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## SUPPORTING STATEMENT MEDICARE PLAN FINDER EXPERIMENT

## Introduction

The Centers for Medicare & Medicaid Services (CMS) request a one year clearance from the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 for the Medicare Plan Finder Experiment) Survey. This request for approval takes the OMB control number XXXX-XXXX.

# A. Justification

#### A1. Circumstances Making the Collection of Information Necessary

The mission of the Centers for Medicare & Medicaid Services (CMS) is to ensure the provision of health care to its beneficiaries. Recent legislative mandates, including the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, require CMS to provide information to beneficiaries about the quality of the Medicare health and prescription drug plans. To provide that information, all Medicare health and prescription drug plans with an enrollment of 600 or more are required to collect and report data following protocols that CMS has established. CMS has also contracted with various organizations to develop valid and reliable quality measures and to consider how best to report those measures to beneficiaries.

A primary vehicle for reporting quality information to beneficiaries is the Medicare Plan Finder, a section of the Medicare website that is intended to help beneficiaries make informed choices among health and prescription drug plans. The Medicare Plan Finder tool contains a great deal of potentially useful information, including extensive data on the fixed and variable costs associated with being enrolled in plans, the benefits and coverage that plans offer, and the quality of service that plans provide, as revealed by member experience data, disenrollment statistics, and a variety of measures of clinical processes and outcomes.

One of the key challenges that CMS has faced is how to engage beneficiaries with the quality information provided in the Medicare Plan Finder. Among the possible reasons that beneficiaries may fail to engage with this information are first, that several steps are required for a user of the Medicare Plan Finder to gain access to comparative plan information, and second that once the user does reach a data display, the amount of information presented is voluminous, and can seem overwhelming.

This study will use an experimental design to assess the effectiveness of two potential enhancements to the Medicare Plan Finder tool that may help address these barriers to engagement and use of quality information.

#### Overview

The purpose of this experiment is to test the effects of two prospective enhancements to the Medicare Plan Finder (MPF) website. We refer to these prospective enhancements as the "Quick Links" home page and an "enhanced data display."

The Quick Links home page, which was developed as an alternative to the current MPF home page, is intended to provide a quick overview of all of the most common uses of MPF data, a succinct explanation of each of those uses, and a direct conduit to comparative data on plans. The enhanced data display is designed as a more consumer-friendly alternative to the current data display. In particular, the enhanced data display is meant to make plan data more easily evaluable and operable, and to draw greater attention to plan quality data Each of these enhancements is described in greater detail below.

Each of these prospective enhancements will be tested in the context of an experiment conducted with members of a national online panel. Participants in this experiment will be randomly assigned to view either pages that are currently on the MPF website or enhanced versions of these pages. Independently of this assignment to different versions, they will also be randomly assigned to one of two tasks (browsing among plans available in an area or comparing "their" plan to other plans) and to viewing one of two types of plans (standalone prescription drug plans or Medicare plans with drug coverage). Participants will use the MPF tool to browse or compare plans as instructed. They will then complete a questionnaire that measures their understanding of quality measures and their experience using the MPF tool. We will assess the enhancements by comparing process and outcome measures of participants' use of the web site with versus without the enhancements.

#### **Quick Links Home Page**

Before discussing in detail the design of the Quick Links home page, it is necessary to describe the current MPF home page (to which it is meant as an alternative) and the steps necessary to get from the current home page to a display containing comparative plan data. The current MPF home page is dominated by two boxes-stacked one atop of the other-that occupy about threequarters of the screen (see Attachment A). The top box presents the option of a "general" plan search and the bottom box presents the option of a "personalized" plan search. The main distinction between these two search modes is that the personalized search requires the user to enter his or her name, birthdate, Medicare number, ZIP code, and date of enrollment in Medicare. The advantage of a personalized search is that it automatically retrieves information (to the extent it is available in the Medicare database) about a beneficiary's current health plan, health status, current prescription drugs, and other information that enhance the accuracy of estimates of the costs and benefits of plans to be considered. In conducting a general search, users are required to choose their current plan from a list of plans (Step 1 in a 4-step process) and to indicate (or not) one-by-one the prescription drugs that they currently take (Step 2) and the pharmacy or pharmacies at which they fill their prescriptions (Step 3; each of the latter two steps may be skipped, in which case cost estimates are based on averages). The option to enter prescription drugs and preferred pharmacy information is still provided to beneficiaries who choose a personalized search, but only as a way to update their drug list or selected pharmacy or pharmacies. Step 4 of the 4-step process to getting to plan data allows users the option to "refine your plan results (see Attachment B)." This step involves the use of filters or check boxes to

narrow or expand the list of plans that are available in the beneficiary's area. A likely disadvantage of this approach is that, at this point in their search, users are not aware of the meaning of attributes on which they are filtering or of the benefits of applying filters. Moreover, all of the filters on the "refine your results page" are closed by default, so users are not aware of the possible values of the plan attributes. When a user is finished filtering, he or she clicks a button at the bottom of the filtering feature to "continue to plan results." It is at this point that the user is shown a data display. On the MPF home page, in addition to the options to conduct a general or personalized search is a box of additional tools that allow users to "Find and Compare Medigap Policies," "Search by Plan Name or ID," "Enroll Now," "Find formularies in your area" or access a "Medicare Complaint Form (see Attachment A)." None of these functions is explained on the page and whether and how these functions are distinct from the general and personalized search is not clear.

The style of the Quick Links page mimics the style of the current MPF home page (see Attachment C for an image of the Quick Links page, see Attachment A for an image of the current MPF home page). Listed prominently in the center of the Quick Links page are five pathways related to the MPF. No toolbox is presented on the side of the Quick Links page, as all of the functions provided by the toolbox are incorporated in the list of pathways. The pathways include: (1) see what plans are available in my area, (2) compare my current plan to other plans in my area, (3) find a plan that covers my drugs, (4) enroll in a plan, and (5) find and compare Medigap (supplement) policies. Clicking on any of these pathway names highlights the pathway and brings up a callout box that explains the purpose of the pathway and shows the initial steps required to follow it. The callout box appears to the right of the list of pathways and does not obscure the list so that choosing another pathway requires nothing more than clicking on another pathway name (see Attachment C). Experimental participants who are shown the Quick Links page will be able to click on any pathway and view its callout box; however, the focus of the experiment is on the initial two pathways, "See What Plans Are Available in My Area" and "Compare My Current Plan to Other Plans in My Area."

