

Protocol

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**THE IMPACT OF MEDICAID ON CLINICAL OUTCOMES:
EVIDENCE FROM THE OREGON HEALTH INSURANCE EXPERIMENT**

Supplemental Materials

I. Analysis Plan

II. Fielding Protocols

III. Interview Text

THE OREGON HEALTH INSURANCE EXPERIMENT: EVIDENCE FROM THE IN-PERSON INTERVIEWS

Katherine Baicker
Sarah Taubman
Heidi Allen
Mira Bernstein
Jonathan Gruber
Joseph P. Newhouse
Eric Schneider
Bill Wright
Alan Zaslavsky
Amy Finkelstein
And the Oregon Health Study Group

**Analysis Plan
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In addition to the individuals named above, The Oregon Health Study Group includes Matt Carlson (Portland State University), Tina Edlund (Deputy Directory, Oregon Health Authority), Charles Gallia (Oregon DHS), and Jeanene Smith (Office for Oregon Health Policy and Research).

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Introduction

The goal of the analysis described here is to use the Oregon Health Insurance Experiment and the data we collected through in-person interviews and physical exams to estimate the effects of expanding Medicaid availability to a population of low-income adults. This analysis examines the effects on health care utilization (including preventive care), finances, and health, as well as access to health care, quality of care, and overall wellbeing. There is a particular emphasis on health using the physiologic measures obtained through our in-person data collection.

This analysis plan aims to pre-specify the analysis before comparing outcomes for treatment and control groups. By creating this analysis plan, which serves as a record of our ex ante planned analysis, we hope to minimize issues of data mining and specification searching. We do use the control distributions for all the outcomes and perform treatment-control comparisons that explore the validity of our analysis (such as balance on pre-randomization characteristics and uptake of insurance). This plan was constructed after viewing the findings from a mail survey and administrative data collected approximately one year after the lottery (Finkelstein et al. 2011). The methods and measures proposed here follow those undertaken in that analysis very closely; the primary new outcome measures are physiologic measures of health (Tables 4 and 5), measures of medical diagnoses and treatments (Table 7), as well as some additional self-reported health measures (Table 6). This plan is not intended to include all analysis that will eventually be done using these data – only to capture the analysis that will inform the first paper(s).

Methods

Randomization and intervention

In 2008, Oregon selected roughly 30,000 individuals by lottery from a waiting list of over 80,000 for an otherwise closed Medicaid program. The state conducted eight lottery drawings from March through September 2008. Selected individuals won the opportunity – for themselves and any household member – to apply for health insurance benefits through Oregon Health Plan Standard (OHP Standard). OHP Standard provides benefits to low-income adults who are not categorically eligible for Oregon’s traditional Medicaid program (OHP Plus); to be eligible, individuals must be adults ages 19 – 64, not otherwise eligible for Medicaid or other public insurance, Oregon residents, U.S. citizens or legal immigrants, have been without health insurance for six months, have income below the federal poverty level, and have assets below \$2,000. Among the randomly selected individuals, those who completed the application process and met the eligibility criteria were enrolled in OHP Standard. OHP Standard provides relatively comprehensive medical benefits with no consumer cost sharing and low monthly premiums (between \$0 and \$20, based on income), provided mostly through managed care organizations.

The lottery process and OHP Standard have been described in more detail elsewhere (Finkelstein et al. 2011)

In-person data collection

Between September 2009 and December 2010, we conducted a large in-person data collection effort to assess a wide variety of outcomes. The 20,745-person sample for the in-person data collection included almost all of the individuals selected in the lottery living in the Portland area and a roughly equal number of unselected controls. We focused on the Portland area because of the logistical constraints of in-person data collection.

Potential participants were released into the field at regular intervals to be recruited for interviews. The recruitment protocol began with a postcard and a phone call attempt; potential participants were then assigned to interviewers, who used a flexible approach (including phone calls, text messages, home visits, and other contacts) to schedule interviews. The interviewers worked closely with our tracking team to locate potential participants if our contact information was out-of-date. As fielding progressed, we would periodically select a random subset of those participants who had not yet completed an interview. Recruitment would stop on the selected random subset, allowing the fielding staff to put additional time and resources into recruiting those remaining. In addition to this “continuous intensive follow-up,” in the final months of fielding we expanded our recruitment efforts to encourage those remaining to complete the interview; at this point we increased the compensation, developed new tracking and recruitment procedures, and travelled with a mobile unit to individuals who had moved out of Portland.

Starting in November 2009, Oregon opened a new lottery for OHP Standard coverage. We worked with the state to identify which of our potential participants signed-up for the new lottery and which were selected over the course of subsequent lottery drawings. We did not interview participants who had been selected in the new lottery after they were informed of their new selection. However, we could not simply exclude those on the new lottery list, since signing up was voluntary – and thus not random. Rather, we took advantage of the fact that selection by the state from among those on the new list was random. Those potential participants who had signed up for the new list but were not selected could thus stand in for those on the list who had been selected. We use sample weights (described below) to adjust for dropping subsets either for intensive follow-up or the new lottery. Although we continued collecting data until December 2010, after the state had selected the entire new list, we limit our analysis to interviews completed by October 13, 2010. After that the weights to adjust for the new lottery become substantially more extreme and our estimates are unstable.

The interview generally lasted about 1 hour and 15 minutes, including about half an hour of interview questions, then medication cataloging, anthropometric measurements, blood pressure measurements, and collection of dried blood spots. Oversight of human subjects was performed by multiple IRBs. Written informed consent was obtained at the beginning of the interview; separate written informed consent for the dried blood spots was obtained immediately prior to that component. Interviews were mostly conducted at one of three clinic sites we

operated in Portland, although interviewers traveled to homes if participants preferred. Interviewers were not informed of participants' treatment status prior to the interview, but status sometimes became clear at the end of the interview when asking about insurance coverage. We provided participants with a preliminary "report of findings" about their health (including body mass index (BMI) and blood pressure) at the end of the interview and then with a mailed report of findings (adding the results of the blood tests and depression screening). Participants were compensated for their time and effort: \$30 for the interview, an additional \$20 for the dried blood spot collection, and \$25 for travel if the interview was at a clinic site.

More detail on specific outcome measures is provided in the appendix; the survey instrument is available at www.nber.org/oregon.

Administrative data

In addition to the in-person interview data we collected, the state provided us with detailed data on Medicaid enrollment for every individual on the list (starting prior to the lottery). We use this to construct our primary measure of insurance coverage during study period.

Statistical analysis

Our analytic approach begins with an intent-to-treat model comparing outcomes for all those who were selected in the lottery (the study treatment group) to all those who were on the list but not selected (the study control group). Treatment assignment was done at the level of the household—if an individual was selected, all adult members of the household were offered the chance to apply for coverage—but because the lottery was conducted at the individual level, households with more members on the list were selected at higher rates. We estimate linear probability models for our outcomes with adjustment for the number of household members on the lottery list, which is required for unbiased estimates because the treatment probabilities vary by this. For the analysis of the blood pressure measures, we also adjust for age (in decile bins) and sex. These are not needed to prevent bias, as they are not related to treatment status. As important determinants of these outcomes in particular, however, they may increase the precision of our estimates of the effect of insurance by accounting for some of the variance in the outcome.¹ All standard errors are clustered by household to account for intra-household correlation.

All analysis is weighted using survey weights to account for the sample releases into the field and restriction of the active sample for intensive follow-up and in response to the new

¹ To decide when to add adjustment for additional pre-randomization variables, we examined how much of the variance in the outcome is explained by those variables (limiting to the control respondents). Only age and sex explained considerable variance and only for the blood pressure outcomes. For all other outcomes (and other potential covariates), we decided against additional controls in our baseline specification as we expect the gains in precision to be small and we prefer the more direct treatment and control comparison. In the sensitivity analyses described later in this document we explore how the rest of the results are affected by age and sex adjustment (and how the blood pressure results are affected by their removal).

lottery. The goal of these weights is to ensure that the final active sample is balanced on treatment status and representative of the full sample base. The weights are constructed using the general principle that for any given change to the sample (such as dropping part of the sample to conduct intensive follow-up on the remaining sample), those who were at risk for exclusion but remain in the sample are weighted by the inverse of the probability of being included. The final weights are the product of the weights for each change. The weights are discussed in more detail in the appendix.

In addition to the intent-to-treat analysis, which estimates the effect of *being selected in the lottery*, we also provide a local-average-treatment-effect analysis (sometimes called a complier-average-causal-effect analysis). This analysis, under certain assumptions, provides an unbiased estimate of the effect of *health insurance coverage* for those individuals for whom being selected in the lottery results in insurance coverage that they would not otherwise have obtained (Angrist, Imbens and Rubin 1996). We use being selected in the lottery as an instrument for being covered by health insurance (specifically by OHP Plus or OHP Standard) and estimate a two-stage least squares model with the same adjustments and weights as in the intent-to-treat model.

For each of the outcome domains we examine (e.g., health care utilization, access to health care, or self-reported health), we have multiple measures. Where there is a sensible existing summary measure for a given domain (such as total spending to summarize utilization), we use that; otherwise we present standardized treatment effects, which are a weighted average of the estimates. To derive standardized treatment effects, each individual measure in a domain is defined to have the same direction as the others (e.g. increases imply better health). The effect estimate for each individual measure is divided by the standard deviation of the control group for that measure (converting the effect estimate into standard deviation units). The standardized effect estimates for all the measures in a given domain are then averaged, producing a single standardized treatment effect for the domain. Although standardized treatment effects can provide a convenient summary for closely related measures and can increase power to detect small effects, they have several disadvantages. As used here, the included measures are all given equal weight, ignoring differences in the relative importance of the measures. Furthermore, the standardized treatment units are difficult to interpret.

Results

Preliminaries and initial analysis

The study population

Figure 1 shows the evolution of the study population from submitting names in the lottery to survey response. Of the 89,824 individuals who submitted names to the lottery, a total of 10,405 individuals selected in the lottery and 10,340 individuals not selected were sampled for inclusion in the in-person data collection effort. The in-person data collection effort was limited to the Portland area for logistical reasons. Of those sampled for inclusion, a total of 12,229

individuals responded to the survey by October 13, 2010 for an effective response rate of **73%**. Some of those included in the sample population were not “reachable”, however: about **2%** of our sample was either deceased or incarcerated by the time of our fielding and an additional **6%** had moved out of the area; we completed interviews with 80% of the remaining individuals. The average date of survey response was April 24, 2010, approximately 25 months after randomization (standard deviation = 3 months).²

The characteristics of the respondent sample are shown in Table 1. Just over half the study participants are women, about a quarter are ages 50-64 (the oldest eligible age group), and about 70 percent are white. We did not see any significant differences between treatment and control groups on these characteristics or on the wide variety of baseline and interview characteristics that we examine in the appendix. There is likewise no significant difference between treatment and control groups in response rates to either the full survey (Table 2) or the components of the survey (see appendix).

Insurance coverage

Table 3 reports the difference in insurance associated with being selected in the lottery. Our primary measure of insurance coverage is whether the individual was ever on Medicaid (which includes both OHP Standard and OHP Plus) during our study period, as measured by the state’s Medicaid enrollment files. The results indicate an increase of 24.1 percentage points in the probability of having Medicaid coverage. This is considerably less than 100 percent, reflecting imperfect take-up of Medicaid by those selected in the lottery and (to a lesser extent) those not selected becoming eligible for OHP Plus over our study period (Allen et al. 2010, Finkelstein et al. 2011). Appendix Table A4 reports the effects using alternative definitions of insurance coverage and tests for additional effects of lottery selection. We see no evidence of changes in private insurance rates and only substantively trivial impacts on receipt of other social services.

Health

We hypothesize that health insurance may improve health. Tables 4 and 5 summarize the results for our physiologic health measures and Table 6 summarizes the results for our self-reported health measures. Table 7 combines the measures on health with those on diagnosis and medication.

² For the purposes of this analysis plan and subsequent papers, we define the study period as beginning on March 10, 2008, which is the first date that anyone was notified of being selected in the lottery. In Finkelstein et al. 2011, we used a slightly different definition of the study period based on individual notification dates. Using the same definition as in Finkelstein et al., our average survey response occurs 22 months after notification (standard deviation = 4 months) or 20 months after insurance approval (standard deviation = 4 months).

Physiologic health measures

Table 4 summarizes the results for our physiologic measures of health. We consider, as continuous variables, measurements of body mass index (BMI), systolic and diastolic blood pressure, total and HDL cholesterol, and Hemoglobin A1c. In addition, we consider whether subjects have various clinical conditions using cut-points of these measures. Specifically, we consider whether they are overweight or obese, have pre-hypertension or hypertension, have elevated or high cholesterol, or have pre-diabetes or diabetes. Each of these measures is discussed in detail in the appendix. In the first panel of four columns, we examine the physiologic measure for the full sample. In subsequent columns and tables, we add to this primary analysis by considering both diagnosis and treatment (see discussion below). We do not present standardized treatment effects for the physiologic health measures because we use the Framingham risk score to summarize (see discussion of Table 5 below).

Limiting on pre-randomization diagnoses or age

Health insurance may have a much more pronounced impact on health for people with pre-existing poor health than for the general population (Newhouse and the Insurance Experiment Group 1993). For example, we might expect that health insurance, by increasing utilization of health care services, improves the management of blood pressure in people with hypertension and leads to reductions in blood pressure for that group. For individuals with normal blood pressure, however, we might not expect to see much change in blood pressure. Ideally, we would examine this by limiting our study sample on the basis of pre-randomization physiologic measures (looking, for example, at the reduction in blood pressure in those with high pre-randomization blood pressure and so on). We do not have pre-randomization physiologic measures, however, so we proxy for pre-existing conditions using self-reports of diagnoses made before randomization. This is an imperfect proxy; within the set of people who have the condition pre-randomization, those who are not yet diagnosed may be the ones for whom insurance has the largest impact. By limiting to those with pre-randomization diagnoses, we are capturing a population where management of the physiologic measures may be particularly important, but we are missing another population where management (beginning with diagnoses) may be even more important.

Furthermore, although we ask respondents about when they first received a diagnosis (enabling us to construct measures of pre-randomization diagnoses), these self-reports were still collected post-randomization and the possibility of differential post-hoc reporting of diagnosis by treatment and controls cannot be excluded. Appendix Table A3 examines the balance of treatment and control respondents on reports of pre-randomization diagnoses for ten conditions. Participants are considered to have a pre-randomization diagnosis if they reported having a specific diagnosis made before March 2008. The multivariate F-statistic for differences in all these conditions pooled has a p-value of 0.299; the standardized treatment effect for change in diagnosis of all these conditions is -0.003 standard deviations. This suggests that there is no differential reporting of pre-existing diagnoses by treatment or controls. In addition to observing

balance on the individual conditions, we also see no evidence of imbalance on a composite measure for having a pre-randomization diagnosis of diabetes, hypertension, high cholesterol, heart attack or congestive heart failure (estimated average difference is -0.003 (standard error =0.009; p value is 0.77). We use this composite measure to identify a subset of our population that is at increased risk of adverse cardiovascular outcomes. As noted above, this subset does not include those also at increased risk who have not been diagnosed pre-randomization because we have no way to identify them.

The middle panel of Table 4 presents our analysis of physiologic measures limited to this subset of individuals with prior diagnoses of these conditions (about a quarter of our sample). We use this composite measure, including diabetes, hypertension, high cholesterol, heart attack and congestive heart failure, rather than measure-specific diagnoses, in order to have a reasonable sample size in the limited group, and because of the patterns of comorbidity. Individuals with any of these conditions are at increased risk of adverse cardiovascular outcomes and would particularly benefit from care and management. Appendix Table A5 presents additional analysis of the health measures limited to only those with the related pre-randomization diagnosis (considering the blood pressure outcomes in those with pre-randomization diagnosis of hypertension and so on).

We also consider an alternate proxy for poor health based on age. The right-hand panel of Table 4 presents our analysis of physiologic measures limited to the quarter of our sample aged 50-64. There is substantial overlap between those ages 50-64 and those with pre-randomization diagnoses; about half of those aged 50-64 also have a pre-randomization diagnosis and about half of those with a pre-randomization diagnosis are aged 50-64. We expect that the response of physiologic measures to health insurance may be more pronounced in both of these higher-risk groups than in the overall study population.

Framingham risk score

We combine some of our physiologic measures on health with information on gender, age, smoking status and blood pressure medication to calculate the predicted 10-year risk of cardiovascular disease (CVD) using Framingham risk scores (D'Agostino et al. 2008). Table 5 reports the results for each of the components of the Framingham risk score as well as the predicted 10-year risk of CVD. We interpret the Framingham risk score as a standard clinical measure of cardiovascular health and a way of summarizing across multiple measures. For several reasons, we caution against interpreting these results as a change in the probability of CVD in the next 10 years. First, our measurement of Framingham risk score captures only one point in time and any effects of insurance that we observe may not be sustained. Second, the panel relationship between the components of the Framingham risk score and CVD in the Framingham population may not be the same as the experimental relationship in our study population. We therefore interpret the results as evidence of the impact on a useful summary measure of health rather than predictions of 10-year cardiovascular outcomes.

Self-reported health measures

For self-reported health (Table 6) we consider (1) whether subjects report good, very good or excellent health; (2) whether they report fair, good, very good or excellent health; (3) whether their health status has gotten worse over the last twelve months; (4) the physical component summary from the Medical Outcomes Survey Short Form (SF-8); (5) the mental component summary from the SF-8; (6) whether they screen positive for depression; (7) their predicted probability of depression; and (8) whether they report more than very mild pain. As with the physiologic measures of health, we present this analysis for the full sample, those with pre-randomization “high-risk” diagnoses, and those aged 50-64.

Combining health measures, diagnoses, and medications

Where there are medications that can effectively treat a clinical condition related to a physiologic measure (for example, cholesterol-lowering medication for high cholesterol), we combine the health outcome measure with information on diagnoses and medications to categorize respondents with respect to conditions and to create two measures. An abnormal result on a physiologic or self-report measure can be interpreted as reflecting that the individual has the condition (or disease). The two additional measures are:

- (1) Undiagnosed condition: an abnormal result on a health measure without a corresponding respondent-reported diagnosis;
- (2) Unmedicated condition: an abnormal result on a health measure without a corresponding medication.

We hypothesize that these measures may respond to insurance more than the measured health outcomes themselves, since controlling these diseases is difficult (particularly over a relatively short time horizon) even with the existence of effective medications.

In Table 7, we consider whether the conditions of hypertension, high cholesterol, diabetes, or depression have been diagnosed and whether they are being treated by medication. We consider a person to have an *undiagnosed* condition if the person’s self-report or physiologic measures indicate the person has the condition but the person does not report ever having been diagnosed. We consider a person to have an *unmedicated* condition if the person’s self-report or physiologic measures indicate the person has the condition but the person is not currently taking condition-specific medications based on the detailed catalogue of current medications.

There are of course treatments for these conditions other than medications, and the clinically effective management of these conditions is far more complicated than this analysis implies. The prototype clinical effectiveness measures are intended to assess the impact of insurance at a general level, and we defer a more complete examination of the management of these diseases—including other treatments and classes of medications—to future analysis.

In Panel C of Table 7, we consider two distinct measures of unmedicated pain: whether the respondent has pain untreated by any prescription pain medication and whether the respondent has pain untreated by any pain medication (prescription or over-the-counter). We

make this distinction because for pain medications in particular the same medication may be available both by prescription and over-the-counter (for example, ibuprofen). Because OHP Standard does not require co-payments for prescription medications, there may be some switching from over-the-counter versions to prescription medications without any change the prevalence of unmedicated pain.

Happiness

We hypothesize that health insurance may increase overall wellbeing. Table 8 reports results for whether the individual is very or pretty happy (as opposed to not too happy). Of course, this question is asked as part of our health-focused survey, so responses are likely influenced by participants' feelings about their health and health care.

