

Choice Architecture: Design Decisions that Affect Consumers' Health Plan Choices

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Table of Contents

Acknowledgements	2
Executive Summary	3
Introduction	5
What is a Health Plan Chooser Tool?	5
What is Choice Architecture?	6
About This Study	6
Findings	9
Aligning with Site Goals	9
Initial Results	10
Sort Order	10
Are All Plans Displayed?	13
Data Elements Displayed	14
Sponsored Links	15
Consumer Management of Initial Results – Alternative Sorting and Filtering	15
Alternate sorting options	16
Filters	16
Engagement Strategies	18
Key Health Plan Attributes	20
Cost	20
Provider Directory	21
Plan Quality Ratings	24
Language and Design Elements	25
Collecting Evidence	28
Next Steps/Future of Tools	29
Conclusions	30
Appendix A. Profiles of Health Plan Chooser Tools	33
Consumer Checkbook Health Plan Comparison Tool	34
CMS – Medicare Plan Finder	35
eHealthInsurance	36
Massachusetts Health Connector	37
PBGH/CalPERS	38
User Experience (UX) 2014	39
Appendix B. Moderator’s Interview Guide	40

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Sam Gibbs, eHealthInsurance

Robert Krughoff, Consumers’ Checkbook

Robert Mercado, eHealthInsurance

Christian Palino, Enroll UX 2014/IDEO

Denice Sieron, Centers for Medicare & Medicaid Services (CMS)

William Trefzger, Centers for Medicare & Medicaid Services (CMS)

Ted vonGlahn, Pacific Business Group on Health (for PBGH/CalPERS)

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Executive Summary

Choosing a health insurance plan is a major decision that has important health and financial implications for American families. Unfortunately, many consumers find it very difficult to evaluate their health plan options. One approach that helps consumers choose among plans is web-based *health plan chooser tools*. Web-based health plan chooser tools help consumers by providing simplified, comparative information to help individuals better understand and evaluate their options.

Given the number of attributes associated with health plan choices (premium, covered services, provider quality, etc), no website can emphasize all elements of a health plan equally. Tool designers make decisions about what to emphasize and how to frame the elements that they feel are important to consumers, such as health plan cost or quality. These design decisions represent the tool's "choice architecture." More formally, choice architecture is known as organizing the context in which people make decisions.

This study uses a review of web-based tools and structured interviews with designers to examine the choice architecture in leading health plan chooser tools, including eHealthInsurance, Consumers' Checkbook, PBGH/CalPERS, the Massachusetts Connector, Medicare Plan Finder and a new design called User Experience 2014. This environmental scan is highly germane to health reform discussions going on around the country as work begins to implement state-based "Exchanges" as part of the Affordable Care Act.

The study emphasized the choice architecture used to display the *initial* set of health plan options. The default choice set radically affects consumers' shopping experiences because once they see the default, they use it as an anchor or baseline for the rest of their selection process. What consumers see *first* will frame their understanding of the rest of information – in effect, creating a mental model for them. Consumers won't always know what they *aren't seeing*, and the choice architecture conveys implicit and explicit decisions about what is important. Research conducted by PBGH/CalPERS shows that 93% of the time the default display of information is accepted by consumers with no customization on their part. More than 60% of users of the Checkbook site make their decisions without leaving the initial summary screen.

Our interviews with designers revealed that today's tools reflect a significant evidence base, even though there are some differences in terms of the initial plan attributes displayed, the default sort order of the health plan results, and whether or not the initial choice set has been filtered in some way.

This evidence informed two critical design elements: the default sort order in the initial display of plans and whether or not all plan choices were displayed. Four of the tools used the concept of

total expected costs to order their results. This measure combines the consumer's premium cost with an estimate of what they would pay during the year under the plan's cost-sharing provisions. Sites differed in whether or not all available options are provided in the default set of search results. Some of our interviewees strongly emphasized the need to display all the plan choices initially, whereas others felt it was a help to the consumer to "filter" the options so that only some were displayed. Within this group, one designer used user responses to filter the available plans where another used their own criteria to show a shorter list.

All sites provided consumer-managed methods for additional filtering or refining of results to limit the number of plans displayed or change which attributes were displayed. All provided summary measures for comparing plans such as plan ratings. To keep consumers engaged, several sites emphasized quick and easy access to the initial list of health plan results. Sites also often included video and other design elements to engage consumers and help them understand the information.

Each tool had some very robust features, and this scan should provide a tempting menu for policymakers, regulators and others seeking to identify and use best practices. Our interviewees emphasized the evidence underlying their design decisions, providing a reliable basis for identifying what might work in a given state.

Indeed, to achieve the best consumer outcomes, policymakers, regulators and other designers must pay careful attention to the choice context in their health plan chooser tools. Choice architecture not only sets the stage for a decision, it also *influences* the consumer's final decision.

Introduction

Choosing a health insurance plan is a major decision that has important health and financial implications for American families. Unfortunately, many consumers find it very difficult to evaluate their health plan options. Health plans have many discrete features, including numerous *coverage* attributes such as cost-sharing provisions and the scope of covered services, attributes of their *provider* networks such as performance on quality measures, and attributes of the company itself such as reputation among consumers, rating by accrediting organizations and others. Consumers must figure out how to approach this daunting array of information in order to select a health plan. And many consumers have a choice of plan. A recent report shows that 66 percent of employees with employer-based coverage have a choice of plans.¹ In addition, shoppers who buy on their own have many choices, as do seniors eligible for Medicare.

What is a Health Plan Chooser Tool?

One approach that helps consumers choose among plans is web-based *health plan chooser tools*.

Web-based health plan chooser tools help consumers by providing simplified, comparative information to help individuals better understand and evaluate their options. In general, these online tools include a range of information about available plans. Some tools take consumers through the entire decision process – (1) finding and comparing available plans that meet an individual's personal needs/circumstances, (2) selecting a plan, and (3) applying for or enrolling in the plan. Others provide decision support and information by taking consumers through the first two steps only.

Because health plan information is so complex and voluminous, tool designers have to decide what information to present and how – otherwise the amount of information would be nearly impossible for consumers to wade through. Discrete information about each plan must be organized and narrowed down in some way to simplify the process.

¹ *Decoding Your Health Insurance: The New Summary of Benefits and Coverage*, Families USA, May 2012.

What is Choice Architecture?

Choice architecture is broadly defined as the way information is organized to help people make decisions.² Choice architecture, on the surface, merely sets the stage for a decision. At a fundamental level, however, it also *influences* the consumer's final decision, perhaps even nudging the consumer in a particular direction. Choice architecture, thus, may accomplish two things: it may make it easier for the consumer to navigate complex choices but it may also influence the choices they make.

Thaler and Sunstein posit that most economists think of the consumer as a rational person who weighs each product attribute before making a purchasing decision.³ In reality, consumers are innately flawed decision-makers because they are vulnerable to predictable mental biases: for example, individuals often anchor their understanding of a situation based on “first impressions” or the initial information presented to them and they are quick to use available data to support their assumptions and choices. These biases influence how consumers view and interpret subsequent information, and the decisions they ultimately make.

When consumers get information to make a decision, such as choosing health insurance, these biases are tapped. For instance, consumers have to see something – such as a list of health plans (anchoring); the information has to be sorted in some way – for instance, according to monthly premium (framing); and they have to be given some contextual information immediately before they choose – such as plan ratings (priming). Explicitly or implicitly, these biases are harnessed by the choice architect.

There is no such thing as neutral choice architecture. No website can emphasize all elements of a health plan equally. Acknowledging this, the choice architect consciously organizes information in order to influence the decisions that individuals make. Tool designers choose which elements to draw attention to, what the first cut of information would be, how they would present information, what other information they would make available.

About This Study

Choice architecture shapes consumer choice. The purpose of this project was to gather information on how choice architecture is being implemented in web-based health plan chooser tools. We analyzed six tools as described in Table 1 below.

² Richard Thaler and Cass Sunstein. *Nudge: Improving Decisions about Health, Wealth, and Happiness*, Yale University Press, 2008.

³ *Ibid.*

Table 1. Health Plan Chooser Tool and Populations

Tool	Population that Uses the Tool
PBGH/CalPERS	State of California employees, retirees, and their families.
CMS Medicare Plan Finder	Medicare beneficiaries and those who help them: caregivers, counselors, State Health Insurance Assistance Program representatives, and 1-800-Medicare, customer service representatives.
Consumers' Checkbook	Federal employees, retirees, and their families, and people helping them.
eHealthInsurance	Individuals, families, and small businesses seeking to purchase health insurance.
MA Health Connector	State of Massachusetts residents purchasing health insurance on their own.
Enroll User Experience (UX) 2014 ⁴	Not yet operational, this tool is intended to serve consumers purchasing through exchanges.

Consumers Union selected these health plan chooser tools for review because they are considered leading examples in the industry; they reach large segments of the population, or, in the case of UX 2014, they have been specifically designed with the exchange audience in mind.⁵ Except for UX 2014, each site either enrolls or directs thousands of individuals per year into health plans. A summary of each tool is included as *Appendix A. Profiles of Health Plan Chooser Tools*.

To gather the information, we acquainted ourselves with each tool and cataloged some of the basic choice architecture decisions. We then conducted interviews with tool designers to provide initial feedback on the following research areas:

- Key elements of choice architecture;
- Approaches to simplifying complex information;
- Key areas of interest to consumers such as health plan costs and provider information ;

⁴ Enroll UX 2014 is a public-private partnership between eight national and state health care foundations, the federal government, and 11 participating states. This consortium design effort is intended to provide federal and state governments with a human-centered design for the health insurance exchanges coming online in 2014. The design is intended to help people better understand and connect with coverage, but is also flexible and can be adapted for different exchanges.

⁵ Healthcare.gov, another useful consumer tool, was not included in the study. While the site provides a useful overview of consumers' health plan options, unlike the six sites profiled, the consumer must leave the site to complete the health plan selection process.

- Methods for collecting and analyzing feedback and other evidence; and
- Ideas for best practices if not yet implemented

Given the critical role of the initial *default* set of plan search results, we focused on this aspect of the health plan chooser tools. We also looked at what elements of health insurance the tool emphasized (e.g., cost or quality) and how the tool structured information to facilitate consumer choice.

The Kleimann team began by reviewing each tool to develop a background understanding of the tools' design and choice architecture. Kleimann then conducted interviews with nine choice architects familiar with the development of the six tools.

- PBGH/CalPERS: Ted vonGlahn
- CMS Medicare Finder Tool: William Trefzger and Denice Sieron
- eHealthInsurance: Sam Gibbs and Rob Mercado
- Consumers' Checkbook: Robert Krughoff and Robert Ellis
- Massachusetts Health Connector: Scott Devonshire
- Enroll UX 2014: Christian Palino

To avoid biasing responses, our interview guide focused on open-ended questions. (See *Appendix B. Moderator's Interview Guide*.) Interviewees received a copy of the questions ahead of time. Interviewees generously provided follow-up clarifications by email when needed.