The callout box that appears when users click the pathway, "See What Plans Are Available in My Area," provides a simple explanation of the purpose served by the pathway: "Browse a list of health and prescription drug plans that are available to people in your area. Use filters to narrow the list by cost and coverage (see Attachment C)." Beneath this statement is an action field in which users are required to enter their ZIP code to indicate the area in which they want to search, followed by a button that users must click (Find Plans) to begin the process of finding available plans. The subsequent three steps mimic ones that appear on the MPF site as it is currently configured (see above). These steps require users to indicate any prescription drugs they currently take (as a way to customize cost estimates), select their preferred pharmacy from a list of pharmacies in their area (also a way to customize cost estimates), and then narrow their list of plan results by specifying (or not) the types of plans they would like to see. Importantly, this final step (narrowing the list of plan results) will only be seen by participants in conditions that do not include the enhanced data display. For participants in conditions that include the enhanced data display, the option to narrow search results will be incorporated into the data display page (this is explained fully in the subsequent section).

The callout box that appears when users click the pathway, "Compare My Current plan to Other Plans in My Area," begins with a statement of the primary purpose of the pathway: "See how the plan in which you are currently enrolled compares with other plans in your area on cost, benefits, and quality (see Attachment D)." Beneath this statement is an action field in which users are required to enter their ZIP code to indicate the area in which they would like to search. Users are also presented with the option (via radio buttons) to either enter their Medicare information (member ID number, date of birth, and other details) on a secured page (a personalized search, see above) or to select their current plan manually from a list (a general search, see above). Because of the advantages to the user of a personalized search, i.e., in requiring fewer steps to get to the plan data and generating more accurate estimates, we have made this the default option. In either case (personalized or general search), users are eventually given the option of narrowing their list of plan results by specifying (or not) the types of plans they would like to see (see above). Once again, this final step (narrowing the list of plan results) will only be seen by participants in conditions that do not include the enhanced data display. For participants in conditions that include the enhanced data display, the option to narrow search results will be incorporated into the data display page (see subsequent section).

#### **Enhanced Data Display**

The enhanced data display is shown in Attachment E. As explained in the Overview, the main goals of the enhanced data display are to make plan data more easily evaluable and operable (i.e., easier to manipulate based on one's preferences), and to draw greater attention to plan quality data.

Two key features of the enhanced data display distinguish it from the data display on the current MPF site, which is shown in Attachment F. First, the enhanced display is designed so that only essential information appears in the cells of the display (though all of the plan attributes represented in the current MPF display are also represented in the enhanced display). Some of the information in the cells of the original display has been moved into the column headers of the enhanced display. Other information has been omitted entirely. Another way in which we have simplified the amount of information in a single cell is by providing information on only a one variable per column. Some of the data columns in the current MPF data display provide information on multiple plan attributes, which contributes to the overall crowded look of the display. A second distinguishing feature of the enhanced data display is that it includes a faceted filtering feature that allows users to see information about the distribution of values for each of the plan attributes and allows them to shift the content of the data display according to their preferences. Filters are presented for plan type, monthly premium, overall plan rating, and other plan features. What filters are shown will depend on the types of plans that a user chooses to view. Three filters will always be present and "open" by default: plan type, monthly premium, and overall plan rating. This is meant to call attention to the plan ratings. Use of the filters is explained briefly at the top of the data display along with other instructions that largely replicate ones presented on the current MPF plan results page. Other features of the enhanced display that distinguish it from the current MPF data display include (a) a more prominent feature to select plans for comparison, (b) a plan sorting feature that is more optimally located on the page (i.e., at the top of the table rather than embedded in the middle of it), (c) a clearer indication of plan type (above the plan name), (d) labels for the number of stars and the indicator of low plan performance in the overall plan quality column, and (e) a link through which a user can view

additional details about any one plan. Finally, the enhanced data display includes an option to collapse or expand the table width-wise so that fewer or more plan attributes are shown. By default, the collapsed view will be shown. In this view, some of the details of plan coverage and cost are hidden so that consumers can more quickly scan the table and get a sense for the available plans. The expanded view (See Attachment G) was included as an option mainly to accommodate the needs of CMS call-in center representatives and SHIPs counselors who prefer to have in-depth information about plans available in a single table. Their experience with plan details and the CMS website prevents them from being overwhelmed by so many details.

#### **Experimental Design**

Participants in our experiment will be randomly assigned to one of sixteen conditions in a 2 (Quick Links page: yes, no) x 2 (enhanced data display: yes, no) x 2 (plan type: MAPD, PDP) x 2 (assigned task: browse plans in your area, compare your plan to others) fully factorial design. With 600 total participants, this means that 37-38 participants will be assigned to each condition. The sixteen conditions of our experiment are summarized in Exhibit 1 below.

With this design, we will be able to test the effect of the Quick Links page on each of our outcomes by comparing the responses of participants in Conditions 1-8 (n = 300) with those of participants in Conditions 9-16 (n = 300). We will also be able to test the effects of the enhanced data display on each of our outcomes by comparing the responses of participants in Conditions 1-4 and 9-12 (n = 300) with those of participants in Conditions 5-8 and 13-16 (n = 300). This design will also allow us to test the synergistic effect of the quick links page and the enhanced data display by testing for an interaction between these two variables. Because the enhanced data display incorporates the filtering and sorting step that is currently a part of the process of getting to plan results, it not only has the (intended) effect of making the sorting and filtering process more transparent but also allows participants to get to the plan data more quickly. Given that the main purpose of the quick links display is likewise to provide a more direct route to the plan data, having these two features in place may have effects on consumer experience and decision-making that are multiplicative rather than additive (i.e., an interactive effect).