Health care utilization

General health care utilization

We hypothesize that health insurance increases health care utilization, although there may be some offsetting effects if care is used in more efficient ways or if health improves enough. Table 9 reports results for our measures of health care utilization; we consider (1) prescription drugs, (2) office visits, (3) outpatient surgery, (4) emergency department visits, and (5) hospital visits. Prescription drugs are measured as those currently taken (collected as a detailed catalog of actual medications) and all other components of utilization are measured as reported use over the past 12 months. We examine both the extensive margin (Panel A) and total utilization (Panel B).

For health care utilization, there is a meaningful way to combine different types of use: their respective costs. In the final row of Table 9, we do a back-of-the-envelope calculation of the mean and change in annual spending using cost data from the Medical Expenditures Panel Survey to convert utilization to spending.

Preventive health care and screening

We hypothesize that health insurance increases use of preventive care and screening tests. Table 10 reports the results for use of preventive care in the last 12 months; we consider (1) cholesterol testing, (2) blood stool testing, (3) colonoscopy, (4) flu shot, (5) pap smear, (6) mammogram, and (7) PSA testing. Except for cholesterol and pap smear, all analysis is limited to those aged 50 and above; analysis for pap smear and mammogram is limited to women, and analysis for PSA testing is limited to men.

Access and quality

We hypothesize that health insurance may increase perceived access to and quality of medical care. Table 11, Panel A reports results for our measures of access to medical care; we consider (1) whether you have a usual place of clinic-based care, and whether the person got all needed (2) medical care, (3) mental health care, (4) substance abuse care, and (5) prescription

medications. Table 11, Panel B reports results for perceived quality of care, conditional on receiving care in the last 12 months (which 78% of our controls did).

Finances

We hypothesize that health insurance may reduce financial strain. Table 12 reports results for our measures of financial strain, all of which have a 12 month look back period except medical debt; we consider (1) whether one has any out-of-pocket spending, (2) the (unconditional) mean dollar amount of out-of-pocket spending, (3) whether one has catastrophic medical expenditures (defined as out-of-pocket spending exceeding 30 percent of reported household income), (4) whether one has any current medical debt, and (5) whether one has skipped other bills or borrowed money to pay medical bills.

Additional analysis

For those outcomes where we have substantively or statistically significant estimates, we plan to explore the results more fully. Rather than produce the full potential set of additional tables in this analysis plan, we instead describe our planned approach more generally..

Sensitivity of results to model specification and adjustment for covariates

As our primary specification we use linear probability models even for rates of binary outcomes. Appendix Tables A6-A14 report the results for Tables 4-12 using an alternate specification of logistic models and estimated marginal effects for all binary outcomes.

We will also investigate the sensitivity of results to adjustment for covariates. We will report our primary specification, as well as a specification either with adjustment for age and sex (where the primary specification did not include it) or without adjustment for age and sex (in the case of our blood pressure measures). We will also report a specification adding controls for a more complete set of pre-randomization characteristics.

Heterogeneity of results

We will investigate whether our treatment effects are heterogeneous along a number of dimensions: gender, age (19-49 and 50-64), race (white and any non-white), pre-randomization access to credit (yes or no), education (more than high school and high school or less), smoking status (ever smoker and never smoker), and signing up for the lottery on the first possible day. This analysis follows Finkelstein et al. and is explained in more detail there (Finkelstein et al. 2011). The measures of access to credit and sign-up date for the lottery use data sources not discussed here but are described fully in Finkelstein et al.

Comparison with prior results

We will compare our estimates, where possible, with parallel measures obtained from our mail survey conducted approximately 18 months after the lottery. Estimates may differ because

of the different mode of data collection (in-person vs. mail), the longer time horizon, or differences in respondent characteristics (the in-person data collection was conducted only for study participants in the Portland area, and also had a higher response rate). To try to shed light on the relative role of these factors, we will make several comparisons. We will replicate the prior mail survey analysis limiting to individuals in the Portland area. We will compare the mail survey results for respondents to the in-person survey with results for non-respondents to the in-person survey. We will compare in-person results for respondents to the mail survey with results for non-respondents to the mail survey. Finally, we will limit both survey analyses to the overlap set of respondents.

Comparison with observational estimates

In Table 13, we compare our results with estimates that would be obtained using simple observational comparisons of people with and without insurance in our study – ignoring the role of the lottery in randomly assigning access to insurance. We present these comparisons for the physiologic measures in Table 4; similar results for self-reported health, health utilization and finances have been previously reported (Finkelstein et al. 2011). The first comparison, done in the full sample, represents an “as treated” analysis (comparing all those covered by Medicaid to all those not covered). We then perform the same analysis in the control group only, which avoids having much of the variation in insurance coming from the lottery; in that group, most of the insurance coverage is OHP Plus, which covers a somewhat different population than OHP Standard. Last, we perform the analysis within the treatment group, comparing those on OHP Standard to those with no Medicaid (and dropping the small percentage of treatment individuals on Plus). Unlike our primary estimates, which use the lottery as a source of random variation in insurance coverage, these observational estimates will be confounded by factors that impact both likelihood of insurance coverage and our outcomes.

Future analysis

This analysis plan is intended to pre-specify an initial set of analyses from the in-person data. There are, however, entire sections of the in-person interview and additional measures that are not included in this plan. These include, for example, rich detail on medication usage and specific conditions (diagnosis and treatment of asthma, diabetes, hypertension, etc.), health behaviors, and labor force participation and work impairment. In addition, there are several physiologic health measures that we did not include here (pulse, C-reactive protein levels, and waist circumference). We intend to develop analysis plans and complete analyses of these outcomes subsequent to this initial set of analyses; our general analytic approach will be similar to that described here.

Figures and tables

Figure 1: Enrollment, treatment assignment, sampling and survey response

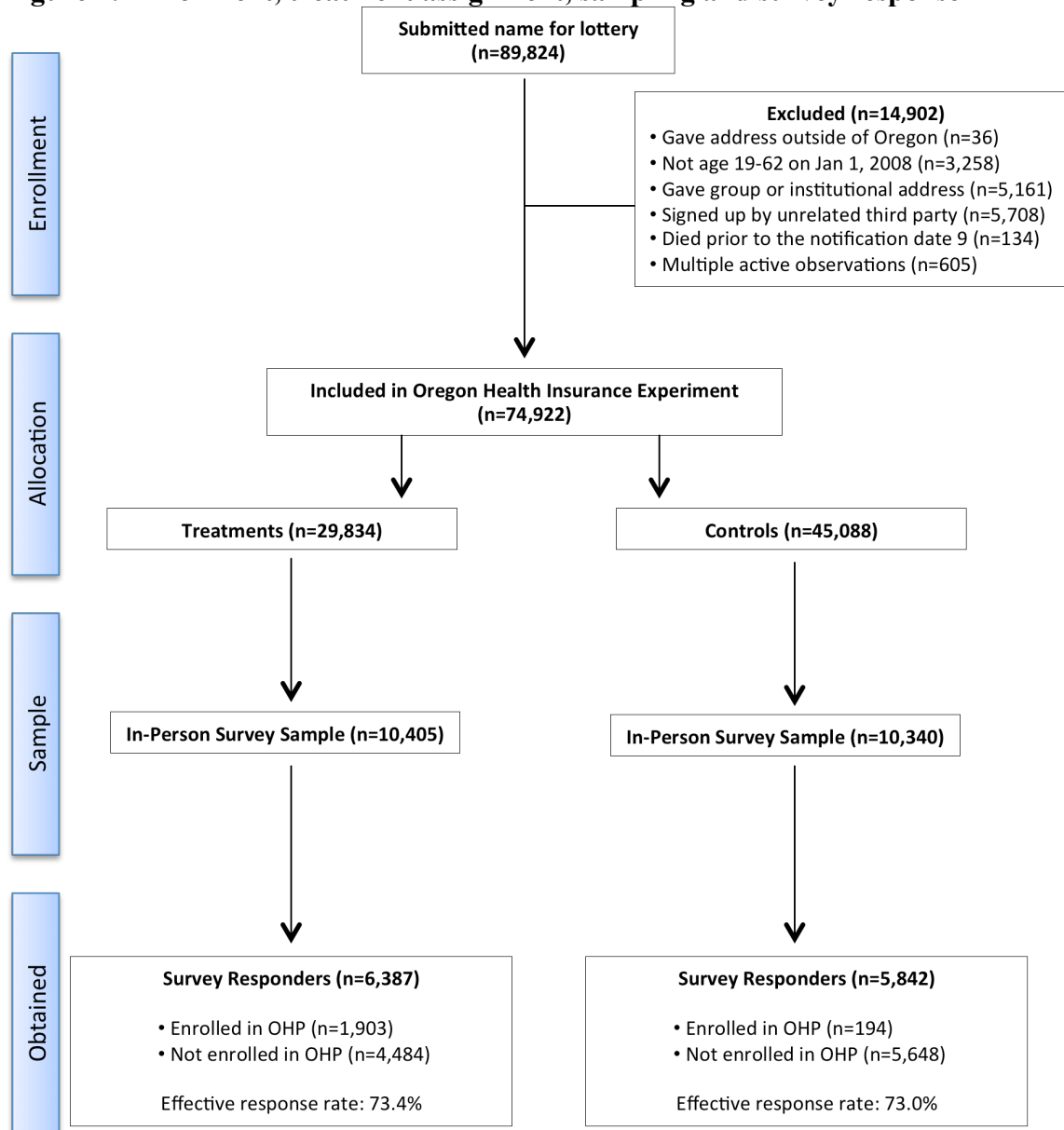


Table 1: Characteristics of the study population

	Mean for controls	Difference between treatment and controls
	(1)	(2)
Female	0.569	-0.0046 (0.0087) [0.597]
Age 19-34	0.360	-0.009 (0.01) [0.382]
Age 35-49	0.364	0.0016 (0.01) [0.873]
Age 50-64	0.276	0.0073 (0.0094) [0.434]
White*	0.688	0.0042 (0.01) [0.68]
Black*	0.105	0.0014 (0.0061) [0.824]
Other race*	0.148	0.00034 (0.008) [0.966]
Hispanic	0.172	-0.0019 (0.0084) [0.818]
Interview conducted in English	0.882	0.0025 (0.0076) [0.737]

Notes: The first column reports the weighted mean for the control respondents. The second column reports the difference between the average outcome for all individuals selected in the lottery and the average outcome for all control individuals, as calculated by ordinary least squares regression; the dependent variable is given in the left hand column. All regressions include indicators for each household size and all standard errors are clustered on household. We report the coefficient, standard error (in parentheses), and per comparison p-value [in square brackets]. All analysis is weighted using survey weights.

Sample consists of survey respondents (N = 12,229).

*Note that people were able to give more than one answer for race.

Table 2: Balance of response rates

	Mean for controls	Difference between treatment and controls
	(1)	(2)
Responded to survey	0.73	0.0028 (0.016) [0.856]

Notes: The first column reports the mean and standard deviation for the control sample. The second column reports the difference between the average response rate for all individuals selected in the lottery to the average response rate for all control individuals, as calculated by ordinary least squares regression. All regressions include indicators for each household size and all standard errors are clustered on household. We report the coefficient, standard error, and per comparison p-value. All analysis is weighted using survey weights. Sample consists of survey sample (N = 20745).

Table 3: Insurance coverage

	Control mean	Estimated FS
Ever on Medicaid during study period	0.184	0.241 (0.0090) [<0.0001]

Notes: The first column reports the weighted control mean for the measure of “INSURANCE” defined in the left-hand column; The second column reports the effect on insurance coverage, which compares the average of the insurance measure for all individuals selected in the lottery to the average of the insurance measure for all control individuals, as calculated by ordinary least squares regression. All regressions include indicators for each household size and are weighted using survey weights. All standard errors are clustered on the household.

The insurance measure is taken from the Medicaid enrollment administrative data. The study period is defined as running from March 10, 2008 to the date of survey response; the variable defined as “ever” covers this entire period.

Sample consists of survey respondents (N = 12,229).

(Standard errors in parentheses)

[p-values in square brackets]

Table 4: Physiologic measures of health

	All survey respondents				Pre-existing “high-risk” diagnoses				Ages 50 - 64			
	Control mean (1)	ITT (2)	LATE (3)	p- value (4)	Control mean (5)	ITT (6)	LATE (7)	p- value (8)	Control mean (9)	ITT (10)	LATE (11)	p- value (12)
<i>Body mass index</i>												
BMI	29.822 (7.581)				32.317 (8.129)				30.42 (7.759)			
Overweight/obese	0.713				0.830				0.749			
Obese	0.415				0.558				0.448			
<i>Blood pressure</i>												
Systolic BP	119.278 (16.852)				126.142 (19.567)				127.303 (19.371)			
Diastolic BP	76.013 (12.136)				80.596 (13.092)				79.557 (12.812)			
Prehypertension or hypertension	0.493				0.660				0.667			
Hypertension	0.163				0.293				0.283			
<i>Cholesterol</i>												
Total cholesterol	198.529 (32.036)				200.263 (34.733)				201.438 (34.52)			
Elevated total chol	0.444				0.472				0.48			
High total chol	0.102				0.13				0.139			
HDL cholesterol	53.565 (14.934)				52.511 (15.27)				54.174 (16.07)			
Low HDL chol	0.184				0.212				0.187			

(continued on next page)

Table 4: Physiologic measures of health (continued)

	All survey respondents				Pre-existing “high-risk” diagnoses				Ages 50 - 64			
	Control mean (1)	ITT (2)	LATE (3)	p- value (4)	Control mean (5)	ITT (6)	LATE (7)	p- value (8)	Control mean (9)	ITT (10)	LATE (11)	p- value (12)
<i>Glycosylated hemoglobin</i>												
Hemoglobin Alc	5.575 (1.013)				6.138 (1.52)				5.899 (1.202)			
Pre-diabetic or diabetic	0.252				0.448				0.414			
Diabetic	0.080				0.218				0.147			

Notes: Column 1 reports the weighted mean of the dependent variable in the control sample of survey respondents and standard deviation for continuous outcomes. Column 2 reports intention-to-treat estimates, which compare the average outcome for all individuals selected in the lottery to the average outcome for all control individuals, as calculated by ordinary least squares regression. Column 3 reports the local-average-treatment-effect for insurance coverage as estimated by instrumental variable regression. Column 4 reports the per-comparison p value. All regressions include indicators for each household size, and all standard errors are clustered on the household. All analysis is weighted using survey weights.

For the blood pressure measures, all regressions also include controls for age (in decile bins) and sex.

Columns 1-4 show the full sample of survey respondents (N=12,229). Columns 5-8 limit the sample to those with pre-randomization diagnoses putting them at higher risk for adverse events (diabetes, hypertension, high cholesterol, heart attack, or congestive heart failure) (N=3,314); see text for more details. Columns 9-12 limit the sample to those aged 50-64 (N=3,372).

(Standard errors in parentheses)

Table 5: Framingham risk score

	All survey respondents				Pre-existing “high-risk” diagnoses				Ages 50 - 64			
	Control mean (1)	ITT (2)	LATE (3)	p- value (4)	Control mean (5)	ITT (6)	LATE (7)	p- value (8)	Control mean (9)	ITT (10)	LATE (11)	p- value (12)
Female	0.569 (0.496)				0.562 (0.496)				0.558 (0.498)			
Age	40.723 (11.688)				47.978 (10.042)				55.395 (3.937)			
Total cholesterol	198.529 (32.036)				200.263 (34.733)				201.438 (34.52)			
HDL cholesterol	53.565 (14.934)				52.511 (15.27)				54.174 (16.07)			
Systolic BP	119.278 (16.852)				126.142 (19.567)				127.303 (19.371)			
BP medication	0.111 (0.314)				0.335 (0.472)				0.250 (0.433)			
Smoker	0.428 (0.495)				0.438 (0.496)				0.438 (0.496)			
Diabetic	0.080 (0.272)				0.218 (0.413)				0.147 (0.354)			
<i>Framingham Risk Score</i>	0.066 (0.06)				0.090 (0.071)				0.111 (0.071)			

Notes: See Table 4 notes. Columns 1-4 show the full sample of survey respondents (N=12,229). Columns 5-8 limit the sample to those with pre-randomization diagnoses putting them at higher risk for adverse events (diabetes, hypertension, high cholesterol, heart attack, or congestive heart failure) (N=3,314); see text for more details. Columns 9-12 limit the sample to those aged 50-64 (N=3,372).

(Standard errors in parentheses)

Table 6: Self-reported measures of health

	All survey respondents				Pre-existing “high-risk” diagnoses				Ages 50 - 64			
	Control mean (1)	ITT (2)	LATE (3)	p-value (4)	Control mean (5)	ITT (6)	LATE (7)	p- value (8)	Control mean (9)	ITT (10)	LATE (11)	p- value (12)
Health g/vg/e	0.596				0.417				0.492			
Health not poor or very poor	0.858				0.743				0.785			
Health same or gotten better	0.804				0.749				0.747			
SF-8 physical subscale score	45.492 (10.495)				41.048 (10.867)				41.402 (11.099)			
SF-8 mental subscale score	44.387 (11.38)				42.285 (11.827)				43.184 (11.62)			
Pos depression screen*	0.30				0.419				0.391			
Probability of depression*	0.257 (0.337)				0.354 (0.369)				0.333 (0.369)			
No or very mild pain <i>STE</i>	0.564				0.398				0.414			

Notes: See Table 4 notes. Columns 1-4 show the full sample of survey respondents (N=12,229). Columns 5-8 limit the sample to those with pre-randomization diagnoses putting them at higher risk for adverse events (diabetes, hypertension, high cholesterol, heart attack, or congestive heart failure) (N=3,314); see text for more details. Columns 9-12 limit the sample to those aged 50-64 (N=3,372).

*For the standardized treatment effect, the sign of the positive depression screen and the probability of depression effect is reversed so that a positive effect corresponds to better health as it does for the rest of the measures.

(Standard errors in parentheses)

Table 7: Health, diagnoses and medications

All survey respondents					Pre-existing “high-risk” diagnoses				Ages 50 - 64			
	Control mean (1)	ITT (2)	LATE (3)	p- value (4)	Control mean (5)	ITT (6)	LATE (7)	p-value (8)	Control mean (9)	ITT (10)	LATE (11)	p-value (12)
<i>Panel A: Undiagnosed conditions</i>												
Undiagnosed hypertension	0.072				0.026				0.102			
Undiagnosed high chl	0.070				0.042				0.079			
Undiagnosed diabetes	0.023				0.026				0.037			
Undiagnosed depression <i>STE</i>	0.091				0.099				0.120			
<i>Panel B: Unmedicated conditions</i>												
Unmedicated hypertension	0.123				0.175				0.187			
Unmedicated high chl	0.094				0.109				0.118			
Unmedicated diabetes	0.032				0.055				0.049			
Unmedicated depression <i>STE</i>	0.211				0.252				0.248			

(continued on next page)

Table 7: Health, diagnoses and medications (continued)

All survey respondents				Pre-existing “high-risk” diagnoses				Ages 50 - 64			
Control mean (1)	ITT (2)	LATE (3)	p- value (4)	Control mean (5)	ITT (6)	LATE (7)	p-value (8)	Control mean (9)	ITT (10)	LATE (11)	p-value (12)
<i>Panel C: Unmedicated pain</i>											
Pain without Rx med	0.296			0.372				0.364			
Pain without any med	0.188			0.225				0.220			

Notes: See Table 4 notes. Columns 1-4 show the full sample of survey respondents (N=12,229). Columns 5-8 limit the sample to those with pre-randomization diagnoses putting them at higher risk for adverse events (diabetes, hypertension, high cholesterol, heart attack, or congestive heart failure) (N=3,314); see text for more details. Columns 9-12 limit the sample to those aged 50-64 (N=3,372).

Undiagnosed conditions are defined as having a health measure indicating the presence condition without a corresponding respondent-reported diagnosis. Unmedicated conditions are defined as having a health measure indicating the presence of the condition without a corresponding medication.