For each 60-minute interview, we used a primary interviewer and a notetaker. During the interview, the notetaker collected responses into a database. After each interview, the primary interviewer and the notetaker shared immediate observations and clarified and resolved discrepancies arising during the interview. A third, independent researcher reviewed the database to identify preliminary themes and to compare those to the observations of the primary interviewer and notetaker.

The analysis included summaries of each choice architecture tool. One key informant per tool reviewed the *Appendix A* summary for accuracy.

Findings

Aligning with Site Goals

To start, choice architecture must be considered within the context of what the site is trying to accomplish. All of the site representatives noted that they want to help consumers quickly and easily find the best plan for them and their families. They saw health insurance as a complex product, and a primary aim of each site is to make the process of choosing a plan simpler and easier for the consumer and responsive to the consumer's preferences. However, each site has a slightly different perspective on this goal:

- Provide decision support by presenting key factors, such as total estimated cost, that consumers weigh and compare (PBGH/CalPERS);
- Provide one tool that can be used by a range of audiences – beneficiaries, caregivers, 1-800-MEDICARE customer service representatives, and state health insurance assistance program representatives (SHIPS) – to select health and prescriptions drug plans (CMS);
- Make the selection process meaningful and accurate by enabling consumers quickly to compare plans for total estimated cost, risk of high costs, whether preferred doctors will be in plan, and aspects of plan quality the consumer cares most about (Checkbook);
- Make the purchase relatable and understandable by helping consumers see what others like them have selected (eHealthInsurance);
- Facilitate direct comparison of plans, "apples to apples," by standardizing most costs so that the remaining differences in coverage are more obvious (MA Connector); and
- Give states and the federal government a customizable set of design standards that provide consumers tools and information that help them find the best plan to meet their ongoing and changing needs (Enroll UX 2014).

Each site made design decisions to help achieve their stated goals. For example, for sites like Checkbook and PBGH/CalPERS where total estimated cost is the driving factor, they emphasize that attribute in their initial search results. CMS provides a range of information that is useful to less experienced consumers (who may

Total Estimated Costs = Consumers
premium cost + Expected consumer out
of pocket costs when services
are utilized

be using the tool on their own) and “power users” like 1-800-Medicare customer service representatives. Ease of comparison is paramount to MA Health Connector – and the system minimizes variation in benefit design, which makes it easier for consumers to focus on premium costs (their natural tendency).⁶ Enroll UX 2014 seeks to guide users by utilizing a set of questions to help narrow down plan options as much as possible upfront. eHealthInsurance, on the other hand, seeks to emphasize information about the choices that other shoppers in their geographic area have made when purchasing health insurance.

Each site has a look and feel to support their respective choice architecture goals.

Initial Results

No site can emphasize all elements of a health plan equally. At its core, choice architecture is structuring information in a way that emphasizes certain elements for consumers. Thus, site architects must decide which attributes of the health plan to initially emphasize - the “default choice architecture.”

The default choice architecture radically affects consumers’ experiences because once they see the default, they use it as an anchor or baseline. Consumers won’t always know what they *aren’t seeing*, so what they see first is going to frame the rest of what they choose. A key area of focus in both our site reviews and interviews was how different tools structured the choice of health plans for consumers – especially what they emphasized in the initial set of results.

Sort Order

At the heart of each site is its initial list of plans from which a consumer can choose. The initial list of plans is based on the information the consumer entered at the outset. The way the initial list is sorted is a key element of the default choice architecture. In large part, the sort order reflects the philosophy of the site.

Checkbook, PBGH/CalPERS, CMS, and Enroll UX 2014 all have initial displays that emphasize cost and, in particular, “total costs” that a consumer can expect to pay (Figure

Figure 1. PBGH/CalPERS Total Cost

Plan	Your Employer's Contribution (Per Month)	Your Actual Premium Contribution (Per Month)	Your Actual Premium Contribution (Yearly)	Your Estimated Cost at Time of Service (Yearly)	Your Estimated Total Cost (Yearly)
PERS Select	\$500.00	\$426.24	\$5,114.88	\$1,161.00	\$6,275.88
Blue Shield NetValue Plan HMO	\$500.00	\$571.46	\$6,857.52	\$160.00	\$7,017.52
Kaiser Permanente	\$500.00	\$618.22	\$7,418.64	\$160.00	\$7,578.64
PERS Choice	\$500.00	\$591.12	\$7,093.44	\$1,161.00	\$8,254.44
Blue Shield Access+ HMO & EPO	\$500.00	\$745.80	\$8,949.60	\$160.00	\$9,109.60
PERSCare	\$500.00	\$1,455.96	\$17,471.52	\$1,161.00	\$18,632.52

⁶ MA Health Connector includes several standard coverage levels. Within a coverage level, each plan has very similar out of pocket costs and covered services. These standard coverage levels represent policy decisions made outside the realm of the website display but given this simplification, designers adopted a different emphasis compared to other sites.

1).⁷ Total cost is the total premiums that the consumer can expect to pay *plus* an estimate of what they would pay out-of-pocket under the plan. Each of these sites asks consumers to answer questions that help predict utilization and then – through “behind the scenes” algorithms that apply the plan’s cost-sharing provisions – are translated into estimated total predicted health care costs for the consumer. In this way, consumers can compare predicted total costs (such as estimated total out-of-pocket costs per year plus total premiums) instead of costs for individual cost-sharing components (co-pays, prescriptions, and so on). These sites “do the math” for consumers because, otherwise, it is hard to extrapolate total consumer costs from the plan’s discrete cost-sharing provisions.⁸

The method of estimating total cost differs across these sites. Checkbook asks for little information upfront but uses algorithms to match a few consumer data points to an actuarially-derived average cost estimate for someone like the user. The data points include: who will be covered, age at coverage, gender, health status, tobacco use, major medical expense considerations (a drop down box to select from a list). Checkbook’s initial sort lists all available plans from lowest to highest total estimated average cost for people like the user.

To personalize the user experience, PBGH/CalPERS uses scale questions (see Figure 3) on predicted use and translates some of this information into a total cost that factors in premium cost and cost at time of care. The site then generally presents up to six plans (out of all those in a given geographic area) based on lowest total cost.

CMS has found through its internal usability testing that the most important factor to beneficiaries is an estimated annual cost. Therefore, the site sorts Medicare Advantage plans from lowest to highest estimated annual costs based on information collected from consumers in four steps at the beginning of the process. The fourth step also allows users to filter plans based on their own specific needs – although the site also warns that the use of filters may eliminate some options, including plans with the lowest estimated annual cost. Although cost is the default in this model, CMS has found that coverage, convenience, and customer service are also important to beneficiaries and therefore included in sort options

Enroll UX 2014 also sorts by cost, but uses a different approach. Consumers are initially guided through a series of questions to assess their needs and predicted utilization. These questions are more in-depth than other sites and lead to an initial filtering of plans so that consumers are not given an “overwhelming” number of choices. Consumers are then shown up to three choices on the results screen which they can compare. These choices may be sorted in various ways and, because results are displayed horizontally, the sort is actually left to right, rather than the more traditional top to bottom.

⁷ Premium amounts in figure are an example only.

⁸ L. Quincy, *What’s Behind the Door: Consumers Difficulties Selecting Health Insurance*, Consumers Union, January 2012.

After initially asking the consumer to select a coverage level, the MA Health Connector sorts plans by monthly premium cost. Plans are initially filtered by the desired level of insurance coverage (Bronze – low/medium/high; Silver – low/ high; and Gold). Within coverage level, the site lists plans from lowest premium to highest because there is evidence (from internal focus groups and usability testing) that most shoppers are interested in plan affordability and want to see the lowest premium cost first. In the Connector’s case, the out-of-pocket costs within a coverage level—but not between coverage levels—are going to be very similar, since the cost-sharing provisions are mostly standardized. The MA Health Connector does not use total cost because they don’t yet believe there is an accurate method of predicting it.

eHealthInsurance uses an entirely different model for initial display. Their default sort algorithm is proprietary and can’t be detected by the customer. The display instead emphasizes that the plans listed have received their “Best Seller” designation - plans that have been frequently purchased through eHealthInsurance in recent weeks.⁹ Our interviewees noted they have tried other default sorts in the past - alphabetical, least to most expensive premium. eHealthInsurance also displays “sponsored” plans, and these get prominence – they are listed before the best sellers, but outside of the main search results section. Like MA Health Connector, eHealthInsurance feels that costing models are not yet robust enough to accurately predict total costs. However, in the future, if models are better, they would consider this as a default health plan sort.

Table 2. Default Sort in Initial Results by Site

Site	Plans at the top of the list have...
PBGH/CalPERS	Lowest Total Costs
CMS	Lowest Total Estimated Annual Costs (Health and Drug)
Checkbook	Lowest Combined Total Cost – (Annual net premium plus estimated average out-of-pocket for people like the user.)
MA Health Connector	Lowest Premiums (within a coverage level category)
eHealthInsurance	Uses a proprietary algorithm (within the group of “Best Sellers” – or most popular eHealthInsurance plans* in the consumer’s area)
Enroll UX 2014	Lowest Anticipated Total Cost (within the group of plans created by user responses to questions)

** Note: Not all plans contract with eHealthInsurance. “Best Seller” is determined just among those that contract with the company using a proprietary algorithm that takes into account recent sales volume but also other factors.*

⁹ Not all plans contract with eHealthInsurance. eHealthInsurance’s primary source of income is commissions from plans that contract with the site. Popularity is determined just among those that contract with the company.

Are All Plans Displayed?

Sites differ in whether or not all available options are provided in the default set of search results. All sites restrict the results to just those plans available for purchase in the consumers' geographic area, but some go further in narrowing the initial display of options.

Checkbook does not limit the number of plans displayed in the initial search results because their testing has shown that consumers want and can understand a lowest to highest total cost listing that includes all the plans. Testing shows that users can easily sort, scroll, and filter using the tools available on the initial display. Checkbook's testing has also shown that some users would eliminate plans—for example, high-deductible plans or plans that don't include a specific doctor—that are at least substantially less expensive if the initial search results are filtered.

CMS also lists all plans in the initial search results, but gives consumers the option of limiting the search before seeing all plans listed – so consumers can limit the listing prior to seeing the full list. Filter options can also be used to *add* “Special Needs Plans” that do not automatically display due to eligibility requirements.

PBGH/CalPERS lists up to six plans available to the user in a given geographic area and allows the consumer to select a subset or consider all of the available plans.