Another important question that we will be able to address with this design is whether the enhanced data display works as well (i.e., produces a similar net benefit beyond the nonenhanced display) for consumers comparing Medicare Advantage plans with drug coverage (MAPD) as it does for consumers comparing standalone prescription drug plans (PDPs). As MAPD plans are significantly more complex in the benefits that they provide (and thus require a more elaborate data display), it is important to determine whether an enhancement benefits consumers in understanding a data display that portrays MAPD plans. We will address this question by testing for a 2-way interaction between the type of data display participants see and the type of plans that they are assigned to compare. We will also be able to test whether any effects of the quick links page on user experience and decision-making generalizes beyond a single task by testing for a 2-way interaction between the quick links page and the task to which participants are assigned (i.e., browse plans in your area or compare your current plan to other plans in your area). Finally, we will be able to test whether the impact of either of our enhancements is moderated by patient activation, level of numeracy, past experience with choosing a Medicare plan, using the Internet to search for health information, or seeing reports on health care quality.

Condition	Quick	Enhanced	Plan Type	Assigned Task
	Links Page	Data		
		Display		
1	Yes	Yes	MAPD	Browse plans in your area
2	Yes	Yes	MAPD	Compare your plan to others
3	Yes	Yes	PDP	Browse plans in your area
4	Yes	Yes	PDP	Compare your plan to others
5	Yes	No	MAPD	Browse plans in your area
6	Yes	No	MAPD	Compare your plan to others
7	Yes	No	PDP	Browse plans in your area
8	Yes	No	PDP	Compare your plan to others
9	No	Yes	MAPD	Browse plans in your area
10	No	Yes	MAPD	Compare your plan to others
11	No	Yes	PDP	Browse plans in your area
12	No	Yes	PDP	Compare your plan to others
13	No	No	MAPD	Browse plans in your area
14	No	No	MAPD	Compare your plan to others
15	No	No	PDP	Browse plans in your area
16	No	No	PDP	Compare your plan to others

**Exhibit 1: Overview of Experimental Design** 

#### **Procedures**

Participants will begin by completing a brief pre-exposure survey (see Attachment H) in which they will report on prior experience choosing a Medicare health plan, prior exposure to comparative quality information on health plans, doctors, or hospitals, use of the internet to seek health information, health status and health care utilization, and they will complete a scale measuring patient activation (see Measures section below for more detail). They will then be given a set of instructions for the plan choice task that follows (see below). After clicking a button to indicate that they have read and understand these instructions, participants will be directed from the Knowledge Networks website to a fictitious website, the Medicare Plan Locator, maintained on RAND's web server. On this website, they will be asked to compare a set of plans and make a hypothetical choice for themselves. After choosing a plan, participants will be directed back to the Knowledge Networks website where they will complete a post-exposure survey (see Attachments I-P) in which they will report on their experience with and reactions to the Medicare Plan Finder and will answer a few questions designed to assess numeracy (see Measures section below).

#### Instructions to Participants

All participants will be told that the purpose of the study is to evaluate a new web tool, called the Medicare Plan Locator, which is being developed for Medicare beneficiaries who are looking to select a health or prescription drug plan. Participants will be told further that their task is to roleplay a Medicare beneficiary making this type of choice. Half of participants will be told to imagine that they are a beneficiary who is searching for a Medicare prescription drug plan (i.e., a PDP; Conditions 3, 4, 7, 8, 11, 12, 15, and 16); the other half will be told to imagine that they are a beneficiary who is searching for a Medicare health plan with drug coverage (i.e., an MAPD plan; Conditions 1, 2, 5, 6, 9, 10, 13, and 14). Furthermore, half of each of these subsets will be told to imagine that they are not currently enrolled in a PDP/MAPD but looking to enroll in one for the first time. These participants will be told that their task is to "browse plans in their area" and choose a plan that seems to get them the best value for their money (not necessarily to minimize costs). Alternately, participants will be told to imagine that they are currently enrolled in a plan and that they are considering switching to a new plan that gives them better value for their money. These participants will be told that their task is to "compare their current plan to other options available in their area."

Participants told to browse PDP or MAPD plans available in their area (Conditions 1, 3, 5, 7, 9, 11, 13, and 15) will be given a zip code, told that they take two specific drugs and that they do not have a pharmacy preference. This information, which we need to standardize across participants, will be necessary in completing the multi-step process of getting to the data. Participants who see the Quick Links page (Conditions 1, 3, 5, and 7) will presumably click the link to "browse plans available in your area." Doing so will provide them with the option of conducting a general or personalized search (they will be told to choose a general search). After entering the zip code provided, these participants will then be given the option of entering drug and pharmacy information (the latter of which they will decline) and then they will be taken either to the refine your results page (Conditions 5 and 7) or to the enhanced data display (Conditions 1 and 3, from which they can refine their results). Participants who do not see the Quick Links page (Conditions 2, 4, 6, and 8) will navigate a replica of the current MPF home page and go through the same steps as participants in the Quick Links condition (plus the additional step of indicating that they are not currently enrolled in a plan at Step 1).

Participants told to compare their current PDP or MAPD plan with other options available in their area (Conditions 2, 4, 6, 8, 10, 12, 14, and 16) will be given a zip code, told that they belong to a specific plan, take two specific drugs, and that they have no pharmacy preference. Participants who see the Quick Links page (Conditions 2, 4, 6, and 8) will presumably choose the option to "compare my current plan to other plans in my area). They will then be required to find their assigned plan in a list of fictitious plan names, after which they will enter their drugs, decline to enter pharmacy information, and be taken either to the refine your results page (Conditions 6 and 8) or to the enhanced data display (Conditions 2 and 4, from which they can refine their results).