Table 8: Happiness

	Control mean (1)	Reduced form (2)	LATE (3)	p-value (4)
Very happy or pretty happy (vs. not too happy)	0.749			

Notes: See Table 4 notes. Sample is all survey respondents (N=12,229)

(Standard errors in parentheses)

Table 9: Health care utilization

	Control mean (1)	ITT (2)	LATE (3)	p-value (4)
<i>Panel A: Extensive margin (any)</i>				
Rx drugs (currently taking)	0.539			
Office Visits (last 12 months)	0.646			
Outpatient Surgery (last 12 months)	0.078			
ED visits (last 12 months)	0.402			
Hospital visits (last 12 months)	0.127			
<i>Panel B: Total margin (number), unconditional</i>				
Rx drugs (currently taking)	1.832 (2.807)			
Office Visits (last 12 months)	6.745 (21.476)			
Outpatient Surgery (last 12 months)	0.105 (0.435)			
ED visits (last 12 month)	1.027 (2.182)			
Hospital visits (last 12 months)	0.29 (3.119)			
<i>Annual spending</i>				

Notes: See Table 4 notes. Sample is all survey respondents (N = 12, 229).

(Standard errors in parentheses)

Table 10: Preventive care

	Control mean	Reduced form	LATE	p-value
	(1)	(2)	(3)	(4)
Cholesterol checked	0.272			
Blood stool test (age ≥ 50)	0.191			
Colonoscopy (age ≥ 50)	0.104			
Flu shot (age ≥ 50)	0.355			
Pap smear (women)	0.449			
Mammogram (women ≥ 50)	0.289			
PSA (men ≥ 50)	0.214			
<i>Standardized treatment effect</i>				

Notes: See Table 4 notes. All measures are for preventive care in the last 12 months. Sample is all survey respondents (N=12,229), survey respondents at least 50 years of age (N=3374), female survey respondents (N=6915), female survey respondents at least 50 years of age (N=1864) or male survey respondents at least 50 years of age (N=1509), as indicated in the table.

(Standard errors in parentheses)

Table 11: Access and quality

	Control mean (1)	Reduced form (2)	LATE (3)	p-value (4)
<i>Panel A: Access</i>				
Have usual place of clinic-based care	0.461			
Got all needed medical care	0.610			
Got all needed mental health care	0.756			
Got all needed prescription drugs	0.724			
<i>Standardized treatment effect</i>				
<i>Panel B: Quality</i>				
Quality of care is good, v good or excellent (conditional on any)	0.784			

Notes: See Table 4 notes. Sample is all survey respondents (N=12, 229) except for quality of care which is only defined on those who received care in the last 12 months (N= 9,694). All measures of “got needed care” are over the last 12 months.

(Standard errors in parentheses)

Table 12: Finances

	Control mean (1)	Reduced form (2)	LATE (3)	p-value (4)
Any out-of-pocket spending	0.588			
Amount of out-of-pocket spending	552.839 (1219.49)			
Catastrophic expenditures	0.055			
Any medical debt	0.568			
Borrowed money or skipped bills	0.244			
<i>Standardized treatment effect</i>				

Notes: See Table 4 notes. Sample is all survey respondents (N=12, 229).

(Standard errors in parentheses)

Table 13: Comparison with observational estimates

	Random assignment (1)	Any Medicaid vs. No Medicaid (2)	Any Medicaid vs. No Medicaid (controls only) (3)	OHP Standard vs. No Medicaid (treatment only) (4)
Sample size				
Percent insured				
BMI				
Overweight or obese				
Obese				
Systolic BP				
Diastolic BP				
Prehypertension or hypertension				
Hypertension				
Total cholesterol				
Elevated total cholesterol				
High total cholesterol				
HDL cholesterol				
Low HDL cholesterol				
Hemoglobin Alc				
Pre-diabetic or diabetic				
Diabetic				

Notes: The top two rows report the sample size and percent insured for each sample. Column 1 reports our LATE results from Table 4 (“all survey respondents”). Columns 2 and 3 compare all those with any Medicaid coverage during our study period to those without Medicaid for the full sample and the control group. Column 4 limits to the treatment group and compares those on OHP Standard to those with no Medicaid. All regressions include indicators for each household size and are weighted using the survey weights. All standard errors are clustered on the household.

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Analytic specifications

The goal of this analysis, as described in the main plan, is to evaluate the effect of lottery selection and subsequent insurance coverage on a range of outcomes. This section describes the empirical specifications.

Intent-to-Treat Effect of the Lottery (ITT)

We estimate the Intent-to-Treat (ITT) effect of winning the lottery (i.e. the difference between treatment and controls) by estimating the following OLS equation:

$$y_{ij} = \beta_0 + \beta_1 LOTTERY_h + X_{ih}\beta_2 + V_{ih}\beta_3 + \varepsilon_{ij} \quad (1)$$

where i denotes an individual, h denotes a household and $j \in J$ denotes a “domain” of related outcomes (such as health or financial strain). For example y_{ij} might be the self-reported health of individual i , which is one of the health measures in the health “domain” j .

$LOTTERY$ is an indicator variable for whether or not household h was selected by the lottery. The coefficient on $LOTTERY$ (β_1) is the main coefficient of interest, and gives the average difference in (adjusted) means between the treatment group (the lottery winners) and the control group (those not selected by the lottery); it is interpreted as the impact of being able to apply for OHP Standard through the Oregon lottery.

We denote by X_{ih} the set of covariates that are correlated with treatment probability (and potentially with the outcome) and therefore must be controlled for so that estimates of β_1 give an unbiased estimate of the relationship between winning the lottery and the outcome. In all of our analyses, X_{ih} includes indicator variables for the number of individuals in the household listed on the lottery sign-up form (hereafter “household size”); although the state randomly sampled from individuals on the list, the entire household of any selected individual was considered selected and eligible to apply for insurance. As a result, selected (treatment) individuals are disproportionately drawn from larger households.¹

We denote by V_{ih} a second set of covariates that can be included to potentially improve power by accounting for chance differences between treatment and control group in variables that may be important determinants of outcomes. These covariates are not needed for β_1 to give an unbiased estimate of the relationship between winning the lottery and the outcome, however, as they are not related to treatment status. Our primary analysis does not control for any V_{ih} covariates; the exception to this is in the analysis of the blood pressure measures, where we add adjustment for age (in decile bins) and sex. As a secondary analysis, we will explore whether our results are sensitive to inclusion of the V_{ih} covariates.

¹ The proportion of treated individuals in household size 1 is 71.40% (78.40% for controls), in household size 2 is 28.36% (21.57% for controls) and in household size 3 is 0.25% (0.03% for controls).

In all of our ITT estimates and in our subsequent instrumental variable estimates (see below), we estimate linear models even though a number of our outcomes are binary. Because we are interested in the difference in conditional means for the treatments and controls, linear probability models pose no concerns in the absence of covariates or in fully saturated models (Angrist 2001, Angrist and Pischke 2009). Our models are not fully saturated, however, so it is possible that this functional form choice could make a difference, especially for outcomes with very low or very high mean probability. We explore the sensitivity of our results to an alternate specification using logistic regression and calculating average marginal effects for all binary outcomes.

In all of our analyses we cluster the standard errors on the household identifier since the treatment is at the household level. All analyses are weighted to account for the sampling design of the survey as described below.

Local Average Treatment Effect of Medicaid (LATE)

The intent-to-treat estimates from equation (1) provide an estimate of the causal effect of winning the lottery (i.e. winning the opportunity to apply for OHP Standard). This provides an estimate of the net impact of expanding *access* to public health insurance. We are also interested in the impact of insurance *coverage*. We model this as follows:

$$y_{ihj} = \pi_0 + \pi_1 \text{INSURANCE}_{ih} + X_{ih} \pi_2 + V_{ih} \pi_3 + v_{ihj} \quad (2)$$

where INSURANCE is a measure of insurance coverage and all other variables are as defined in equation (1). We estimate equation (3) by two stage least squares (2SLS), using the following first stage equation:

$$\text{INSURANCE}_{ihj} = \delta_0 + \delta_1 \text{LOTTERY}_{ih} + X_{ih} \delta_2 + V_{ih} \delta_3 + \mu_{ihj} \quad (3)$$

in which the excluded instrument is the variable *LOTTERY*.²

We interpret the coefficient on insurance from instrumental variable estimation of equation (3) as a local average treatment effect of insurance, or LATE (Imbens and Angrist 1994). In other words, our estimate of π_1 identifies the causal impact of insurance among the subset of individuals who obtain insurance on winning the lottery and who would not obtain insurance without winning the lottery (i.e. the compliers).³

² In principle, if we could observe individuals' income in the year before the lottery this could be quite predictive of the first stage and interacting pre-randomization income with the LOTTERY variable in the first stage could improve the precision of our estimates, and thus our power.

³ When insurance is defined as "ever on OHP Standard" we can probably be comfortable interpreting the IV estimates of equation (3) as the treatment-on-treated (ToT) rather than a LATE. In practice, there are two small violations of this interpretation. First, if there were no way to get OHP Standard without winning the lottery there would be no "always-takers" in the terminology of Angrist, Imbens and Rubens (1996), but about 2 percent of our controls got onto OHP standard through some limited alternative mechanisms—for example, pregnant women who are on OHP Plus can sometimes stay on OHP Standard after giving birth. Second, it is possible that some compliers were put on OHP Plus rather than Standard, since case workers are instructed to first check applicant eligibility for

The LATE interpretation requires the additional identifying assumption that the only mechanism through which winning the lottery affects the outcomes studied is the lottery's impact on insurance coverage. We believe this is a reasonable approximation, but it may not be strictly true. First, it is possible that the event of winning (or losing) the lottery may have direct effects on outcomes, although it seems unlikely to us that any such effects persist more than a year after the lottery. Second, individuals who apply for public health insurance may also be encouraged to apply for other public programs, such as food stamps or cash welfare. In particular, if the individual applied for OHP in person (rather than by mail), case workers were instructed to offer assistance to interested applicants in applying for TANF (cash welfare) and the Supplemental Nutrition Assistance Program (food stamps). These other transfer programs could have direct effects on the outcomes we study. This is not an idiosyncratic feature of our setting but a more general feature of the application process for public programs; as such, it may be a relevant component of the impact of attempts to expand Medicaid more generally. However, any direct impact of winning the lottery on receipt of other benefits is a violation of the exclusion restriction for the LATE interpretation of the impact of insurance per se (which is not the case in the ITT analysis estimating the effect of expanded access to Medicaid). This is explored empirically below.

Handling many outcomes

For each of the broad domains, we provide a summary measure in addition to the individual outcomes. For some domains there are natural summaries available (such as total cost for utilization or the Framingham risk score for physiological measures described below). When a natural summary measure is not available, we generate a simple one based on the average observed effect in standardized units:

$$\sum_{j \in J} \frac{1}{J} \frac{\xi_{1j}}{\sigma_j} \quad (4)$$

where σ_j is the standard deviation of y_j in the control group and ξ_{1j} is the coefficient of interest for outcome j . (Specifically, for the ITT estimates in equation (1), the ξ_{1j} 's correspond to the β_{1j} 's.) In order to account for covariance in the estimates of ξ_{1j} / σ_j we estimate pooled OLS for all outcomes $j \in J$.⁴ An important limitation of this ad hoc standardized treatment effect is that it implicitly “weights” each outcome within a domain equally.

Plus; in practice this number is likely to be small since the estimated first stage is very similar for “ever on Medicaid” (which includes Plus and Standard) and “ever on OHP Standard” (see rows 1 and 2 of Table 3).

⁴ Specifically, we stacked the data for the individual outcomes within a domain and estimated a single regression equation that allowed the coefficients on each covariate to vary flexibly across the outcomes and for correlation in the error terms across outcomes. The outcomes are defined to point in the same direction (e.g. increasing means better health).

Survey weights

We use weights to adjust for several aspects of our survey fielding in all of our summary statistics and regression analyses. The weights are designed to ensure our recruitment sample (i.e. the sample of people whom we attempted to contact and who ended up with non-zero weights) is balanced on treatment status and representative of our sampling base.

We began recruitment of study participants in groups (called “sample releases”). These rolling releases facilitated efficient use of recruitment, tracking, and interviewing resources. There were 44 such releases, roughly weekly, typically of about 450 individuals. Over the course of the fielding, we routinely dropped individuals from our active recruitment sample. There were two reasons for doing so. First, to promote a high response rate, we regularly took a random subsample of the participants who had been released but had not yet responded and instructed the fielding staff to continue active recruitment only on the selected group. This allowed our staff to devote additional time and effort (“intensive follow-up”) to potential participants who were difficult to locate or recruit, without diverting too many resources away from the rest of the potential participants. Second, during our fielding the state was conducting a new lottery for OHP Standard (discussed more below). Following each new lottery drawing, we excluded from our active sample individuals selected in the lottery who had not yet responded (“new lottery drops”). Between the intensive follow-up drops and the new lottery drops, the active sample was restricted roughly every 2 to 4 weeks. A typical drop removed a few hundred individuals from the active sample.

We adjust for both types of drops using weights constructed on the following principle: within any (even non-random) subset of the original sample base, a randomly selected group can be weighted to stand in for the non-selected remainder based on the probability of that random selection without introducing bias. For each of the drops, we construct a weight that corrects for that drop. The final analytic weight is simply the product of all the weights introduced over the course of the study.

Our weighting is roughly analogous to weighting done for censoring or attrition in longitudinal data (Cole and Hernán 2008, Kalton 1986). As in those settings, we weight each observation at each time point by the inverse probability of obtaining data, and we generate overall weights as the product of the weights across all time points. In our setting, the time points correspond to changes in the active sample. We do not need to model the probability of obtaining data since we randomly assigned active sample status and know the probabilities

Table A1 summarizes the distribution of the weights for the entire sampling base, the recruitment base and then survey responders. Over the entire sampling base, the weights have a mean close to 1, and there are relatively few extreme weights. For the survey respondents, which comprise the sample we analyze, the weights are even less extreme. The average weight is 1.24, with the 95th to 5th percentile range of 2.076 to 0.96. The controls are impacted more by the weights than the treatment group, as they were more likely to sign up for the new lottery (see below).

This weighting method allowed us to continue fielding in the face of the new lottery which affected a non-random subsample of our population and to devote resources to an intensive follow up of non-respondents, while preserving balance between treatment and control study participants. The primary cost of such weighting is an increase in variance. One way to quantify the cost in variance is to calculate an “effective sample size”, which is the unweighted sample size that would have equivalent precision to our weighted sample. Our effective sample size is 4786 controls and 5406 treatments (compared to our actual sample of 5842 controls and 6387 treatments).

The following sections give more detail on the construction of the weights.

Continuous intensive follow-up of non-respondents

For each “intensive follow-up drop” we constructed weights as follows. Let N_t be the set of individuals in a specified sample release (or a group of releases) who have not yet completed an interview at time t . We select a random subsample F_t from N_t with sampling probability $p_t = |F_t|/|N_t|$. The weights are defined for each individual i in the sampling base as:

$$w_t(i) = \begin{cases} \frac{1}{p_t} & \text{if } i \text{ in } F_t \\ 0 & \text{if } i \text{ in } N_t \text{ and } i \text{ not in } F_t \\ 1 & \text{if } i \text{ not in } N_t \end{cases}$$

This weighting does not impact any individuals not yet released for fielding or already having completed interviews; it up-weights the subsample selected for intensive follow-up by the inverse of the probability of being selected, so that they stand in for those dropped (who are assigned weight zero).

New state lottery

Early in our fielding period, the state of Oregon began conducting a new lottery for OHP Standard. The state mailed postcards to those on the original list who were not selected (our controls) asking if they would like to be included in this second lottery. Those who returned the postcard were added to the new waiting list and an initial draw was done just from that group. Following that initial draw, the state opened the new waiting list to the general public (including both our controls and our treatments as well people not on our original list); drawings from this list were conducted approximately monthly. Unlike the original 2008 waiting list, the new waiting list remained continuously open: individuals could sign up at any point. As with the original lottery, draws were done on individuals, but the opportunity to apply for OHP (treatment) was extended to the whole household. After each drawing, we probabilistically matched⁵ the new waiting list to our study population to identify individuals who were eligible for selection by the state (called “opt-ins”) and those who were actually selected in a given drawing (called

⁵ The matching was done using LinkPlus software using name, date of birth, social security number, address and Medicaid client ID where available.

“selected opt-ins”). By December 6, 2010 the state had selected everyone in our original sample who signed up for the new lottery; we limit our analysis to data collected by October 13, 2010 to avoid having extreme weights.

Given the complications in interpreting the “treatment” received by those who were drawn in the new lottery, we chose to drop the selected opt-ins from our recruitment sample. Additional weights are needed to correct for this. For each lottery drawing, the set of opt-ins is not a random sample of our study population: signing up for the new list was optional, and thus subject to the influence of factors such as underlying health. However, the set of selected opt-ins *is* a random sample of the opt-ins. We were therefore able to use weights to adjust for the sample dropped because of the second lottery using the same principle as above: within any (even non-random) subset of the original study population, a randomly selected group can be weighted to stand in for the non-selected remainder based on the probability of that random selection.

Let O_t be the set of opt-ins in our study population eligible for new lottery drawing on date t . Let S_t be the set of opt-ins selected in drawing on date t . For those released into active fielding and having already completed an interview, the new lottery does not pose any problems. This whole set is assigned weight 1. For who have not yet completed an interview, we define the weight for individual i to be:

$$w_t(i) = \begin{cases} \frac{1}{1-p_t} & \text{if } i \text{ in } O_t \text{ and not in } S_t \\ 0 & \text{if } i \text{ in } S_t \\ 1 & \text{if } i \text{ not in } O_t \end{cases}$$

where p_t is the probability of an opt-in being selected.

Selection probabilities varied by the number of household members on the new list, so in all cases, we estimated the selection probability separately by strata of “tickets” (household members on the new waiting list at time t). Additionally, because of complexity in how we chose releases, the probability p_t depended on whether and when an individual was released. Thus we actually assign these weights in groups of releases where p_t was constant.⁶

Final analytic weights

Each weight variable w_t is designed to adjust for the sampling event at time t (whether an intensive follow-up drop or a new lottery drop). We define the cumulative weight variable W_T as the product of all w_t for $t \leq T$. Reweighting by W_T ensures that the recruitment sample is representative of the full sampling base. Whenever there is a sampling event, W_T changes appropriately: multiplication by w_t is precisely what is necessary for the recruitment sample to remain representative.

⁶ Due to a technical complication in our sampling, releases 4-21 were stratified on opt-in status with different sampling probabilities for opt-ins and non-opt-ins. We use an additional set of sampling weights to correct for this. The net effect of this is small; the range of these corrective weights is 0.85-2.59.

Treatment-control balance

In previous work (Finkelstein et al. 2011), we discuss the random assignment of treatment and control groups. Here we examine treatment and control differences in the subset of the study population who completed interviews. Table A2 reports the results.

Panel A reports the balance on response rates to the survey. Preliminary results suggest that our weighted effective response rate for the controls was 73% and the treatments did not respond at a significantly different rate. In addition to this relatively high response rate, we obtained very high responses to the individual components of the study. We obtained valid anthropometric and blood pressure data on 98% of respondents and valid blood assays (total cholesterol, HDL cholesterol and Hemoglobin A1c) on 99% of respondents. Over 98% of respondents either provided medications to be catalogued or reported no medication use (although 8% indicated that this catalog was incomplete). There is no evidence of differential response rates between treatments and controls on any of these components.

Given any response rate of less than 100%, however, there is the potential for bias even if the overall response rate for treatment and control groups is the same: the controls that respond could have systematically different characteristics from the treatments that respond. In Panel B, we examine respondents' balance on characteristics that are not affected by lottery selection. Some are measured pre-randomization, taken from the information they provided when signing up for the lottery. Some are measured in the survey but are immutable, such as age or race. Others are characteristics of the data collection effort, such as response date (including season, weekend vs. weekday, etc.), response time (days between start of recruitment and completion of the interview), location of the interview, and language of the interview (English, Spanish, or interpreter of another language). All these variables are intended to help identify potential response bias by capturing characteristics of the responders that may be related to outcomes (men may differ from women, those who chose to come in on the weekend may differ from those who chose to come in during the week, and so on) but are not likely to be affected by the lottery itself. The overall F-stat for differences in all the characteristics pooled has a p-value of 0.738.