As noted above, the MA Connector filters plans according to a level of insurance coverage (Bronze/Silver/Gold) that the consumer would like to see. MA Health Connector then lists all plans in the selected coverage level and the consumer can choose to expand the lists of high/medium/low to see more plans. The consumer does have the option on the first page to skip coverage level and see all plans listed.

eHealthInsurance limits its initial display to all “best sellers” in its initial search results and gives consumers the option to see all plans. Their “Best Seller” designation is determined just among plans that contract with the company using a proprietary algorithm that takes into account recent sales volume but also other factors. Their internal research has shown that consumers are most interested in what other people are buying on the eHealthInsurance site. This “anchors” an individual's decision to what others have done. It is important to note that even the “all plans” list is just those that contract with eHealthInsurance; therefore the consumer is not seeing **all** plans that might be available to them.

Enroll UX 2014 filters their initial list of the plans using answers that consumers give to the upfront questions, such as the prescriptions the consumer takes, providers they use, and their preferences with respect to plan quality. Within these results, the tool only displays up to three plans per screen. At the beginning, users can skip the guided questions to see all plans. They also have the option, at anytime, to return to the guided questions and see all the plans available *at that point in the filtering process*. Research done during the development process showed that consumers overwhelmingly preferred fewer plans displayed per screen with more comprehensive

information for each plan shown on that page. Additionally, the designers cite research¹⁰ which demonstrates that individuals cannot generally handle more than three or so pieces of information at one time. Although all choices are not displayed, consumers can click to other pages (scroll horizontally) which will show more choices – always three per screen.

Data Elements Displayed

Each site's initial plan results are presented in a table that emphasizes certain points about the plan. These range from discrete elements, such as deductibles and copays, to summary measures such as estimated total costs or quality star ratings. Table 3 summarizes the default health plan attributes displayed by each site.

PBGH/CalPERS lists by plan type and then includes several other aspects of cost, including "premium per month" and "premium per year" as well as "employer contribution." It also includes health quality information.

CMS provides more elements than the other sites, including: Estimated Annual Drug Costs, Monthly Premium, Deductibles and Drug Copay/ Coinsurance, Health Benefits, Drug Coverage and Drug Restriction, Estimated Annual Health and Drug Costs, Overall Plan Rating, Pharmacy (in network, preferred-network, or out-of-network), and Remainder of the Year Costs if users are enrolling later in the year.

eHealthInsurance displays monthly premium, deductible, coinsurance, and office visit copays in the initial results.

Checkbook displays plan type, estimated total average cost for people like the user, maximum possible cost, a plan quality measure that the user can personalize, whether user-specified doctors are in the plan, and premium.

Enroll UX 2014's approach is intended to provide state and federal exchange designers with a design that displays all the major plan attributes. This is an important part of the design strategy as it doesn't require a consumer to navigate to a separate plan details page to get the majority of the information they are seeking – that information is part of the default display. Some plan attributes in the design prototype are plan type, anticipated total cost, additional coverage, quality rating, and drug coverage.¹¹ The page also shows for whom the plan is available – since the tool allows a consumer to simultaneously save and compare searches for different members of the same household.

¹⁰ See *Consumer Decision Support Rules for Health Exchanges*,

http://www.pbgh.org/storage/documents/DecisionSupportRules_Installment_One_Brief_030112.pdf

¹¹ The design standards do not define the full list of comparative categories that can be used, but rather uses a few examples to demonstrate how to handle different types of interactions.

Table 3. Some of the Health Plan Data Displayed in Initial Results, by Site

Site	Monthly or Annual Premium	Estimated Total Costs	Drug Coverage	Maximum out-of-pocket	Deductibles and Copay/Coinsurance	Overall Plan Quality Rating	Estimated Annual Drug Costs	Doctor in Plan
PBGH/CalPERS	✓	✓						
CMS	✓	✓	✓	✓	✓	✓	✓	
Checkbook	✓	✓		✓		✓		✓
MA Health Connector	✓		✓	✓	✓			
eHealthInsurance	✓		✓		✓			
Enroll UX 2014	✓	✓	✓			✓		

Notes: Other health plan data elements are available to shoppers when they click out of the initial results screen. In the Enroll UX 2014 design, other plan attributes are available if the user scrolls down past the first screenful of plan attributes.

Sponsored Links

Alone among the sites, eHealthInsurance displays sponsored links to health plans. These links are prominent “above the fold” on the results page, listed before the best sellers.

eHealthInsurance explained that consumers do click on those links, which explains why plans are willing to pay for them, but also serves as a caution when thinking about choice architecture.

Consumer Management of Initial Results – Alternative Sorting and Filtering

Most of the sites want the consumer to see a range of plans in the initial results screen, and all offer ways for the consumer to change the display. All sites allow consumers to sort results using other plan attributes, such as quality of plan or deductible. Other options allow consumers to filter results (hide some plans) according to factors that are important to them. Most sites provide tabs indicating other display options along with the initial results. Two sites allow users to go through guided questions to help narrow the choices.

It is worth noting that these vital and consumer friendly features are not always used.

PBGH/CalPERS internal research has shown that 93% of the time the default choice architecture is accepted with no customization from the consumer. Similarly, more than 60% of users of the Checkbook site make their decisions without leaving the initial summary screen.

Alternate sorting options

Every site presents options so consumers can change the sort order of plans. Alternate sort options vary by site, but options often include plan type (HMO vs PPO), insurance carrier name, quality/ratings, or cost elements (such as premium or deductible). Across all of the sites reviewed, representatives noted that the most common sorting/filtering options applied by consumers (if not the default and if an available element) are: plans with your doctor, premium costs, and quality.

Filters

Sites also provide a range of filters that allow consumers to narrow the number of plans displayed to a more manageable number or one that better reflects criteria important to the consumer. CMS and Checkbook have options to show only plans that meet certain criteria such as monthly premium level (Low to High); and other narrowing questions such as Estimated Average Yearly Cost or Most You Can Pay. When filters are nested (more than one criterion can be applied at a time), they are more powerful than sort options in terms of engaging consumers and customizing the display to meet their needs.

PBGH/CalPERS provides a “Rate or Remove Plan” option on the search screen where a consumer can rate each plan as “Good Fit/So-So Fit/Poor Fit or Remove Plan.” This helps narrow and filter plans further.

Checkbook site representatives noted that they do not allow consumers to narrow the selection *before* they have seen initial results for all the available plans. This is because the site's testing has shown that some users would filter out plans—for example, high-deductible plans or plans that don't include a specific doctor—that are at least \$2,000 less expensive than the plans that are shown after the filter, and that many users would want to see these lower cost choices if they knew about them.

eHealthInsurance features a filter called "Help Me Choose" (4-5 screens worth of questions that will narrow down plans), which is a popular option for consumers. These questions include queries about the shopper's height, weight and prescription drug use, as well as queries about preferences with respect to insurance carrier, comprehensiveness of coverage and comfort levels regarding out-of-pocket spending.

Unlike other tools, Enroll UX 2014 uses an upfront filtering process (through the use of guided questions) and the consumer's initial results are narrowed down to a smaller number. When consumers see the final list, they have the option of reorganizing the categories of plan information to move a respective category higher up on the display. Users can also easily return

Figure 2. CMS Refine Search

The screenshot shows the 'Refine Your Search' section of the CMS website. It includes three main filter categories:

- Limit Your Monthly Premium:** A slider range from \$0 to \$128, with a current selection of \$75.
- Limit Your Annual Drug Deductible:** A slider range from \$0 to \$320, with a current selection of \$107.
- Select Drug Options:** A list of four checkboxes:
 - ☐ have NO restrictions for my drugs (applies only to plans with drug benefits)
 - ☐ have all my drugs on formulary (applies only to plans with drug benefits)
 - ☐ provide coverage in the gap (applies only to plans with drug benefits)
 - ☐ provide mail order pricing for drugs (applies only to plans with drug benefits)

to the guided questions in order to change their answers. Enroll UX 2014's design standards provide for consumer-directed sorting options, but they did not define what those sort options would be.

Table 4. Alternative Sorting and Filtering Options by Site

Site	Alternative Sorting and Filtering Options
PBGH/CalPERS	Sorts: Costs, Doctors, Plan Performance Ratings, Features, Services Filters: Rate or Remove Plan
CMS	Sorts: Lowest monthly premium, Overall plan rating, Plan name, Lowest estimated annual health and drug cost, Lowest health plan deductible, Lowest estimated annual retail drug cost, Lowest estimated annual mail order drug cost, Lowest annual drug deductible, Drug restrictions, Off formulary drugs, Coverage gap, Lowest remainder of the year retail costs, Lowest remainder of the year mail order costs Filters: Monthly premium, Drug deductible, Drug options, Plan ratings, Coverage options, Special needs plans, or Company.
eHealthInsurance	Sorts: Price, Deductible, Ratings, Company Filters: All Plans, Plans with Your Doctor, "Help Me Choose"
Checkbook	Sorts: Total Cost, Deductibles/Copays/Etc., Coverage Features, Vision/Dental/Hearing Benefits, Plan Flexibility, ¹² Plan Quality, Whether Preferred Doctors Are in Plan, Maximum Cost, Cost in High- and Low-Usage Years, and All Other Cost and Quality Measures Filters: Plan Type, Overall Quality Score, Estimated Average Yearly Cost, Most You Can Pay, Deductible, Yearly Premium
MA Health Connector	Sorts: Benefits Package, Monthly Cost, Annual Deductible, Annual OOP Maximum, Insurance Carrier Filters: Provider, Monthly Cost, Insurance Carrier
Enroll UX 2014	Sorts: To be determined by the site designer Filters: User can return to the upfront questions to change the way that plans were filtered.

¹² Plan Flexibility explains the various types of plans (HMO, etc) and how they affect consumers' ability to use the provider of their choice and to achieve additional savings.

Engagement Strategies

Most consumers dread shopping for health coverage.¹³ It is a difficult task involving complex information and is fraught with important implications for their family. All key informants told us that quickly engaging consumers and providing the right level of information – so they can complete their shopping exercise – was a high priority. Web-based tools must engage consumers and meet their needs if they are to be successful, especially if consumers have other options for shopping for coverage.

To engage consumers, most designers agree that the most important strategy is speed. Every site wants to get people to results (a list of health plans including some information about cost) as quickly as possible.

A key tradeoff that site architects must consider is how much consumer information to require upfront, before showing available health plans (“plan results”). In the individual insurance market, significant applicant detail is generally needed to generate an accurate premium quote—however, an option that

eHealthInsurance employs is to supply an estimated premium quickly and collect the detailed information later in the process. (Several of the tools we reviewed don’t require as much information because there is no or little medical underwriting, e.g., Massachusetts Connector, CMS,

PBGH/CalPERS, and the Checkbook tool for federal workers.) Enroll UX 2014 asks for more information upfront through a series of guided questions – although consumers are offered the option, at any time, to exit out of the questions and see which plans are available. Answering these questions and entering personal information takes more time than other tools. However, designers feel this additional time is helpful to consumers because it helps narrow the choices for

Figure 3. PBGH/CalPERS Utilization Questions

2. Medication Use

Choose the one category that best describes the prescription drug use you expect for next year. For a family, choose the category that best describes the family member who will probably need the most services. Prescription means a 30-day supply of the medication. For details see [Medication Use](#).

