pathway" for participants to think about their plan choices. The use of these tiers doesn't require a technical understanding of the term actuarial value, just a general understanding of the *relative* ranking indicated by each tier. The appeal of the designations rested, in part, on the fact that the relative value of the "metals" was already familiar to them, from either credit cards or the Olympics.

Consumers struggled, however, when actuarial value was displayed as percentage on a side-by-side plan comparison. Consumers didn't understand (and mostly ignored) a new required federal disclosure, designed to convey whether or not a plan covers at least 60% of the total allowed cost. The purpose of this disclosure was not clear, and the text used jargon that wasn't familiar to consumers. While not explicitly required by the ACA, we also tested a "conventional" actuarial value measure alongside the disclosure. This measure used explanatory text similar to the

disclosure. Not surprisingly, consumers were confused for similar reasons. In addition, some had difficulty understanding the difference between the actuarial value measure and other percentages in the comparison, such as coinsurance.

However, even though consumers didn't find the conventional actuarial value measure easy to use, their statements and responses actually *reinforced* the need for an overall number like actuarial value as a means of comparing across plans. Despite participants' clear preference for being able to weigh costs (or often "value") across health plans, the bottom line is that they don't understand the typical cost-sharing provisions very well. If consumers cannot effectively weigh or measure those costs, they cannot make meaningful comparisons across plans.

Their ready use of the metal tier designations—a related concept that was intuitive and easy to use—indicates the potential of this measure. The use of the metal tiers to guide health insurance shopping could be attributed to the fact that the tiers provided a *usable* mental model for making decisions. Conversely, conventional actuarial value was too unfamiliar. The explanatory text could not overcome consumers' lack of experience with the concept, and the measure did not become a useable point of comparison.

This study should be considered an initial foray into eliciting consumers' reactions to the actuarial value measures in use today. Consumer shopping has been successfully guided by benchmark measures in other realms (think EnergyGuide ratings or estimated Miles per Gallon stickers) and actuarial value shows promise as comparative tool that fulfills a real consumer need. However, it is critical that follow-up studies are conducted to explore the word choice, education, and graphic design elements needed to make this measure more accessible to consumers. Furthermore, steps must be taken to ensure that it is trusted by consumers, including having the measure calculated in a standardized way.

Introduction

The 2010 Affordable Care Act (ACA) calls for a measure known as “actuarial value” to be placed in front of consumers for the first time in 2014. While familiar to insurers and other insurance experts, most consumers are unfamiliar with this concept.

Actuarial value measures the overall financial protection that a health plan offers to a standard population.¹ This measure could be useful to consumers who struggle to understand the protection offered by health plans when confronted with myriad, confusing cost-sharing provisions.² Consumers report a lack confidence in their ability to choose the best plan for themselves.³ This finding should not be surprising. Other studies reveal that the plan features that would seem to indicate financial protection (deductibles and out-of-pocket maximums) correspond poorly with the overall financial protection actually offered by the health plan.⁴

However, one prior instance of consumer testing revealed that the conventional measure of actuarial value is a difficult concept for consumers to grasp.⁵ It is unfamiliar to consumers and is commonly expressed as a percentage, leading to confusion with other health plan provisions like coinsurance.

This study explores how consumers react to several different methods of using and displaying actuarial value. Using a setting that emulates a real world health insurance shopping experience, we examine the ways in which actuarial value helped consumers, as well as areas of confusion and misunderstanding.

What is actuarial value?

Actuarial value measures the average amount the plan contributes to the cost of covered medical care for a standard population of enrollees for a year. For example, the standard large employer health plan has an actuarial value of approximately 85%. This means that across a standard population of both sick and healthy enrollees, the employer plan pays 85% of covered expenses

¹ L. Quincy, *What Will an Actuarial Value Standard Mean for Consumers?* (Yonkers, N.Y.: Consumers Union, Jan. 2011).

² Consumers Union and People Talk Research, *Early Consumer Testing of New Health Insurance Disclosure Forms*, December 2010.

³ Ibid.

⁴ See K. Pollitz, E. Bangit, J. Libster et al., *Coverage When It Counts, How Much Protection Does Health Insurance Offer and How Can Consumers Know?* (Washington, D.C.: Center for American Progress Action Fund, May 8, 2009) and Roland McDevitt, *Actuarial Value: A Method for Comparing Health Plan Benefits*, California HealthCare Foundation, October 2008.

⁵ Personal communication with Kevin Counihan, former Chief Marketing Officer of the Commonwealth Health Insurance Connector Authority.

and the enrollees pay 15%. Because it is an average, any individual enrollee's share of costs could be higher or lower.

Actuarial value and the Affordable Care Act (ACA)

With respect to actuarial value, the ACA includes three requirements:

- Effective January 1, 2014, employers with at least 50 full-time-equivalent employees will have to provide “qualified” health insurance coverage to their full-time employees and their dependents. Qualified coverage means that plans must have an actuarial value of at least 60 percent and charge premiums that cost less than 9.5 percent of employees’ household incomes. If employers don’t meet these conditions, they may face penalties.
- Effective January 1, 2014, health plan offerings in the individual and small group markets must conform to one of four benefit tiers, plus a separate catastrophic plan. The four levels of coverage are: Bronze (60% actuarial value), Silver (70%), Gold (80%), and Platinum (90%), collectively referred to as the “metal tiers.”⁶
- New health insurance disclosures, required for all plans (grandfathered and non-grandfathered, group and non-group), will include a statement indicating whether the plan meets a 60% actuarial value threshold.⁷ Plans will begin using this disclosure in 2012, but the 60% threshold statement may not be required until 2014.

Beginning in tax year 2014, some taxpayers will be assessed a penalty for any months during which they or their dependents lack “minimum essential” health coverage. Coverage that fulfills this requirement includes coverage under a government-sponsored health care program (e.g., Medicaid, Part A of Medicare); an “eligible” employer-sponsored plan; coverage under a plan offered in the individual market; a grandfathered health plan; and other health coverage as recognized by the Secretary of Health and Human Services. It isn’t explicitly required that this coverage meet a specific actuarial value threshold, but most plans offered by self-insured employers, or sold to individual or small groups, will meet this 60 percent threshold.⁸

⁶ Cost-sharing subsidies available for some individuals will mean that the effective actuarial value could be higher than the gold and platinum thresholds.

⁷ An early example of this health insurance disclosure can be viewed on:

http://www.naic.org/documents/committees_b_consumer_information_ppaca_summary_of_benefits_sample.pdf

Note: the example doesn’t yet include the 60% threshold statement.

⁸ One area of concern is “self-insured” plans offered by small employers. Because these employers have less than 50 full-time-equivalent employees, they aren’t subject to the penalties facing larger employers if their coverage falls below a 60% actuarial value threshold. In reality, however, employers of this size aren’t really self-insured. They actually purchase large “stop gap” insurance policies with low attachment points. Unless HHS or individual states enact rules to prevent it, a small, self-insured firm could offer a plan that doesn’t conform to the rules for qualified coverage.

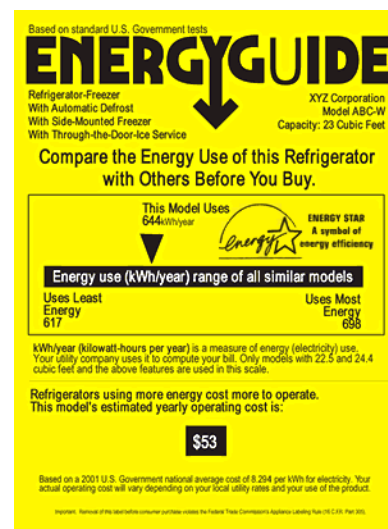
Actuarial value and consumers' needs

Previous consumer testing studies show that consumers are confused by the myriad cost-sharing provisions and the complex interactions between those provisions (eg, “do co-pays count towards the out-of-pocket maximum?”) that are featured in health plans. Without a clear understanding of the financial protection offered by a health plan, consumers are at a profound disadvantage when it comes to comparing health coverage. Essentially, they can’t assess what they’re getting for their premium dollars. Consumers express a desire for a “bottom line” number that would convey the value or strength of the coverage. The patient’s out-of-pocket limit, which seems like it could meet this need, often has too many exceptions to provide certainty about the financial protection being offered.⁹

Consumers need a way to easily compare and contrast plans without getting lost in the detail of plan offerings. Actuarial value also has the potential to meet this need, allowing them to compare plans on an apples-to-apples basis.

Additionally, consumers have demonstrated that they can learn to use similar shopping tools for other products. For example, the FTC’s EnergyGuide label is familiar to many consumers. This label is an estimate of how much energy an appliance will use, calculated using a standardized methodology. Similar to actuarial value, it doesn’t indicate how much energy the appliance will use for an individual consumer but it does allow consumers to compare energy use across appliances on a simple measure.¹⁰

Exhibit 1. EnergyGuide Label



⁹ See K. Pollitz, E. Bangit, J. Libster et al., *Coverage When It Counts, How Much Protection Does Health Insurance Offer and How Can Consumers Know?* (Washington, D.C.: Center for American Progress Action Fund, May 8, 2009) and Roland McDevitt, *Actuarial Value: A Method for Comparing Health Plan Benefits*, California HealthCare Foundation, October 2008.

¹⁰ For more on the Energy Guide, see http://www.energystar.gov/index.cfm?c=appliances.pr_energy_guide <http://www.energystar.gov/ia/business/downloads/FTCs%20Appliance%20Labeling%20Rule.pdf>

Research questions

This study was designed to provide initial feedback on three questions:

- How do consumers respond to the new benefit tiers? Are the plan rankings clear? Useful?
- Do consumers understand the content and purpose of the new actuarial value disclosure?
- If health plan actuarial value is provided as part of a plan comparison, along with a definition, is it understandable and useful?

A final goal for the project was to identify areas for additional research on this topic.

Study Approach

This study used cognitive interviewing and usability testing to observe consumer responses to actuarial value concepts.

Cognitive interviewing uses a single participant and a trained moderator to explore how consumers make sense of the information within a document or web site. Despite a small number of participants overall, this technique yields rich and nuanced data because the consumers' actions can be precisely observed and their responses explored in a consistent manner. At the same time, the one-on-one approach allows the moderator the flexibility to explore individual responses in-depth. Cognitive interviewing allows the researcher to elicit from an individual the thinking behind their answers, providing researchers with the detailed understanding that is critical to improving consumer documents.