In Panel C, we test whether there was any evidence of differential sorting across our interviewers or equipment on the basis of treatment status. We do not expect that there will be differences here, as assignment to interviewer or equipment should not be related to treatment status. As such, we do not want to include all these additional tests in our global test of response bias in Panel B because it could mask real differences between respondents in the characteristics in Panel B. However, because the interviewer or equipment used has such a direct effect on the outcome measurement, we might be concerned about differences even arising from chance.⁷ The F-stats for the tests on the three pieces of equipment have p-values of 0.291, 0.231, and 0.728 respectively. The F-stat for the test of sorting across our 48 interviewers has a p-value of 0.150.

⁷ It is worth noting that the division between Panel B and Panel C is not completely clean. For example, interviewers and equipment were assigned to specific clinics.

As a final check of imbalance between treatment and control respondents, we examined differences in pre-randomization characteristics measured in other, administrative, datasets. We examine whether treatments and controls differed in having any hospital visits or the number of hospital visits in the pre-randomization period (as measured in hospital discharge data) or in having any medical or non-medical collections (as measured in credit report data). These datasets are described by Finkelstein et al. (2011), and this analysis follows Table A13 from that paper. There is no evidence of any difference; the F-stat for the test on these four variables combined has a p-value of 0.187 (not shown).

Although these results are not conclusive—there is still the possibility of differences on other unobserved variables—they are reassuring. To the extent that we are able to examine it, we find no evidence of differential selection into responding between treatment and control groups.

Insurance coverage

Table A4 reports the control means and effects of lottery selection for alternative definitions of insurance coverage. The increase in OHP Standard is slightly greater than the increase in any Medicaid (0.265 percentage points compared to 0.241). This suggests that at least some of the increase in OHP Standard comes from individuals who are on another Medicaid program at some point during the study period. The lottery is associated with an increase of 4.16 months on Medicaid (row 3). Using “current” enrollment (measured on the date of interview) reduces the effect on insurance coverage from 0.241 to 0.111; the increase in Medicaid coverage associated with the lottery attenuates over time as treatments fail to recertify their eligibility for OHP Standard and controls get on OHP Plus. Figure A1 shows the time path of enrollment in OHP Standard and all Medicaid over time.

Unlike the administrative data that capture only Medicaid coverage, the interview data capture all sources of insurance (including private coverage). The difference in Medicaid coverage associated with the lottery as measured in the interviews is similar to the difference in Medicaid coverage as measured in the administrative data on the same date. The increase in any insurance coverage is similar to the increase in Medicaid coverage, suggesting that the lottery had little impact on non-Medicaid insurance coverage. Specifically, we see no evidence of crowd-out of private insurance; private insurance rates are unchanged by the lottery.

Table A4 indicates that selection by the lottery is also not associated with any substantive or statistically significant change in TANF (cash welfare) receipt or benefits. However, lottery selection is associated with a statistically significant but substantively trivial increase in the probability of SNAP (food stamp) receipt (2.3 percentage points), although not in total food stamp benefits. Estimates of the income elasticity of health care use range from a low end of about 0 to a high end of about 1.5 (Getzen 2000, Table 1), suggesting that the income effect of food stamp receipt on health care use would be considerably less than 1 percent. The impact on health seems likely to be negligible as well. Thus, we are comfortable interpreting our IV

estimates as the effect of insurance coverage, or more specifically, the Oregon Medicaid program, on outcomes.

Additional analysis

Table A5 reports analysis of some of our health measures limited to only those with the related pre-randomization diagnosis. We consider the blood pressure measures limited to those with a pre-randomization diagnosis of hypertension, the cholesterol measures limited to those with a pre-randomization diagnosis of high cholesterol, the glycosylated hemoglobin measures limited to those with a pre-randomization diagnosis of diabetes, and the depression measures limited to those with a pre-randomization diagnosis of depression or anxiety.

Tables A6-A14 report analysis of our binary outcome measures using a logistic regression rather than a linear probability regression model. We present the control means and linear probability results (also shown in Tables 4-12 in the main text) as well as average marginal effects from the logistic model estimation. The average marginal effects are calculated by predicting the outcome as a treatment and as a control for each individual, taking the difference in the two predictions, and averaging those differences across the whole sample.

Outcome measures

The outcomes in this analysis are drawn from the physiological measures and in-person questionnaire (available at www.nber.org/oregon). We developed the questionnaire for this study, drawing on existing survey instruments whenever possible. Table A15 provides a summary of the outcome variables and Table A16 provides additional detail on the distribution of some variables. The outcomes fall into several broad domains.

Physiologic measures of health

Our physiologic health measurements were modeled on those done by the National Health and Nutrition Examination Survey (NHANES) and we worked with consultants from the National Center for Health Statistics to develop them.

We measured weight using a Seca 876 portable digital weight scale and height using a Seca 214 portable stadiometer. We examine continuously measured **body mass index (BMI)** defined as a function of height and weight. We define whether you are **overweight or obese** as BMI of at least 25 and whether you are **obese** as BMI of at least 30. These are standard clinical cut-points (Expert Panel on the Identification Evaluation and Treatment of Overweight and Obesity in Adults 1998, World Health Organization 2011) and are used by the NHANES in estimating the prevalence of obesity in the US population (Flegal et al. 2010)

We measured blood pressure using the OMRON IntelliSense unit, model HEM-907XL, which automatically inflates the cuff to the desired level and does not require adjustment by the

interviewer. Our blood pressure measure is the average of three readings taken 30 seconds apart, following a period of sitting quietly for 5 minutes. We examine continuously measured **systolic blood pressure** and continuously measured **diastolic blood pressure**. We define **pre-hypertension or hypertension** using the standard clinical cut-points of systolic blood pressure of at least 120 or diastolic blood pressure of at least 80 and **hypertension** as systolic blood pressure of at least 140 or diastolic blood pressure of at least 90 (Chobanian et al. 2003).

We collected up to 5 drops of whole blood from a finger stick. Samples were collected on Whatman 903 specimen-collection paper and dried and stored following established protocols (McDade, Williams and Snodgrass 2007). The University of Washington Department of Laboratory Medicine performed the assays from the stored blood. We used formulas developed by the National Center for Health Statistics to convert the dried blood spot measurements to the scales used for clinical measures.

We examine continuously measured **total cholesterol**. We define **elevated cholesterol** as total cholesterol greater than or equal to 200 mg/dL and **high cholesterol** as total cholesterol greater than or equal to 240 mg/dL (Expert Panel on Detection Evaluation And Treatment of High Blood Cholesterol In Adults 2001). We also examine continuously measured ("good") **HDL cholesterol**. We define **low HDL cholesterol** as HDL cholesterol below 40 mg/dL.

We examine continuously measured **Hemoglobin A1c**. We defined **elevated risk of diabetes** as Hemoglobin A1c of at least 5.7% and **diabetes** as Hemoglobin A1c of at least 6.5% (International Expert Committee 2009, American Diabetes Association 2010).

Framingham risk score

We use a sex-specific multivariable point-mapping system to calculate the probability of specific atherosclerotic cardiovascular disease (CVD) events, i.e., coronary heart disease, cerebrovascular disease, peripheral vascular disease, and heart failure (D'Agostino et al. 2008). This system, derived using data from the Framingham Heart Study, incorporates age, total and high-density lipoprotein (HDL) cholesterol, systolic blood pressure, treatment for hypertension, smoking, and diabetes status. For each of these variables, a number of points between -3 and 12 is allotted. Total points are then aggregated across all variables and mapped to a probabilistic risk of CVD events in the next 10 years. To calculate the CVD risk score, we used gender and age variables from survey responses and total and HDL cholesterol, systolic blood pressure and diabetes as described in *physiologic measures of health* above. A person is considered "treated for hypertension" if one or more medication from her medication survey was classified as a hypertension medication (more detail in *undiagnosed and unmedicated conditions* below). Individuals answering "yes" to the survey question "Are you currently smoking?" are considered smokers.

Self-reported health

We use a question about self-reported health to construct two binary measures: self-reported **health good, very good or excellent** (vs. fair, poor, or very poor) and self-reported **health fair, good, very good, or excellent** (vs. poor or very poor). These differ in the handling of the 26 percent of participants reporting fair health. The next measure is whether **health status has gotten worse over last twelve months** (vs. stayed the same or gotten worse).

Our survey included the Medical Outcomes Survey Short Form (SF-8) and we examine both the **SF-8 physical component summary** and **SF-8 mental component summary**. The SF-8 is a short form (8-item version) of the Medical Outcomes Survey designed to measure health-related quality of life (Ware et al. 2001). The eight questions ask about general health, work, physical and social limitations, pain, energy levels and emotional problems. Each response is assigned a score, and the physical component summary and mental component summary are both sums of those scores using different weightings. The scoring is designed so that the summary scores will be comparable to scores obtained using the validated SF-36 (McHorney, Ware and Raczek 1993). The scores range from 0 to 100, with higher scores indicating better health, and are normalized to a mean of 50 and standard deviation of 10 in a general population sample.

The next two measures are based on the 8-question version of the Patient Health Questionnaire (PHQ-8). The Patient Health Questionnaire is a standard scale for measuring depression (Kroenke et al. 2009) and is used for measuring depression prevalence in the US population in both the NHANES (Shim et al. 2011) the BRFSS (Kroenke et al. 2009). We include both your **probability of depression** and whether you **screened positive for depression**. The PHQ-8 asks about the frequency of eight depression symptoms. The summary score is calculated by assigning a score of 0 – 3 for each question of the questionnaire (0 for not at all; 3 for nearly every day) and then summing those scores, so higher scores indicate more severe depression symptoms. We map the score to a probability of depression (Kroenke and Spitzer 2002). The positive depression screen is based on a cut-point of PHQ-8 summary score of 10 or above. Using a cut-point of 10 or above for depression in a 9-question version of the PHQ has been shown to correlate highly with clinician diagnosis of major depressive disorder (Kroenke, Spitzer and Williams 2001). The PHQ-8 is a modified version of the 9-question version differing only in excluding the question about suicidal ideation (which is rarely answered in the affirmative, and thus makes little substantive difference in scores (Huang et al. 2006)).

Finally, we use one of the SF-8 questions separately to capture whether you **had no or only very mild pain** in the past 4 weeks.

Undiagnosed and unmedicated conditions

In addition to direct measurement of the presence of several health conditions, we also examine the prevalence of unmedicated or undiagnosed health conditions. We construct these variables using measures of hypertension, high cholesterol, diabetes, depression and pain measures (derived from the combination of survey and physiologic health measures, as described

above) paired with survey data on respondent-reported diagnoses and our cataloguing of current medication usage, described in more detail below.

For “undiagnosed” measure, we consider an individual to have **undiagnosed hypertension** if our blood pressure reading meets the clinical criteria for hypertension, yet the individual reports never having been diagnosed with hypertension. We consider an individual to have **undiagnosed high cholesterol** if our dried blood spot cholesterol reading meets the clinical criteria for high cholesterol, yet the individual reports never having been diagnosed with high cholesterol. We consider an individual to have **undiagnosed diabetes** if our dried blood spot Hemoglobin A1c reading meets the clinical criteria for diabetes, yet the individual reports never having been diagnosed diabetes. We consider an individual to have **undiagnosed depression** if the individual has a PHQ-8 score of 10 or above, yet the individual reports never having been diagnosed with depression.

For “unmedicated” measures, we use information on medications for hypertension, high cholesterol, diabetes, depression, and pain from our medication cataloging. If an individual reported any medication use in the last 4 weeks, we took a detailed inventory of the actual medications. Participants were asked to bring all current medications (prescription and over-the-counter) to their interview. The interviewers entered information (including medication name, dosage, frequency and route) on each medication through an interface that looked up records in a drug database obtained from First DataBank. This drug database codes medications into classes, with drugs with multiple uses having multiple class codes. We use these classes to identify indications with input from a physician. For example, we considered anyone taking a medication classified as an antidepressant to be taking medication for depression (even though that drug may have been prescribed for a different indication). Table A17 lists the names of medications included in each group. For each medication, interviewers asked whether the medication was prescribed or over the counter. If the participant had not brought all current medications to the interview, a phone follow-up was attempted to obtain any remaining medications. Of the 68% of participants who reported any medication use, 11% said that did not provide all medications at the interview and did not complete a phone follow-up.

We consider an individual to have **unmedicated hypertension** if our blood pressure reading meets the clinical criteria for hypertension, yet the individual does not report anti-hypertensive medication. We consider an individual to have **unmedicated high cholesterol** if our dried blood spot cholesterol assay meets the clinical criteria for high cholesterol, yet the individual does not report cholesterol medication. We consider an individual to have **unmedicated diabetes** if our dried blood spot Hemoglobin A1c reading meets the clinical criteria for diabetes, yet the individual does not report diabetes medication. We consider an individual to have **unmedicated depression** if the individual has a PHQ-8 score of 10 or above, yet the individual does not report antidepressant medication. We note that this is a very restrictive definition of treatment based only on medication; future work will explore disease management more broadly.

We consider two measures of unmedicated pain. We consider an individual to have **pain without prescription pain medication** if the individual reports more than mild pain, yet the

individual does not report using prescription pain medication. We consider an individual to have **pain without any pain medication** if the individual reports more than mild pain, yet the individual does not report using any pain medication (prescription or over-the-counter). For both we use analgesics as pain medications, and do not consider other classes of medications that are sometimes used in the context of pain (e.g. corticosteroids).

Happiness

We also asked about how individuals were feeling in general, and we construct a measure of being “**very happy**” or “**pretty happy**” as compared too “not so happy”.

Health care use

We consider both the extensive and the total margins of five utilization categories: prescription drugs, doctor’s office visits, outpatient surgery, emergency department visits, and hospital visits. Our survey module on utilization was based on the Health and Retirement Survey questionnaires (Health and Retirement Study 2000). We asked about each kind of health care visit separately. In cases where the participant could not give a close estimate of how many visits, we asked for the best guess between zero, one, and more than one visit. If the answer to the probe was “more than once,” we coded it as if the individual had 2 visits in the last 12 months. Less than 0.2% of answers were imputed from probes for each variable. We truncated each of the number of visits measures (office, outpatient surgery, emergency room, and hospital) at 2*99th percentile, recoding outliers to missing. The cutpoints for truncation and percent truncated are shown in Table A16.

If an individual reported any medication use in the last 4 weeks, we took a detailed inventory of the actual medications (as described in the *undiagnosed and unmedicated conditions* section above). For **any current prescription drugs** and **number of current prescription drugs**, we counted up all medication records that could be identified as prescription drugs from the medication survey, after removing duplicates. We note that the number of prescription drugs is likely an underestimate because for 8% of respondents the medication catalogue was incomplete.

We define **number of office visits in the last 12 months** by the individual’s response to the question “In the last 12 months, about how many times have you seen a doctor or other health care professional at a doctor’s office, a clinic, or at home?” We define **any office visits in the last 12 months** as whether the individual provided a positive answer to this question.

We define **number of outpatient surgery visits in the last 12 months** by the individual’s response to the question “In the last 12 months, how many times have you had outpatient surgery?” We define **any outpatient surgery in the last 12 months** as whether the individual provided a positive answer to this question. Almost everyone who reports an outpatient surgery visit also reports an office visit, as we would expect since such surgery would likely require associated office visits (for diagnosis, pre-operative consultation or post-operative follow-up).

We define **number of ED visits in the last 12 months** by the individual's response to the question "In the last 12 months, about how many times have you gone to an emergency room or urgent care clinic?" We define **any ED visits in the last 12 months** as whether the individual provided a positive answer to this question.

We define **number of hospital visits in the last 12 months** by the individual's response to the question "In the last 12 months, how many times have you had to stay in a hospital at least overnight?" We define **any hospital visits in the last 12 months** as whether the individual provided a positive answer to this question.

Annual spending estimation

To calculate the implied annual spending effects associated with the estimated utilization effects we use data from the 2002-2007 (pooled) Medical Expenditure Panel Survey (MEPS) on expenditures of all nonelderly (19-64) adults below 100 percent of poverty who are publicly insured. This gives us a total sample of over 7,500 individuals. We use their expenditures (all inflated with the CPI-U to 2007 dollars) to calculate average expenditures per outpatient visit (including doctor visits, outpatient surgery, and outpatient visits to any other facilities), average expenditures per ED visit, average expenditures per inpatient visit (for visits not related to childbirth). For medications, we calculate average spending per prescription drug by dividing total annual prescription drug costs by the total number of prescription drugs taken over the course of the year. All spending numbers are based on total expenditures (i.e. not just expenditures in the insured or insurance expenditures). The underlying costs are \$150 per outpatient visit, \$435 per ED visit, \$7,523 per inpatient visit, and \$312 expenditure per prescription drug. For each type of utilization we observe (doctor visit, outpatient surgery, ED visit, inpatient visit and prescription drug), we multiply the estimated change in number by the cost per visit estimated in the MEPS. For both doctor visits and outpatient surgery, we use the \$150 outpatient visit estimate which is calculated across all outpatient visits (including doctor office visits, outpatient surgery and other outpatient visits).

Preventive care and screening

Our module on preventive care used questions from the BRFSS (Centers for Disease Control and Prevention (CDC) 2000) for blood stool tests, colonoscopy, pap smear, mammogram and PSA tests. It also included questions from the NHANES (Centers for Disease Control and Prevention (CDC) National Center for Health Statistics (NCHS) 2000) on cholesterol checks. We only asked individuals about their use of preventive care if they reported having used medical care in the past 12 months. This means we do not know about use of preventive care prior to the past 12 months in individuals who did not report medical care in the past 12 months. To avoid potential bias from these missing data, we have adopted a 12-month time frame for all types of preventive care, even when the recommended interval is longer.

We consider an individual as having had a **cholesterol check in the last 12 months** (1) if the individual answered “yes” to the survey question “Has a doctor or other health professional ever told you that you had high cholesterol?” and “within the last year” to the survey question “When were you first told that you had high cholesterol?”, or (2) for individuals who have not been diagnosed with high cholesterol, if the individual answered “within the last year” when asked “long has it been since you last had your cholesterol checked?” Cholesterol testing is recommended every 5 years starting at age 20 (Expert Panel on Detection Evaluation And Treatment of High Blood Cholesterol In Adults 2001).

We consider an individual as having had a **blood stool test in the last 12 months** if the individual answered “Yes” to the survey question “In the last 12 months, has a doctor asked you to do a blood stool test?” We consider an individual as having had a **colonoscopy in the last 12 months** if the individual answered “Yes” to the survey question “In the last 12 months, have you had a sigmoidoscopy or a colonoscopy?” We do not look at blood stool tests or colonoscopies for individuals younger than 50. The U.S. Preventive Services Task Force recommends screening using blood stool test, colonoscopy, or sigmoidoscopy for colorectal cancer in all adults beginning at age 50 years and continuing until age 75 years. The Task Force recommended annual screening with high-sensitivity blood stool test, or sigmoidoscopy every 5 years coupled with high-sensitivity blood stool test every 3 years, or screening colonoscopy every 10 years (U.S. Preventive Services Task Force 2008).

We consider an individual as having had a **flu shot in the last 12 months** if the individual answered “Yes” to the survey question “Have you had a flu shot in the last 12 months?” We do not look at flu shots for individuals younger than 50. Although the Advisory Committee on Immunization Practices (ACIP) in the Center for Disease Control (CDC) recommends annual flu shots for everyone older than 6-months, it also recommend priorities to be given to young children and those 50 or older in cases of limited supply (Fiore et al. 2010).