- ☐ Level 1 **No health problems or brief illness** requires about 2 prescriptions during the year.
- ☒ Level 2 **Medication for a moderate health problem** requires about 5-7 prescriptions during the year.
- ☐ Level 3 **Regular, ongoing medication needs** requires a regular, monthly prescription and occasionally additional prescriptions; about 14 prescriptions during the year.
- ☐ Level 4 **Multiple prescriptions used daily** requires more than 30 prescriptions during the year.

3. Medical Service Use

Choose the one category that best describes the medical service use you expect for the next year. For a family, choose the category that best describes the family member who will probably need the most services. For details see [Medical Services Use](#).

- ☐ Level 1 **No health problems or a well-controlled condition** requires 2 doctor office visits, including a regular check-up, and several lab tests during the year.
- ☒ Level 2 **Moderate health problem** requires regular doctor care to watch or control a problem; 5-6 doctor office visits and regular tests or treatments during the year.
- ☐ Level 3 **Significant health event or problem** requires monthly doctor office visits, outpatient treatment and a number of lab, x-ray or other services, like therapy, during the year.
- ☐ Level 4 **Serious and costly problem or condition** requires a hospital stay and considerable outpatient care for the problem (or for expected care like pregnancy); about 20 doctor office visits and a large number of tests or treatments during the year.

¹³ L. Quincy, *What’s Behind the Door: Consumers Difficulties Selecting Health Insurance*, Consumers Union, January 2012.

them to a more manageable set and may save the consumer time in the long run. Designers must carefully consider this tradeoff, since the evidence suggests two very different approaches.

Even in the absence of medical underwriting, each site asks consumers some initial questions to generate the first list of plan options. For example, a consumer in Massachusetts would get a list of plans based on their geographic area and family size as well as the preferred coverage level they entered.

Most stated that their goal was to get consumers to their initial plan selection page within seconds to a minute. Every site, however, asks the consumer to enter *some* information at the outset. MA Health Connector requires geographic information, some personal information (date of birth) and a few health status questions (such as, are you a smoker?). eHealthInsurance also asks for basic geographic and demographic information. PBGH/CalPERS and CMS require consumers to answer some short questions with radio buttons at the beginning of the process in order to predict utilization and customize results. In both cases it does not take long for the consumer to enter this information. On the CMS site, a consumer must complete four steps (with several questions within each step) regarding predicted utilization before getting to a results screen. The PBGH/CalPERS tool builds a consumer profile, by asking simple scale questions, such as: “Choose the one category [out of 5] that best describes the medical service use you expect for the next year. For a family, choose the category that best describes the family member who will probably need the most services.”

In all cases, the upfront questions are short and allow the consumer to proceed to the initial results quickly.

Enroll UX 2014 requires a higher level of consumer engagement upfront by asking a series of questions about the user, user preferences, and predicted utilization. These questions guide the user to explore what is important to them and is intended to filter plans down to the best fit. As consumers answer each question, the tool continues to narrow down plans with a goal of providing more narrowed down search results. However, at any time, a user could see all plans available to them (however, these are still displayed

Figure 4. Enroll UX 2014 Filter Questions

The screenshot displays the Enroll UX 2014 interface. At the top, a navigation bar includes the user's name "Gustav Herrmannson", links for "View Account (3)", "Sign Out", and "Saved", along with icons for a shopping cart (0 items), search, and help. Below the navigation bar, a sidebar on the left lists the steps: "Find a Plan", "Getting Started", "Find a plan for Penelope Herrmannson-Smith", "Find a plan for Beatrice Herrmannson", and "Checkout". The main content area shows a "View Plans" button and "38 Plans Found". The first question, under the heading "Health Care Providers", asks: "Is there a specific doctor or health care provider that you want included in the health plan for Penelope?" with an "Add Provider" button and "Skip" and "Save" options. The second question, under "Provider Visits", asks: "How many times do you expect Penelope to visit the doctor per year?". The third question, under "Prescriptions", asks: "Does Penelope have prescription medications that you want covered by the health plan?".

three at a time). Enroll UX 2014 believes that this model is more effective in helping consumers find appropriate plans by doing some of the work of narrowing and selecting for them.

It is important to note the difference in audience for sites and how this impacts engagement strategies and the level of consumer information that can be collected. On some sites, the consumer web-based tool is one of the primary methods for obtaining coverage (e.g., CMS, Enroll UX 2014). For captive audiences like these, more consumer data can be collected because the consumer has a strong incentive to go through the process.

Key Health Plan Attributes

In our review and discussions with tool representatives, we explored three coverage attributes a bit more deeply than others because they are known to be of key interest to consumers: costs, provider directories, and plan quality ratings.

Cost

A consistent body of research shows that consumers care deeply about costs, yet struggle to understand their out-of-pocket costs when confronted with “traditional” displays of health plan information.¹⁴ When faced with discrete health care cost information (like deductible, copays, and out-of-pocket limits), consumers have difficulty figuring out what the bottom line is for them. For this reason, we took a deeper look at how the health plan chooser tools displayed costs.

As discussed above, PBGH/CalPERS, Checkbook, CMS, and Enroll UX 2014 use health plan provisions and some user provided information to estimate overall out-of-pocket costs and present a total cost figure, along with the premium and other out-of-pocket components (see Table 2 above).¹⁵ These four sites go even further by making total estimated cost the default sort option. All three sites report that their internal testing shows that this total cost figure is very important or even most important to their enrollees.

¹⁴ L. Quincy. *What's Behind the Door: Consumers' Difficulties Selecting Health Plans*, Consumers Union, January 2012.

¹⁵ Note that these sites use different approaches to calculate total estimated out of pocket costs. PBGH/CalPERS derives its number from the user's predicted usage. For example, the user might choose "Medication for a moderate health problem requiring about 5-7 prescriptions during the year." Plan cost-sharing provisions would then be applied to that usage. Checkbook and CMS use datasets of medical usage to predict services for someone like the user, so that unexpected services are also included in the estimate. Both sites allow the user to also include some of their known costs for the following year, such as having a baby (Checkbook) or drug usage (CMS).

MA Connector displays costs in a more traditional form: monthly premium and discrete cost-sharing provisions. However, these plans are unique in the country. Plans sold through the Connector have been grouped into categories (Bronze/Silver/Gold) signifying the overall coverage level –

the "metal" level. In addition, the health plan cost-sharing features (annual deductible, annual out-of-pocket max, cost for doctor visit, generic Rx, emergency room, and hospital stay) have been standardized so that only one feature (monthly premium) varies between plans within a metal level. Hence, the task of comparing costs between plans is cognitively much easier to navigate and assess, compared to the traditional amount of plan variability.

Figure 5. MA Health Connector Standardized Cost Sharing Features

	Monthly Cost	Annual Deductible	Annual Out of Pocket Max.	Doctor Visit	Generic Rx	Emergency Room	Hospital Stay
Bronze Low Benefits Package 8 plans available Hide Plans About Bronze Low	as low as \$556	\$2,000 (ind.) \$4,000 (fam.)	\$5,000 (ind.) \$10,000 (fam.)	annual deductible, then \$25 copay	annual deductible, then \$15 copay	annual deductible, then \$100 copay	annual deductible, then 20% co-insurance
<input type="checkbox"/> CELTICARE	\$556.13	↑	↑	↑	↑	↑	↑
<input type="checkbox"/> BOSTON MEDICAL CENTER HealthVer Plan <small>Get more.</small>	\$636.37	↑	↑	↑	↑	↑	↑
<input type="checkbox"/> fallon community <small>SMALLER NETWORK</small>	\$694.00	↑	↑	↑	↑	↑	↑

eHealthInsurance also follows the industry standard, which is to show premium and the basic cost sharing features of plans – deductible, coinsurance, office visit copay. An important difference is that eHealthInsurance does not automatically display the health plan's out-of-pocket limit – a feature that helps consumers understand their overall exposure to cost-sharing. The only way to see this feature is to select a subset of plans for side-by-side comparisons. Regarding total cost, eHealthInsurance representatives note that predictive modeling is still in its infancy and may not be very accurate.

While not the industry standard at this time, all of the experts we interviewed believe that health insurance displays will move in the direction of total cost using predictive modeling. And under health reform, plan designs will become somewhat more standardized, which could enhance comparability across plans.¹⁶

Provider Directory

In surveys and consumer testing, consumers often want to know if their doctor(s) or hospital participates in the plan. Sometimes, if they don't have a regular physician, they want to know if

¹⁶ For example, by 2014 all private plans will be required to cover selected preventive services with no cost-sharing, annual and life-time dollar limits will be banned, and out-of-pocket limits will be capped with limit exceptions curtailed. For individual and small group products, the reforms go further. The scope of covered medical services will be standardized and plans will be categorized into coverage tiers. Unlike Massachusetts, the cost-sharing designs within a coverage tier may still vary significantly.

“good” doctors participate in the plan’s network. Many of our experts agreed that this is a key attribute of interest to consumers.

Additionally, consumers would like to find this information all in one place – they don’t want to have to go to multiple locations¹⁷ (such as to different individual plan sites) to find if their provider participates. In order to meet this consumer need, health plan chooser tools need an “integrated provider directory” – a comprehensive, searchable list of doctors who are available within the plans. Three of the sites we researched – Checkbook, MA Health Connector, and eHealthInsurance – have such directories.

Site representatives also noted that through analytic/web tracking software, they see that consumers spend a significant amount of time searching provider directories if an integrated provider director is not available. For example, a consumer may spend up to 4-5 minutes looking inside of directories, which accounts for a major portion of the total time they spend on the site.

Sites without integrated directories, such as PBGH/CalPERS, noted that one of the few negatives reported about its site is that consumers have to go into separate plan directories to get information about providers – they can’t get it

all in one place.

A few of our key informants explained that developing an integrated directory of providers is a difficult and daunting task. Provider information (such as which plans they currently take or address/contact information) changes rapidly and it is hard to keep such a directory up to date. A few site representatives (such as PBGH/CalPERS) reported that integrated provider data sets have been developed by third-party companies, but it is an added cost.