#### Plan Data

Participants in the MAPD conditions will be provided with data on 20 plans; participants in the PDP conditions will be provided with data on 30 plans. Respectively, these numbers represent the average number of MAPD plans available to Medicare beneficiaries in 2011 (Gold, Jacobson, Damico, & Neuman, 2011), and the median number of PDP plans that were available in a given state in 2011 (KFF, 2011). Aside from increasing the realism of the task, presenting 20+ plans makes using the sorting and filtering options appealing (or at least relevant). All participants who are tasked with considering MAPD plans will see the same 20 plans (though the order of the plans will be randomized), and the data associated with each of these plans will be

constant across participants. Likewise, all participants who are tasked with considering PDPs will see the same 30 plans (in random order), and the data associated with each plan will be constant. MAPD plan attributes will include information about plan type, total estimated annual costs, monthly premium, annual deductible, the extent of doctor choice offered by the plan, whether all of the beneficiary's drugs are included on the plan's formulary, pharmacy status (whether the pharmacy selected by the user falls in the plan's network), and an overall plan quality rating. In the expanded view, this list of MAPD attributes will also include information about drug co-payment and co-insurance amounts, limits on out-of-pocket spending, information about drug restrictions, and information about gap coverage (if any) provided by the plan. PDP plan attributes will include all of these same variables except doctor choice. Moreover, the columns for monthly premium and annual deductible will only include information about both the health plan and prescription drug portions of the plan.

The data presented in the displays will be based on actual data on plans from a single mid-sized market area. The only exception to using real data is that we will adjust plan ratings as necessary to ensure that there are among the alternatives some plans that are more expensive and have lower quality ratings and other plans that are less expensive and have higher quality ratings. Having these plans among the alternatives will allow us to evaluate the degree to which our two enhancements increase the likelihood that participants will pay attention to and use plan quality data.

#### Measures

Unless otherwise noted, the measures described in this section will be included in the survey that participants complete after visiting the Plan Finder website and choosing a plan (also referred to as the post-exposure survey). Attachment Q explains how the measures described in this section map onto the items in the pre- and post-exposure surveys.

#### Process Variables

*Perceived ease of understanding information on the website.* We will ask participants to rate how easy or difficult it was for them to understand the information that was provided about the health (prescription drug) plans ( $1 = very \ difficult$  to  $5 = very \ easy$ ). This measure is based on a similar one reported by Greene and colleagues (2008) that was sensitive to different ways of presenting comparative quality data on health plans.

*Amount of information acquired.* Consistent with Hanoch et al. (2011), we will use the web tracking data to compute a measure of amount of information required that is based on the number of times a participant drills down for detailed data and the number of times the participant clicks on the names of plan attributes for information about the attribute. In Hanoch et al. (2011), this measure was sensitive to the experimental manipulation of choice-set size in a study of drug plan choice. In particular, increasing choice-set size was associated with consideration of less of the available information on a website that presented comparative quality data on Medicare prescription drug plans.

*Emotional reaction to the decision-making task.* Based on a measure by Mikels et al. (2010), we will ask participants to indicate the extent to which choosing a plan made them feel each of seven positive emotions (e.g., relaxed, calm, certain, and capable) and each of seven negative emotions (e.g., confused, overwhelmed, doubtful, and frustrated). We anticipate combining the ratings of the positive emotions into a one scale and the ratings of the negative emotions into a second scale. In the study by Mikels and colleagues (2010), this measure was sensitive to the experimental manipulation of the framing of a health care choice task.

*Salience of decision attributes.* To measure the salience of each plan attribute that was included in the data display, we will show participants a list of these attributes and ask participants if they recall seeing the information (*yes*, *no*). This measure is based on one developed for our AHRQ-funded SelectMD online experiment.

*Perceived usefulness of decision attributes.* For those plan attributes that participants recall seeing, we will ask them to rate how easy it was distinguish among plans on the basis of the attribute  $(1 = very \ difficult$  to  $4 = very \ easy$ ). We will create an index by averaging across the attributes they remember. This measure is based on one developed for our AHRQ-funded SelectMD online experiment.

*Comprehension of data display.* As part of the post-exposure survey, we will show participants a picture of the data display that they saw on the website to which they were exposed (i.e., either the enhanced data display or the current MPF data display) and ask them to use the data display to answer three relatively simple comprehension questions (e.g., "Which plan has the lowest monthly premium for prescription drug benefits?") and three more difficult comprehension questions (e.g., "If you wanted a plan that is above average quality, allows you to see doctors outside of your plan, and would cost you no more than \$2,500 per year, which plan would you choose?"). Answering a simple comprehension questions requires that the participant look at one plan attribute only. Answering a complex comprehension question requires that the participant consult information about two or more plan attributes. This measure is based on one reported in Hibbard et al. (2007); in that study, comprehension was strongly related to the quality of decision-making by consumers who were asked to read a simulated hospital quality report.

#### **Outcome Variables**

*Overall evaluation of website*. Participants will report their overall evaluation of the website by completing the following two items that were developed for our AHRQ-funded SelectMD online experiment: "If you could have free access to a website like this one when you need to choose a health plan (prescription drug plan) in real life, how likely would you be to use this website (1 = *Definitely would not use* to 5 = Definitely would use)," and "Would you recommend that your friends and family use a website like this one when they make their own choices about a health (prescription drug) plan (1 = *Definitely not recommend* to 5 = Definitely recommend?"

*Evaluation of home page* (Quick Links or current MPF home page). As part of the post-exposure survey, we will show participants a picture of the home page of the website that they visited (i.e., either the Quick Links page or the current MPF home page) and ask them two questions about the page: "Thinking about when you first saw this web page, how good an idea did the page give

you about what information was available on the Plan Finder website," and "How goo an idea did this page give you about what you might be able to do on the website?" The end points of the 4-point response scale for each of these items are labeled "no idea at all" and "a very clear idea."

*Elapsed time to get to a data display.* As a measure of how easily participants are able to navigate the website, we will use the web tracking data to create a measure of the time (in seconds) elapsed between when participants first access the website and when they first reach a data display.

*Perceived usability and navigability of the website*. Participants will rate the ease of navigability of the website by responding to the question, "How easy or difficult was it for you to find information that you were looking for (1 = very difficult to 5 = very easy)." Participants will also rate the overall usability of the website by responding to the question, "How easy or difficult was it for you to use the website in general (1 = very difficult to 5 = very easy)."

*Proactive engagement with decision task.* We will use the web tracking software to compute measures of whether and how often participants used the sorting, filtering, and plan comparison features on the website. We will also compute a measure of the total amount of time participants spent on the website. We will analyze these measures separately and combined (provided adequate correlation among them) as indices of participants' engagement with the decision task.