We consider a woman as having had a **pap smear in the last 12 months** if she answered “Yes” to the survey question “In the last 12 months, have you had a Pap test or Pap smear?” This variable is not applicable to men. The U.S. Preventive Services Task Force recommends initial screening for cervical cancer with Pap smear or liquid-based cytology starting by age 21 years or approximately 3 years after the first sexual intercourse. Future screenings should occur every year with a traditional Pap smear or every 2 years with liquid-based cytology. At or after age 30 years and with three normal test results, intervals can be decreased to every 2 to 3 years with traditional Pap smear or every 3 years with HPV assay testing plus cervical cytology (U.S. Preventive Services Task Force 2003).

We consider a woman as **having had a mammogram in the last 12 months** if she answered “Yes” to the survey question “In the last 12 months, have you had a Mammogram?” This variable is not applicable to men, and we limit to women 50 or older. According to updated guidelines in 2009 from the U.S. Preventive Services Task Force, biennial screening mammography is recommended for women aged 50 to 74 years (U.S. Preventive Services Task Force 2009).

We consider a man **having had a PSA test in the last 12 months** if he answered “Yes” to the survey question “In the last 12 months, have you had a blood test to check for prostate cancer?” This variable is not applicable to women, and we limit to men 50 or older. PSA screening may not be beneficial, and the US Preventive Task Force recently circulated draft recommendations against such screening (Chou et al. 2011). It is, however, quite common, with 54% of the U.S. men aged 50-64 reporting have received a test in the last year,⁸ and as of 2009, American Urological Association and American Cancer Society have recommended that early detection begin at age 50 years for men at average risk of prostate cancer (Greene et al. 2009). We include it because access to health insurance may increase use of commonly used tests, even if those tests are of limited value.

Access and quality

We considered a number of questions on individuals’ access to health care. We asked if they **had a usual place of clinic care**. We exclude emergency rooms but include all doctors’ offices in a hospital, a private clinic, or a community health center. We also asked if individuals needed medical care in the last 12 months, and if so, whether they received all needed care. These questions focused on care for a physical illness, injury, or condition and excluded dental care or routine vision services. We consider people having **gotten all needed medical care in the last 12 months** if they reported needing care and receiving all needed care or if they reported not needing care. We asked separate questions about whether an individual **got all needed mental health care** and **got all needed prescription drugs**. For medical care, 23% of controls reported not needing any care; for mental health care 60% reported not needing any care and for prescription drugs 32% reported not needing any care.

We asked individuals to rate the **quality of care they received in the past 12 months**, conditional on receiving care, and analyzed if it was **good, very good, or excellent**, vs. **fair or not so good**. This measure of quality of care is defined for the 78% of participants who reported receiving any medical care (include office visits, outpatient surgery, emergency room visits, hospital stays, and other care).

Financial strain from health care costs

We considered several measures of financial strain based on out-of-pocket spending, medical debt, and borrowing money or skipping paying bills because of medical debt.

Our module on health care use and costs was based on the Health and Retirement Survey questionnaires (Health and Retirement Study 2000). We asked survey participants about out-of-pocket spending in the last year for their own doctor visits, ED visits, outpatient surgeries,

⁸ Estimated from 2008 BRFSS data, N= 28380.

hospital visits, dental care, and “other” medical care not included in the first five categories. The survey also asked about monthly out-of-pocket prescription medication costs, which we converted to estimated yearly costs by multiplying by 12. Participants were only asked about a given category of spending if they reported use of that category of medical care.

In cases where participants could not give a close estimate of how much they spent in a given category, they were asked follow-up probes that broke spending into nine possible intervals. We incorporated answers to probes into total spending estimates using the midpoint of each probe interval, except for top-coded intervals, which we coded as their lower bounds.

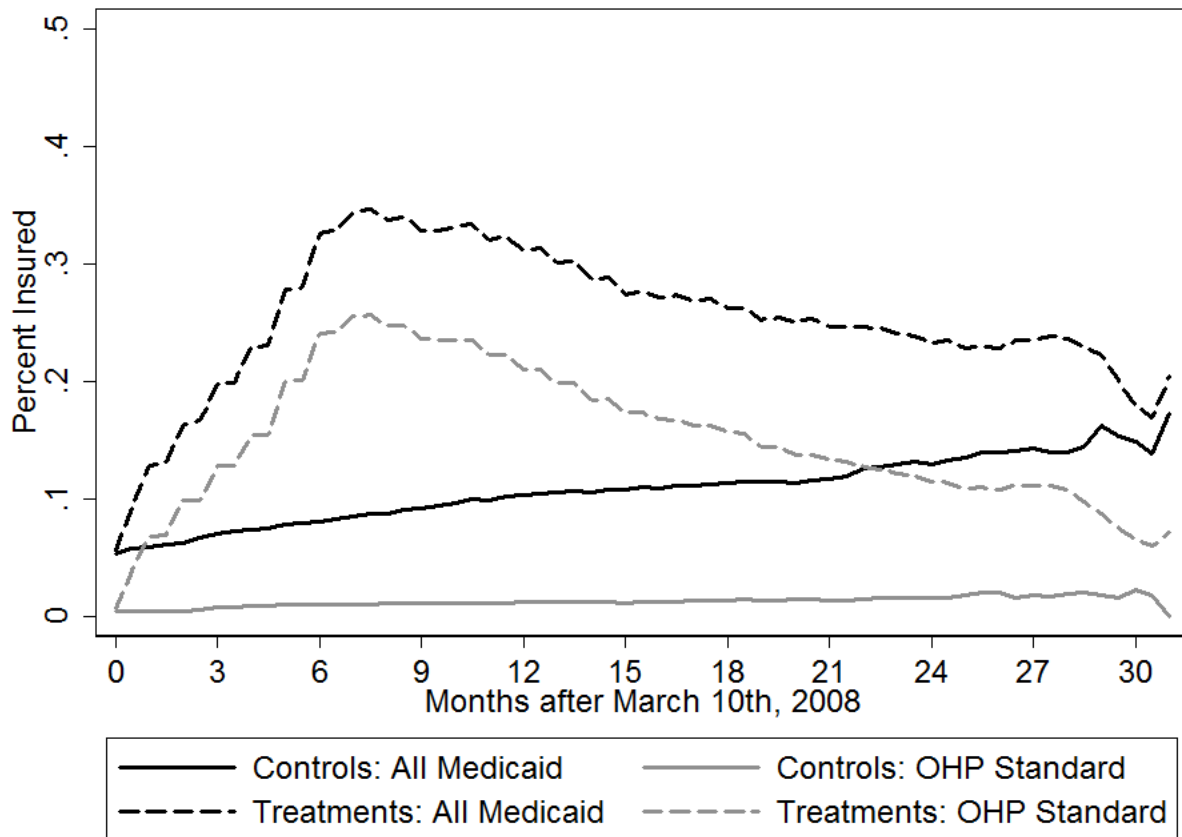
We defined **any out-of-pocket spending** as occurring when the individual reported non-zero spending in at least one of the following: doctor visits, ED visits, outpatient surgery, hospital visits, or other medical care. We did not include out-of-pocket spending on dental care because such care is not covered by OHP. We defined the **amount of out-of-pocket spending** as the sum of reported spending for the same categories (doctor visits, ED visits, outpatient surgery, hospital visits, prescription medications, and other medical care). We treated the sum as missing if any of the component measures was missing. We truncated the amount of out-of-pocket spending at 2*99th percentile, recoding outliers to missing.

We defined **catastrophic expenditures** as occurring when the amount of an individual’s reported out-of-pocket spending on himself exceeded 30 percent of reported household income. Household income was reported in brackets; for this calculation we used the midpoint of each bracket and the lower bound of the top bracket (\$50,000). Different studies use different definitions for catastrophic expenditures based on the share of total income or post-subsistence income (Xu et al. 2003, King et al. 2009). We used a cut-point of 30 percent of income following King et al., but we use total income (whereas they used post-subsistence income), as there was no clear way to separate subsistence and post-subsistence income in our data.

The questions on medical debt were taken from our 12-month mail survey (Finkelstein et al. 2011). We defined **any medical debt** by the individual’s response to the question “Do you currently owe money to a health care provider, credit card company, or anyone else for medical expenses?” We defined **borrowed money or skipped bills** by the individual’s response to the question “In the last 12 months, have you had to borrow money, skip paying other bills, or pay other bills late in order to pay health care bills?”

Figures

Figure A1: Enrollment in OHP Standard and all Medicaid



Notes: Figure shows the weighted percent with public insurance coverage over time. Weighted percent with insurance is shown separately for treatments and controls, and both all Medicaid coverage and OHP Standard coverage percentages are given. Time is measured in months from March 10, 2008; percent enrolled is observed twice a month. Individuals are censored following interview date and no longer contribute to the weighted percent. This mimics how we define the study period for each individual (from March 10, 2008 to interview date). The numbers closest to the end of the time period (28 months or more from March 10, 2008) are thus based on small numbers for respondents and not estimated precisely. Sample consists of survey respondents (N=12,229)

Tables

Table A1: Distribution of analytic weights

	Mean	SD	Min	5 th %tile	25 th %tile	Median	75 th %tile	95 th %tile	Max	N
Sampling base	0.998	1.282	0	0	0	1	1.159	3.46	52.211	20745
Recruitment base	1.511	1.31	0.671	0.978	1	1.15	1.378	3.491	52.211	13707
Survey respondents	1.24	0.57	0.681	0.96	1	1.07	1.212	2.076	13.634	12229
Control respondents	1.301	0.663	0.681	0.95	1	1.14	1.307	2.361	13.634	5842
Treatment respondents	1.178	0.461	0.862	1	1	1.003	1.152	1.815	10.872	6387

Notes: Zero weights are the result of being dropped from active follow-up. The recruitment base is the sampling based limited to those with non-zero weights. Respondents all have non-zero weights.

Table A2: Balance of treatment and controls for responders to the in-person survey

	Mean for controls	Difference between treatment and controls
	(1)	(2)
<i>Panel A: Response Rates</i>		
Responded to survey	0.73	0.0028 (0.016) [0.856]
Had Anthropometric Measures	0.977	0.00037 (0.0029) [0.9]
Had at least one DBS measure	0.995	0.0003 (0.0014) [0.828]
Had all DBS measures	0.991	0.0021 (0.0024) [0.367]
Had valid medication data (or does not need medication data)	0.984	0.00027 (0.0025) [0.912]
Pooled F-Stat		0.243
<i>p-value</i>		0.914
<i>N</i>		12229
<i>Panel B: Responder and interview characteristics, limited to responders</i>		
Age	40.723 (11.688)	0.205 (0.247) [0.408]
Female	0.569	-0.0046 (0.0087) [0.597]
Black	0.105	0.0014 (0.0061) [0.824]
Other race	0.148	0.00034 -0.008 [0.966]
Hispanic	0.172	-0.0019 -0.0084 [0.818]
English as preferred language	0.907	-0.0017 (0.0069) [0.805]
Signed self up	0.895	0.0011

		(0.002) [0.572]
Signed up first day of list	0.096	0.0064 (0.0068) [0.344]
Gave phone number	0.876	-0.00029 (0.0075) [0.969]
Address a PO Box	0.03	0.0046 (0.0039) [0.245]
In MSA	0.996	0.0019 (0.0011) [0.096]
Median hh income of zip code	44097.99 (9563.062)	-12.417 (210.951) [0.953]
Interview date (difference in days)	24April2010 (102.965)	-1.405 (2.286) [0.539]
Response time (days)	43.71 (52.338)	1.216 (1.617) [0.452]
Winter interview	0.202	0.0011 (0.0072) [0.876]
Spring interview	0.28	-0.011 (0.0093) [0.217]
Summer interview	0.194	0.016 (0.0092) [0.081]
Weekend interview	0.11	-0.0037 (0.0064) [0.561]
In-home interview	0.092	-0.0055 (0.0066) [0.408]
East side clinic interview	0.395	0.013 (0.011) [0.215]
South side clinic interview	0.209	0.0031 (0.0092) [0.74]
Spanish language instrument	0.092	0.00097 (0.0065)

		[0.881]
Interviewed with interpreter	0.028	-0.0038 (0.0049) [0.433]
Pooled F stat		0.798
<i>p-value</i>		0.738
<i>N</i>		12229
Panel C: Measurement variables, limited to responders		
Interviewer (pooled F-stat)		1.211
<i>p-value</i>		0.15
<i>N</i>		12224
Scale (pooled F-stat)		1.108
<i>p-value</i>		0.291
<i>N</i>		12202
Stadiometer (pooled F-stat)		1.152
<i>p-value</i>		0.231
<i>N</i>		12211
Sphygmomanometer (pooled F)		0.855
<i>p-value</i>		0.728
<i>N</i>		12189

Notes:

Panel A shows the response rate to the survey.

Panel B variables are pre-randomization “demographics” taken from the lottery list (from January and February 2008) and characteristics of the interview itself. Age, sex, race and ethnicity are taken from information reported in the interview; respondents were allowed to report multiple races. The next set of variables is from the lottery list. “English as preferred language” indicates whether you did not check a box requesting materials in a language other than English. “Signed up self?” is an indicator for whether you signed yourself up (as opposed to a household member including your name when they signed up). “Signed upon first day of list?” is an indicator variable for whether you signed up the first day the list was open. “Gave phone number” is an indicator variable for whether you provided a phone number when you signed up. “Interview date” is the time when the interview was conducted. The unit for the mean and the standard deviation are in days. “Response time” indicates the number of days between when the study participant was first released to an interviewer for recruitment and when the interview took place. “Response time” is missing for 885 survey responders because we could not accurately identify their release date. “Winter interview”, “Spring interview”, “Summer interview” are indicators for whether the interview was conducted in the corresponding season; the omitted category is “Fall interview.” “Spring” is defined as March, April, and May, and all other seasons are defined accordingly. “Weekend interview” indicates if the interview took place on a weekend. “In-home interview”, “East side clinic interview”, “South side clinic interview” are indicators for whether the interview was conducted in the corresponding location; the omitted category is “West side clinic interview.” “Spanish language instrument” is an indicator for whether the survey instrument is in Spanish. “Interviewed with interpreter” is an indicator for whether an interpreter was present during the interview.

All analysis is weighted using survey weights. The first column reports the mean of these variables for the control sample and standard deviation for continuous variables. Column (2) reports estimated differences between treatments and controls in the survey responders for the outcome shown in the left hand (except in Panel A where the whole survey sample is used). Specifically it reports the coefficient on LOTTERY based on estimating equation (1); the dependent variable is given in the left hand column. All regressions include household fixed effects and all standard errors are clustered on household. We report the coefficient, standard error, and per comparison p-value. The last row of panel B reports the pooled F-stat from estimating for all the variables in that panel jointly.

Panel C reports global tests for if there is any evidence of sorting across interviewers or equipment used. The scales are equipment used for measuring weight, the stadiometers are equipment used for measuring height and the

sphygmomanometers are equipment used for measuring blood pressure. There are 49 interviewers, and we have interviewer information for all but 5 observations. We could identify the scale, stadiometers, sphygmomanometers used for 12202, 12211, 12189 observations, respectively. A few equipments are only used once or twice. To increase power, for each category, we grouped all equipments used for 10 or fewer observations into an “other” category. After this grouping, there are 44 different scale groups, 44 stadiometer groups, and 43 sphygmomanometer groups in our analysis. The global test for sorting across interviewers (scales, stadiometers, sphygmomanometers) calculated by estimating equation (1) with each of the 49 interviewers (44 scales, 44 stadiometers, 43 sphygmomanometers) as the outcome, then testing whether the 49 coefficients on LOTTERY are equal.

Table A3: Balance of pre-randomization diagnoses

	Control Mean	Difference between treatment and controls
	(1)	(2)
Asthma	0.199	-0.0068 (0.008) [0.396]
Diabetes	0.072	-0.0016 (0.005) [0.755]
Hypertension	0.181	0.0021 (0.0076) [0.788]
High cholesterol	0.127	-0.0015 (0.0067) [0.828]
Heart attack	0.020	-0.0012 (0.0027) [0.663]
Congestive heart failure	0.0097	0.0016 (0.0019) [0.39]
Emphysema/COPD	0.023	0.00018 (0.003) [0.952]
Failing kidneys	0.018	-0.00049 (0.0024) [0.84]
Cancer	0.043	0.0015 (0.0041) [0.716]
Depression/anxiety	0.35	-0.008 (0.0095) [0.401]
Pooled F – stat		0.299
p-value		0.982
N		12229
Standardized treatment effect		-0.0026
p-value		.761
N		12229
Diabetes, hypertension, high cholesterol, heart attack, or congestive heart failure	0.273	-0.0026 (0.009) [0.768]

Notes: All analysis weighted using survey weights. The first column reports the mean of these variables for the control sample. Column (2) reports estimated differences between treatments and controls in the survey responders for the outcome shown in the left hand. Specifically it reports the coefficient on LOTTERY based on estimating equation (1); the dependent variable is given in the left hand column. All regressions include household fixed effects. All standard errors are clustered on household. We report the coefficient, standard error, and per comparison p-value. We report the pooled F-stat and the standardized treatment effect from estimating for all the variables (except the composite measure) jointly.

We asked individuals about whether they were ever diagnosed with the following conditions: asthma, diabetes, hypertension, high cholesterol, heart attack, congestive heart failure, emphysema/COPD, kidney failure, cancer, and depression, and when they were diagnosed. If an individual was interviewed in 2010 and answered “more than 3 years ago” to the question “when were you first diagnosed”, or if the individual was interviewed in 2009 and answered “more than 2 years ago” to the question “when were you first diagnosed”, we knew that the diagnosis was before the lottery. In other cases we asked explicitly about the month and year of diagnosis to determine whether the diagnosis was before or after the lottery. For each of these conditions, we consider the individual to have a **pre-randomization diagnosis of asthma, diabetes, hypertension, high cholesterol, heart attack, congestive heart failure, emphysema/COPD, kidney failure, cancer, or depression** if we could identify that the diagnosis of the specific condition happened before March 10, 2008 (the earliest possible selection date for the lottery).

We consider an individual **high risk** if there was a pre-randomization diagnosis of diabetes, high blood pressure, high cholesterol, heart attack, or congestive heart failure (although there are likely other high risk individuals with such conditions who were never diagnosed). The last row reports the results for this composite measure, which is the one we use to select the sub-sample for the middle panel of Tables 4 through 7.

(Standard errors in parentheses)

[P-values in square brackets]

Table A4: Insurance coverage

	Control mean	Estimated FS
(1) Ever on Medicaid during study period	0.184	0.241 (0.0090) [<0.0001]
(2) Ever on OHP Standard during study period	0.033	0.265 (0.007) [<0.0001]
(3) # of Months on Medicaid during study period	2.558	4.16 (0.164) [<0.0001]
(4) Currently on Medicaid	0.133	0.113 (0.008) [<0.0001]
(5) Currently have any insurance (self-report)	0.358	0.111 (0.01) [<0.0001]
(6) Currently have Medicaid (self-report)	0.128	0.123 (0.008) [<0.0001]
(7) Currently have private insurance (self-report)	0.147	-0.004 (0.007) [0.583]
(8) Ever on TANF	0.043	-0.003 (0.004) [0.487]
(9) TANF Benefits (\$)	276.368	-20.135 (26.706) [0.451]
(10) Ever on Food Stamps	0.610	0.023 (0.008) [0.004]
(11) Food Stamp Benefits (\$)	3141.772	17.587 (66.946) [0.793]

Notes: The first column reports the weighted control mean for the measure of “INSURANCE” defined in the left-hand column; The second column reports the effect on insurance coverage, which compares the average of the insurance measure for all individuals selected in the lottery to the average of the insurance measure for all control individuals, as calculated by ordinary least squares regression. All regressions include household size fixed effects and are weighted using survey weights. All standard errors are clustered on the household.

The insurance measures are taken from the Medicaid enrollment administrative data except for those labeled “self-report” (rows 5-7) which are taken from the survey. The measures of TANF and food stamps are taken from state administrative records for those programs. In the survey, respondents could report various types of insurance; we define “private insurance” as employer or private insurance and “any insurance” as Medicaid, Medicare, employer, private or other insurance. The study period is defined as running from March 10, 2008 to the date of interview; variables defined as “ever” (rows 1-3 and 8-11) cover this entire period; variables defined as “currently” are current for the interview date. All outcomes are measured for the individual except that in Row 9 (11) where TANF (Food stamp) benefits measure the average monthly benefit amount across all months that the household was covered by TANF during the study period.