However, three sites – eHealthInsurance, Checkbook, and MA Health Connector – have overcome those challenges and provide

Figure 6. eHealthInsurance Provider Directory

aetna Managed Choice Open Access 5000
Plan Type: PPO Network: Managed Choice Open Access

ZIP: 74114 Distance: 10 miles

General Categories: No Preference

Provider's Name (optional)
Doctor's Last Name or Hospital's Name: COX First Name: JON

REFINE SEARCH FIND PROVIDERS >

1 PROVIDER FOUND Provider List Update : 05-03-2012
Sort by: Name | Distance Page 1 of 1

Jon P. Cox MD
Internal Medicine, Pr...
1919 South Wheel...
Tulsa, OK
(918)748-7630
PCP#: Not Necessary

Map data ©2012 Google

¹⁷ General usability guidelines for web sites instruct designers to make information accessible and provide it in one place without sending users off site. Sending users to different sites can be time intensive and confusing for less experienced users who may have trouble navigating back to the site. See research by

Nielson Norman Group, a leader in web usability research:
<http://www.useit.com/homepageusability/guidelines.html> and
<http://www.asktog.com/columns/007silodesign.html>

integrated directories with information on which plan each doctor participates in.

eHealthInsurance provides a robust and consumer-friendly integrated provider directory with a map to guide consumers to closest providers, as well as an option to filter plans according to whether a provider participates. Although eHealthInsurance could not provide specific “trade secrets” on how they developed this directory, they did share that relationships with carriers are the most important element to establishing an integrated directory. In their business model, one of the requirements to participate is that carriers must provide provider data. They note that it was challenging in the beginning to get carriers' cooperation and managing those relationships over time. However, now it is simply an expected part of carrier participation. Additionally, eHealthInsurance noted that they do have a proprietary technology that allows them to overcome issues in developing/maintaining the directory, such as lack of standardization of how provider's names show up in directories. They've created methods of data normalization to allow these to be seamlessly identified and presented.

MA Health Connector and Checkbook also provide an integrated directory; consumers can enter a provider name and easily find the plans in which the provider participates. MA Health Connector's provider search consists of a consumer entering the provider's first/last name. This brings up contact information about the provider as well as plans in which he/she participates. MA Health Connector has a “Seal of Approval” process for carriers, and part of the contract is that carriers have to provide up-to-date network information. The site hired an outside vendor – eHealthInsurance – to enter network data, clean it, normalize it, integrate it, and make it usable for consumers.

The Checkbook tool invites consumers to enter doctor information upfront and then displays – for each plan – whether or not the doctor participates in the network. Health plans participating in Checkbook's system are not required to provide their provider directories in electronic form so the integrated directory is built from publicly available information. For some plans, it is simply unknown as to whether the provider participates and the display distinguishes this result from cases where the provider is known to not be in the network.

The Checkbook tool also includes another feature in its all-plan provider directory: information on the quality of each doctor. For example, the feature indicates which doctors participate in NCQA and Bridges to Excellence Patient Centered Medical Home practices or have recognition for diabetes or heart care and which doctors get high ratings in Checkbook's extensive surveys of patients or Checkbook's surveys of doctors about their peers. This information is intended to help consumers who do not already have preferred physicians to identify good choices. This same information is also used in Checkbook's plan quality ratings, which take into account the percentage of a community's quality-recognized doctors whom the plan has recruited into its provider network.

Plan Quality Ratings

Consumers appreciate cognitive short-cuts such as summary measures about health plans. A “cognitive shortcut” does some of the work for the consumer, for example, rolling up discrete health plan quality attributes into an overall summary measure.

All of the sites use some kind of quality rating system to help consumers compare health plans. Several sites employ ratings derived from 3rd party customer rating surveys such as Consumer Assessment of Healthcare Providers and Systems (CAHPS) and National Committee for Quality Assurance (NCQA) clinical process ratings.¹⁸ Some sites display their own current members’ satisfaction ratings of plans.

Checkbook uses overall member satisfaction data derived from CAHPS survey results. The CAHPS survey asks consumers and patients to report on and evaluate their experiences with health care, provider availability, customer service, and other features of each plan. Checkbook distills the score down to a star rating number, which helps consumers easily rank the plans from best to worst. Checkbook reports that consumers both like and use this feature.

Consumers on Checkbook’s site are also able to personalize the quality ratings. They can see 16 measures of quality derived from CAHPS survey data, from NCQA clinical process measures (e.g., measures of diabetes care or heart care), from records of disputed claim rates, and from analysis of availability of quality-recognized providers in each plan, and they can weight these different dimensions based on what is important to them and thus get a personalized plan quality measure on a five-star scale for each plan.

The PBGH/CalPERS site provides information based on its own member health plan surveys. Their own research indicates that a small but significant number (just under 25%) of consumers say the customer survey information is an important part of making their plan choice. Consumers can drill down and get even more information about these ratings if they choose.

MA Health Connector uses NCQA Report Card ratings. The health plan choices available on the MA Health Connector site are all rated as four stars or higher on the NCQA scale which includes a report card for: Overall, Access and Services, Qualified Providers, Staying Healthy, Getting Better, and Living with Illness. Therefore, these ratings are not methods of comparison for consumers as much as “minimum criteria” for health plans to participate on the site.

¹⁸ The National Committee for Quality Assurance is a private, not-for-profit organization dedicated to improving health care quality. They are responsible for “developing quality standards and performance measures for a broad range of health care organizations.” <http://reportcard.ncqa.org/plan/external/About.aspx?Tab=AboutNcqa> The first CAHPS program was launched in October 1995 in response to “concerns about the lack of good information about the quality of health plans from the enrollees’ perspective.” For more: <https://www.cahps.ahrq.gov/About-CAHPS/CAHPS-Program.aspx>

eHealthInsurance uses consumer ratings from "experienced" members similar to how Amazon allows customers to rate products and see other consumer reviews and ratings. These ratings (from 0 to 5 stars) are a summary of all available reviews submitted in the last year from customers who have participated in a plan through eHealthInsurance. Customers are solicited for the ratings survey only after they have participated in a plan for one year, and they rate on the following criteria: Customer Service, Doctor Selection, and Benefit Coverage. eHealthInsurance chose to use customer ratings because their research found that consumers used to be more interested in what authorities thought was good, but now, consumers are more interested in hearing what other consumers have to say. It is important to note that these ratings are dependent on customers submitting reviews. Therefore, not all plans will have ratings and some may only have a few ratings.

The CMS site shows overall plan ratings derived from member surveys, information from clinicians, and results of Medicare monitoring activities. For plans covering health services, the overall score for quality of those services covers 36 different topics in 5 categories; for plans covering drug services, the overall score for quality of those services covers 17 different topics in 4 categories. These are distilled into one star rating score from 0 to 5 stars. Consumers are able to drill down to see the component ratings and specific measures that make up the overall ratings (such as "staying healthy," which is a component of health services).

In the Enroll UX 2014 model, the exchange designer can choose which quality ratings to load into the tool. The design standards demonstrate how the quality ratings can be presented and how users can interact with them.

Language and Design Elements

All sites noted they have tried to employ design elements and eliminate or simplify health insurance jargon to ensure the site is user friendly. Although a great deal of common health insurance jargon still exists, most sites have tried to simplify some terminology to be more consumer-centric and/or provide glossaries or roll-over definitions. Some of these are simple changes. For example, PBGH/CalPERS uses "Yearly" instead of "Annually" when referring to drug/premium costs. Checkbook also uses pronouns like "yours" when referring to "Total Yearly Costs for Families Like Yours" and consumer-centric terms like "most you could pay in a year," instead of insurance-centric terms like premiums and deductibles. eHealthInsurance also uses terms like "Office Visit," instead of less familiar terms like copay. These small changes make sites more approachable and usable to consumers.

Checkbook has also experimented with some pop-ups, videos, and additional text, to help refine understanding. In particular, they use video definitions to help clarify terminology. The most used, based on usage analytics research, is roll-over text explanations that appear when users hover over question mark symbols that appear next to words. While they noted there has been a surge

in recent years in audio-video explanations overall and that they are using more of these, they've only recently started using audio-only files, including a user-optional audio tutorial that will guide users through the site, and

are not sure how they will work. Checkbook says they are continuing to test and use audio-video explanations of key points and a user-optional audio tutorial that hand-holds the user through the choice process.

eHealthInsurance links important terms to text-based definitions to assist with consumer comprehension. In addition, they have employed

the use of short videos, but have found that they work best in big markets like San Francisco, Washington, DC, and Atlanta where people have access to faster internet speeds and work less well in smaller regional markets. eHealthInsurance presents icons of the types of insurance elements that are most often shopped on (prescription drugs, maternity, etc.) A person can visually see the icon and know if the element is represented in the plan. The most popular feature on the site is the "chat" feature that has been in use for the past 5 years. It is staffed nearly around the clock due to the high level of consumer engagement.

PBGH/CalPERS site includes both a FAQ and Glossary section that is easily accessible on their site. By moving toward a total cost presentation, they have attempted to keep people away from having to understand basic terms like "deductible" in their overall presentation of the information.

MA Health Connector also provides a rollover definition of terms. If a consumer hovers over a word, they will get a definition. They have attempted to simplify words, remove acronyms and industry terms, and write to a 5th grade reading level using internal expertise. The site also uses some audio elements including testimonials from existing customers. Some of the testimonials are from famous people (e.g., Boston Red Sox players) to "sell" the concept of having insurance. The site also features something called "My Wellness Track," which is a wellness tracking device to help consumers track their personal health information and learn more about health in general. Currently, these ancillary features are not used much, the belief being that most consumers are using the site to shop for a health plan and not to track health outcomes.

Figure 7. Checkbook Video Definition



Enroll UX 2014 extensively tested its site with consumers during the development process. Additionally, the design team used principles of user-centered design¹⁹ at each stage of development to ensure that the site was accessible to consumers. Elements that help simplify the user experience are: extensive use of graphics to show concepts to consumers, and ease of comparison through the 3-plan per page model. The highly graphical nature of the site (colors, graphs/bar charts, format of information, and a shopping cart) invites comparisons to retail sites such as amazon.com. Additionally, the site includes an inline chat tool that allows a consumer to interact with customer service at any time. It also includes other methods of consumer help, such as an easily accessible glossary and calculator (to assist consumers if they want to add or calculate costs).

In an effort to simplify language, the CMS site uses plain language and a helpful tone in communicating with beneficiaries. The main goal is consistency in how the site communicates. Within the team that maintains the Medicare Plan Finder Tool, there are several plain language advocates and CMS employees receive "plain language" training. In addition, the site uses both a glossary and Frequently Asked Questions (FAQ) sections. Areas denoted with a bracketed question mark are clickable and link to the glossary. While the average consumer does not use the FAQ section frequently, it is a feature that is often used by power users like SHIPs. The site also includes a video on the home page that provides an overview of the tool. The video has been very well received by consumers. Two other features that are currently in process include integrating online video tutorials for each of the five main steps of the tool. The goal is to take each step and chunk it into its own "lesson," for instance, showing a consumer how to enter their prescription drug. These online tutorials will then be publicized in an attempt to make them accessible to consumers. In addition, CMS is working to integrate the "Medicare and You" publication throughout the site and within the "Help" feature.