Cognitive interviews allow us to not only hear what consumers think but to see what they actually do. At times, consumers may say that they like an element of a document, but our observations show they cannot use it. On the other hand, participants may say that they dislike a certain element, but their actions demonstrate that they, indeed, need it. Therefore, a combination of listening and observing helps us learn what might work best for consumers in the future.

For this study, we conducted 16 one-on-one interviews (each lasting 90 minutes) in two sites: Aurora, CO and Bethesda, MD. Our participants were recruited from two groups—uninsured and self-pay (non-group) coverage. We interviewed an equal number of men and women, and a range of ages and educational levels. Based on our observations, these consumers had a wide range of familiarity with health insurance concepts, ranging from quite expert to completely unfamiliar with terms like “deductible,” “coinsurance,” and “benefit limits.”

Several documents were developed for testing, designed to explore our three research questions. Participants were initially given a “welcome” document that introduced the metal tiers but didn't use the term actuarial value. The next set of documents compared two health plans side by side, retaining the “tier” designation (gold, silver, etc) and also included additional detail on the health plan's network design (HMO, PPO), service specific cost-sharing, and an initial attempt at the new required disclosure (does the plan pay at least 60% of allowed costs?), as well as a statement as to the overall actuarial value of the plan. However, while these documents employed actuarial value concepts, the term “actuarial value” was not used. Additional exercises tested definitions of actuarial value (employing the term), and additional plan comparisons, structured to test participants' understanding of the concepts. The test documents are included as Appendix B.

It is important to note that the documents we used were not highly graphically designed. This goal of this project was to provide baseline data that would help improve word choice and graphic presentation in future consumer communications that use actuarial value concepts.

An actuarial firm developed the plan designs so as to “hit” the actuarial value targets and calculated a representative premium. The health plan designs conform to the requirements that will be in place in 2014. See Appendix C for a complete discussion.

In the first part of the session, participants were asked to “think aloud” while they shopped for a health plan using the test documents. Their reactions were observed and a series of question was asked about how they viewed different aspects of the form, as well as the thinking behind how they selected their plan. In the second part of the session, participants were prompted to examine the actuarial value materials more closely. The testing questions and scenarios were designed to assess consumers’ understanding by using an approach that mirrors real world shopping for coverage as closely as possible.

A detailed discussion of our methodology is included as Appendix A.

Findings

What is important to consumers when shopping for a health plan?

The use of actuarial value must be considered within the context of how consumers shop for health insurance. While the thrust of the study was to learn about how actuarial value might help, or confuse, consumers, we also learned quite a bit about how they shop for health coverage.

What consumers say they want

At the beginning of each session, we asked participants “what is important to you when shopping for health insurance?” The purpose of this open-ended question was to get a sense of the participants’ understanding of health insurance and to gauge the factors that were important to them in selecting a health plan.

Overwhelmingly, participants noted that costs—both premium and out-of-pocket costs for services—are the driving factor in shopping for health insurance.

“That is important—the out-of-pocket. If you don’t have the money so you have to think about things like that” (Aurora 7)

“In this day and age, you know cost is key...what is important to me is what is my premium and out-of-pocket costs” (Aurora 6)

“I think that’s what our biggest worry is [costs out-of-pocket]. I guess I would want to have to worry about bills piling up, then after awhile it goes on your credit if you don’t pay on time. I think that’s just the biggest worry: If you do become ill, what your obligations are going to be as far as out-of-pocket” (Bethesda 5)

“Medical bills are ridiculous, and if I ever have to pay that out-of-pocket, there is no way I am going to survive” (Bethesda 6)

In addition to concerns about out-of-pocket costs, participants also noted that “coverage” is critical when shopping for a health plan. Participants defined coverage as how much the plan would pay for *and* which illnesses or services were covered under the plan. In terms of coverage, consumers seemed most interested in how well the plan meets the health care needs they anticipate having (as opposed to a general “more coverage is better” mentality).

Participants recognize there was a trade-off between what they, as consumers, pay and what they get in return. Some expressed a nuanced perspective on “value”—or the coverage offered in

relation to the premium cost. So, instead of simply wanting the lowest cost plan, participants wanted the best value that they could afford. At the same time, participants could only understand this trade-off at a high level (as opposed to a nuanced level) because they could not get a complete handle on either coverage levels or out-of-pocket costs.

“Let us say value. That you are getting good value for your money” (Aurora 6)

“At the end of the day, what is going to get me the most service for the least amount of input from me” (Bethesda 2)

“I will be willing to pay a little higher premium if I know that the level of care is going to be that much greater. So just kind of finding a balance between those two” (Aurora 2)

Participants also noted that they would like clear and easy-to-use health plan information that is written in layman’s terms. Clear information would simultaneously disclose costs and level of coverage in a way that is straightforward and “honest.”

“Having it convenient and straightforward. I don’t have to read between the lines with the policy if I’m covered or not” (Bethesda 1)

“Clear explanation of what is being offered as opposed to sort of an offer with lots of options that is unclear as to what’s included and what’s not included” (Bethesda 2)

“I feel like when you are shopping for health insurance, everything should be laid out whether it is bad or good to the consumer...it should not be written in legal terms, it should not be written in health terms, it should be written in layman’s terms so that we know what we’re going to invest in” (Bethesda 6)

What we observed about consumer shopping preferences

Participants are strongly oriented towards what they “get” in return for their premium

When participants think about health plan comparisons, they tend to look at fixed costs—particularly premiums and deductibles. After assessing what they are paying, their thoughts quickly turn to what they are getting in return: *what is the plan going to do for me?* They prefer not to think about what else they have to pay, but what they are going to get for the amount that they are paying.

“Well, for the money you are spending on health care, I want to know what I’m getting” (Aurora 5)

“The plan is covering 70%. I am responsible for the other 30%. I want to make sure I’m going to get the maximum for me with my 30%” (Bethesda 1)

“A much higher percentage which I prefer seeing...because I feel like that’s a better value to me. I feel like more will be covered” (Bethesda 2)

“Out of pocket jumps out at me—the out of pocket costs—whether or not its going to be low or high, and I would definitely go towards a low or lower out of pocket, but then I also want a low premium, so I’d be looking more in the moderate area, and then I’d also want to know: what does that include? What type of coverage am I going to get?” (Aurora 8)

This desire to understand what they were getting may have led to erroneous conclusions. As discussed below, any time a percentage was displayed, consumers were predisposed to interpret percentages as what *the plan* was covering – an assumption that was not always correct.

Participants’ struggle with the costs that help them assess “value”- particularly out-of-pocket costs

Consumers want to see concrete numbers showing what they are paying and what they are getting in return. However, they struggle to comprehend the numbers that would help them with this value equation. Their value calculations, though important to them, are often incorrect. In particular, they found it difficult to understand their out-of-pocket costs. (All plans presented to them covered the same comprehensive set of services as would be the case in 2014.)

“It is hard to know between co-pays, deductibles...there is so much, and it is constantly changing.” (Aurora 2)

“What am I paying? What are they paying? I would have to be clearer on those things before I decided.” (Aurora 5)

“How much it would cover and if I would have to go to the hospital and stay, how much I would have to pay for that?” (Aurora 7)

“I would like to see a better description of what the premium entails, a better understanding of exactly what I am going to have to pay” (Bethesda 8)

“The thing I do not like is that you have to sit here and decipher what they are trying to tell you...we have a co-pay plus doctor visit (100%) plus a maximum out of pocket, and you have a deductible and co-insurance. You have four things you have to decipher [to understand] what does it cost me to go to the doctor. I do not have a clue.” (Aurora 6)

In the absence of a broad understanding of health insurance cost-sharing, participants focused on what was familiar to them (e.g., premiums, co-pays and sometimes the deductible). Unfamiliar concepts, like coinsurance, out-of-pocket limit or, as discussed below, estimated percent of allowed costs paid by plan (i.e., actuarial value) were usually skipped, guessed at, or struggled with.

In many cases, participants were just unfamiliar with the terminology, for example, not realizing that a \$150/hospital admission was not a charge that occurred for each day they spent in the

hospital. Many participants misunderstood the out-of-pocket maximum, or didn't realize that the doctor visit was not subject to the deductible.

"The annual out-of-pocket max, I am not sure what that means. So I guess if I go to the doctor, and I have to pay \$100 every time I go, maybe if I pay \$100 a visit, and I go 60 times, then they will start paying that afterwards, I guess." (Bethesda 6)

"It is kind of expensive, \$150 just to be admitted [to the hospital]. Is that day to day, every day? That could be expensive. Would they pay all that or half of that? (Aurora 7)

Another source of confusion was *who* paid the indicated amount, the consumer or the insurance company. Especially when percentages were displayed, participants were predisposed to interpret these as what *the plan* would pay—despite a table title that said "You Pay" (see Appendix B).

"I don't know what's included in just these benefits when it says the "cost of the benefits listed"... is that going to cover 100% or am I going to have to pay 100%? That's confusing." (Aurora 8)

"I get confused on both these sides (of the plan comparison)—what I pay and what they pay" (Aurora 5)

"The first thing I found confusing was what I pay for network care, am I paying 0% or are they paying 0%? That was the first thing I was trying to figure out." (Aurora 6)

"I see it as misleading—100%, is it what you are paying? Or is it 100% that the insurance company?" (Aurora 2)

Participants preferred dollar figures to percentages when making comparisons

When presented with side-by-side comparisons of dollar amounts and percentages (e.g. Platinum: \$40 vs. Gold: 20%), participants noted an overwhelming preference for actual dollar amounts which are considered concrete, plus it was clearer to participants that co-pays were their responsibility (see Appendix B). Percentages, such as coinsurance, were harder to decipher because the final cost depends on the initial total cost, which is unknown. Participants cited the prevalence of co-pays in the Platinum plan as being a key reason they chose that plan.

"The percentages are a little scary. I prefer dollar amounts because I know exactly what I'm going to have to pay when I go there" (Aurora 8)

"Knowing that I'm going to pay \$40 for a doctor's visit. That, to me, is really important because I can always budget for that, but I can't budget for the unknown" (Bethesda 2)

"I don't like percentages very much. I would rather know how much you want me to pay." (Bethesda 4)

“The percentages make me feel like it is tricky, sometimes I could go there and it would cost me \$10.00, and sometimes I could go and it could cost \$1,000.00. But if I went with the platinum it would only cost \$40 every time” (Aurora 4)

The discomfort with percentages for some participants seemed to relate to quantitative literacy. Calculating a percentage requires a moderate level of quantitative literacy and can be daunting to individuals who function at lower levels. One participant (Aurora 7) had extremely low quantitative literacy and could not interpret percentages at all (even with prompting).