*Perceived ease of decision-making*. Participants will use a 5-point scale (1 = very difficult to 5 = very easy) to rate how easy or difficult it was to choose a plan. This measure is based on one reported in Tanius et al. (2009); in that study, perceived ease of decision-making in choosing among drug plans was sensitive to the experimental manipulation of the size of the choice set. In particular, increasing choice-set size was associated with greater perceived difficulty in choosing a Medicare prescription drug plan.

*Post-decision confidence*. Participants will use a 5-point scale (1 = not at all confident to 5 = extremely confident) to rate how confident they are about their choice of plan. This measure is based on one reported in Uhrig et al. (2006); in that study, this measure was sensitive to the experimental manipulation of the content and formatting of a report on health plan quality.

*Quality of decision*. Among the plans from which participants will be asked to choose, there will be one superior plan (in higher quality and more generous benefits) within each stratum of estimated annual costs. Consistent with Hibbard et al. (2005), we will consider participants to have made a "quality choice" if they choose the best (highest quality, most generous benefits) plan within any cost stratum.

*Perceived value of information on the website.* We will ask participants to rate their satisfaction  $(1 = very \ dissatisfied$  to  $5 = very \ satisfied$ ) with the information provided about each plan. Uhrig et al. (2006) found that this measure was sensitive to an experimental manipulation of content and formatting of a report on health plan quality. We will also ask participants to indicate how they feel about the amount of information provided about each plan (with response options of *not enough information, about the right amount of information for me to handle,* and *more* 

*information than I could handle*). This measure is based on one reported in Sainfort and Booske (2000); in that field study, individuals who perceived that the amount of information provided in a health plan quality report was "about the right amount of information" (vs. too much or too little) were significantly more likely to be satisfied with their choice of a health plan and to feel that the information in the report was useful and adequate for their decision needs.

Average importance of attributes. For each plan attribute that participants recall seeing, we will ask them to rate how much they relied upon that attribute in making their choice of a plan (1 = not at all to 4 = a great deal). We will use this information to create an overall index (averaging across all items) of the perceived importance of the attributes for decision-making. Participants who do not recall seeing information about a specific attribute will be assigned a score of 1 (not at all) on that attribute.

*Reliance on quality information.* From the ratings of reliance on plan attributes described above, we will create a measure of the importance of overall quality in choosing a plan. Participants who do not recall seeing information about overall quality will be assigned a score of 1 (not at all).

#### Hypothetical Moderating Variables

*Experience using the Internet for health or medical information.* As part of the pre-exposure survey, participants will complete a four-item measure of use of the Internet for information about health or medical care (e.g., "In the past 12 months, how often did you use the Internet to look for health or medical information for yourself or someone else?"). These items are from the National Cancer Institute's Health Information National Trends Survey (the measure can be accessed at http://hints.cancer.gov/topics.aspx?section=Internet+Use).

*Experience with health care quality reports*. As part of the pre-exposure survey, participants will also indicate whether in the past 12 months they have seen information comparing the quality of different doctors, hospitals, or health plans. This measure was developed for our AHRQ-funded SelectMD online experiment.

*Experience choosing a Medicare health or prescription drug plan.* As part of the pre-exposure survey, participants will indicate whether they have ever had to choose a Medicare health or prescription drug plan for themselves or another person.

*Patient activation.* As part of the pre-exposure survey, participants will complete the "Believes active role important (2 items)" and "Confidence and knowledge to take action (4 items)" subscales of the Short Form Patient Activation Measures (PAM). Two other facets of patient activation that are measured by this scale but that we do not plan to include in our study are taking action to address a health problem (3 items) and maintaining action when one's health condition or psychological state worsens (4 items). We do not plan to include these subscales because the items in them presume the existence of a health problem and thus will not be relevant for some of the participants in our study. Alpha reliability for this scale is reported to be above 0.80 (Hibbard, Mahoney, Stockard, & Tusler, 2005). As part of the pre-exposure survey, participants will also complete a 2-item measure that was included in the 2007 Medicare CAHPS

survey to assess patient activation status. These two items are: "How confident are you that you can identify when it is necessary for you to get medical care (*not at all confident, somewhat confident, confident, or very confident*)" and "How frequently do you bring to your doctor visits a list of questions or concerns you want to cover (*never, sometimes, usually,* or *always*)?" Information about the psychometric properties of this scale is included in Williams and Heller (2007). If the two-item measure is highly correlated with the 6 items from the PAM, we will combine these 8 items to form a single scale.

*Numeracy*. Participants will complete a 7-item risk numeracy scale by Lipkus and colleagues (e.g., "If Person A's risk of getting a disease is 1% in ten years, and Person B's risk is double that of A's, what is Person B's risk?"). Alpha reliability for this scale has been reported to be between 0.70 and 0.75 (Lipkus, Samsa, and Rimer, 2001).

#### Control Variables

*Demographics*. Demographic measures collected by Knowledge Networks include age, sex, race/ethnicity, and level of education. Measures of race and ethnicity will conform to the data standards required by Section 4302 of the Affordable Care Act.

*Self-rated health status*. As part of the pre-exposure survey, participants will rate their overall health status using a single-item measure from the SF-36 Health Survey (Ware & Sherbourne, 1992).

*Chronic health condition.* Knowledge Networks collects extensive data from members of its Knowledge Panel on chronic health conditions (e.g., high blood pressure, asthma, diabetes, chronic pain, kidney disease, heart disease, osteoarthritis, and rheumatoid arthritis). We will use this information to create a single indicator of whether or not a participant has a chronic health condition.

*Level of use of health care system.* Also as part of the pre-exposure survey, participants will report the number of times in the past 12 months that they went to a doctor's office or clinic to get health care for themselves.

## A2. Purpose and Use of the Information Collection

The results of this study will be used to develop recommendations to CMS for enhancements to the Medicare Plan Finder tool on the Medicare.gov website that will help consumers better understand and more effectively use the information on the site to select health plans. The aim is to make the tool and the information it contains more accessible, useful, and transparent to the public. The information collected will therefore serve functions related both to program evaluation and quality improvement.