Sample consists of survey responders (N = 12,229).

(Standard errors in parentheses)

[p-values in square brackets]

Table A5: Health measures limited to specific pre-randomization conditions

	Control mean (1)	ITT (2)	LATE (3)	p-value (4)
<i>Blood pressure in those with pre-randomization hypertension diagnosis (N=2225)</i>				
Systolic BP	129.83 (20.746)			
Diastolic BP	82.877 (13.665)			
Prehypertension or hypertension	0.742			
Hypertension	0.38			
<i>Cholesterol in those with pre-randomization high cholesterol diagnosis (N=1549)</i>				
Total cholesterol	205.549 (37.087)			
Elevated total chol	0.552			
High total chol	0.172			
HDL cholesterol	53.39 (15.367)			
Low HDL chol	0.188			
<i>Glycosylated hemoglobin in those with pre-randomization diabetes diagnosis (N=872)</i>				
Hemoglobin Alc	7.772 (1.884)			
Pre-diabetic or diabetic	0.873			
Diabetic	0.698			
<i>Depression in those with pre-randomization depression or anxiety diagnosis (N=4166)</i>				
Positive depression screen	0.521			
Probability of depression	0.432 (0.373)			

Notes: See Table 4 notes. For each set of outcomes, the analysis is limited to those with the related pre-randomization diagnosis.

Table A6: Logistic specification: physiologic measures of health

	Control mean (1)	ITT primary spec (2)	ITT logistic spec (3)
<i>Body mass index</i>			
Overweight/obese	0.713		
Obese	0.415		
<i>Blood pressure</i>			
Prehypertension or hypertension	0.493		
Hypertension	0.163		
<i>Cholesterol</i>			
Elevated total chol	0.444		
High total chol	0.102		
Low HDL chol	0.184		
<i>Glycosylated hemoglobin</i>			
Pre-diabetic or diabetic	0.252		
Diabetic	0.08		

Notes: Column 1 reports the weighted mean of the dependent variable in the control sample of survey responders. Column 2 reports intention-to-treat estimates, which compare the average outcome for all individuals selected in the lottery to the average outcome for all control individuals, as calculated by ordinary least squares regression. Column 3 reports intention-to-treat estimates as calculated by logistic regression. We present average marginal effects for the logistic specification. All regressions include indicators for each household size, and all standard errors are clustered on the household. All analysis is weighted using survey weights. Sample is all survey respondents (N=12,229).

For the blood pressure measures, all regressions also include controls for age (in decile bins) and sex.

(Standard errors in parentheses)
[p-values in square brackets]

Table A7: Logistic specification: Framingham risk score

	Control mean (1)	ITT primary spec (2)	ITT logistic spec (3)
Female	0.569 (0.496)		
BP medication	0.111 (0.314)		
Smoker	0.428 (0.495)		
Diabetic	0.08 (0.272)		

Notes: See Table A6 notes. Sample is all survey respondents (N=12,229).

(Standard errors in parentheses)
[p-values in square brackets]

Table A8: Logistic specification: self-reported measures of health

	Control mean (1)	ITT primary spec (2)	ITT logistic spec (3)
Health g/vg/e	0.596		
Health not poor or very poor	0.858		
Health same or gotten better	0.804		
Positive depression screen	0.3		
No or very mild pain	0.564		

Notes: See Table A6 notes. Sample is all survey respondents (N=12,229).

(Standard errors in parentheses)
[p-values in square brackets]

Table A9: Logistic specification: health, diagnoses and medications

	Control mean (1)	ITT primary spec (2)	ITT logistic spec (3)
<i>Panel A: Undiagnosed diseases</i>			
Undiagnosed hypertension	0.072		
Undiagnosed high chl	0.07		
Undiagnosed diabetes	0.023		
Undiagnosed depression	0.091		
<i>Panel B: Unmedicated diseases</i>			
Unmedicated hypertension	0.123		
Unmedicated high chl	0.094		
Unmedicated diabetes	0.032		
Unmedicated depression	0.211		
<i>Panel C: Unmedicated pain</i>			
Pain unmedicated by Rx meds	0.296		
Pain unmedicated by any meds	0.188		

Notes: See Table A6 notes. Sample is all survey respondents (N=12,229).

(Standard errors in parentheses)

[p-values in square brackets]

Table A10: Logistic specification: happiness

	Control mean (1)	ITT primary spec (2)	ITT logistic spec (3)
Very happy or pretty happy (vs. not too happy)	0.749		

Notes: See Table A6 notes. Sample is all survey respondents (N=12,229).

(Standard errors in parentheses)
[p-values in square brackets]

Table A11: Logistic specification: health care utilization

	Control mean (1)	ITT primary spec (2)	ITT logistic spec (3)
<i>Extensive margin (any)</i>			
Rx drugs currently taking	0.539		
Office Visits (last 12 months)	0.646		
Outpatient Surgery (last 12 months)	0.078		
ED visits (last 12 months)	0.402		
Hospital visits (last 12 months)	0.127		

Notes: See Table A6 notes. Sample is all survey respondents (N=12,229).

(Standard errors in parentheses)

[p-values in square brackets]

Table A12: Logistic specification: preventive care

	Control mean (1)	ITT primary spec (2)	ITT logistic spec (3)
Cholesterol checked	0.272		
Blood stool test (age >=50)	0.191		
Colonoscopy (age >=50)	0.104		
Flu shot (age >=50)	0.355		
Pap smear (women)	0.449		
Mammogram (women >=50)	0.289		
PSA (men >=50)	0.214		

Notes: See Table A6 notes. Sample is all survey respondents (N=12,229), survey respondents at least 50 years of age (N=3374), female survey respondents (N=6915), female survey respondents at least 50 years of age (N=1864) or male survey respondents at least 50 years of age (N=1509), as indicated in the table.

(Standard errors in parentheses)
[p-values in square brackets]

Table A13: Logistic specification: access and quality

	Control mean (1)	ITT primary spec (2)	ITT logistic spec (3)
Panel A: Access			
Have usual place of clinic based care	0.461		
Got all needed medical care	0.61		
Got all needed mental health care	0.756		
Got all needed prescription drugs	0.724		
Panel B: Quality			
Quality of care is good, v good or excellent (condl on any)	0.784		

Notes: See Table A6 notes. Sample is all survey respondents (N=12, 229) except as indicated. All measures of “got needed care” are over the last 12 months.

(Standard errors in parentheses)
[p-values in square brackets]

Table A14: Logistic specification: finances

	Control mean (1)	ITT primary spec (2)	ITT logistic spec (3)
Any out-of-pocket spending	0.588		
Catastrophic expenditures	0.055		
Any medical debt	0.568		
Borrowed money or skipped bills	0.244		

Notes: See Table A6 notes. Sample is all survey respondents (N=12,229).

(Standard errors in parentheses)
[p-values in square brackets]

Table A15: Summary of analytic variables

	Time frame of question	Survey question name(s)*	Non-missing data (N)	Non-missing data (%)
<i>Physiologic measures of health</i>				
BMI	Current	physical measures	12175	99.6
Systolic blood pressure	Current	physical measures	12188	99.7
Diastolic blood pressure	Current	physical measures	12188	99.7
Total cholesterol	Current	physical measures	12174	99.6
HDL cholesterol	Current	physical measures	12172	100
Hemoglobin A1C	Current	physical measures	12140	99
<i>Framingham risk score</i>				
Female	Current	gender_inp	12229	100
Age	Current	ageconf_raw	12229	100
On bp medication	Current	hbp_rx_use_inp	12229	100
Smoker	Current	smk_now_inp	12225	100
Framingham risk score	Current	from the above + physical measures	4134	33.8
<i>Self-reported measures of health</i>				
Health status	Last 12 months	health_last12_inp	12222	99.9
Health change not worse	Last 12 months	health_change_inp	12226	100
SF-8 physical subscale score	Last 4 weeks	sf1_inp to sf8_inp	12204	99.8
SF-8 mental subscale score	Last 4 weeks	sf1_inp to sf8_inp	12204	100
PHQ total severity score	Last 4 weeks	phq1_inp to phq8_inp	12161	99
No or mild pain?	Last 4 weeks	sf4_inp	12225	100
<i>Health, diagnoses and medications</i>				
Undiagnosed hypertension	Current	hbp_dx_inp + physical measures	12151	99.4
Undiagnosed high chol	Current	chl_dx_inp + physical measures	11986	98
Undiagnosed diabetes	Current	dia_dx_inp + physical measures	12,137	99.2
Undiagnosed depression	Current	dep_dx_inp + physical measures	12188	99.7
Unmedicated hypertension	Current	medication survey + physical measures	12198	99.7
Unmedicated high cholesterol	Current	medication survey + physical measures	12176	99.6
Unmedicated diabetes	Current	medication survey + physical measures	12143	99.3
Unmedicated depression	Current	medication survey + physical measures	12175	100
Unmedicated pain	Current	medication survey + physical measures	12226	100
<i>Happiness</i>				
Very happy or pretty happy	Current	happy_inp	12206	99.8
<i>Health care utilization</i>				
Any Rx drugs taken	Last 4 weeks	rx_any_inp + medication survey responses	12226	100
Any office visits	Last 12 months	doc_use_inp and doc_use_probe_inp	12205	99.8
Any outpatient surgery	Last 12 months	surg_use_inp and surg_use_probe_inp	12,204	99.8
Any emergency dept. visits	Last 12 months	ed_use_inp and ed_use_probe_inp	12204	99.8
Any hospital visits	Last 12 months	hosp_use_inp and hosp_use_probe_inp	12205	99.8
Number of Rx drugs taking	Current	rx_any_inp + medication survey responses	11912	97.4
Number of office visits	Last 12 months	doc_use_inp and doc_use_probe_inp	12158	99.4
Number of outpatient surg	Last 12 months	surg_use_inp and surg_use_probe_inp	12188	100
Number of ED visits	Last 12 months	ed_use_inp and ed_use_probe_inp	12175	99.6
Number of hospital visits	Last 12 months	hosp_use_inp and hosp_use_probe_inp	12175	99.6
<i>Preventive care in last 12 months (all use care_any_inp and probe)</i>				
Cholesterol checked	Last 12 months	chl_dx_inp, chl_test_when_inp	11382	93.1
Had a blood stool test (age≥50)**	Last 12 months	fobt_ever_inp	3358	99.5
Had a colonoscopy (age≥50)**	Last 12 months	col_ever_inp	3,361	99.6
Had a flu shot (age≥50)**	Last 12 months	did_flu_inp	3364	99.7
Had a pap smear (women)**	Last 12 months	pap_inp	6673	96.9
Had mammogram (women, age≥50)**	Last 12 months	mam_inp	1858	100
Had a PSA test (men, age≥50)**	Last 12 months	psa_inp	1381	91.1

Access and quality

Have usual place of clinic-based care	Current	usual_place_inp, usual_place_where_inp	12219	99.9
Got all needed medical care	Last 12 months	got_care_phs_inp, needed_care_phys_inp	12216	99.9
Got all needed mental health care	Last 12 months	got_care_ment_inp, needed_care_med_inp	12192	99.7
Got all needed drugs	Last 12 months	rx_delay_inp, rx_inp	12215	99.9
Quality of care (cond. on any)	Last 12 months	satisfaction_inp	9694	99.3

Finances

Any out-of-pocket spending	Last 12 months	doc/surg/ed/hosp/other_cost_inp plus	12194	99.7
Amount of out-of-pocket spending	Last 12 months	probes	12145	99.3
Had catastrophic expenditures	Last 12 months	from the above + hh_income_inp	11795	96.5
Any medical debt	Current	owe_inp	12108	99
Borrow money or skipped bills	Last 12 months	borrow_inp	12212	99.9

*The survey question names are provided to identify the questions in the survey instrument, which is available online at www.nber.org/oregon.

**The count of non-missing observations is restricted when the question only applies to a particular subgroup (e.g., we would only expect responses for mammogram, pap test questions from women).

Table A16: Distribution of variables (control sample only)

Panel A: Physiologic Health							
	Mean	SD	5th %tile	25 %tile	Median	75th %tile	95th %tile
BMI	29.82	7.58	20.23	24.44	28.56	33.6	44.27
Systolic Blood Pressure	119.28	16.85	97	107	117	128	149
Diastolic Blood Pressure	76.01	12.14	58	67	75	83	98
Total Cholesterol	198.53	32.04	151.71	176.29	195.65	218.13	254.74
HDL Cholesterol	53.56	14.93	31.44	43.37	52.74	62.11	80.85
Hemoglobin A1C	5.58	1.01	4.69	5.09	5.35	5.75	7.47

Panel B: Health Status		
	N	%
General health, last 12 mo.		
1: Very poor	134.72	2.31
2: Poor	692.40	11.86
3: Fair	1533.75	26.27
4: Good	2100.89	35.99
5: Very good	1024.71	17.55
6: Excellent	351.52	6.02
Health status compared to 12 mo. ago		
0: Better	1461.07	25.02
1: Worse	1144.10	19.59
2: About the same	3233.83	55.38

Note: All numbers are weighted

Panel C: Self Reported Health

	Mean	SD	5th %tile	25 %tile	Median	75th %tile	95th %tile
SF-8 physical subscale score	45.49	10.5	25.65	37.83	47.71	54.16	57.32
SF-8 mental subscale score	44.39	11.38	22.62	36.48	46.76	53.31	57.67
Probability of Depression	0.26	0.34	0	0	0.129	0.58	0.92

Panel D: Health Care Use

	Percent reporting any	Mean	SD	Median	75th %tile	95th %tile	Cutpoint for truncation	% of data truncated
Doctor office visits	64.55	8.61	13.49	4	10	30	164	0.5
Outpatient surgery visits	7.81	1.25	.58	1	1	2	4	0.2
ED visits	40.23	2.48	2.5	2	3	7	20	0.1
Inpatient hospital visit	12.66	1.5	1.04	1	2	4	6	0.3
Number of Rx drugs	53.89	3.48	3.04	2	5	10	n/a	n/a

Note: In Panels D and E, the mean, standard deviation, median, 75th and 95th percentile values reflect non-zero observations only, after truncating at 2*99% based on the unweighted distribution. "Number of Rx drugs" is not truncated. Percent reporting any use, cutpoint for censoring and percent of data censored reflect all valid non-missing data, including observations with zero values. The value for "percent reporting any use" for "Number of Rx drugs" includes 157 control respondents who reported taking Rx drugs but for whom we could not accurately count the number of Rx drugs. All numbers in table except "Cutpoint for truncation" are weighted.

Panel E: Financial Strain

	Percent reporting any	Mean	SD	Median	75th %tile	95th %tile	Cutpoint for truncation	% of data truncated
Total out of pocket expense	58.8	942.18	1472.37	440	1075	3661	15200	0.3
Total medical expense	57.68	1066.43	2916.92	425	1040	3816	n/a	n/a
Total other expense	8.3	312.83	491.4	150	350	1200	n/a	n/a

Note: "Total out of pocket expense" is the sum of "total medical expense" and "total other expense." In Panels D and E, the mean, standard deviation, median, 75th and 95th percentile values reflect non-zero observations only, after truncating at 2*99% based on the unweighted distribution. "Total medical expense" and "total other expense" are not truncated. Percent reporting any expenses, cutpoint for censoring and percent of data censored reflect all valid non-missing data, including observations with zero values. Missing values are largely due to individuals answering "don't know" or "prefer not to answer" to the survey question. All numbers except "Cutpoint for truncation" are weighted.

Table A17: Classification of medications

Panel A: Distribution of Anti-hypertensives

Medication Name	Frequency	Percent	Cumulative
Lisinopril	950	38.28	38.28
Hydrochlorothiazide	531	21.39	59.67
Furosemide	151	6.08	65.75
Clonidine	137	5.52	71.27
Lisinopril-Hydrochlorothiazide	106	4.27	75.54
Cozaar	66	2.66	78.2
Spironolactone	64	2.58	80.78
Triamterene-Hydrochlorothiazid	47	1.89	82.68
Doxazosin	36	1.45	84.13
Enalapril Maleate	32	1.29	85.41
Losartan	24	0.97	86.38
Terazosin	23	0.93	87.31
Accupril	21	0.85	88.15
Prazosin	17	0.68	88.84
Benicar	16	0.64	89.48
Diovan	16	0.64	90.13
Lasix	16	0.64	90.77
Chlorthalidone	16	0.64	91.42
Hydralazine	15	0.6	92.02
Amlodipine-Benazepril	14	0.56	92.59
Quinapril	14	0.56	93.15
Accuretic	10	0.4	93.55
Aldactone	10	0.4	93.96
Cardura	10	0.4	94.36
Atenolol-Chlorthalidone	10	0.4	94.76
Other	130	5.2	100

Panel B: Distribution of Antihyperlipidemics

Medication Name	Frequency	Percent	Cumulative
Simvastatin	411	31.79	31.79
Lipitor	228	17.63	49.42
Lovastatin	214	16.55	65.97
Pravastatin	87	6.73	72.7
Gemfibrozil	69	5.34	78.04
Fish Oil	68	5.26	83.29
Crestor	32	2.47	85.77
Atorvastatin	23	1.78	87.55
Omega 3 Fish Oil	14	1.08	88.63
Niacin	13	1.01	89.64
Niaspan Extended-Release	12	0.93	90.56

Lovaza	10	0.77	91.34
Tricor	10	0.77	92.11
Zocor	10	0.77	92.88
Other	92	7.13	100

Panel C: Distribution of Diabetes Medicine

Medication Name	Frequency	Percent	Cumulative
Metformin	657	42.22	42.22
Glipizide	174	11.18	53.41
Lantus	140	9	62.4
Glyburide	96	6.17	68.57
Humalog	53	3.41	71.98
Novolog	39	2.51	74.49
Novolin R	35	2.25	76.74
Actos	34	2.19	78.92
Novolin 70/30	33	2.12	81.04
Novolin N	27	1.74	82.78
Glucotrol Xl	23	1.48	84.25
Glimepiride	20	1.29	85.54
Glucophage	15	0.96	86.5
Humulin N	15	0.96	87.47
Humulin R	15	0.96	88.43
Lantus Solostar	14	0.9	89.33
Glucotrol	11	0.71	90.04
Novolog Flexpen	11	0.71	90.75
Other	144	9.19	100

Panel D: Distribution of Antidepressants

Medication Name	Frequency	Percent	Cumulative
Trazodone	430	16.39	16.39
Citalopram	384	14.64	31.03
Amitriptyline	215	8.2	39.23
Sertraline	200	7.62	46.85
Cymbalta	196	7.47	54.33
Bupropion Hcl	137	5.22	59.55
Paroxetine Hcl	121	4.61	64.16
Lexapro	113	4.31	68.47
Effexor Xr	96	3.66	72.13
Zoloft	95	3.62	75.75
Prozac	68	2.59	78.35
Celexa	63	2.4	80.75
Venlafaxine	52	1.98	82.73
Bupropion (Bulk)	49	1.87	84.6
Nortriptyline	49	1.87	86.47
Wellbutrin	46	1.75	88.22

Wellbutrin Sr	36	1.37	89.59
Mirtazapine	35	1.33	90.93
Doxepin	33	1.26	92.18
Paxil	32	1.22	93.4
Wellbutrin XL	25	0.95	94.36
Pristiq	23	0.88	95.23
Effexor	20	0.76	96
Budeprion XL	19	0.72	96.72
Budeprion Sr	18	0.69	97.41
Escitalopram	10	0.38	97.79
Other	58	2.25	100

Panel E: Distribution of Pain Medications (Rx Analgesics)

Medication Name	Frequency	Percent	Cumulative
Ibuprofen	564	17.57	17.57
Hydrocodone-Acetaminophen	378	11.78	29.35
Oxycodone	356	11.09	40.44
Vicodin	340	10.59	51.03
Naproxen	197	6.14	57.17
Aspirin	145	4.52	61.68
Clonidine	136	4.24	65.92
Percocet	106	3.3	69.22
Morphine	89	2.77	71.99
Oxycodone-Acetaminophen	88	2.74	74.74
Oxycontin	52	1.62	76.36
Meloxicam	41	1.28	77.63
Aspirin Low Dose	31	0.97	78.6
Acetaminophen	31	0.97	79.56
Tylenol	30	0.93	80.5
Piroxicam	30	0.93	81.43
Advil	24	0.75	82.18
Acetaminophen-Codeine	24	0.75	82.93
Norco	23	0.72	83.64
Naproxen Sodium	23	0.72	84.36
Diclofenac Sodium	21	0.65	85.02
Etodolac	18	0.56	85.58
Salsalate	17	0.53	86.11
Enteric Coated Aspirin	15	0.47	86.57
Motrin	15	0.47	87.04
Tylenol Extra Strength	15	0.47	87.51
Indomethacin	15	0.47	87.98
Nabumetone	15	0.47	88.44
Aleve	14	0.44	88.88
Tylenol-Codeine #3	13	0.4	89.28
Ultram	12	0.37	89.66

Vicodin Es	12	0.37	90.03
Fentanyl	12	0.37	90.4
Hydrocodone-Ibuprofen	12	0.37	90.78
Hydromorphone	12	0.37	91.15
Celebrex	11	0.34	91.5
Endocet	11	0.34	91.84
Diclofenac Potassium	11	0.34	92.18
Propoxyphene N-Acetaminophen	11	0.34	92.52
Oxycodone Hcl-Oxycodone-Asa	10	0.31	92.83
Other	230	7.05	100

Notes: Some of these medications are available either over the counter or by prescription. They are included here if the participant reported that the medication had be prescribed.