“Question: when you look at this 90% down here in...platinum, what do you think it means? Answer: That they pay half the cost is what I’m thinking. It is straight down the middle maybe” (Aurora 7)

Several participants cited plan type (HMO versus PPO) as important but weren’t sure what it meant

One of the tasks participants faced required them to choose between a PPO and an HMO. When prompted, it was apparent that most participants do not have a complete understanding of the difference between an HMO and PPO. However, they believe that they *should* be concerned about it and believe they should have a preference of one over the other. At the same time, since they could not often accurately determine the difference between the two, it tended to not factor into their actual decision regarding choosing a health plan.

“I think I’ve heard them before, but I don’t remember what they are” (Aurora 5)

“HMO, I think is better because you have more of a choice of what doctors you want to choose, opposed to the PPO” (Bethesda 5)

Additionally, consumers often believe that restrictions on out-of-network care would strongly impact them if they were out of the city or state. However their primary concern seemed to be whether the plan would pay in that case as opposed to having access to their doctor. Typically, their interpretation of what is considered “out of network” is more restrictive than it actually is.

“If you are out of state and you do not have a network there and you get hurt and have to go to some other doctor, they are going to say, well, you did not go to our network so you are not covered. I find that as a big negative in the plan. You should be able to go to any doctor. I would think a plan that would be really good would cover any doctor you choose to go to” (Aurora 6)

“Well, I wonder what I am supposed to do if I’m out of network. I travel back and forth because my family’s out of town. So what happens if it’s out of network? Do I have to pay for everything” (Aurora 8)

Finally, we noted elements of health care that consumers did *not* mention or mentioned infrequently. These included network adequacy, whether or not their existing doctor(s) were in-

network, a preference for an HMO versus PPO, and an assessment of the quality of providers within the health plan.

Participants “trust level” impacts their ability to use health plan information

One common theme that emerged from the testing has to do with trust. How participants interpreted the information on the plan comparisons came back to the baseline level of trust they had concerning health insurance. Some had negative experiences with health insurance in the past or were skeptical of the level of coverage that health plans would actually provide for what they (as consumers) have to pay. Consumers often pointed out elements that seemed suspicious on the health plan materials (such as the words “estimate” or “allowed costs”). Those who were skeptical tended to be skeptical of *all* information and were less likely to trust the figures, including actuarial value. Those who were not as skeptical tended to willingly trust the figures. We found some of the least sophisticated consumers were the most likely to trust and accept actuarial value without questioning.

“I think unfortunately a lot of the health insurance policies are written that way, to be confusing to people. They think they have something they do not. This could be written much simpler, so that the actual layman could say we know exactly what they are giving me. Right now, I would say I do not know what they are giving in this plan. Unfortunately, salesmen will tell you anything” (Aurora 6)

“This [actuarial value estimate] is a plan kind of ‘covering itself’ in saying we’re going to provide you health insurance but we may not be covering everything. It would make me want to read more to find out” (Bethesda 2)

“I read that it pays at least 60% of the total listed cost, but there is fine print in all these plans. I’m sure it only covers this and 60% of that. I’m sure it’s a big thick ‘to do’ when you actually get your policy” (Aurora 5)

How do participants understand actuarial value?

In the testing session, we introduced actuarial value concepts in a variety of ways. For each segment, we observed how consumers processed this information—what they noticed and what they used—without biasing them. We tested the concepts in the following order:

- **Actuarial value plan groupings (the “metal tiers”).** First, we showed consumers a “welcome” page, indicating that their plan choices would be organized around tiers (platinum, gold, silver, bronze, and catastrophic) representing different premium/coverage combinations. While health plan actuarial value underlies the groupings, the term “actuarial value” was not used (see Appendix B). This document also noted that all plans covered the same (comprehensive) range of services.

- **Actuarial value federal disclosure in plan descriptions.** Next, we showed a series of side-by-side plan comparisons. These comparisons retained the metal tier designation, but included additional plan detail (premium, deductible, etc) and the required federal disclosure stating whether the plan covered at least 60% of the total allowed costs.
- **“Conventional” actuarial value percentage in plan descriptions.** These plan comparisons also included the plan’s actual actuarial value percentage, described as the estimated percentage of total allowed costs paid by plan. The language reflects the terms used in the disclosure.
- **Actuarial value glossary definition.** Finally, we showed participants several different definitions of actuarial value to assess whether they increased their awareness and understanding of the concept.

Actuarial value plan groupings (metal tiers) were readily understood and useful

Participants innately understood and used the rank ordering associated with actuarial value-based groupings (platinum, gold, silver, bronze, and catastrophic). Exhibit 2 displays the portion of Handout 1 that included the tiers.

Exhibit 2. Metal Tier Designations

	Premiums	Out-of-Pocket Costs
Platinum Plans:	Highest	Lowest
Gold Plans:	Higher	Lower
Silver Plans:	Moderate	Moderate
Bronze Plans:	Lower	Higher
Catastrophic Plans:	Lowest	Highest

These tier designations provided a highly accessible “road map” for participants. Even when participants misunderstood the plan’s specific cost-sharing provisions, they understood that a silver plan should be “more generous” than a bronze. As such, the tier designations provided a basis for stepping back and reevaluating their understanding of the plan’s cost-sharing provisions.

“If you were to ask me what do you think the difference is between a Platinum and a Bronze plan, I would think that the Platinum would cover more and cost more and the Bronze plan would” (Aurora 1)

“Gold is a little bit better than silver, just in general...so maybe you feel like you are getting a little bit more with the gold plan. It could [cost] more, but you could be getting a higher level of care and more with it” (Aurora 2)

"[With] Bronze, you don't have to pay anything for prescription drugs but with Silver you do but Silver is supposed to be the better program than Bronze is. And, then, Bronze is supposed to be the not-as-good plan. This [plan comparison] doesn't correlate to this as far as I can understand" (Bethesda 3)

"I figure that [number] is very low because Platinum is supposed to be the best plan"
(Bethesda 4)

Having such an "evaluable" labeling system helped participants, but they were also aided by prior familiarity with "metal" designations. Participants used prior knowledge of credit card benefit levels or Olympic medals to understand these groupings.

"You have such a standard to call the platinum card, the gold card, the silver card, so I think when people relate to what they get in the cost of things by those minerals"
(Aurora 6)

"I think of the Olympics, and I know the bronze is the lowest medal you can get, and so I see in this right here bronze would probably be the lower plan that you can get, the cheapest" (Bethesda 7)

In a few cases, these prior associations made them poorly disposed towards the lower tiers. A few people who noted that if individuals couldn't afford platinum, they might feel bad about themselves or others might think poorly of them. For example, some participants felt that the term "catastrophic" would denigrate a consumer who had to purchase this level of plan because they didn't have as much money.

"So the two lower plans, I think I would rename, especially with Catastrophic because...some people might already feel they'd have to be in a lower bracket and then see, 'Oh, I'm in the Catastrophic.'" (Bethesda 5)

Additionally, several participants responded negatively to the catastrophic category. The use of "red" to denote that category along with the word "catastrophic" was concerning to them and served as a subtle warning.

"It has the highest out of pocket, and it just sounds so scary" (Aurora 8)

"I feel like the catastrophic plan makes you not even want to get it. You better learn how to suture your own foot" (Aurora 4)

Actuarial plan groupings catered to participants' most important shopping considerations

As discussed above, all participants emphasized their concern about out-of-pocket costs. The actuarial value tiers provided an important "pathway" for participants to think about their plan choices, one that didn't rely on a detailed understanding of cost-sharing features. The grouping scheme corresponded to individuals' natural tendency to look at health insurance plan handouts

in a sequential way (top to bottom), with an intuitive emphasis on features important to them: premiums and out-of-pocket costs.

Most participants liked and used the color-coded presentation of health plan groupings

In addition to the metal terms, most participants reacted favorably to the color coding used for each tier. The color was eye-catching, with most noticing it as soon as they were presented with the initial overview information. Most felt the color coding was useful in helping delineate groupings; plus, it directed their eyes to important information.

"I do like the bottom [of the Welcome page]... the different plans are color coded, makes it a little easier to see" (Aurora 1)

"You can see it has color coordinated so you would know exactly what you are looking at. I like that" (Aurora 7)

"It is kind of like they are using colors here to say we have this really nice, contemporary color here for platinum, but yet...we have this big red thing that says 'look out, this is not that good!' It is subconsciously playing on you. By using the silver in the middle, well silver is very neutral. I would say obviously a psychiatrist picked out these colors."
(Aurora 6)

Participants ignored the "60 percent" actuarial value federal disclosure

When presented with the side-by-side plan comparisons, participants were given the unstructured task of reviewing the plans and "thinking aloud" as they did. These comparisons retained the metal tier designation, but included additional plan detail and the required federal disclosure stating whether the plan covered at least 60% of the total allowed costs. See Exhibit 3 for one of these "side-by-sides" and Appendix B for the others.


Exhibit 3. Plan Comparison Page

Insureco

Plan Comparison >>>

This summary information will help you compare health plans. However, before you make your selection, you should always consult the full policy of the plan you want to buy.

Plan Basics	Bronze 1	Silver 1
Plan Type	PPO	PPO
Your Premium	\$332/month	\$381/month

What YOU Pay for In-Network Care	Bronze 1	Silver 1
Deductible	\$5,950/year	\$3,000/year
Co-Insurance	0%	20%
Annual Out-of-Pocket Max	\$5,950	\$5,950
Doctor Visit	100%	\$60
Prescription Drugs	100% (generic/preferred brand/non-preferred)	\$10/\$30/\$50 (generic/preferred brand/non-preferred)
Emergency Room	100%	\$200/visit
Hospital Stay	100%	20%
	Your costs may be higher if out-of-network providers are used.	Your costs may be higher if out-of-network providers are used.

Average Paid by PLAN	Bronze 1	Silver 1
Required Federal Disclosure:	On average, this plan will pay at least 60% of the total allowed costs for the benefits listed in the policy.	On average, this plan will pay at least 60% of the total allowed costs for the benefits listed in the policy.
Estimated Percent of Total Allowed Costs Paid By Plan:	63%	70%

For questions or additional information, contact us at www.insureco.com or 1-888-888-8887.