# A3. Use of Improved Information Technology and Burden Reduction

Participants will complete the experiment through a secure online connection from their homes. Survey data are collected by a web-based survey system (internally referred to as "Dimensions"). This application runs on top of a secured Windows environment that has been hardened through various network and hosted-based security techniques. Participants take online surveys by using a web-browser to access a unique, secured web URL that is both emailed to them and made available through a secured web-portal. The URL provides access to click through to a highly-available load-balanced farm of web servers that hosts the online survey. This survey URL can be exposed via either standard http or over SSL and TLS encrypted https, depending on the client requirements. Throughout the interview process, questionnaire data are copied to a secured, centralized database for data processing.

Collection of information from respondents through online connection from their homes reduces the ancillary burden associated with participating at a study site, since no time is required for travel. Respondents are also able to schedule their participation at their own convenience.

# A4. Efforts to Identify Duplication and Use of Similar Information

Work carried out under this clearance has been designed to reflect specific needs of the population for which this work is being conducted and will not duplicate any other work being done by CMS or other Federal agencies.

# A5. Impact on Small Businesses or Other Small Entities

Respondents are seniors of Medicare age and caregivers who assist seniors of Medicare age with their health care decisions. The study will not have a significant impact on small businesses or other small entities.

## A6. Consequences of Collecting the Information Less Frequently

This is a one-time information collection. The consequences of not collecting this information at all would be that CMS would be in the position of needing to make decisions about changes to the Medicare.gov website and Medicare Plan Finder tool in the absence of the valuable evidence that this experiment will provide on how enhancements that are contemplated for the website are likely to affect user experience.

# A7. Special Circumstances Relating to the Guidelines of 5 CFR 1320.5

This request is consistent with the general information collection guidelines of 5 CFR 1320.5(d)(2). No special circumstances apply.

#### A8. Comments in Response to the Federal Register Notice and Efforts to Consult Outside the Agency

The Federal Register notice was published on date X page Y.

## A9. Explanation of Any Payment or Gift to Respondents

Consistent with Knowledge Networks' practice in projects that require more than 20 minutes of participants' time, panel members who participate in this experiment will receive 5,000 points as

an incentive payment. This is the equivalent of \$5. Points are redeemed in the form of a check to the panel member at a later date.

## A10. Assurance of Confidentiality Provided to Respondents

Individuals contacted as part of this data collection will be assured of the confidentiality of their replies under 42 U.S.C. 1306, 20 CFR 401 and 422, 5 U.S.C. 552 (Freedom of Information Act), 5 U.S.C. 552a (Privacy Act of 1974), and OMB Circular A-130.

## A11. Justification for Sensitive Questions

The survey does not include any questions of a sensitive nature.

#### A12. Estimates of Annualized Burden Hours and Costs

Exhibit 2 shows the estimated annualized burden hours for the respondents' time to participate in this experiment. The entire experiment (including the design phase) will not exceed two years. All participants will complete the pre-exposure questionnaire, which is estimated to require 3.8 minutes (assuming an average response pace of 5 items per minute). As explained above, the experimental website varies by experimental condition; however, based on preliminary testing, each participant will require about 10 minutes to review the information on the site. Exhibit 2 provides an average time required to complete the post-exposure questionnaires (estimated at 11.4 minutes assuming an average response pace of 5 items per minute). The total burden hours are estimated to be 252.2 hours.

Surveys/Response Tasks	Number of Respondents	Number of responses per respondent	Hours per response	Total Burden hours
Pre-exposure survey	600	1	0.06333	38.0
Experimental Website	600	1	0.167	100.2
Condition #1 Post-exposure	38	1	0.19	7.22
Condition #2 Post-exposure	37	1	0.19	7.03
Condition #3 Post-exposure	38	1	0.19	7.22
Condition #4 Post-exposure	37	1	0.19	7.03
Condition #5 Post-exposure	38	1	0.19	7.22
Condition #6 Post-exposure	38	1	0.19	7.22
Condition #7 Post-exposure	37	1	0.19	7.03
Condition #8 Post-exposure	37	1	0.19	7.03
Condition #9 Post-exposure	38	1	0.19	7.22
Condition #10 Post-exposure	37	1	0.19	7.03
Condition #11 Post-exposure	38	1	0.19	7.22
Condition #12 Post-exposure	37	1	0.19	7.03
Condition #13 Post-exposure	37	1	0.19	7.03
Condition #14 Post-exposure	38	1	0.19	7.22
Condition #15 Post-exposure	37	1	0.19	7.03
Condition #16 Post-exposure	38	1	0.19	7.22
Total	600	1	0.420*	252.2

Exhibit 2. Estimated annualized burden hours

\* We estimate the total response hours per individual to be 0.420 hours (25.2 minutes) regardless of which study condition the individual is assigned to.

Exhibit 3 shows the respondents' cost burden for their time to participate in this experiment. The total cost burden is estimated to be \$5,382.

Surveys/Response Tasks	Number of respondents	Total burden hours	Average hourly wage rate*	Total cost burden
Pre-exposure survey	600	38.0	\$21.35	\$811
Experimental Website	600	100.2	\$21.35	\$2,139
Condition #1 Post-exposure	38	7.22	\$21.35	\$154
Condition #2 Post-exposure	37	7.03	\$21.35	\$150
Condition #3 Post-exposure	38	7.22	\$21.35	\$154
Condition #4 Post-exposure	37	7.03	\$21.35	\$150
Condition #5 Post-exposure	38	7.22	\$21.35	\$154
Condition #6 Post-exposure	38	7.22	\$21.35	\$154
Condition #7 Post-exposure	37	7.03	\$21.35	\$150
Condition #8 Post-exposure	37	7.03	\$21.35	\$150
Condition #9 Post-exposure	38	7.22	\$21.35	\$154
Condition #10 Post-exposure	37	7.03	\$21.35	\$150
Condition #11 Post-exposure	38	7.22	\$21.35	\$154
Condition #12 Post-exposure	37	7.03	\$21.35	\$150
Condition #13 Post-exposure	37	7.03	\$21.35	\$150
Condition #14 Post-exposure	38	7.22	\$21.35	\$154
Condition #15 Post-exposure	37	7.03	\$21.35	\$150
Condition #16 Post-exposure	38	7.22	\$21.35	\$154
Total	600	252.2	na	\$5,382

Exhibit 3. Estimated annualized cost burden

\*Based upon the mean of the average wages, "May 2010 National Occupational Employment and Wage Estimates, United States" U.S. Department of Labor, Bureau of Labor Statistics.