Interestingly, there is no consensus across sites of what simplified jargon is. Each site uses different terms to denote the same information (for example, some use "Insurance Carrier" while another uses "Insurance Company"). Definitions for terms – such as coinsurance or deductible – are also different across sites. Some terms are vague. For example, one site uses "Health Benefits" to denote variable costs for services under a plan. Another uses "Plan Flexibility" to denote the ability to use your provider and achieve cost savings. These terms point to a lack of standardization with respect to consumer-centered language describing key plan characteristics.

¹⁹ User-centered design is a multi-stage design process that not only requires designers to analyze and foresee how users are likely to use a product, but also to test the validity of their assumptions in real world tests with actual users.

Collecting Evidence

All sites interviewed noted that they do consumer testing and collect feedback through web tracking analysis of consumer usage (for example, Google analytics) and other types of feedback, such as short online surveys about the consumer's experience or emails to customer service. All sites use this feedback to make changes to their site, sometimes as often as a few times a year. Most sites conduct usability testing and/or focus groups testing prior to the initial site launch.

Of note, eHealthInsurance indicated they often conduct focus groups and gather small group input on the designs when they make changes. They can also pilot test different design changes in different zip codes (odd numbers will get one view, even numbers will get another view) to see how the different designs work when real people use them. They noted that actual users behave differently than those in focus groups. They use the data collected to see what works best in order to make constant improvements to the site.

In addition, some sites (Checkbook, PBGH/CalPERS, and CMS) use a combination of annual and exit surveys to collect consumer opinions on the site experience or on the plan experience. The feedback collected across the different sites seems to have some common themes such as how consumers want to see the information displayed (e.g., not by plan type) and their understanding of definitions and terms. Sites reported that they pay special attention to distinguishing between feedback on the site itself and feedback on consumers understanding their actual plan benefits.

Enroll UX 2014 used an extensive testing process as part of the tool development. They conducted initial field research to understand people's context and experience with health insurance. To conduct this qualitative research, they visited 18 consumers in their homes to ask about their experiences with health care insurance and what their personal situations are like. The design team then conducted iterative user evaluations of the tool (or aspects of the tool) using mockups. At some points they created paper prototypes and showed alternative concepts to consumers to identify which resonated with them. At other points, they showed actual electronic prototypes and asked consumer to "think aloud" as they used them in order to solicit their opinions and preferences. One important finding from Enroll UX 2014's research is that consumers expressed a desire to see more information in the default view (rather than numerous plans with limited details). The designers used this finding as the basis for a default sort and presentation that shows only three plans per page, but includes more information about each plan. They also selected a horizontal orientation to facilitate this type of display. It is important to note that the tool has not yet been tested in a "real world" setting.

Evidence demonstrates that cost is a key factor for consumers. In three cases, total estimated cost is used as the key method of sorting and presenting plans to consumers. Other sites also communicate and emphasize cost in different ways. At the same time, all sites offer information

beyond cost (such as quality ratings and provider information) to enhance consumers' ability to choose.

Next Steps for These Tools

All of the sites indicated that their site was evolving and they would continue to make changes to ensure the site is as usable as possible. Different sites had different priorities for next steps.

Checkbook indicated that next goals include trying to model more condition-specific costs to bring into the cost rankings to make cost- modeling "truer" for consumers. They are also interested in trying to show specific medical scenarios as a comparative tool to consumers. For instance, "If you expect to have a child, your coverage costs with this plan would be approximately X." They also indicated they would like to add more video to the site.

eHealthInsurance is interested in trying to add features that show the total cost of ownership of a policy and predictive cost modeling features. The priority is based on the belief that the next big step for consumers is to understand total cost and that for consumers to make the best possible decision on a plan, they need to predict utilization.

PBGH/CalPERS noted several next steps including putting together an integrated provider directory for all clients, adding more educational features, and integrating provider quality data.

MA Health Connector is currently working on the next generation of its web site. The next generation will likely include a robust decision support tool with a cost calculator, trusted advisor type scenarios to ask consumers about current health utilization for decision making purposes. This type of feature would help filter consumer choices to a few plans or to a benefits package level based on the information the consumer entered. In addition, they hope to add a cost calculator feature to help consumers understand total cost based on expected utilization. The cost calculator would move people toward plans that would offer the best value in terms of their own predicted utilization.

CMS noted that the next major iteration of the site will be to make it more task-based. Currently, the first page is a general or customized search for Medicare related health plans that takes information from the consumer. Consumers have to enter their zip code and then basic information about how they get their Medicare coverage, if they receive additional assistance, prescription drugs they take, and the pharmacies they use. The consumer feedback CMS has received indicates that the site works well for those who have experience with Medicare but less well for inexperienced consumers. Based on that finding, CMS is interested in changing the front page to start by asking a consumer what they want to do, such as find prescription drug coverage instead of first taking information from the consumer. This page will include quick link labels to create a compelling task-based entry point and help manage expectations of what users can do. This strategy will help meet the needs of consumers who don't have a lot of Medicare experience, but come to the website with a task in mind.

Enroll UX 2014 has just been released for states and exchange designers to consider. States can use the full design specifications or can choose functionalities to use/highlight.

Conclusions

Choice architecture is a powerful attribute of health plan chooser tools. It can activate individuals and help them make better decisions about health insurance. It can also profoundly influence the decision they end up making.

As this study shows, there is no one way to organize the context in which people make health plan decisions. While each site had notable elements that set it apart from others, there were a few common themes. Checkbook, PBGH/CalPERS, CMS, and Enroll UX 2014 each emphasized a total cost view of the data, to nudge consumers to consider both premium *and* out-of-pocket cost when making a purchasing decision. As the interviewees all agreed, when faced with discrete cost-sharing data, it is difficult for consumers to figure out what their out-of-pocket spending might be. Tool architects were also in agreement that ready access to an integrated provider directory was highly desired by consumers, if sometimes difficult to achieve on the ground.

Three tools branched out in new ways. MA Health Connector benefited from policies that standardized the discrete cost-sharing features of a health plan within broad coverage tiers. As such, comparative information about health plans within a tier could really focus on attributes other than out-of-pocket costs, such as premium and quality. eHealthInsurance is moving toward a social media model (such as Amazon or eBay) that helps match consumers to plans that might be of most interest to them based on popularity and customer reviews and also provides robust integrated provider directories. Enroll UX 2014 emphasizes upfront questions to help filter plans for the consumer. Additionally, though limiting the initial plans displayed, the tool allows users to compare myriad plan details without clicking off the initial results screen.

All key informants emphasized the importance of robust and ongoing feedback mechanisms to better shape site content and design. Web tracking/analytics, focus groups, user testing, and surveys are generally favored as tools to collect information from consumers.

At the same time, all choice architects we interviewed struggle with how to best convey the complex health insurance concepts in an easy and accessible way. Despite tremendous progress designing consumer friendly default choices sets, finding consumer friendly language to describe the discrete health plan provisions continues to be a challenge.

Purchasing coverage using web-based tools may become even more common when state-based “Exchanges” are implemented as part of the Affordable Care Act.²⁰ Organizations that wish to develop health plan chooser tools can take away specific guidance from the practices of the six sites reviewed in this study. Key findings include:

1. **Recognize the importance of choice architecture.** Choice architecture helps organize complex health care information and shapes consumer choice. Being conscious of how information can be managed and displayed is important for those responsible for designing such tools in the future. Consumers benefit from careful consideration of how to present, sort, order, and define health care choices. The strategies defined in this report can provide direction to future designers.
2. **It is critical to define the overall goal of the site upfront.** Every site has somewhat different overarching goals for the consumer experience as well as a guiding philosophy about “what matters most” to consumers. For some, it was total cost. For another, it was making the purchase relatable through popularity of plans. Each site must decide what it thinks matters most – and internal as well as external research about consumer behavior can help site designers make these decisions. Defining the overarching goal in turn shapes the choice architecture, which provides the structure or “bones” of the site.
3. **Special attention should be paid to the initial search results screen.** The initial results screen (which shows a set of plans to consumers) reflects the default choice architecture, or the key organizing principle of the site, and is probably the most important element of any site. Here, consumers find which plans are available to them and begin the task of deciding. This display of results immediately begins influencing the consumer’s purchasing decision. Designers must consider: How should the information be presented and organized? What other information should be provided? What alternative sorting or filtering options should be provided?
4. **Cost is a critical factor in health plan choice and should be carefully considered by site designers.** While their approaches varied, each key informant emphasized cost as a key element of consumer choice. Consumers readily understand their premium cost but they struggle to understand what they might have to pay out-of-pocket given the myriad

²⁰ As envisioned by the Affordable Care Act, an exchange is a consumer friendly, state-level “marketplace” where people can buy health insurance. In person assistance will be available but a significant number of consumers are expected to use a web-based shopping tool. Enrollment through exchanges will begin in late 2013, offering coverage that begins January 1, 2014. While coverage will still be sold “outside” the exchange, only coverage sold through the exchange will be eligible for the new premium tax credit subsidies that also begin in 2014.

health plan provisions that affect this estimate. Several sites provide some form of “total estimated costs” that a consumer will pay to help them with this calculation. Their testing shows that this is a very popular feature. These cost estimators provide a relative comparative measure but are not a “promise” of what consumers will pay. Still, some site representatives emphasized that, even as relative comparative estimates, the measures must be reliable for consumers to use and trust them.

5. **Presenting consolidated provider information is an important challenge.** One area of importance to consumers is easily determining whether their provider participates in the plan’s network. Three sites– eHealthInsurance, Checkbook, and MA Health Connector – provide an easy and efficient way for consumers to search for providers. All key informants noted that aggregating this information is difficult due to challenges in collecting/consolidating provider information from disparate sources and normalizing so that it can be used on the site. Carrier relationships and cooperation are critical to creating these directories.

Appendix A. Profiles of Health Plan Chooser Tools

Consumers' Checkbook Health Plan Comparison Tool

Year established: 2001 on web; 1979 in printed format

URL: www.checkbook.org/plancompare (demo)

Goal: Helping people choose health insurance plans for themselves and their families.

Target Consumers: Federal workers and retirees in the Federal Employees Health Benefits Program.²¹

Choice Architecture: People answer questions about age, family members to be covered, employment category, and other characteristics, and use the tool's all-plan provider directory to identify the doctors they want access to. The next screen is where most users make their plan

choice. It has a column with average yearly cost (premium plus actuarially estimated out-of-pocket) for people like the user (same age, family size, etc.) highlighted in yellow, and plans are ordered from lowest to highest cost. In addition, this summary screen has a column for the "most you can pay in a year" (maximum risk) based on plans' stated out-of-pocket limits and

reflecting any loopholes the website's researchers have identified. A column using a 5 star system rates plan quality based on multiple factors (member survey results, clinical measures, complaint rates, network breadth, etc.), and users can personalize the star scores by changing the weights given to these factors. A final column shows which plans the user's named doctor or doctors participate in. Hover-over text, audio, and/or video links explain all key words.