Handout 2

Most participants ignored the federal disclosure

Most participants tended to ignore the federal disclosure—either not noticing it, or noticing it but simply moving past it. When probed later about why they ignored it, some saw it as a “disclaimer-type” of information, some felt it was required yet unimportant, and others questioned how it could be of use since it was the same on every plan.¹¹

“Honestly, I just looked at that, and I read through real quickly and moved on because it said Federal Disclosure” (Aurora 1)

“They are putting it there because they have to put it there. So they are not really making it layman’s term really...why is it there and what are you disclosing? (Bethesda 6)

“It is not really saying anything. It is so generic” (Aurora 6)

“On average this plan will pay at least 60% of the allowed costs. That’s confusing to me because it’s the same all the way across [different plan offerings]” (Aurora 1)

Most participants did not understand the terminology in the disclosure

When asked to read the disclosure, few participants understood what it meant or what its purpose was.

The term “on average” made participants feel the percentage paid by plan was not stable and could vary a great deal. Additionally, many questioned the term “allowed cost.” They were unfamiliar with this term and guessed that it meant that only certain types of treatments would be covered. They would want to know what is considered allowed.

“Why do they say at least 60%? I’ve never seen that before. Insurance companies either cover a certain amount or they don’t. I don’t know what at least 60% means. Why is it variable?” (Bethesda 3)

“I really do not know what is covered. Because it says on average this plan will pay at least 60% of the total allowed. The word ‘allowed’ tells me that we do not allow for all medical procedures...does it pay for chemotherapy? Does it pay for a bone marrow transplant? I interpret this as saying there are certain things that they will pay for and certain things they will not, or they would not have used the word ‘allowed’” (Aurora 6)

“Well, in both [plans] the required federal disclosure says that the average it will pay is at least 60%. If that’s the average, what constitutes the average? What is the high and what’s the low? Again those are real costs to me. So that is what I would want to know. Am I going to be an exception? If I’m the exception then what does that mean to me?” (Bethesda 2)

¹¹ It was our intention to include a plan that was below the 60% threshold but the actuarial model used to develop the plans couldn’t create such a plan while also conforming to the other provisions of the ACA. See additional discussion in below.

Underlying participant concerns about the terms “on average” and “allowed costs” was a general wariness of health plans. Some participants wondered whether the Federal Disclosure was being used to hide costs and/or protect the insurance company from having to pay more in claims.

“On average the plan will pay 60% of the total cost...well, what benefits are there that you are not covering? ...I have seen plans that say we have to decide whether we are going to pay for it or not, so this says to me here that there are a lot things they would not pay for, or they would not have a disclosure like that” (Aurora 6)

“I mean I read that it pays at least 60% of the total listed cost, but there is fine print in all these plans.” (Aurora 5)

In addition to the difficulties listed above, many participants overlooked the term “at least.” So, when the federal disclosure mentioned “this plan pays at least 60% of total allowed costs,” participants would typically read it as “the plan pays 60%.” They did not read it as though the amount could be *above* 60% but rather as a fixed percentage. This confusion tended to decrease the utility of the disclosure. Additionally, because they overlooked the “at least,” it contributed to the confusion between the federal disclosure and the estimated percentage of total allowed costs displayed on the next line.

Conventional actuarial value measure was not readily understood

The actuarial value for each plan was displayed as the last item in the plan description, termed “Estimated percent of total allowed costs paid by plan.” See Exhibit 4. As with the Federal Disclosure, this was a new concept and many participants weren’t sure how to use the information. The phrase used to explain the concept closely mirrored the terminology used in the Federal Disclosure.

Participants struggled with terminology

This terminology is similar to what is included in the federal disclosure, and participants had the same struggles with “average” and “allowed costs” as described above. In particular, the terms “estimate” and “average” made people feel that the percentage (as listed) could vary a great deal. While this is correct (in terms of the costs an individual faces), this led some to question the utility of actuarial value because it was considered variable.

“If I am getting a plan that pays for...70% of my healthcare, what are the dependencies that could change of that 70%...could it possibly be 75%? Or, would it only be less than 70% and why would it be less than 70%?” (Aurora 1)

“It’s not really telling you anything really. Just an average but it’s not telling you the average of what. I guess they are just in general, they go through all the years, and it’s about 70%. I’m sure for every person it has to be different” (Aurora 5)

*“It is kind of an arbitrary statement because it always says that the measure it refers to is an estimate of the total cost allowed by plan. So you are saying then that my plan does not have a definition of how much it is going to pay? It is just estimating the percentage of what I **might** get paid? For me, this is almost a catch 22” (Aurora 6)*

A few participants used the measure to compare plans

When participants used actuarial value to compare plans, the measure helped them calculate the “trade-offs” in their minds between premium costs and their out-of-pocket costs. Actuarial value served as a proxy for what they might have to pay.

“The one below where it says 80% and 90%, that brought me toward platinum because 10% of whatever my costs are going to be is only about \$4.00 more a month” (Aurora 4)

“Another thing too that catches my eye...with the silver, you are going to be paying 70% of the total plan vs. the bronze being 63%. Now with the silver plan you are paying roughly about \$50 more a month, so if something comes up, does that 7% difference in what’s covered by the plan equal out. I think in the longer run, it probably would” (Aurora 2)

Participants understood this was a measure of what plan pays

In other areas of the health plan documents, participants had trouble understanding what they would pay versus what the plan would pay. As noted above, participants seemed pre-disposed to think in terms of what the insurance company would pay as opposed to what the patient would pay. No matter how the payment responsibility was displayed (e.g., whether we displayed “what you pay” as 100% or 10%), participants frequently interpreted the percentage as being *what the insurance company would pay*.

Since actuarial value *is* a measure of what the plan would pay, participants’ assumptions coincided with reality. However, they did not necessarily understand that the remaining percentage was *an average across all enrollees*; some thought of it as an estimate for their share of costs; others saw it as more firm than it actually is.

Estimated percent of total allowed cost paid by plan—not by me but by plan. So the total amount of cost, allowed cost that would be paid for me on the Platinum plan is 90%, leaving me 10% that I’ve got to pay for. If I go down here on the cheaper plan, the Bronze plan I’ve got to pay for 37% out of pocket. (Aurora 1)

“Like you pay this premium every month, so the plan puts in a certain amount of money towards your health care, and in the end, they’re going to pay on average ...either 90% or 80%, and I would be responsible for 10% or 20%” (Aurora 8)

"On average what they are going to cover, and then you are going to pay the rest. So if it is a \$1,000, they will cover \$900, and you pay \$100." (Aurora 2)

"That they pay 80% of whatever is wrong with me" (Aurora 7)

"To me, it means that basically they are going to be paying about 70% of everything" (Aurora 5)

Having the required federal disclosure and actuarial value side-by-side was confusing

Participants usually misunderstood the relationship between the required Federal disclosure and the actuarial value line. While the two pieces of information would have confused consumers if viewed in isolation, it appeared that see them together was even more confusing. Both lines offered percentages, and both used similar wording. For many, it wasn't clear why two percentages were being displayed. (Recall that many overlooked the "at least" phrase in the disclosure, hiding a major difference between the two numbers.)

"Here it says 60% and 60%. That is kind of confusing because then you pay 63%. This one says 70%. That is kind of confusing to me." (Aurora 7)

"Well it says it will pay at least 60% but then it's saying the estimated percent is 90%. So to me I would be like...what does that mean?" (Aurora 5)

A few who noticed the "at least" thought perhaps a range was being displayed.

"It is saying the least it will pay is 60% and at the most it will pay 80% for the gold. For the platinum, at the least this plan would be 60% and 90% at the most." (Bethesda 7)

Some participants confused actuarial value percentages with coinsurance

Some participants thought that actuarial value was related to coinsurance. Additionally, participants were often unsure of how the actuarial value percentage related to the annual out-of-pocket maximum.

"I mean, say there is \$100,000 in an accident I got in and they are saying they pay 90% of it but I only have to pay \$5,000 of that, that would be like they are paying 95% of it...I'm not really sure what it would cover" (Aurora 5)

"Here it is saying they are going to pay 90% by the plan so that I am only paying 10% of what my medical costs are and by looking at this I would think that I would be paying more than 10%, and here it is saying that my max out-of-pocket is still only going to be \$5,950...so it is a little confusing to me how they are coming up with those figures" (Bethesda 5)

Some participants questioned the legitimacy of actuarial value

Some participants questioned the legitimacy of the measure. As above, the use of terms like “on average” and “allowed” contributed to lack of faith in the measure. These comments seemed to reflect not only their uncertainty about the measure but also an underlying distrust of health insurance. Those who seemed to have a lower baseline level of trust were more likely to question the actuarial value percentages.

“The numbers do not work. This just makes this whole thing even more confusing. It almost looks like deceptive...and they are trying to make me think I am getting something that I am really not” (Aurora 6)

“There is an overall coverage but that may not be reality for each individual person...this tells me that this is a plan kind of ‘covering itself’ in saying we’re going to provide you health insurance but we may not be covering everything. This would make me want to read more to find out” (Bethesda 2)

“Why is it flexible [estimated percentage of total allowed costs paid by plan]? If you tell me I have to give you this much money...why do you get to be flexible? Maybe this month I’m sending you \$285 instead of \$300!” (Bethesda 3)

“I am likely going to be responsible for 20% even though it doesn’t really say 20%; it says up to 80%. So it could be 20% or higher...I think its misleading....I think this sort of deflects and that is confusing” (Bethesda 2)

Glossary definitions of actuarial value need more work

The only document that actually used the term actuarial value in our testing was the glossary definitions we tested. Over the course of the testing, we tried four different definitions of actuarial value, although any given participant was only shown two. Definition A (which is the definition provided by healthcare.gov) remained stable across sessions, but we alternated other definitions to attempt to better define actuarial value. We iteratively developed the third and fourth definitions based on what we heard in the test sessions. The findings around definitions demonstrated that it will take time to come up with an effective definition of actuarial value that will help consumers quickly and easily understand this complex concept.