Panel F: Distribution of Pain Medications (Prescription and OTC Analgesics)

Medication Name	Freq.	Percent	Cum.
Ibuprofen	1,709	23.98	23.98
Aspirin	603	8.46	32.44
Hydrocodone-Acetaminophen	378	5.3	37.74
Oxycodone	356	4.99	42.73
Vicodin	340	4.77	47.5
Advil	331	4.64	52.15
Tylenol	324	4.55	56.69
Tylenol Extra Strength	317	4.45	61.14
Aleve	255	3.58	64.72
Naproxen	215	3.02	67.73
Aspirin Low Dose	163	2.29	70.02
Clonidine	137	1.92	71.94
Excedrin Migraine	109	1.53	73.47
Acetaminophen	109	1.53	75
Excedrin Extra Strength	108	1.52	76.52
Percocet	106	1.49	78
Morphine	89	1.25	79.25
Oxycodone-Acetaminophen	88	1.23	80.49
Advil Liqui-Gel	73	1.02	81.51
Naproxen Sodium	71	1	82.51
Motrin	55	0.77	83.28
Oxycontin	52	0.73	84.01
Acetaminophen Extra Strength	50	0.7	84.71
Baby Aspirin	50	0.7	85.41
Bayer Aspirin	49	0.69	86.1
Meloxicam	41	0.58	86.67
Piroxicam	30	0.42	87.09
Ibuprofen Ib	26	0.36	87.46

Acetaminophen Pain Relief	25	0.35	87.81
Aspirin Child	24	0.34	88.15
Low-Dose Aspirin	24	0.34	88.48
Acetaminophen-Codeine	24	0.34	88.82
Advil Pm	23	0.32	89.14
Norco	23	0.32	89.46
Aspirin Low-Strength	21	0.29	89.76
Diclofenac Sodium	21	0.29	90.05
Aspirin Extra Strength	19	0.27	90.32
Enteric Coated Aspirin	18	0.25	90.57
Etodolac	18	0.25	90.82
Ecotrin	17	0.24	91.06
Salsalate	17	0.24	91.3
Excedrin Ib	16	0.22	91.53
Tylenol Arthritis Pain	16	0.22	91.75
Excedrin Back & Body	15	0.21	91.96
Indomethacin	15	0.21	92.17
Nabumetone	15	0.21	92.38
Acetaminophen Non Aspirin	14	0.2	92.58
Bayer Childrens Aspirin	14	0.2	92.77
Excedrin Tension Headache	14	0.2	92.97
Tylenol 8 Hour	14	0.2	93.17
Motrin Ib	13	0.18	93.35
Tylenol-Codeine #3	13	0.18	93.53
Ultram	12	0.17	93.7
Vicodin Es	12	0.17	93.87
Fentanyl	12	0.17	94.04
Hydrocodone-Ibuprofen	12	0.17	94.21
Hydromorphone	12	0.17	94.37
Celebrex	11	0.15	94.53
Endocet	11	0.15	94.68
Diclofenac Potassium	11	0.15	94.84
Propoxyphene N-Acetaminophen	11	0.15	94.99
Aspirin Maximum Strength	10	0.14	95.13
Oxycodone Hcl-Oxycodone-Asa	10	0.14	95.27
Other	337	4.52	100

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Oregon Health Insurance Experiment: In-Person Data Collection Protocols

October 9, 2012

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Overview

This document provides details on the fielding of the in-person data collection component of the Oregon Health Insurance Experiment. Details of the study design and analytical methods are provided elsewhere. The Oregon Health Insurance Experiment in-person data collection was designed and implemented by the Oregon Health Study (OHS) Group. The in-person interviews included an administered survey questionnaire, medication catalog, anthropometric and blood pressure measurement, and dried blood spot collection. The survey instrument and measurement and fielding protocols were modeled on those used in the National Health and Nutrition Examination Survey (NHANES) and were adapted in consultation with the National Center for Health Statistics.

The main in-person data collection effort took place between September 8th, 2009 and September 27th, 2010. The 20745-person sample for the in-person data collection was comprised of a subsample of participants in the Oregon Health Insurance Experiment living in the Portland area. We focused on the Portland area, roughly defined as within 15 miles of one of three Portland-area study clinics, because of the logistical constraints of in-person data collection.

The OHS in-person data collection was fielded out of the Center for Outcomes Research and Education (CORE), a health services research laboratory embedded within Providence Health and Services, Oregon's largest health system. The fielding operated out of three locations in the Portland, OR area—named Eastside, Westside and Southside. Each fielding location featured two elements: a clinic and a fielding office. The clinic resembled a traditional primary care clinic, with a waiting room, a receptionist, and individual rooms in which the questionnaire, physiologic measurements and dried blood spot collection were administered. The fielding office housed the field supervisor's office and spare offices for recruiters to use, and was also the site for team meetings.

Each fielding location was administered by a field supervisor, a clinic coordinator, and two administrative assistants. The study employed 44 interviewers, who were responsible both for recruitment and for conducting in-person interviews, physiologic measurements, and dried blood spot collection. All three fielding locations were supported by, in total, 2 quality assurance specialists, 2 analysts, 4 phone recruiters, and 5 trackers. Additional off-site participant tracking was provided by the University of Washington, Social Development Research Group, Survey Research Division (SRD). SRD provided initial consultation and training of the OHS tracking staff.

Recruitment Protocols

Standard recruitment protocol

A multi-wave, multi-method recruitment strategy was used that included mail, phone, text, email and in-person contacts as well as third-party and social networking contacts. Recruitment was tailored to each individual participant, so recruitment methods did vary; however, recruitment followed this general workflow outlined below.

1. POSTCARD. Once a segment of the sample was released to the fielding team (called a *release*), a postcard was sent to all study participants (SPs) in that release. This postcard served two purposes. First, bounced (returned) postcards identified bad addresses; participants whose postcards were returned were assigned to the tracking team. Second, the postcard advertised a free health screening and indicated that participants would be compensated for their time. Participants who called the toll-free number that was listed on the postcard spoke to a phone recruiter or an administrative assistant who could answer questions or schedule a person immediately.
2. PHONE RECRUITMENT. In the same week that the postcards were sent to a release, the release was divided among 4 phone recruiters for recruitment. Phone recruiters would call each of the numbers associated with a participant until they found a good number. If phone recruiters were able to speak to a participant, they attempted to schedule an interview. The result of each call would be recorded in the participants' individual contact log, and phone recruiters would mark old, disconnected or wrong numbers. If we had no good phone numbers for a participant or if phone recruiters were unable to recruit after three phone attempts, the case would be assigned to an interviewer for in-person recruitment.
3. ASSIGNMENT TO INTERVIEWERS. Field supervisors assigned cases to interviewers based on a variety of factors such as zip code, the interviewer's strengths and weaknesses, and interviewer caseload. We found that the characteristics of the interviewer were important for successful recruiting. Sometimes cases were matched with interviewers with similar demographics, such as an older interviewer might be assigned to recruit an older study participant. Other times, a field supervisor would note that an interviewer was not particularly successful with a certain demographic, such as one young male interviewer who found it difficult to recruit young female study participants. The field supervisor's role was to work closely with the interviewers to understand their strengths and to assign cases accordingly. The typical interviewer caseload was approximately 30 cases at a time.

4. TAILORED RECRUITMENT. Interviewers used a variety of techniques to recruit participants; their strategies were based on the information in the participant's contact log that might indicate what strategies would be successful. Tailored recruitment required sensitivity and tact to successfully recruit participants. Common recruitment techniques included: Phone call, text message, email contact, in-person doorstep visit, handwritten letters or messages, contact via Facebook or Myspace, calls to third parties (from information participants provided on our mail survey).

A detailed record of all contacts was kept in the participant's individual contact log, so that a recruiter could examine the results of all previous contacts and plan next steps. For example, if the last doorstep visit had been between 9 and 5 and no one had been home, the recruiter might try a visit in the evening or on the weekend. If, during the last phone call, the participant had been too busy to talk, the recruiter might try an email contact.

When an interviewer struggled to recruit a particular participant, that interviewer could seek assistance from another recruiter or at a team meeting. The interviewer could also request reassignment of the participant to another recruiter. Weekly meetings with the field supervisor offered an opportunity to discuss recruitment strategies. The field supervisor would review the case history documentation using the contact log and would probe the interviewer for details related to current case status. If the supervisor determined that the case warranted a different approach, he or she would either suggest alternate contact or conversion strategies for the interviewer, or the supervisor would reassign the case to a new interviewer who could offer a fresh recruitment style.

5. TRACKING. The participant sample, which included a high percentage of low-income adults as well as homeless and highly mobile individuals, was a population that presented challenges for survey research. This group moves often and changes phone numbers often, making it difficult to reach many participants for follow-up study. The tracking operation enabled a boost in response rates through an intensive effort to find participants who may have been lost because they had moved or fallen off the grid. Data trackers used consumer bureau filings, court records, online resources and outreach to friends and family to update contact information for hard-to-find participants. Tracking took four forms: informal tracking, advanced tracking, field tracking, and verification.

Informal Tracking. When an interviewer could not be confident of the validity of the contact information on file for a participant—when, for instance, the interviewer had left three messages but couldn't be certain whether the voicemail belonged to the participant—the interviewer could request informal tracking. A tracker and interviewer would sit together for a half-hour; the tracker would review the contact log, make a strategic selection of a database or two to search, and attempt to give an interviewer a lead within a very short time frame.

Advanced Tracking. When an interviewer had exhausted all leads—all addresses and all phone numbers had proven to be invalid and all third party locators had been attempted—the case would move from the interviewer’s caseload to a tracker’s caseload for advanced tracking. There was no time limit set on advanced tracking efforts; trackers maintained a caseload of participants who had not been found and they spread their location efforts across their caseload. When a tracker received confirmation of a new phone or address, the tracker transferred the case to a field supervisor, who assigned the case to an interviewer for standard recruitment.

Field Tracking. Although most tracking was done using online resources or outreach via mail and telephone, at times it was necessary to visit an address in person in order to gain confirmation of updated contact information. In these cases, trackers would request that a specially trained interviewer visit an address or location to see if a participant could be found.

Verification. Sometimes an interviewer or tracker received information that led them to believe that a participant was ineligible for the study. Most commonly, this happened when a friend or family member told the recruiter that the participant had moved out of the area, was incarcerated, was medically unfit, or was deceased. Trackers verified whether or not this information was accurate by searching for corroborating evidence. If that evidence was found, the case was exited; but if no evidence was found, the case would be sent back to an interviewer or tracker and remained in the potential recruitment pool.

Tracking Tools. Some of the tools used by trackers to locate participants included: Consolidated Lead Evaluation and Reporting (CLEAR), Oregon Judicial Information Network (OJIN), JIS-Link (Washington State’s Judicial Information System), Facebook, Myspace, White Pages, Peoplefinders, Vinelink, Inmate Locator, Zillow, Google, Google Maps, Portland Maps, Oregon Licensing Department, Multnomah County Vital Records.

We excluded sources that could inadvertently differentially advantage finding individuals from the treatment sample over the control sample. For example, we did not use data from the Medicaid enrollment files that likely contained the most up-to-date addresses for our treatment group because the same information would not exist for those who were not selected in the lottery to apply for coverage.

6. SCHEDULING AN INTERVIEW. Participants could choose to schedule an interview at home or in a clinic. Home interviews would be scheduled and conducted by the recruiting interviewer at a time convenient for the participant. If participants preferred a clinic interview, they could call any clinic or the study’s toll-free number to schedule an interview. An interviewer recruiting a participant in the field could make a call to the clinic to schedule the interview on the participant’s behalf. Appointments were offered 7

days a week between 8:00 a.m. and 8:00 p.m. Participants were asked to bring all prescription and over-the-counter medications in their bottles and to wear loose clothing, such as sweatpants and a t-shirt.

7. PROMOTING ATTENDANCE. Participants were not always able to make the interviews that they had scheduled. The OHS recruitment protocol included efforts to ensure that participants were not lost because they missed a scheduled appointment. A reminder letter was sent to the participant's mailing address about a week before the appointment and included driving directions to the clinic. A reminder phone call was made the day before the appointment to make sure that the participant had all the information he or she needed to attend, and to give the opportunity to reschedule if the time was no longer convenient. In addition, when participants failed to attend a scheduled interview, a follow-up call was made fifteen minutes after the scheduled interview in order to give the participant the opportunity to reschedule. If the participant was not immediately rescheduled, the case returned to the interviewer's caseload for further recruitment.
8. ENDING PROTOCOL. Recruitment halted under the following circumstances:
 - The participant completed an interview
 - The participant requested not to be contacted further
 - The participant explicitly stated that he or she did not want to or could not participate in an interview
 - The participant was found to be out of state, incarcerated, deceased, too ill to complete an interview, or mentally incapacitated
 - Three phone calls and three in-person visits had been made to valid phone numbers and valid addresses with no response
 - The participant failed to attend a scheduled interview on three separate occasions

Intensive follow-up

Over the course of the fielding, participants were routinely dropped from our active recruitment sample. To promote a high response rate, recruitment was regularly limited to a random subsample of the participants who had been released but had not yet responded and the fielding staff continued active recruitment only on the selected group. This allowed the fielding staff to devote additional time and effort ("continuous intensive follow-up") to potential participants who were difficult to locate or recruit, without diverting too many resources away from the rest of the potential participants. Those remaining in the recruitment sample were up-weighted to represent those dropped from the active sample.

In addition to the continuous intensive follow-up described, starting on September 28th, 2010, the fielding moved from the standard recruiting protocols to a set of intensive follow-up

protocols. The standard protocol excluded certain participants from recruitment because such recruitment was deemed too labor-intensive. The intensive follow-up protocols included more resources targeted at fewer participants, and was aimed at the recruitment of the following groups:

- Participants in Oregon or Washington who were less than a 5-hr drive from Portland
- Participants who had not been “found” according to standard OHS protocol, but for whom the tracking team had leads
- Participants who had been coded Out of State but who may have moved back to the area
- Participants who had been coded Incarcerated but who may have been released
- Challenging cases, i.e. participants who had never been directly contacted after multiple attempts, participants who had no-showed multiple times, or participants who had been disinclined to complete an interview
- Participants who were likely homeless, in transition, or living temporarily with friends or family.

Case Review. The first step in the intensive follow-up was to review all cases for which the standard protocol had ended or who had been coded as ineligible and to determine whether participants fell into the above 6 groups. Cases for which the standard protocol had ended in the field were reviewed by a field supervisor, who judged whether further recruitment was appropriate. Cases for which the standard protocol had ended because trackers were unable to find the participant were reviewed by trackers to determine whether it was likely that the participant could be found with additional time and attention. Cases in which the participant had been coded as ineligible were reviewed by trackers to determine whether the participant’s eligibility status had changed under the expanded eligibility criteria.

New Recruitment Protocols. For the intensive follow-up, study personnel were trained in recruitment tailored for hard-to-reach participants. In addition to these new approaches, incentives and logistics changed slightly in order to attract participants who had not been successfully recruited in the past, including:

- Expanded incentives: Intensive follow-up participants were offered \$100 for a clinic interview and \$75 for a home interview. When an interviewer scheduled an appointment face to face, the participant was given \$25 in cash at the time of scheduling.
- Taxi rides were offered to participants who appeared to be at risk of failing to show up for the appointment
- In some cases, we were certain that we had the right address for a participant but were unable to confirm because the participant never answered the door or answered any mail. FedEx packages containing gift cards were sent to the addresses in the hopes that a signature for a package could confirm residency.

Increased Communication between Trackers and Recruiters. The standard protocol had largely separated tracking and recruiting. Recruiters followed all contact leads until each was determined to be invalid; the case was then sent to tracking except for limited informal tracking hours when interviewers could meet briefly with trackers. Trackers collected various contact leads but would not pass a case back to a recruiter until contact information was verified.

Intensive follow-up protocol collapsed tracking and recruiting, pairing recruiters with trackers for increased communication. Recruiters could call a tracker from the field to get more information, such as who might be the owner of a house or what family member might be home. Trackers could send recruiters to addresses to see if the address was valid, instead of using mail or telephone contacts.

Mobile Unit. Each interviewer had a car and a suitcase to make recruitment efficient and to make home interviews easy. Home interviewers represented 27% percent of the interviews in the intensive follow-up period compared to 8% percent in the main fielding period.

Teamed pairs of recruiters were assigned territories that extended beyond the original study boundaries, allowing interviews with participants within a 5 hours' drive of Portland. Recruiting pairs used telephone and mail recruitment to schedule interviews ahead of a trip in order to maximize efficiency. Most interviews were scheduled before the recruiters arrived in the area; however, some time was reserved for in-person recruitment. A total of 154 interviews were completed by these teamed pairs of recruiters.

Homeless outreach. Trackers identified a group of potential participants who might be targeted by outreach to service providers for the homeless. This list included participants who:

- Had recently listed service provider—such as shelter—addresses
- Were reported to couch surf or move around a lot
- Appeared or were reported to be in and out of treatment or jail
- Had been reported as homeless by locators or family members

Relationships were cultivated with shelters and service providers. Study representatives explained the nature of the research and the likelihood that results would serve the same population targeted by the service provider. Many service providers maintain strict confidentiality policies, and efforts were made to ensure that confidentiality was not breached during recruitment efforts. Study representatives gave service providers a list of participants identified as candidates for street outreach. In some cases, providers identified names of participants who had or who currently received services at that location, and study packets were given to the providers to pass on. In other cases, the packets were given to providers to give to participants without the providers having to disclose whether or not they recognized the names on the list. Service providers could choose how to pass on study materials, but the most common strategy was to place the study materials in mailboxes used by participants.

Interviewer incentive pay

OHS had a layered incentive structure for rewarding the performance of individual interviewers and teams of interviewers.