# A13. Estimates of Other Total Annual Cost Burden to Respondents and Record Keepers

There are no direct costs to respondents other than their time to participate in the study.

Capital and maintenance costs include the purchase of equipment, computers or computer software or services, or storage facilities for records as a result of complying with this data collection. There are no capital or maintenance costs for this study.

## A14. Annualized Cost to the Federal Government

Exhibit 4 shows the total and annualized cost for developing and conducting the experimental study, including the cost of designing the experiment, developing the Quick Links and enhanced data display web pages, developing a simulated Plan Finder site, conducting usability testing of the new Web-pages, pilot testing the experiment, collecting the data, analyzing the data, and preparing reports to CMS and papers for journal submission. The total and annual costs are

identical since data collection will not exceed one year. The total cost is estimated to be \$352,000.

	Total	Annual
	Cost	Cost
Cost Components	( <b>\$1,000</b> s)	( <b>\$1,000</b> s)
Experimental design	\$104	\$104
Development of enhanced pages for testing	\$45	\$45
Development of simulated Plan Finder site	\$45	\$45
Pilot testing	\$33	\$33
Usability testing of Web pages	\$15	\$15
Data collection via Knowledge Networks	\$50	\$50
Data analysis	\$75	\$75
Preparation of reports and journal articles	\$15	\$15
Total	\$352	\$352

Exhibit 4. Total and Annualized Costs

# A15. Explanation for Program Changes or Adjustments

There are no program changes or adjustments.

# A16. Plans for Tabulation and Publication and Project Time Schedule

We will produce two types of reports on findings from this experiment. First, we will prepare a report to CMS that recommends changes to the Medicare.gov website, based on results of the experiment along with results of a literature review that has informed the design of this experiment. Second, we will prepare one or more reports in a form suitable for publication in peer-reviewed journals,

Exhibit 5 details the timeline for sample selection, data collection, data analysis, and delivery of analytic reports.

Task	Planned Start Date	Planned End Date
Sample selection	OMB approval	10 days after OMB
		approval
Data collection	11 days after OMB	41 days after OMB
	approval	approval
Data analysis	45 days after OMB	157 days after OMB
	approval	approval
Prepare and submit data	60 days after OMB	187 days after OMB
analysis report	approval	approval

#### **Exhibit 5. Timeline**

## A17. Reason(s) Display of OMB Expiration Date is Inappropriate

The OMB expiration date will be displayed on the online survey.

# A18. Exceptions to Certification for Paperwork Reduction Act Submissions

There are no exceptions to the certification statement identified in item 19 of OMB Form 83-I associated with this data collection effort.

# B. Collection of Information Employing Statistical Methods

# B1. Respondent Universe and Sampling Methods

As noted in Section A1, the Medicare Plan Finder is intended to help Medicare beneficiaries make informed choices among health plans. Medicare beneficiaries themselves are therefore a primary target audience for the Medicare.gov website and the Medicare Plan Finder in particular. However, many beneficiaries also receive help through family members who visit the web site and obtain information on their behalf. Many others receive help through trained intermediaries such as staff at call centers and State Health Insurance Assistance Program (SHIP) counselors. These professional intermediaries make extensive use of the Medicare Plan Finder in working with beneficiaries. However, intermediaries' familiarity with the tool and with the information it contains makes them sophisticated users whose experiences with and challenges in using the tool are likely to be quite different from those of lay users. The enhancements to be tested in this experiment are designed with lay users the Medicare Plan Finder in mind. The target population for the experiment is therefore Medicare beneficiaries and adult "caregivers" of Medicare beneficiaries who assist beneficiaries with their decisions about health insurance.

Respondents for this experimental study (n = 600) will be drawn from the Knowledge Networks Internet panel. This web-enabled panel, recruited from an address-list sampling frame that covers 97% of U.S. households, represents the broad diversity and key demographic dimensions of the U.S. population. The panel closely tracks the U.S. population on age, race/ethnicity, geography, employment, and other demographics, with the small differences further reduced by nonresponse adjustment. The Knowledge Networks panel (~ 50,000 adults, 16% age 65 and over) is large and diverse enough to provide a geographically, racially, ethnically, and educationally diverse sample of seniors of Medicare age and people who assist them for this experiment. Use of an existing panel substantially lowers recruitment costs relative to a sample recruited through a focus group recruiting firm, allowing larger sample sizes for a given budget. Kanouse and Martino have recently conducted a successful web-based physician choice experiment using a sample recruited from the Knowledge Networks Panel.

Half of the participants recruited for this experiment will be seniors of Medicare age (65 and older) and half will be "caregivers" of seniors of Medicare age (defined as adults who have helped someone of Medicare age with decisions about health insurance or who have retrieved information via paper, phone, or the web about health insurance for someone of Medicare age). We have defined all seniors of Medicare age as eligible to participate regardless of whether they are enrolled as Medicare beneficiaries, and we will restrict screening of younger adults for eligibility as caregivers to those aged 35 to 59. We estimate an eligibility rate of about 20 percent for those in this 25-year age bracket.

To assure a balance of seniors of Medicare age and caregivers in each condition, random assignment to experimental condition will be made within strata.

The Knowledge Networks Panel is constructed to include those who do not otherwise have internet access (by providing them with a free netbook computer and Internet service in return for their participation on the panel).