Exhibit 4. Summary Of Participant Comments On Actuarial Value Definitions

Definition	Participant Comments
<p>Definition A (used in all sessions)</p> <p>Actuarial Value is the percentage of total average costs for covered benefits that a plan will cover. For example, if a plan has an actuarial value of 70%, on average, you would be responsible for 30% of the costs of all covered benefits. However, you could be responsible for a higher or lower percentage of the total costs of covered services for the year, depending on your actual health care needs and the terms of your insurance policy.</p> <p>Source: <i>healthcare.gov</i></p>	<p>Negative comments:</p> <p><i>"I'm still not sure because of the one line 'depending on your actual health care needs.' It could be higher or lower. It is how you figure out your own actual healthcare needs. I guess it's hard to tell"</i> (Aurora 5)</p> <p><i>"They are trying to have a disclaimer saying that there could be situations where I could be responsible for more or less"</i> (Bethesda 6)</p> <p><i>Its so wordy; if it was more visual...maybe if it was broken up, I think that would help</i> (Aurora 8)</p> <p>Positive comments:</p> <p><i>"It gets right to the point that you could be responsible. It is like they are disclosing it but disclosing it in a way an attorney would disclosure it so it would be hard for you to understand...Here (on the second) most people would understand the statement saying my costs could be a lot more"</i> (Aurora 6)</p> <p><i>"[It] is a lot easier to determine because it gives you an example."</i> (Aurora 2)</p>
<p>Definition B (used in interviews 1–4 in Aurora)</p> <p>Actuarial Value is a measure of the overall financial protection offered by a health plan. The higher the number, the more the plan contributes to the cost of medical care for its enrollees.</p>	<p>Negative comments:</p> <p><i>"This one (Definition A) tells me it's going to take care of a percentage of my stuff—this one (Definition B) tells me it's going to take care of a percentage of my stuff maybe"</i> (Aurora 4)</p> <p><i>"It needs to be more specific"</i> (Aurora 5)</p> <p><i>"Where they say 'the higher the number,' what's the number?"</i> (Aurora 2)</p> <p>Positive comment:</p> <p><i>"You're saying actuarial value is a measure of the overall financial protection offered by the health plan. If you define it that way, I can get that...it's clearer."</i> (Aurora 1)</p>
<p>Definition C (Used in interviews 5–8 in Aurora and in Bethesda)</p> <p>Actuarial Value is a measure of the overall financial protection offered by a health plan. It measures the average amount the plan contributes to the cost of medical care for its enrollees for the year. For example, if a plan has an actuarial value of 70%, its enrollees are responsible for 30% of the costs of all covered benefits. However, your costs could be different from this average, depending on your actual health care needs and the terms of your insurance policy.</p> <p>In your health insurance documents, this measure may also be referred to as estimated percent of total allowed costs paid by plan.</p>	<p>Negative comments:</p> <p><i>"The medical care for the enrollees for the year"—that is confusing"</i> (Aurora 7)</p> <p>Positive comments:</p> <p><i>"It just looks cleaner. It is not shouting anything at me which I find distracting [in comparison to Definition A]"</i> (Bethesda 2)</p>

Definition	Participant Comments
<p>Definition D (Used in interviews 1–8 in Bethesda)</p> <p>Actuarial Value is a measure of the <i>overall</i> financial protection offered by a health plan. It measures the <i>average</i> amount the plan contributes to the cost of medical care for its enrollees for the year. However, <i>your</i> costs could be different from this average, depending on your actual health care needs.</p> <p>Example: if a plan has an actuarial value of 70%, its enrollees are responsible for 30% of the costs of all covered benefits.</p> <p>In your health insurance documents, this measure may also be referred to as estimated percent of total allowed costs paid by plan.</p>	<p>Negative comments:</p> <p>None</p> <p>Positive comments:</p> <p><i>“It’s broken up. It’s not one paragraph. It gives the example of what’s covered and it lets you know that the estimated percentage of total allowed costs—that’s what it’s referred to. So it gives a little more clarification”</i> (Bethesda 5)</p> <p><i>“I like the fact that this was in color. I liked that fact that it was bold. I liked the fact that they had the blue highlighted—everything just looked clearer”</i> (Bethesda 6)</p>

“Actuarial value” was an unfamiliar term

Not surprisingly, none of the participants had previously heard the term actuarial value. Using an unfamiliar, non-intuitive term interfered with their ability to master the concept.

“As soon as it starts off, I don’t know what that word [actuarial value] means”
(Bethesda 4)

Substituting a term that provided a more intuitive sense of what the measure would mean to them would clearly help consumers.

Definition D was preferred

Of all of the definitions, Definition D seemed to garner the most positive comments. In particular, the example seemed to help participants see how actuarial value worked. Participants liked more specificity and clarification of details. To this end, they seemed to prefer definitions that clearly delineated the percentage of responsibility of the enrollees versus the plan as opposed to more general definitions such as Definition B.

Most difficult part of the concept

Having participants use the actuarial value measures in the plan comparison, after reading the definition, helped clarify what was especially difficult for consumers to grasp. First, most participants understood that actuarial value was an average, but they did not understand the nuance that actuarial value is a measure of what the plan would pay for *all* enrollees. Because this concept wasn’t readily understood, qualifying language such as “your costs could be different than average” tended to be met with suspicion and led some consumers to disregard the information. Finally, the use of the term “financial protection” was not readily understood by some consumers in the context of health insurance.

Participants appear to desire a measure like actuarial value but did not find it effective as presented in the documents

As noted above, consumers have a strong desire to understand what it is they are getting for their premium dollar—which they refer to as “coverage” or what the plan pays. They also find it difficult to synthesize the various health plan provisions to arrive at a measure of the plan would pay overall. Actuarial value provides a way to fill this gap by providing a “roll up” number upon which consumers can compare different plans. Consumers expressed interested in such a measure. At the same time, roughly half of the participants did not feel that actuarial value, as presented in the materials, was effective for them.

At the end of the testing, after seeing actuarial value presented in several different ways (including definitions), we asked participants to again tell us what they thought actuarial value meant and whether it was a useful measure to them. Overall, participants seemed interested in using actuarial value.

“I would use it greatly because I want to see what, on average, the insurance companies are going to cover versus what I am responsible for based on the cost that I am paying. If I am paying something huge monthly, but they are only covering 60%, well then the other 40% that’s probably going to cost me a ton more....I want to see what I am paying in for [what] the insurance is going to cover under the deal” (Aurora 2)

“It lets me know exactly...their obligation to pay, and it says 90%. I guess with that higher percentage range kind of gives you a comfort that you’re going to have to pay something, but at least they’re paying the majority of it” (Bethesda 5)

“They are saying that no matter what they are going to pass down 30% of the cost to the people...so that is very insightful” (Aurora 6)

“It gives you the percentages of how much I am going to pay on average. That is good” (Aurora 7)

However, some participants didn't feel that the measure would be of use to them. When giving a reason for why they would not use actuarial value, many came back to the issue of cost and the desire to see real, dollar-denominated out-of-pocket amounts, as opposed to an average percentage.

"It's not going to make it or break it...I would look at other things that the plan offered."
(Bethesda 1)

"We don't know what your average is going to be so to me what is more helpful is how much the doctor visits are going to be, how much out of pocket if something bad happens." (Aurora 5)

"I find far more comfort for me personally in having the real numbers as opposed to a percentage...which would leave me guessing as to what I would be responsible for"
(Bethesda 2)

Many participants had a flawed or incomplete understanding of the measure, not realizing that it was an average calculated across a population. However, most understood that a higher number was better. Because actuarial value is unfamiliar, in our second location, we asked some general questions at the end of the interview to explore the concept of a estimate, calculated in a standard way, whose purpose was to compare products, as opposed to predict how the product will perform for the individual consumer. We used an FTC "EnergyGuide" sticker from an appliance (see Exhibit 1) as an example. Most individuals were familiar with EnergyGuide and find it to be a useful measure. When participants were directly asked if a similar measure would be useful when comparing health plans, again participants were split. Some felt it would be a useful measure and welcomed a number that could help them compare plans.

"Well I think it a really quick and sort of simple way to break down to give an overall impression of a percentage of what you can expect to pay." (Bethesda 2)

"It would be a little bit easier to understand because...it is your picture of what you could expect or sort of expect...you can see it rather than reading." (Bethesda 4)

"Yes...because it would be clear and straightforward. I think that sometimes things need to be put right out in front of you, and I think that sometimes that makes it easier to make a decision when it is visually clear." (Bethesda 5)

"It would be very useful...because I need to understand a little better just how much this thing is going to cost me, you know yearly and in terms of me actually using this health care plan." (Bethesda 8)

Others, however, felt that it would be difficult to provide such a measure for health care.

“That is something that is very different in health care because you are also talking about a far more expensive proposition than buying a refrigerator, and you are also talking about your life in many cases...you are talking about an appliance versus a life”
(Bethesda 2)

“I don’t think you can estimate with health insurance that way. You can’t estimate who’s going to get cancer, who’s going to have something happen, or how much new technology is going to cost.” (Bethesda 3)

“I do not know because health plans are...refrigerators are exact size and they are going to use energy and you will pay for it. But with health plans everybody has their own health issues so there is no way you can estimate that” (Bethesda 6)

Modeling actuarial value to produce standard estimates

This study shows that consumers will readily use the “metal tiers” as an aid in comparing health plans. Placement in a metal tier implies that a plan is comparable to the other plans in the tier. For consumers to confidently use this information, the actuarial value estimates must be calculated in a standardized way.

In order to produce the testing materials, we hired an actuarial firm to produce plan designs that conformed to the actuarial value standards in the ACA. This modeling exercise raised important policy questions. For one, we were unable to include a catastrophic plan that included a maximum OOP of \$5,950 and had an actuarial value below 60% because the model couldn’t meet both conditions at the same time (see Appendix C). (We had intended to include a plan for which the federal disclosure made sense.)

It turns out that actuarial value estimates are very sensitive to the underlying claims distribution underlying the model, as well as the modeling assumptions used.¹²

This sensitivity suggests that strong rules will be needed standardizing the calculation of actuarial value, as employed by the ACA. These rules should include:

- Use of the same underlying claims distribution, weighted to represent the same population in each case
- Use of a sophisticated modeling approach, which will account for benefit exceptions, all types of annual limits, and other plan provisions that can raise consumer cost-sharing.

¹² Larry Levitt and Gary Claxton. What the Actuarial Values in the Affordable Care Act Mean, Kaiser Family Foundation, April 2011. <http://www.kff.org/healthreform/upload/8177.pdf>

- Identical modeling assumptions
- Calibration of models to a common benchmark

Indeed, policymakers may want to investigate the feasibility of just using a common model in order to produce the estimates needed for ACA purposes.