Consumers can sort plans by any column and can filter out specific plan types, plans with quality star scores below a user-chosen level, plans with average cost or maximum cost above a chosen level, plans with a deductible or premium above a chosen level, etc. They can select up to 4 plans to compare side-by-side in more detail or to print. From the summary screen, users can click on tabs to see other screens that show, for all plans, costs in unusually high- or low-use years and probability of having such years; details of deductibles/coinsurance/etc.; dental, hearing, vision, acupuncture, and other coverage details; and extensive advice, with links to ask questions.

Contact Information: Robert Krughoff, President, Consumers' Checkbook

Select to Compare	Plan Name	Plan Code	Plan Type	Estimated Average Yearly Cost for Families Like Yours	Most You Could Pay in a Year	Published Premium	Overall Quality Score - (Personalize Here)	Doctor Result (Click each name for more info)
<input type="checkbox"/>	APWU CDHP	475	CDHP	\$2,900	\$9,340	\$2,410	★★★★	Edge, Deborah
<input type="checkbox"/>	Aetna HealthFund HDHP	225	HDHP	\$2,900	\$8,190	\$2,470	★★★	Edge, Deborah
<input type="checkbox"/>	GEHA HDHP	342	HDHP	\$2,970	\$10,930	\$2,740	★★★★	Edge, Deborah
<input type="checkbox"/>	Kaiser-Std	E35	HMO	\$3,310	\$10,870	\$2,480	★★★★★	Unknown
<input type="checkbox"/>	Aetna HealthFund CDHP	222	CDHP	\$3,390	\$10,450	\$4,450	★★★★	Edge, Deborah
<input type="checkbox"/>	Mail Handlers HDHP	482	HDHP	\$3,900	\$10,480	\$3,140	★★	Edge, Deborah
<input type="checkbox"/>	CareFirst BlueChoice-HI	202	HMO	\$5,940	\$9,000	\$3,870	★★★	Edge, Deborah
<input type="checkbox"/>	Aetna Open Access-Basic	JN5	HMO	\$4,030	\$12,010	\$3,600	★★★★	Edge, Deborah
<input type="checkbox"/>	Kaiser-HI	E32	HMO	\$4,060	\$8,770	\$4,420	★★★★★	Unknown

²¹ Note: many federal agencies subscribe to this tool to make it available for all of their employees. Employees and retirees not in those agencies purchase access to the tool.

CMS – Medicare Plan Finder

Year established: Site redesigned and re-launched in 2010

URL: <https://www.medicare.gov/find-a-plan/questions/home.aspx>

Goal: Integrate two previous stand-alone tools so that beneficiaries (and other users) could go to one site/one tool to compare all the Medicare health and prescription drug plan options available in their area and make an informed choice about their complete healthcare coverage.

Target Consumers: Medicare beneficiaries and the entities that help them: caregivers, counselors, and Medicare customer service representatives.

Choice Architecture: Consumers are first asked a series of questions in four steps which are designed to gather contextual and utilization information. That information, in turn, is used to customize results.

Prior to seeing the initial sort results, consumers are given the opportunity to further filter results according to the following options: Limit your monthly premium, Limit your drug deductible, Select drug options, Select plan ratings, Coverage options, Special needs plans, Change health status, or Select plans by company.

Initial sort results are focused on estimated annual cost from lowest to highest. Consumers then have the opportunity to re-sort plans according to several options or compare plans side by side (overview, health plan benefits, drug costs and coverage, and plan ratings).

Once a plan is selected, the site guides the user through the four-step enrollment process.

Because the site is meant to meet the needs of very diverse audiences (beneficiaries as well as customer service representatives), the site includes a great deal of information. Paring down this information for inexperienced consumers while still providing the level of information needed for “expert” users (such as customer service representatives) is an ongoing goal of site developers.

Contact Information: William Trefzger, Director of Division of Website Strategy, Center for Medicare and Medicaid Services

The screenshot displays the Medicare Plan Finder interface. At the top, it shows 'Your Current Plan(s)' with details for 'Original Medicare (H0001-001-0)'. Below this, it lists 'Prescription Drug Plans' with a note that there are 30 plans in 74114 that match preferences. A 'Compare Plans' button is visible. The results are sorted by 'Lowest Estimated Annual Retail Drug Cost'. Two plans are shown: 'EnvisionRxPlus Silver (PDP) (S7694-023-0)' and 'Humana Walmart-Preferred Rx Plan (PDP) (S5884-144-0)'. Each plan has a table of details including Organization, Estimated Annual Drug Costs, Monthly Premium, Deductibles, Health Benefits, Drug Coverage, and Overall Plan Rating.

Your Current Plan(s)						
Original Medicare (H0001-001-0)						
Organization:	Estimated Annual Drug Costs:	Monthly Premium:	Deductibles: [?] and Drug Copay [?] / Coinsurance:	Health Benefits: [?]	Drug Coverage: [?] and Drug Restrictions: [?]	Estimated Annual Health and Drug Costs: [?]
Original Medicare (H0001-001-0)	Annual: \$4,977 Rest of 2012: \$2,903 Mail Order Annual: N/A Rest of 2012: N/A	\$0.00 Drug: N/A Health: \$0.00	Annual Drug Deductible: N/A Health Plan Deductible: Not Available Drug Copay/Coinsurance: N/A	Doctor Choice: Any Doctor Out of Pocket Spending Limit: Not Available	N/A	\$8,000 Includes \$4,977 for drug costs

Prescription Drug Plans						
Prescription Drug Plans offer only drug coverage (Part D). There are 30 plans in 74114 that match your preferences. View 10 View 20 View 50 View plan quality and performance ratings for all Prescription Drug Plans View Plan Medication Therapy Management (MTM) program eligibility information [?]						
Sort Results By: Lowest Estimated Annual Retail Drug Cost [v] Sort [v]						
EnvisionRxPlus Silver (PDP) (S7694-023-0)						
Organization: EnvisionRx Plus	Estimated Annual Drug Costs:	Monthly Premium:	Deductibles: [?] and Drug Copay [?] / Coinsurance:	Drug Coverage: [?] and Drug Restrictions: [?]	Overall Plan Rating: [?]	
EnvisionRxPlus Silver (PDP) (S7694-023-0)	Annual: \$0.00 Pharmacy Status: Network Annual: \$53 Rest of 2012: \$31 Mail Order Annual: N/A Rest of 2012: N/A	\$0.00 Drug: \$0.00 Health: N/A	Annual Drug Deductible: \$0 Health Plan Deductible: N/A Drug Copay/Coinsurance: \$1.10 - \$3.30	All Your Drugs on Formulary: Yes Drug Restrictions: No No Gap Coverage Lower Your Drug Costs	*** 2.5 out of 5 stars	Enroll
Humana Walmart-Preferred Rx Plan (PDP) (S5884-144-0)						
Organization: Humana Insurance Company	Estimated Annual Drug Costs:	Monthly Premium:	Deductibles: [?] and Drug Copay [?] / Coinsurance:	Drug Coverage: [?] and Drug Restrictions: [?]	Overall Plan Rating: [?]	
Humana Walmart-Preferred Rx Plan (PDP) (S5884-144-0)	Annual: \$0.00 Pharmacy Status: Network Annual: \$53 Rest of 2012: \$31 Mail Order Annual: \$18 Rest of 2012: \$13	\$0.00 Drug: \$0.00 Health: N/A	Annual Drug Deductible: \$0 Health Plan Deductible: N/A Drug Copay/Coinsurance: \$1.10 - \$3.30	All Your Drugs on Formulary: Yes Drug Restrictions: Yes No Gap Coverage Lower Your Drug Costs	*** 3 out of 5 stars	Enroll

eHealthInsurance

Year established: 2007

URL: <http://www.ehealthinsurance.com/>

Goal: To empower individuals, families, and small businesses by offering convenient access to affordable insurance plans and information to make the right choice in purchasing health insurance.

Target Consumers: Individuals, families, and small businesses

Choice Architecture: The site engages the consumer with a quick way to get the plan type options and cost – it aims for users to get plan choices within 10 seconds. After providing basic personal and contextual information, the site shows you plan quotes, compares different plans side by side, and allows you to apply for coverage online. The plans default by “Best Sellers,” or the most popular of available plans in a certain geographic area. The site’s internal research on consumer behavior has shown that consumers are most interested in what other people are buying. By listing plans according to best sellers, the site makes the purchase more “relatable” to consumers and follows a more social media-oriented model such as amazon.com. The site offers multiple ways to filter the insurance options – such as health care icons.

Plan Name	Plan Type	Deductible	Coinsurance	Office Visit	Price
Copey Select SM Value - 2500	Network	\$2,500	30%	\$35	\$164.51/mo*
Copey Select SM Value - 10000	Network	\$10,000	30%	\$35	\$93.55/mo*
Saver 80	Network	\$10,000	20%	Not Covered	\$75.43/mo*
Copey Select 70 - 5000	Network	\$5,000	30%	\$35	\$145.12/mo*

Consumer can choose optional views by selecting the tabs, All Plans, Plans with Your Doctor, or Help Me Choose. Other sort orders include Price, Deductible, Ratings, and by Company. The plans also include other add-on options like vision or dental along with the additional cost for those options.

The site also offers a 24/7 phone number and a live chat function that are very popular with consumers needing personal assistance.

Contact Information: Sam Gibbs, President, Exchange Technology Group, eHealthInsurance

Massachusetts Health Connector

Year established: 2007

URL: <https://www.mahealthconnector.org/portal/site/connector/>

Goal: Massachusetts Health Connector site has the goal of simplifying the health insurance shopping experience and providing consumers with an "apples to apples" comparison of health plan options.

Target Consumers: Residents of the state of Massachusetts purchasing health insurance on their own.

Choice Architecture: All plans are categorized into Bronze, Silver and Gold coverage levels and the site uses these categories as an initial filter before displaying results.

These designations help channel consumers into a level of payment and coverage with which they will be comfortable. Consumers still have the option to view all plans, yet even when all plans are listed, they are still grouped by type (bronze/high, bronze/low, silver/high, silver/low, etc), followed by cheapest monthly premium to highest monthly premium.

Massachusetts connector is unique in that all plans in a category (i.e., Bronze/high) have the same basic cost-sharing structure (i.e., the same annual deductible, out-of-pocket max, doctor visit, generic Rx, emergency room); therefore, the only variable is the monthly premium. This standardization reinforces the ability to compare "apples to apples."

Finally, consumers can check the plans they want to see in more detail. The site brings up those choices in a side-by-side comparison format on a separate page. Once a consumer has selected certain plans, the site provides detailed information related to that plan (all costs, broken down in tabular form).