We do not intend to generate nationally or locally representative results or precise estimates of population parameters from this study. The sample used is best understood as a convenience sample, rather than a probability sample. The Knowledge Networks panel is large and variegated enough to produce samples with a reasonable degree of diversity in key demographic characteristics. Furthermore, no legitimate weights can be constructed from non-probability samples such as the one used here. Hence, we will not in any publications emerging from this work construe this sample or the results generated from this sample as nationally or locally representative. The strength of the experimental study lies in its internal validity, on which meaningful estimates of differences across the experimental exposures (type of task, type of plan, and presence or absence of enhancements) can be produced and generalized.

# B2. Procedures for the Collection of Information

Study participants will be randomly assigned to one of 16 conditions (see Part A Section 1 for a description of the conditions) that vary according to the task the respondent is assigned, the type of plan he or she will be reviewing (MA-PD or PDP), and whether the Plan Finder includes each of two prospective enhancements. Participants will complete the experiment through a secure online connection from their homes. Data will be derived from pre and post-test questionnaires and from server logs that record the web pages visited and viewing times.

## B3. Methods to Maximize Response Rates and Deal with Nonresponse

The response rate is estimated at about 75% based on results obtained from the past projects conducted by KN. Procedures for maximizing response rates include:

- Field period of 3 to 4 weeks
- Use of the Federal agency name in the email invitation
- Email reminders
- Telephone reminder calls to non-responders

The initial analysis of response rate of 75% or better indicates that this response rate, in combination with the size of the population selected for each experiment (described the section titled *Respondent Universe and Sampling Methods*), will provide sufficient power to test for the experimental differences.

## B4. Test of Procedures or Methods to be Undertaken

This experiment has a multifactorial design that is fully crossed, such that experimental cells take on every possible combination of the four manipulated factors. This allows estimation of both the main effects of each factor on outcome variables and interaction effects.

We will use regression analysis in an analysis of variance (ANOVA) style to assess the effects of main effects and interactions. Some outcome variables we will examine will be dichotomous (e.g., whether the respondent remembers seeing a particular type of information on the web site) while others will be ordinal scales that can be treated as continuous (e.g., reported ease or difficulty of understanding the information). We will use logistic regression for dichotomous outcomes and ordinary least squares (OLS) regression for outcomes treated as continuous, and will consider ordered logistic regression and multinomial logistic regression if diagnostics and distributions suggest they are the best models.

Our primary interest is in the main effects associated with each of the two enhancements. However, we hypothesize that the two enhancements will have synergistic effects on outcomes related to ease of use, understanding of content, and quality of the decision. This hypothesis will be tested with a planned contrast for the two-way interaction between the two factors representing the enhancements on the outcomes that should be affected. For other interactions (five other two-way interactions, four three-way interactions, and one four-way interaction), we will conduct omnibus tests of the joint incremental predictive effect of these interactions compared with lower order effects using partial-F tests and Wald test for OLS and logistic regression forms (also examining the corresponding changes in R<sup>2</sup> and c-statistic, respectively). Should an omnibus test be statistically significant, we will follow-up with contrasts to identify the specific interaction(s) contributing to this effect. Significant two-way interactions involving enhancements will be reported as main effects of the enhancement within each level of the interacting variable. For example, we might report the main effect of the enhanced display for those subjects instructed to browse among available plans and for those subjects instructed to compare their plan with other available plans.

For main effects on continuous outcomes, given a sample size of 600, we will have 80% power to detect a small to medium effect of 0.23 SD; for two-way interactions, the minimum detectable effect size is 0.47 SD when all four cells are of equal size, as will be the case for the planned interaction of greatest interest. For a dichotomous outcome with prevalence of 10-90%, the minimum detectable main effect corresponds to a difference of approximately 6.9-11.5 percentage points and the interaction to a difference-of-differences of approximately 14.1-23.5 percentage points, so that continuous outcomes will be most useful in assessing interactions.

We will conduct the analyses described above on the entire sample, pooling seniors of Medicare age and caregivers. However, we will conduct additional exploratory analyses examining both main effects and interactions involving the type of respondent (senior vs. caregiver) as well as other individual difference variables measured in the pre- or post-exposure surveys (e.g., experience choosing a Medicare health plan, prior exposure to quality information, patient activation, numeracy).

# **B5.** Individuals Consulted on Statistical Aspects and Individuals Collecting and/or Analyzing Data

The survey, sampling approach, and data collection procedures were designed by the RAND Corporation under the leadership of:

Marc Elliott, Ph.D. Senior Statistician RAND Corporation 1776 Main Street PO Box 2138 Santa Monica, CA 90407-2138 310-393-0411

Dr. Elliott is a statistician and has provided oversight on statistical aspects.

Data will be collected by Knowledge Networks under the direction of:

Jordan Peugh VP, Health Care and Policy Research Government and Academic Research Knowledge Networks 440 Park Avenue South, 6<sup>th</sup> Floor New York, New York 10016 646-742-5334 jpeugh@knowledgenetworks.com The following individuals will analyze data:

Steven C. Martino, Ph.D. Senior Behavioral Scientist RAND Corporation 4570 Fifth Avenue, Suite 600 Pittsburgh, PA 15213-2665

David E. Kanouse, Ph.D. Senior Behavioral Scientist RAND Corporation 1776 Main Street. P.O. Box 2138 Santa Monica, CA 90407-2138

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# List of Attachments:

- A. Screen shot of current MPF home page
- B. Screen shot of Step 4 (Refine Your Plan Results) from the current MPF plan search process
- C. Representation of the Quick Links home page
- D. Quick Links page with "compare my current plan to other plans in my area" path activated
- E. Representation of the enhanced data display, collapsed view
- F. Screen shot of the current data display on the MPF site
- G. Representation of the enhanced data display, expanded view
- H. Pre-exposure survey
- I. Post-exposure survey, experimental conditions #1 and #2
- J. Post-exposure survey, experimental conditions #3 and #4
- K. Post-exposure survey, experimental conditions #5 and #6
- L. Post-exposure survey, experimental conditions #7 and #8
- M. Post-exposure survey, experimental conditions #9 and #10
- N. Post-exposure survey, experimental conditions #11 and #12
- O. Post-exposure survey, experimental conditions #13 and #14
- P. Post-exposure survey, experimental conditions #15 and #16
- Q. Measures cross-walk