Another approach would be to test the feasibility of the approach used in Massachusetts, which has relied on actuarial value tiers since 2006. In Massachusetts, health plans were given a standard “Gold” plan” design. In order to participate, they had to be approved for a Gold, Silver, and Bronze plan design. In order to participate in the exchange (called the Connector), they had to provide the Connector board with the actuarial value of the other plans relative to the standard Gold plan.¹³ So, even if the insurer’s model showed a somewhat lower or higher value for the Gold plan, as long as the other offerings were proportionally appropriate to the standardized Gold plan, they could meet the Connector’s requirements.

Exhibit 5. Example Of Massachusetts’ Approach To Standardizing Actuarial Value Estimates



¹³ Personal communication with Charles DeWeese, former consulting actuary to Commonwealth Connector and the MA Division of Insurance.

Standardizing the calculation of actuarial value will be essential for the measure to not only be useful to consumers, but also trusted.

Conclusions

When asked what is most important when choosing a health plan, consumers care about costs. They think about these costs in two ways, closely related but with subtle and important differences: they are looking for certainty about their responsibility, plus the ability to measure plan value.

Consumers strongly prefer certainty about their share of costs. This manifests itself in a strong preference for hard dollar costs, specified as clearly as possible. Certainty allows consumers to “budget” for their share of costs, a term we heard over and over. However, the bottom line is that they don’t understand out-of-pocket costs associated with health coverage very well. The concepts of coinsurance, out-of-pocket limits and sometimes even deductible were confusing or misunderstood. The dilemma exists that consumers are deeply about costs, but they cannot effectively weigh or measure those costs.

Additionally, consumers care about value. They have a strong desire to know what they “get” in return for their premium dollars. In this view, they are not thinking about what they have to pay but what the plan pays, what they sometimes describe as their “coverage.” Their pre-disposition to view cost-sharing features as what the plan would pay (except in the case of co-pays) is a partial reflection of consumer’s orientation towards value. Again, however, they struggle with how to assess the value equation.

Actuarial value doesn’t help consumers with the first need, but it has the potential to help with the second issue. Actuarial value represents a way to roll up costs and provide one number that provides individuals the value assessment that they seek. Although consumers in this study struggled with some of the methods used to convey actuarial value, their statements and responses actually reinforce the potential of measure as a method for consumers to compare health plan value. Their ready use of the metal tier designations—a related concept that was intuitive and easy to use—indicates the potential of this measure. The use of the metal tier to guide health plan shopping, but not the actual actuarial value percentage, could be attributed to the fact that the tiers provided a *usable* mental model for making decisions, but the actuarial value was too unfamiliar to be used that way. The conventional actuarial value estimates tested in the study included terms that were difficult to understand and respondents lacked prior experience with the concept.

It is important to note that this study captures consumers’ reactions to actuarial value when they effectively have a “blank slate,” never having seen the concept. We should anticipate that consumers’ response to actuarial value will evolve once it becomes more common. This round of testing (as well as other studies) shows that consumers rely heavily on prior experience with

insurance to interpret health plan information. Initial difficulty with actuarial value does not mean that it cannot become a more useful measure over time as participants have a stronger cognitive anchor and we uncover better methods for displaying the measure. With more exposure and experience with the concept, the term can eventually enter the health lexicon the way that previously unknown terms such as “deductible” or “premium” have.

Our overall assessment is that actuarial value shows promise as a quick and easy way for consumers to compare plans along one dimension that is important to them. For actuarial value to be a success, however, it will require experimenting with better visual displays and a clear, intuitive definition that readily conveys the purpose of the measure. In addition, actuarial value will have to be associated with a track record of reliability. As noted above, a participant’s “trust level” significantly impacts her/his willingness to use health plan information.

Recommendations

The interviews we conducted revealed some clear direction in terms of how to best present actuarial value.

- 1. Use metal tiers (platinum, gold, silver, bronze)—along with corresponding color.**
The metal tiers were highly effective in helping consumers understand the relative value of the plan. Participants relied on the names to help them discern which plan was “higher level” and “lower level.” The colors provided a handy visual reference to each plan’s tier.
- 2. Assess the use of the term “catastrophic.”** Participants were sensitive to the term, and it caught their attention. If policymakers want to draw attention to these plans, then the word and the red coloring is effective in providing a ‘warning’ for this type of plan. If policymakers want a more neutral approach, then the term and the color should be changed.
- 3. Rework the federal disclosure.** The required federal disclosure did not add value to the plan comparisons because participants either ignored or misunderstood it. The version tested here provided no clue as to its purpose and used terminology that was not understandable for most participants. Future testing should explore a more consumer-friendly phrase such as “This plan offers coverage that is above federally recommended minimums.” Alternatively, if health plan actuarial value becomes part of standard health plan disclosures, then we would recommend including an additional phrase such as “this plan is below federally recommended minimums” **ONLY** when the value is below 60%, reflecting the fact that there is no specific action for the consumer to take when above the threshold.
- 4. Continue to test actuarial value as a component of plan descriptions.** While the metal tiers provide consumers with a framework for understanding relative plan value, the actuarial value “number” works on a somewhat different level. If supported by additional testing, the measure would provide them with a “number” that they can use to compare across plans and get a sense of value. The two approaches reinforce one another and support the consumer in choosing a plan. Displays of this number should be standardized, so that consumers can learn to use them. The measure should have visual emphasis, designed to help consumers intuitively grasp its importance among many competing numbers. The introductory phrase should avoid unfamiliar jargon (like allowed costs), and instead utilize the concept of plan value. Designs should be tested iteratively with consumers to gauge which work best and why.

5. **Test using a number and not a percent.** Avoiding the percent symbol could reduce confusion vis-à-vis other percentages used in plan comparisons (like coinsurance), while maintaining the value of having a number that can be used to compare plans.
6. **Continue working on the glossary definition of actuarial value and develop ways to tie it to plan comparisons.** Participants need more contextual understanding of actuarial value for it to be a useful measure. Using a definition that offers clear and simple terms and gives examples would help participants solidify their understanding of the concept. Definition D gets closest to this type of clear, visual definition, but it needs additional testing to refine the wording and design. The phrase used to refer to actuarial value should match that used in the plan descriptions.
7. **Calculate actuarial value in a standard way.** If the metal tiers and the Federal Disclosure are to benefit consumers, the actuarial value estimates must be calculated in a standard way. This could include using a single, central model to produce estimates OR require calibration of models, common modeling assumptions, and a minimum level of methodological rigor (including the richness and timeliness of the underlying claims distribution).
8. **Find ways to build “trust” for actuarial value, as well as other key plan features that consumers rely upon.** It was clear that many consumers are skeptical of health plan offerings. This skepticism can interfere with their understanding and use of actuarial value or any plan feature. For a concept like actuarial value to be effective, participants have to *trust* it as a measure. Calculating actuarial value in a standard way, as described above, will facilitate trust. Another requirement will be consistent standards over time. Consumers rely on prior experience when shopping for coverage and they shouldn’t have to relearn how they are to use actuarial value each year. Other efforts may be warranted to build consumer trust in health plan disclosures, such as public education campaigns.

Our study also yielded some more general recommendations:

1. **Augment the glossary that will accompany health plan materials and conduct further testing.** It was clear that participants were confused by many of the important terms used in the plan comparisons. Any health plan information that consumers receive should be accompanied by a glossary that explains key terms in plain language and uses visuals to help them understand complex topics. The *Glossary of Health Insurance and Medical Terms*¹⁴ we provided to participants in the testing was helpful but left out some key terms, such as HMO, and failed to provide an adequate understanding of other terms, such as coinsurance. Based on this study, the terms that should be added are:

¹⁴ This was a prototype being developed by the National Association of Insurance Commissioners. A copy can be viewed here: http://www.naic.org/documents/committees_b_consumer_information_ppaca_glossary.pdf

- HMO/Health Maintenance Organization
- PPO/Preferred Provider Organization
- Actuarial Value (or corresponding term used on materials)
- Total Allowed Costs
- Out-of-network provider
- Catastrophic plan
- Cost sharing
- Prescriptions—generic, non-preferred brand, preferred brand

- 2. If exchange boards contemplate additional standardization of plan designs, consider using fixed dollar cost-sharing when possible.** Massachusetts, which has operated a health exchange since 2006, has found it advisable to move beyond actuarial value tiers to include more standardized plan designs, featuring fixed cost-sharing amounts. Our study findings support this policy option, as consumers prefer the certainty associated with dollar-denominated cost-sharing. Concrete dollar figures help consumers feel a sense of control and allow them to budget for their out-of-pocket costs. Additionally, they are easier for those of low quantitative literacy to understand because they do not require an additional calculation (as a percentage does).

Appendix A. Methodology

This project uses cognitive interviewing and usability testing to explore consumer reactions to actuarial value concepts.

What is cognitive interviewing?

Cognitive interviewing is a one-on-one technique that uses small numbers of participants to explore how consumers make sense of the information within a document or web site. Participant reactions can be explored in depth, yielding the nuanced information about the factors underlying their decision making.

We used the technique of cognitive interviewing to obtain a detailed assessment of consumers' performance on and reactions to the prototype documents. Survey researchers recognize that they cannot know in an absolute sense what transpires in a respondent's mind as he or she answers a survey question. A researcher applying cognitive interviewing techniques prompts the individual to reveal clues as to what lies behind their answers.

What is usability testing?

Often qualitative testing of information focuses on preference over performance—however, what consumers say they want and what they can actually use are two different things. Usability testing attempts to go beyond statements of preference to assess what participants can actually use and understand. In usability testing we observe participants as they interact with documents (for example, on what elements do they tend to focus? Do their eyes skip over entire sections?, etc.). We also ask them to perform exercises akin to certain “real world” tasks, such as selecting a plan for themselves or calculating their costs for certain services. Through these exercises, we learn if they can actually use the form to complete tasks and make decisions. In this way, the information we gain goes deeper than initial impressions of how a document looks and focuses instead on how it performs.

Location and participants

For the actuarial value testing, we conducted a total of 16 one-on-one interviews (each lasting 90 minutes) at two sites: Aurora, CO, and Bethesda, MD. At each site, we interviewed eight consumers. Our participants were recruited from two groups—uninsured and self-pay and represented a range of age, race/ethnicity, and educational level.