Contact Information: Scott Devonshire, Chief Information Officer for the Commonwealth Health Insurance Connector Authority ("Health Connector")

Sort plans by Benefits package

Show Plans. Then choose up to 3 to compare. Click **Continue** at bottom.

	Monthly Cost	Annual Deductible	Annual Out of Pocket Max.	Doctor Visit	Generic Rx	Emergency Room	Hospital Stay
Bronze Low Benefits Package 8 plans available Hide Plans About Bronze Low	as low as \$556	\$2,000 (ind.) \$4,000 (fam.)	\$5,000 (ind.) \$10,000 (fam.)	annual deductible, then \$25 copay	annual deductible, then \$15 copay	annual deductible, then \$100 copay	annual deductible, then 20% co-insurance
CELTICARE	\$556.13	↑	↑	↑	↑	↑	↑
Healthier Plan	\$636.37	↑	↑	↑	↑	↑	↑
falcon community	\$694.00	↑	↑	↑	↑	↑	↑
Neighborhood Health Plan	\$742.26	↑	↑	↑	↑	↑	↑
MASSACHUSETTS	\$765.04	↑	↑	↑	↑	↑	↑
falcon community	\$788.00	↑	↑	↑	↑	↑	↑
Harvard Pilgrim Health Care	\$813.79	↑	↑	↑	↑	↑	↑
TUFTS Health Plan	\$814.63	↑	↑	↑	↑	↑	↑
Bronze Medium Benefits Package 8 plans available Show Plans About Bronze Medium	as low as \$613	\$2,000 (ind.) \$4,000 (fam.)	\$5,000 (ind.) \$10,000 (fam.)	\$30 copay	\$10 copay	annual deductible, then \$150 copay	annual deductible, then \$500 copay
Bronze High Benefits Package 8 plans available Show Plans About Bronze High	as low as \$650	\$250 (ind.) \$500 (fam.)	\$5,000 (ind.) \$10,000 (fam.)	\$25 copay	\$15 copay	\$150 copay	annual deductible, then 35% co-insurance

PBGH/CaIPERS

Year established: 2003

URL: <https://CalPERS2012.chooser2.pbgh.org/Default.aspx>

Goal: The California Public Employees Retirement System (PBGH/CaIPERS) site has the goal of offering a decision support tool for employees and retirees during open enrollment or for new hires.

Target Consumers: State of California employees and retirees.

Choice Architecture: The site asks consumers to enter personal information about themselves as well as how much they expect to use prescription medication and medical services. They can also enter information about plan features that are important and their top 5 covered services. Consumers see their first page of results in just over a minute. Plans are presented according to cost because testing shows that this is the number one concern for their consumers – specifically premium and overall out-of-pocket costs for services (as opposed to individual cost of services at time of care). Initial results also show the sum of these items: total yearly cost. Consumers can also compare based on doctors, plan performance ratings, features, and services. They can also use the “Quick Compare” option to see all the plans compared on all of the comparison indicators, or they can choose to view those separately (like just on cost or plan performance ratings). Approximately 2/3 of consumers report getting all or most of the information they need to make a decision on the “Quick Compare” page. Testing shows that 93% of the time the default sorting and ordering is accepted with no customization from the consumer.

The tool is consciously designed to focus consumers on elements that matter. For instance, usability testing found that “cost at time of care” was important to consumers so consumers see that indicator as part of the initial display of results.

The site also employs Frequently Asked Questions, glossary, and survey features.

Contact: Ted vonGlahn, Senior Director, Pacific Business Group on Health

The screenshot shows the 'HEALTH PLAN CHOOSER' interface. It includes a navigation bar with links like '< Return to your profile', 'Costs >', 'Doctors >', 'Plan Performance Ratings >', 'Features >', 'Services >', and 'Results'. The main content area is titled 'Estimated Costs' and contains a table of health plans. The table has columns for Plan, Your Actual Premium Contribution (Per Month), Your Actual Premium Contribution (Yearly), Your Estimated Cost at Time of Service (Yearly), Your Estimated Total Cost (Yearly), and Rate or Remove Plan. The plans listed are PERS Select, Blue Shield Net/Value Plan HMO, Kaiser Permanente, PERS Choice, Blue Shield Access+ HMO & EPO, and PERSCare. To the right of the table is a 'QuickCompare' button and a 'Next >' button. Below the table is a 'Next: Doctors' button. On the far right, there is a 'Frequently Asked Questions' section with two questions and links to 'See all FAQs'.

Plan	Your Actual Premium Contribution (Per Month)	Your Actual Premium Contribution (Yearly)	Your Estimated Cost at Time of Service (Yearly)	Your Estimated Total Cost (Yearly)	Rate or Remove Plan	
PERS Select	\$500.00	\$426.24	\$5,114.88	\$1,161.00	\$6,275.88	Not Rated
Blue Shield Net/Value Plan HMO	\$500.00	\$571.46	\$6,857.52	\$160.00	\$7,017.52	Not Rated
Kaiser Permanente	\$500.00	\$618.22	\$7,418.64	\$160.00	\$7,578.64	Not Rated
PERS Choice	\$500.00	\$591.12	\$7,093.44	\$1,161.00	\$8,254.44	Not Rated
Blue Shield Access+ HMO & EPO	\$500.00	\$745.80	\$8,949.60	\$160.00	\$9,109.60	Not Rated
PERSCare	\$500.00	\$1,455.96	\$17,471.52	\$1,161.00	\$18,632.52	Not Rated

Enroll User Experience (UX) 2014

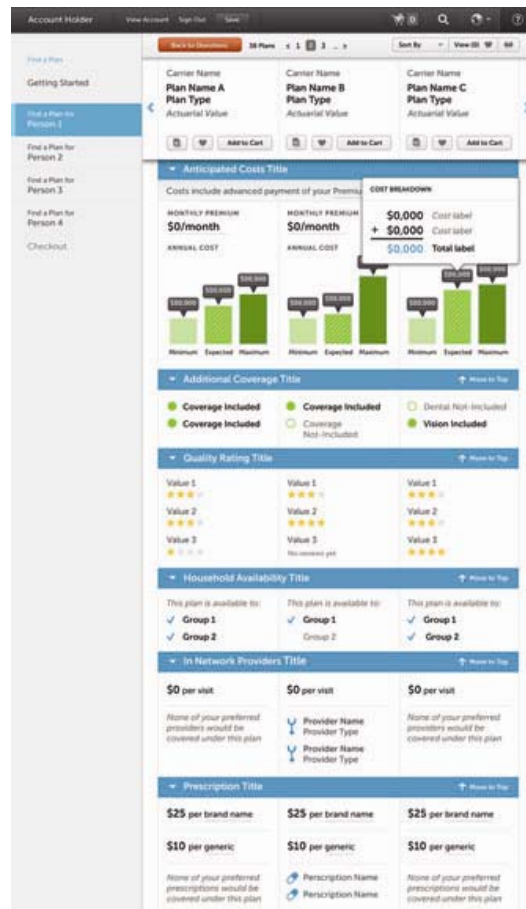
Year established: Not yet operational but intended to guide design for Exchange use in 2014.

URL: <http://www.ux2014.org/>

Goal: To provide federal and state governments with a human-centered user experience (UX) design for health insurance exchanges.

Target Consumers: Consumers purchasing in health insurance exchanges.

Choice Architecture: The site takes consumers through a series of questions that collects personal information, health plan preferences, and predicted utilization. These questions then serve to filter plans down to a more manageable number for the consumer to review. Plans are sorted according to cost first – specifically combined monthly premium and annual anticipated costs (minimum, expected, and maximum). Other comparative elements on this initial screen include plan type, additional coverage, quality rating, drug coverage, and household availability (or which of selected household members qualify for the plan). Enroll



UX 2014 found in its extensive user testing that consumers preferred the three-plan per screen display over a table that had more health plans but less information about each one. Consumers prefer having few plan options with more information displayed rather than more options with less information. This display also encourages users to compare plans initially rather than having to add them to a separate container to compare.

When using the tool, consumers can search for plans for different members of a household (according to their own unique personal characteristics and preferences), and the user can easily toggle between the plans displayed for each of the members. Through the “household availability” category, the consumer can see if a plan listed is also available to other household members.

The site uses a rich graphical display and is designed using a retail model in which plans selected are placed into a shopping cart and consumers can “check out” by applying for the selected plans.

Contact Information: Christian Palino, Senior Project Leader and Principal Designer, IDEO

Appendix B. Moderator's Interview Guide

This project used a standard script for interviews. It included the following questions:

1. Briefly, tell us about your role with the health plan chooser tool
2. When did your site launch?
3. What are the overarching goals of your health plan chooser tool?
4. Do you have feedback tools that tell what design elements on your site (or what aspects of a plan) are most used by consumers in selecting a health plan?
5. What kind of feedback – positive and negative – have you gotten from consumers?
6. How often do you make changes to the site based on feedback?
7. What is your strategy to engage consumers and keep them on your site?
8. How much time does it take consumers to get to their first results (a set of health plan choices)?
9. Do you know at what point consumers select a plan?
10. How much of the site have they used, prior to making a health plan selection?
11. What specific design elements (such as visual or audio elements) does your site use to help consumers and to engage consumers? Which of these are most used by consumers? Which do you think are most effective for consumers?
12. What strategies (if any) did you use to make the health insurance jargon easier for consumers to understand?
13. When consumers see the first screen of health plan results – do they see all possible choices or are they already filtered in some way?
14. What is the default sort order for the initial set of results that a consumer gets?
15. In the default set of results, what health plan data elements does the consumer see?
16. Limiting options can be helpful for consumers so they are not overwhelmed by choices, what options do you give consumers to narrow down the set of health plan options?

17. Does your site use summary measures like star rating systems?
18. Briefly, how are these measures derived?
19. Do you always provide “drill down” capability when summary measures are displayed? Why or why not? What portion of consumers make use of this drill down capability?
20. Things like star ratings are often called “cognitive shortcuts” in that they do some of the work for the consumer. Are there other frequently used short-cuts in your tool that you’d like to bring to our attention?
21. How does your site help consumers understand cost?
22. Can visitors to the site filter the health plan choices by whether their doctor or hospital participates in the network?
23. Does the site help a visitor identify a quality provider if they don’t already have a preferred physician?
24. Do you have any rubric or method for determining whether people enroll in “appropriate” plans?
25. If you didn’t face data or resource constraints, what would you do differently?
26. Sometimes consumers should consider factors that they are inclined to overlook. Does your site have data elements that would fall into this category?
27. It seems like there is a fine balance between giving consumers full choice and narrowing the choices so consumers are not overwhelmed. How do you manage this balance in your tool?
28. In your experience or research, can you tell if consumers are able to distinguish between a rigorously derived measure and one that is “less rigorously” derived measure?
29. What haven’t we asked you that we should have?