Exhibit A-1. Participant Demographics¹⁵

Participant #	Sex	Marital Status	Ethnicity	Race	Age	Highest Ed Completed	Income	How Many People in Household	Employment Status
Aurora 1	M	Married	Non-Hispanic	White	41–50	College grad	Less than 30K	4	Operate own business
Aurora 2	M	Single	Non-Hispanic	White	31–40	College grad	40–59	2	Operate own business
Aurora 3	F	Married	Non-Hispanic	White	41–64	Less than HS, HS, GED	40–59	2	Full-time homemaker
Aurora 4	M	Single	Non-Hispanic	White	26–30	Some college or 2 year	30–39	3	Not employed but looking for work
Aurora 5	M	Single	Non-Hispanic	White	41–50	Less than HS, HS, GED	30–39	3	Operate own business
Aurora 6	M	Separated or Divorced	Non-Hispanic	White	51–64	Less than HS, HS, GED	30–39	1	Operate own business
Aurora 7	F	Married	Hispanic		41–50	Less than HS, HS, GED	40–59	2	Not employed but looking for work
Aurora 8	F	Married	Non-Hispanic	Black	31–40	College grad	40–59	4	Full-time student
Bethesda 1	F	Single	Non-Hispanic	White	41–64	College grad	Less than 30K	2	P/T outside the home
Bethesda 2	F	Single	Non-Hispanic	White	41–64	Some college or 2 year	Less than 30K	1	Operate own business
Bethesda 3	F	Single	Non-Hispanic	White	31–40	Post-college education	Less than 30K	1	Full-time student
Bethesda 4	M	Married	Other	Black	31–40	Less than HS, HS, GED	Less than 30K	4	Not employed but looking for work
Bethesda 5	F	Married	Non-Hispanic	Black	41–64	Some college or 2 year	40–59	4	No employed but looking for work
Bethesda 6	F	Married	Non-Hispanic	White	No answer	No answer	No answer	No answer	No answer
Bethesda 7	F	Single	Non-Hispanic	White	31–40	College grad	30–39k	1	Operate own business
Bethesda 8	M	Single	No answer	Black	41–64	Some college or 2 year	30–39k	2	Employed F/T outside home

¹⁵ Bethesda 6 did not provide additional information on her questionnaire.

Participant health insurance literacy levels

Prior research has demonstrated that health insurance literacy—familiarity with health insurance concepts and the skills and confidence to use concepts when selecting a health plan—are critical dimensions to account for in studies of this nature. While there is no widely accepted tool for quantifying health insurance literacy levels, we observed a wide range of HIL levels among participants in this study, ranging for near experts to consumers who were very unfamiliar with concepts like deductible and coinsurance.

Personal experience using health insurance to pay for a major illness or accident theoretically increases one's health insurance literacy. Based on a question asked at the end of each session, none of our participants had such an experience.

Structure of interviews

Each test session was structured to sequentially assess how individuals reacted to the concept of actuarial value, which was presented in different ways.

First, the moderator led participants through an unstructured “think-aloud” session and through a series of structured questions and comparisons. In the unstructured portions of the interview, we asked participants to talk aloud about what they were reading or looking at and to talk simultaneously about their reactions to each part of the health plan information.

The unstructured and unprompted portion of the interview allowed us to capture users' initial reactions to health plan information (including actuarial value)—including areas they responded well to, areas that they did not understand, and areas they questioned. We captured this valuable information before participants were questioned about specific elements of actuarial value, ensuring that we did not lead participants to discuss information they would not have noticed on their own.

In the structured portion of the interview, we asked targeted questions to determine how well participants understood actuarial value and whether they used it in their assessment of health plans.

During each interview, we introduced participants to different actuarial concepts through a series of tasks.

Exhibit A-2. Usability Task Areas And Assessments

Usability task area	What did we assess?
Task 1. Overview materials	Participants were asked to think aloud as they reacted to a general overview of health plan groupings based on actuarial value (Platinum, Gold, Silver, Bronze, and Catastrophic) and coverage levels. They were then asked some specific questions about the purpose and perceived utility of the overview information.
Task 2. First comparison (Bronze and Silver)	<p>Participants were asked to think aloud as they reacted to a side-by-side comparison of a Bronze and Silver plan. This page was designed to simulate the type of visual chart that an individual might receive from a health plan. It included standard information such as plan type, premium, deductible, co-insurance, and individual costs to the consumer (such as doctor visit and emergency room visit). This page also included the required federal disclosure and a “bottom line” actuarial value percentage.</p> <p>After reviewing the side-by-side comparison, participants were asked a series of comprehension questions design to gauge which plan they would choose, why they chose that plan, and how the information (including the federal disclosure and actuarial value) impacted their decision.</p>
Task 3. Second comparison (Gold and Platinum)	Participants were given a second side-by-side comparison, this time between a Gold and Platinum plan. Again, participants were asked to react to the information and then were asked a series of comprehension questions design to gauge which plan they would choose, why they chose that plan, and how the information (including the federal disclosure and actuarial value) impacted their decision. At this point, more questions about actuarial value and out-of-pocket costs to the consumer were added to investigate these areas in a more focused way.
Task 4. Actuarial value definitions	Participants were given one of two definitions of actuarial value (these were rotated among participants so that half saw one definition first while the other half saw the other definition first). They were asked to read the definition, describe it in their own terms, and rate its level of comprehension difficulty. They were asked then to compare it to the second definition and describe which they preferred. This section of the test was designed to gauge how well participants understood actuarial value and whether they connected it conceptually to what they saw in the side-by-side comparisons.

Usability task area	What did we assess?
Task 5. Third comparison (two hard-to-compare Gold Plans)	Participants were given a final side-by-side comparison, this time between two, roughly equivalent Gold Plans (both rated at 80% actuarial value although having different side-by-side costs). They were asked which they would choose and were given some specific comprehension questions regarding out-of-pocket costs. This section of the test specifically included “difficult-to-compare” plan provisions (one was mostly coinsurance and the other co-pay), to see if participants realized whether the plans were roughly the same on an actuarial value basis. If they did realize this, did knowing they had the same actuarial value help them to compare the plans?
Task 6. Design/Presentation Questions	Participants were asked some general design and presentation questions to elicit preferences and suggestions for future materials. In our second city, participants were asked to line up all the health plan comparisons they had been given, and to describe whether the spread in value (platinum to bronze) was a lot or a little.
Task 7. Health Care Utilization	Participants were asked some specific questions about their health care utilization including their history with health insurance, with major illnesses, and with filing claims. The purpose of this question was to see if they had made heavy use of health insurance in the past, which is believed to greatly influence consumer’s knowledge of health plan cost-sharing features.

Test documents

Drawing on a variety of sources, we developed test documents designed to mimic the way the actuarial value concepts might be introduced to consumers in a real world shopping experience. Because our testing is iterative, it allows for allows for continual adjustment to the content and design with successive test rounds. After the first four participants in Aurora, we slightly revised the design to better emphasize the heading alerting consumers to their costs. Before the second eight participants in Bethesda, we revised the designs again to again emphasize the headings and draw attention to what consumers pay versus what the plan pays. See Appendix B for copies of health plan documents used in the testing.

Exhibit A-3. Actuarial Value Concepts Represented In Testing

Document	Actuarial value concept	Loosely based on...
Welcome page	This document contained high level information about the health plans available for comparison, including the fact that they were grouped into the metal tiers (platinum, gold, etc). Term actuarial value does not appear.	Connector Welcome screen in Massachusetts ¹⁶
Plan comparison	Additional plan detail for two plans “side-by-side.”	<p>Exchange prototype being “test driven” by Wisconsin.¹⁷</p> <p>While we used this design in order to select the “High level” details to display about the plan, several changes were made.</p> <ul style="list-style-type: none"> ▪ The WI site omitted detail on whether the plan was an HMO or a PPO, a health plan dimension that consumers should be aware of and which isn’t captured by an AV measure. ▪ Actuarial value disclosure and actual value estimates were added. ▪ As discussed below, whether the insured or the insurer was paying the indicated cost-sharing wasn’t clear to consumers so the emphasis was changed during testing to make this clearer.
Actuarial value disclosure		From early versions of the <i>Summary of Coverage</i> form being developed by the NAIC.
Actuarial value definition	While consumers won’t necessarily see a reference to the exact term “actuarial value,” we tested some definitions on a standalone basis to round out our examination of consumer reactions.	Healthcare.gov glossary, as well as alternates that we developed.

¹⁶ <https://www.mahealthconnector.org/>

¹⁷ <https://exchange.wisconsin.gov/> NOTE: you have to “pretend” to shop in order to get to the plan comparison screens.

We also had on hand the draft “glossary of terms” developed by the NAIC for participants use if they were confused by terms on the documents. Most participants ended up consulting the glossary, although the definitions they sought were not always included (see Recommendations).

How did we analyze data?

Our research provided significant data that allowed us to gain insight and discern patterns related to participant reactions to the testing materials.¹⁸

Our data includes:

- Audiotaped and videotaped interviews.
- Professionally prepared transcripts for each interview based on audiotapes.
- A structured database to record observations of each testing session.
- Notes recorded by session observers.

Proceeding as described below, we analyzed this data in order to create a cohesive set of research findings.

Step 1: Conduct a debriefing session

At the end of each day of testing, the moderator and note-taker debriefed together, identifying and summarizing the major themes and establishing what they thought was or was not working in the health plan information. These summaries helped us hypothesize the results of the testing. We used these explicit statements to triangulate¹⁹ later analyses and to test findings for biases that either confirm or refute hypotheses. In addition, at this debrief, the moderator, note-taker, and observer identified immediate reactions and observations that were interesting, even though the “meaning” of these reactions and observations was not immediately clear.

Step 2: Analyze participant input and feedback from each round of testing

We used the inductive methodology suggested by Glaser and Strauss (1967) to codify the results from each round of testing.²⁰ We analyzed the themes and patterns that emerged from each testing about the problems participants encountered. In particular, we noted patterns, clustered comments, looked for relationships, and identified contrasts. From this analysis, we identified thematic findings in terms of context, comprehension, and comparison.

¹⁸ As qualitative research, this project did not lead to statistically significant conclusions yet it did provide valuable insights into how consumers interpret and use actuarial value in health plan information.

¹⁹ The purpose of data triangulation is to obtain confirmation of findings through convergence of multiple sources. In this study, data triangulation was used to combine the advantages of analyzing data at certain times and with different research analysts. Field analysis recorded immediate observations of the moderator, notetaker, and observer. Content analysis of the notetaker’s log further investigated what participants were reacting to, during each interview session. Finally, coding and analysis of the transcripts grouped themes that were consistent throughout all interviewees.

²⁰ Glaser, B. & A. Strauss. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Hawthorne, New York: Aldine Publishing Company.

Step 3: Link the analysis and research findings to the project objectives and research questions

Once the participant input and feedback were analyzed, we linked the findings back to the project objectives and the research questions that we created before going out to test.

With so few participants, how do you arrive at conclusions?

Cognitive interviewing typically involves fewer participants than the traditional focus group approach, but the results have been shown to be as reliable, while having the added benefit of being more nuanced and useful for revising a document. This is primarily because these interviews allow for more in-depth observation of how individuals use a document and follow-up probes to uncover where they have problems and why. Such focused observation and questioning is not possible in a focus group setting. Additionally, cognitive interviewing does not require high numbers of participants to get a reliable sense of problems in a document. According to Virzi, 80% of usability problems are uncovered with five (5) participants and 90% with ten (10) participants.²¹ After ten participants, very few new problems emerge, and the interviews, at that point, tend to provide confirmation of existing findings.

This technique has been used extensively to develop or refine financial privacy documents, mortgage disclosures, credit card agreements, and the Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey.

²¹ Virzi, R. (1992). Refining the test phase of usability evaluation: How many subjects is enough? *Human Factors* 34, 457–486.

Appendix B. Materials Used In Testing

The following pages include the handouts participants worked with during testing:

- Handout 1: Welcome page
- Handout 2: First comparison—Bronze and Silver plans
- Handout 3: Second comparison—Gold and Platinum plans
- Handout 4: Third comparison—Gold and Gold plans

Welcome to your new health insurance market place.

All your health plan choices include coverage for these services:

- Medical and surgical care, including preventive and primary care
- Emergency care
- Hospitalization
- Ambulatory patient care (outpatient, day surgery)
- Mental health and substance abuse services
- Prescription drug coverage
- Maternity and newborn care
- X-rays and other diagnostic imaging and screening procedures
- Radiation therapy and chemotherapy

These health plans differ in how much you are charged for your premium and how much you are charged when you go to the doctor or hospital. To make shopping easier, the plans are grouped into five types:

	Premiums	Out-of-Pocket Costs
Platinum Plans:	Highest	Lowest
Gold Plans:	Higher	Lower
Silver Plans:	Moderate	Moderate
Bronze Plans:	Lower	Higher
Catastrophic Plans:	Lowest	Highest


Some plans limit your choice of doctors and hospitals.

Insureco

Plan Comparison >>>

This summary information will help you compare health plans. However, before you make your selection, you should always consult the full policy of the plan you want to buy.

Plan Basics	Bronze 1	Silver 1
Plan Type	PPO	PPO
Your Premium	\$332/month	\$381/month

What YOU Pay for In-Network Care	Bronze 1	Silver 1
Deductible	\$5,950/year	\$3,000/year
Co-Insurance	0%	20%
Annual Out-of-Pocket Max	\$5,950	\$5,950
Doctor Visit	100%	\$60
Prescription Drugs	100% (generic/preferred brand/non-preferred)	\$10/\$30/\$50 (generic/preferred brand/non-preferred)
Emergency Room	100%	\$200/visit
Hospital Stay	100%	20%
	Your costs may be higher if out-of-network providers are used.	Your costs may be higher if out-of-network providers are used.

Average Paid by PLAN	Bronze 1	Silver 1
Required Federal Disclosure:	On average, this plan will pay at least 60% of the total allowed costs for the benefits listed in the policy.	On average, this plan will pay at least 60% of the total allowed costs for the benefits listed in the policy.
Estimated Percent of Total Allowed Costs Paid By Plan:	63%	70%

For questions or additional information, contact us at www.insureco.com or 1-888-888-8887.


Handout 2

Insureco

Plan Comparison >>>

This summary information will help you compare health plans. However, before you make your selection, you should always consult the full policy of the plan you want to buy.

Plan Basics	Gold 1	Platinum 1
Plan Type	PPO	HMO
Your Premium	\$442/month	\$446/month

What You Pay for In-Network Care	Gold 1	Platinum 1
Deductible	\$300/year	\$250/year
Co-Insurance	30%	0%
Annual Out-of-Pocket Max	\$5,950	\$5,950
Doctor Visit	30%	\$40
Prescription Drugs	10%/20%/20% (generic/preferred brand/non-preferred)	\$10/\$30/\$50 (generic/preferred brand/non-preferred)
Emergency Room	30%	\$100/visit
Hospital Stay	30%	\$150/admit
	Your costs may be higher if out-of-network providers are used.	Except for emergency care, out-of-network care is not covered

Average Paid by Plan	Gold 1	Platinum 1
Required Federal Disclosure:	On average, this plan will pay at least 60% of the total allowed costs for the benefits listed in the policy.	On average, this plan will pay at least 60% of the total allowed costs for the benefits listed in the policy.
Estimated Percent of Total Allowed Costs Paid By Plan:	80%	90%

For questions or additional information, contact us at www.insureco.com or 1-888-888-8887.


Handout 3

Insureco

Plan Comparison >>>

This summary information will help you compare health plans. However, before you make your selection, you should always consult the full policy of the plan you want to buy.

Plan Basics	Gold 2	Gold 3
Plan Type	PPO	PPO
Your Premium	\$447/month	\$454/month

What You Pay for In-Network Care	Gold 2	Gold 3
Deductible	\$1500/year	\$500/year
Co-Insurance	10%	20%
Annual Out-of-Pocket Max	\$2,975	\$2,975
Doctor Visit	\$30	\$50
Prescription Drugs	\$10/\$30/\$50 (generic/preferred brand/non-preferred)	\$10/\$30/\$50 (generic/preferred brand/non-preferred)
Emergency Room	\$200/visit	\$200/visit
Hospital Stay	10%	20%
	Your costs may be higher if out-of-network providers are used.	Your costs may be higher if out-of-network providers are used.

Average Paid by Plan	Gold 2	Gold 3
Required Federal Disclosure:	On average, this plan will pay at least 60% of the total allowed costs for the benefits listed in the policy.	On average, this plan will pay at least 60% of the total allowed costs for the benefits listed in the policy.
Estimated Percent of Total Allowed Costs Paid By Plan:	80%	80%

For questions or additional information, contact us at www.insureco.com or 1-888-888-8887.

Handout 5

Appendix C. Actuarial Value Calculations

Estimates of premium cost and actuarial value were determined using Windsor Strategy Partners' proprietary healthcare rating model known as *Actuarial Advisor*. Windsor Strategy Partners, LLC (WSP) is a healthcare actuarial consulting firm specializing in product pricing, model building and data analysis, underwriting, strategic planning, and business strategy.

Modeling assumptions

WSP estimates were developed using the following assumptions:

- WSP defined actuarial value as the percentage of total claim costs paid by the plan for an average covered life, assuming a standard pre-65 commercial population (including children). Specifically, WSP defined actuarial value as the ratio of plan claim costs after applying all cost sharing parameters, to claim costs prior to application of cost sharing parameters.
- WSP considered only in-network claim costs and excluded administrative costs in the calculation of actuarial value.
- Costs were estimated assuming a plan effective date of January 1, 2011 and reflect the average of a single male and a single female, each age 45.
- National averages were assumed for the following parameters:
 - The impact of geographic location on cost and utilization patterns.
 - Industry load
 - Provider payment discounts
- Claim cost estimates reflect prescription drug as well as medical benefits, according to the coverage parameters of each plan being priced.
- For PPO options, we defined out-of-network deductible and maximum out-of-pocket amounts to be double the in-network amounts; we defined out-of-network coinsurance percentages to be 20% greater than the in-network amounts. These assumptions affect the premium estimates, but not the actuarial value estimates.
- Premium estimates reflect an assumed administrative load of 20%.
- While the plans were priced for 2011, the plan designs conformed to requirements that will be in place in 2014, namely, that all plans cover a comprehensive set of essential

health benefits, preventive services covered at no cost, there are no annual or life-time limits and the patient's maximum out-of-pocket costs (OOP) do not exceed \$5,950 per individual.

The *Actuarial Advisor* model is a sophisticated healthcare rating and underwriting tool that predicts the utilization and cost of healthcare. The Actuarial Advisor model is built on a database of over 3 million commercially insured lives, refreshed annually in order to capture and utilize the most recent healthcare trends. The size and richness of the database yields robust estimates of healthcare claim costs.

WSP's modeling and findings are based upon generally accepted actuarial techniques applied in a consistent manner. The actuarial methods, considerations, and analyses used in this study conform to the appropriate Standards of Practice as promulgated from time to time by the Actuarial Standards Board.

The analysis produced the plan grid included as Exhibit C-1, which was used to populate the test documents. As noted in the report, several plans were estimated, corresponding to the range of actuarial values needed to populate each metal tier, as well as containing a mix of coinsurance vs. co-pay provisions. The later consideration was used to gauge participant use of actuarial value measures when plan designs moved from fairly simple to more complex.

Exhibit C-1: Health Plan Design/Actuarial Value Combinations Used To Populate Consumer Testing Documents

Benefit Tier/Plan designation	Actuarial Value	Network Type	Monthly Premium	Deductible	Coinsurance	Max OOP	Service Specific Cost-sharing			
							Doctor Visit	Prescription Drugs	Emergency Room	Hospital Stay
Bronze 1	63%	PPO	\$332	\$5,950	0%	\$5,950	0%	0%	0%	0%
Silver 1	70%	PPO	\$381	\$3,000	20%	\$5,950	\$60	\$10/\$30/\$50	\$200	\$0
Gold 1	80%	PPO	\$442	\$300	30%	\$5,950	\$0	10%/20%/20%	\$0	\$0
Gold 2	80%	PPO	\$447	\$1,500	10%	\$2,975	\$30	\$10/\$30/\$50	\$200	\$0
Gold 3	80%	PPO	\$454	\$500	20%	\$2,975	\$50	\$10/\$30/\$50	\$200	\$0
Platinum 1	89%	HMO	\$446	\$250	0%	\$5,950	\$25	\$10/\$30/\$50	\$100	\$150

Source: Windsor Strategy Partners, LLC