- Monthly cash awards (\$250) were given to the top three interviewers as determined by recruitment success or improvement.
- Monthly cash awards, clinic-based, were given to each interviewer in the clinic if the team reached a goal response rate for a sample in a defined period (\$160 per interviewer and \$25 for every 1% over 55%. If the response rate from a previous month was increased by 5%, interviewers received an extra \$50).
- Interviewers had regular performance reviews that could result in increased wages for high performers.
- Smaller tokens of appreciation were distributed at the discretion of the leadership team and included small gift certificates (under \$25), team parties, and other nominal prizes.
- Interviewers were paid an end-of-study bonus if they maintained employment with the study through the end of the in-person fielding period (\$2,000).
-

Interview protocols

Arriving at the clinic

Participants arriving at a clinic would be greeted by an administrative assistant in the waiting room. The administrative assistant would prepare a folder for the interviewer that was labeled with the participant's name and included consent forms, study packet, DBS collection card, and cash incentive. The forms and DBS collection card were labeled with the participant's study ID. The folder would be brought to the clinic room and left with the interviewer, who would then pull up the participant's record using a tablet computer.

Once the interviewer was prepared, he or she would bring the participant into the clinic room and close the door for privacy. The interviewer would introduce herself/himself and give a brief, general summary of the study. The interviewer would assure the participant that participation was voluntary (though important) and would guarantee that all answers would be kept confidential.

Before obtaining consent, the interviewer would verify participant identity by asking name and date of birth.

Obtaining consent

The interviewer presented the participant with the Consent Form for Interview and Physical Measurements brochure at the start of the interview. The consent brochure explained the following:

- The study purpose and procedures including length of time for participation
- Risks and benefits

- Participant rights
- Participant remuneration and results
- Confidentiality assurances
- Whom to contact with questions

Before proceeding with the dried blood spots component of the interview, the interviewer would provide the participant with the Consent Form for Blood Spot Collection and Testing section of the consent brochure. This brochure highlighted the following: general procedure of the blood draw, goals of the study, participant benefits and rights, data use, and confidentiality. The consent for blood spot collection also allowed the participant to specify whether he or she consented to have his or her specimen stored for future research. Participants had three choices: 1) Yes, can perform future studies; do not contact me; 2) Yes, can perform future studies; please contact me; and 3) No future studies. Depending on the participant answers, each blood spot sample card was given a green (future studies, no contact), yellow (future studies, contact), or red (no future studies) round sticker. The stickers met the specifications for long-term cryogenic storage.

Conducting the interview

Interviews were conducted in a private exam room with the study participant and the interviewer (occasionally with an observer, as described below). The survey questionnaire was computer assisted and administered by the interviewer. The survey was designed and implemented using DatStat Illume software. The interviewer viewed the questions and any relevant instructions through a web browser on a tablet computer. The questions were presented with answers for the interviewer to select or space for the interview to enter the answer. The data for each participant was saved to the secure DatStat servers as the interview progressed.

Interviewers were trained to preserve a neutral demeanor. They were required to read the questionnaire word for word, with no interpretation. They were also trained to probe for answers in cases where the participant's response did not neatly conform to the questionnaire's instructions. Answers to open-ended questions were recorded verbatim. Some questions required the interviewer to read from a list of acceptable responses. In these cases, a response card was provided for the participant that allowed them to view all acceptable responses before choosing one.

Because OHS included interviews with many people who had had little or no insurance coverage, an interview sometimes uncovered difficulties that participants were having in meeting health or other needs. In these cases, interviewers would assist participants after the interview was completed by linking them to resources—such as community clinics or food banks—that might meet their needs.

Anthropometry measures

The complete set of anthropometry measures included weight, height, mid-arm circumference, and waist circumference. Participants were asked to wear lightweight, loosely fitted clothing to facilitate measurement.

Weight. Weight was measured in pounds using a Seca 876 portable digital weight scale. Participants were asked to remove their shoes and empty their pockets, and then step on the scale facing away from the scale display. Results were recorded in the tablet computer to one decimal place.

Height. Height was measured in centimeters using a Seca 214 portable stadiometer. Participants were asked to remove hair ornaments or braids from the top of their heads. The interviewer asked the participant to stand on the floor-piece with his or her back aligned with the stadiometer but not pressing against it. The interviewer also asked that the participant stand with both heels together, toes pointed outward at a 60 degree angle, both arms hanging freely by his or her sides, and with weight distributed evenly on both feet. The headpiece of the stadiometer was then positioned firmly on top of the participant's head, and the participant was asked to step away from the stadiometer. The results were then recorded into a tablet computer.

Upper Arm Length. Upper arm length was measured in order to obtain a reliable arm circumference and for positioning of the blood pressure cuff. The participant was asked to stand upright with weight evenly distributed, facing away from the interviewer. The interviewer then asked the participant to bend his or her right arm at a 90 degree angle at the elbow, with the palm facing up. The interviewer located the uppermost edge of the posterior border of the spine extending from the acromion process, and drew a horizontal line along this edge with a cosmetic pencil. The interviewer held the zero end of the measuring tape directly over this mark and extended the tape down the posterior surface of the arm to the tip of the olecranon process. The measurement was taken to the nearest 0.1 cm.

Arm length was always measured using the right arm, unless the participant had a cast, prosthesis or amputation on the right limb. Results were double-checked and then recorded in the tablet computer. The software application calculated the midpoint of the measured length, which the interviewer measured and marked on the arm with a cross point.

Upper Arm Circumference. Upper arm circumference was measured at the midpoint of the arm in centimeters. The participant was asked to stand upright with his or her shoulders relaxed and the right arm hanging loosely. The interviewer placed the measuring tape around the midpoint of the arm (marked with a cross point) and recorded the arm circumference to the nearest 0.1 cm.

Waist Circumference. For measurement of waist circumference, participants were asked to gather their shirts above their waists, cross their arms, and place their hands on opposite shoulders. The interviewer marked the uppermost lateral border of the right ilium and crossed this mark at the midaxillary line. The interviewer extended the tape measure around the waist, positioning the zero end of the tape below the section containing the measurement value. A mirror was used to ensure horizontal alignment, and the measurement was taken to the nearest

0.1 cm at the end of the participant's normal expiration. The results were then entered in the tablet computer.

Medication look-up

The medication look-up took place during the 5-minute waiting period before blood-pressure measurement. Participants were asked to bring all current medications in their containers with them to the interview. Interviewers first looked over the prescription information to make sure that they understood the recommended dosage. Then, while the participant rested, the interviewer recorded the name of the medication, dosage, and frequency directly from the containers supplied by the participant. Medication information was entered with the assistance of a commercially available prescription drug database (First DataBank), which populated medication names and possible doses as the interviewer typed. Interviewers also asked if the participant took the medication as directed and, if not, how they actually took the medication.

If the participant did not have medication containers available, the information was recorded from the participant's memory or sometimes a computer-generated list of medications the participant had from their prescribing provider. If the participant could not remember medication information, the interviewer asked permission to call the participant later so that the participant could give that information while at home looking at the bottle. Interviewers then scheduled a time for the phone call; if the participant did not answer, the interviewer would make at least two more attempts to contact the participant by phone.

Blood pressure measurement

Blood pressure was measured using the OMRON IntelliSense unit, model HEM-907XL, which automatically inflates the cuff to the desired level and does not require adjustment by the interviewer. Blood pressure was taken on the right arm unless the arm was injured or showed signs of illness.

Interviewers asked participants to sit back in a chair with spine straight, arms and back supported, and legs uncrossed with both feet flat on the floor. The participant's right arm was bare with the palm of the hand turned upward and the elbow slightly flexed. The right arm was positioned so that the midpoint of the upper arm was at the level of the heart. For short or tall participants, footstools or cushions were used in order to ensure that the participant's body was in the correct position before blood pressure was taken.

Blood pressure cuff size was determined using the arm circumference measurement. The interviewer used palpitation to locate the brachial artery and marked the skin with a small dot; the rubber bladder of the cuff was then placed over the brachial artery at least 1 inch from the crease of the elbow. The participant's elbow was then placed on the table with the hand turned upward.

Participants were asked to sit quietly for five minutes prior to blood pressure measurement; during this time, the interviewer completed the medication look-up. At the end of

4 minutes, the interviewer took arterial pulse by finding the radial pulse at the wrist and counting pulse beats for a 30 second period using a stopwatch and recorded the pulse on the tablet computer.

After taking the pulse, the interviewer took blood pressure measurements using the OMRON unit. Three measurements are automatically taken 30 seconds apart; the interviewer recorded all three and the average of the three (computed by the OMRON unit). The interviewers were required to enter the measurements twice; if there was discrepancy between the two entries, they were asked to enter the measurements again.

Dried blood spot collection

After obtaining consent, interviewers confirmed that the participant did not have hemophilia before continuing with dried blood spot collection. The interviewer scanned five labels, sharing a unique identifier that was unrelated to any identifier associated with the participant, into Illume to associate that identifier with the participant. One label was applied to the Whatman 903 protein saver card, the filter paper that absorbs the whole blood. The second and third labels were applied to the study and participant copies of the dried blood spot consent form. A fourth label was applied to the log-book in the drying room, after the interview was completed and the card was placed in a holding rack to dry. The fifth label was an extra, in case a second Whatman 903 card was needed. Interviewers at this time also applied the green, yellow, or red stickers associated with the consent for future testing to the Whatman 903 card.

Study participants were asked to warm their hands by rubbing them together or placing them in warm running water in the sink and to increase blood flow to the hands by pumping their fists, keeping the hands below the heart, or by using a squeeze ball. While the study participant was preparing, the interviewer would lay out the supplies on a sterile Chux pad. The supplies included: two Whatman 903 protein saver cards, two BD Micro-fine Genie lancets (blue, blade dimension 2.0L by 1.5mmW), alcohol wipes, gauze, band-aids, two non-latex gloves, and a sharps container. The interviewer used hand sanitizer and then put on the gloves. The participant's fingers on the non-dominant hand were examined for the best place to take the sample. Interviewers were instructed to avoid fingers that had open sores or wounds, were on a hand with casts, bandages, or splints, were swollen or appeared injured in some way, or were on the side of the body where a mastectomy had been performed (for women). The finger was cleaned with the alcohol pad and the interviewer waited until the alcohol dried before releasing the lancet on the inside tip of the chosen finger. The first drop of blood was wiped off and successive drops were collected onto the filter paper. Each Whatman 903 card featured five ½ inch circles of filter paper which could hold 75 to 80 µl of sample. The interviewers were instructed not to let the finger touch the filter paper, nor to overlap spots. The fingers were massaged gently to obtain the blood but interviewers were discouraged from "milking" the finger, which could dilute the sample. If inadequate sample was obtained, the participants were asked if they would consent to another finger-stick. After the sample was collected, the interviewer would clean the participant's finger and apply a band-aid. The number of finger

sticks and number of blood spots obtained were recorded in Illume, along with any difficulties encountered during the procedure (participant feeling light-headed or nauseated, not enough blood, fainting, problem with equipment or supplies, etc.)

After the interview was over, the interviewer placed the card on a drying rack and entered the participant's label and consent in the dried-blood-spot log book. Cards were left in a drying rack at room temperature for a minimum of four hours, but usually overnight. In the morning, administrative staff collected the samples from the drying rack and confirmed that participant names were linked to the appropriate study ID; that the sticker on the card matched the consent given by the participant; and that all cards were accounted for in the log. The cards were then sealed in a zip locked bag with two or three WWR Humidity Sponge desiccant packs and placed in the designated DBS refrigerator for storage at 4 degrees Celsius. On Mondays and Thursdays, the Administrative Assistant would pull the cards from the refrigerator, pack them in a water-tight insulated cooler with frozen reusable cold gel ice packs, place the insulated cooler within another insulated cooler, and both of these within a third corrugated box. The boxes were labeled "Exempt Human Specimen" and shipped priority overnight by FedEx to the University of Washington, Department of Laboratory Medicine in Seattle, WA. Fed Ex confirmed delivery electronically by 10 am the next day. After shipping, the Administrative Assistant recorded the shipment in RMS using the DBS log.

On receiving the shipment, The University of Washington, Department of Laboratory Medicine placed the samples in short-term freezer storage at -70 degrees Celsius, both prior to and following the processing of the four assays. At the end of the study, the samples were shipped back to Providence for long-term storage in a freezer monitored at -70 degrees Celsius, as is the industry standard.

Compensation

Participants were offered cash compensation: \$30 for an in-person interview, \$20 for dried blood spots, and \$25 for travel (if the interview took place in a clinic rather than the participant's home). Participants were therefore offered \$75 for a typical in-clinic interview with dried blood spot collection and \$50 for a home interview.

Report of findings

At the end of the interview, the interviewer gave the participant a preliminary report of findings that listed the participant's name, age, gender, date of exam, height, weight, BMI, blood pressure, and heart rate. The report informed participants if they were overweight or underweight; it also informed them whether their blood pressure was higher than normal. If their blood pressure was high, the report advised them to see their doctor and gave a suggested time frame for that visit. Study participants who indicated need were also provided a local resource book of low-cost health or behavioral health clinics and other resources for low-income individuals, such as food banks.

After the in-person interview was completed, administrative assistants sent thank-you letters to participants. Within six weeks, once any necessary medication follow-up was complete and DBS results were available, the study participant was mailed a Final Report of Findings. This document repeated the information provided during the interview and detailed above, but contained the results of the DBS analysis and the depression screening. Study participants were provided contextual information about their results, including when to consult a physician for further testing or evaluation. The Final Report of Findings included contact information for inquiries related to their results. OHS leadership would respond to the calls and put the study participants in touch with a contracted physician to answer questions as appropriate.

Home interviews

Home interviews presented a set of challenges with respect to data collection and data quality. It was important that interview conditions allowed the participant to give true and forthright answers; it was also important that physical measurements and blood spots were collected with the same standards used in the clinics. Interviewers worked carefully to obtain privacy for the interview, to minimize noise and distractions, and to arrange suitable seating that did not allow the participant to view the tablet computer as the questionnaire was being filled in.

Interviewers were provided with suitcases complete with all necessary equipment for conducting a home interview—including blood pressure machine, stadiometer, scale, lancet, gloves, wipes, and measuring tape. A level, hard floor surface was sought for anthropometry measurements. A chair next to a surface upon which the participant could rest his or her arm was necessary for blood pressure measurement. Additional protocols and supplies were needed for transporting the dried blood spots to the clinic. The suitcases included a small plastic box with air holes the interviewers used to temporarily store DBS cards in, allowing them to dry until they could be transported back to the clinic and placed in the drying rack.

Quality assurance and quality control

General procedures

Initial Training and OHS Certification. An intensive three-week training program was instituted for all staff immediately upon hiring. Our national consultants were on-site to help provide assistance during the training process. We recruited Providence employees who were not affiliated with the study to allow our interviewers to practice collecting dried blood spots. Several hundred Providence employees participated in the training this way and were compensated with a \$25 gift card to Providence food services. Interviewers were required to pass a certification test on all biomarker protocols in order to move beyond the training phase, and to later pass re-certification (approximately five months after initial training).

Dress Rehearsal. Once the staff had been recruited and trained, a dress rehearsal was organized to test study workflow, systems, technology, and logistics. Oregon Health Study leadership team members recruited 200 real study participants and scheduled interviews for both the clinic and home. Throughout the course of a week, interviewers conducted each interviews while under observation by a consultant from National Center for Health Statistics. Each clinic's team debriefed daily to discuss what systems were succeeding and where improvements were needed, and a final debrief session occurred at the end of the week with all clinics together. The dress rehearsal enabled the study team to make protocol corrections that smoothed the study workflow and enabled greater consistency throughout the in-person data collection effort. The dress rehearsal, for instance, helped to troubleshoot connectivity problems, identified inconsistencies between the cards used as visual aids during the interview and the survey questions, and enabled clarification of blood pressure measurement protocols.

Calibration. All biomedical equipment was subject to stringent calibration. Interviewers cleaned and checked equipment before and after each interview. Administrative assistants calibrated equipment monthly, and results were recorded into an equipment management system. Additionally, equipment from clinic rooms was rotated with equipment in the suitcases used for home visits, because they received varying levels of use.

Data Systems Monitoring for Outliers. All interview data was collected and managed in a web-based software program, which allowed quality assurance managers to review data immediately for accuracy and quality. Analysts provided weekly data reports to the QA team, who monitored completion rates as well as outliers for anthropometry, blood pressure, and other component variables.

Questionnaire completion times were used to assess interviewer performance. Questionnaire times shorter than 15 minutes triggered review to ensure that interviewers were not skipping sections or rushing the participant. Short anthropometry or DBS times also triggered review to ensure that protocols were being followed. After a QA manager engaged in retraining, most interviewers were able to correct timing problems.

Interview Observations. Interview observations played a vital role in quality assurance, since procedures such as placement of measuring tape, body marking, or cuff positioning could

only be assessed by watching in person. If an interviewer emerged as an outlier in data reports, the reason could usually be discovered quickly with one or two observations. In addition, QA managers observed all interviewers once every eight weeks and gave direct feedback and retraining in order to quickly address inconsistencies.

A checklist was used for interview observations to ensure that all protocol components were reviewed for accuracy. Interviewers were evaluated based on:

- the ability to establish and maintain rapport
- proper probing techniques
- general interviewing skills
- accuracy of body positioning, marking and measuring for anthropometry
- use of equipment
- following standard precautions when collecting DBS
- blood spot quality and quantity

Validations. To check interviewers' work, the study team validated 10% of all completed interviews. Participants were contacted by phone and occasionally in person; they were asked to confirm their name, date of birth, participation in the study, remuneration, and whether certain protocols were administered during the interview such as arm, waist, height, weight, and blood pressure measurements. If anything unusual came up in a phone validation, QA managers investigated the issue and provided feedback to the interviewer to help improve his or her performance.

Troubleshooting. When data monitoring suggested that an interviewer was consistently deviating from study protocol, a formal investigative inquiry began immediately, during which QA managers would:

- observe one or two interviews as soon as possible
- meet with an interviewer to provide immediate retraining
- review all data collected by the interviewer to check for unusual outliers or other deviations
- implement a series of validation calls to participants who had been interviewed by the interviewer to hear from the participant how the interviewer had performed
- perform in-person validations of anthropometry measurements when necessary
- work with field supervisors to implement corrective measures

Comments. Each section of the interview software featured a comments field for interviewers to post deviations from protocol, comments, problems, or questions. The QA team regularly reviewed these comments and was often able to address interviewers' issues or implementation difficulties.

Dried blood spot procedures

DBS protocols were monitored for fidelity during the routine QC in-person observations by our QA/QC team. Interviewers who were demonstrating protocol drift would be asked to re-

train and re-pass the DBS certification. Regular monitoring was also used to assess if individual interviewers were experiencing unusual difficulty in obtaining consent, the number of finger sticks required to obtain adequate sample, or the adequate blood spots. Interviewers who were flagged as outliers were re-trained and observed for protocol fidelity. Finally, each week, the QA/QC team would select a DBS shipment (each shipment contained an average of 50 DBS cards) to evaluate each card for the quality of spots obtained. They would document the name of the interviewer and assign a numeric value to each card representing the quality of the DBS card, including number and quality of spots, assessed by turning the card over and measuring the diameter (1/2 inch diameter is a full spot) of red blood that fully saturated the card. The lowest numeric value was 0, indicating no high-quality spots, and the highest was 5, indicating five high-quality spots.

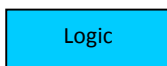
To further assure quality of the laboratory assays, UW Department of Laboratory Medicine prospectively re-assayed 2% of a random selection of cards with red stickers (indicating the study participant had not consented for future assays and that the remaining stored blood was only appropriate for quality assurance purposes). The laboratory considered these as QA samples and monitored variance from the first assays to the repeated assays. The laboratory also assayed 51 samples, labeled and handled identically to OHS samples, but not associated with any study participants. These samples had blood with known clinical values provided by Thomas McDade PhD, at Northwestern University. The results of these assays were then compared to the known clinical measures for those samples.

In-person Questionnaire

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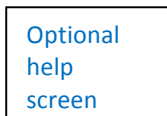
- Introduction/ SP Identity Verification (V – 11 questions)
- Overall health
 - General (G – 2 questions)
 - SF-8 (SF – 8 questions)
- Conditions and treatments
 - Diagnoses (D – 10 questions)
 - Follow-ups for specific conditions (AST – 17 questions, DIA – 13 questions, HBP – 4 questions, CHL – 5 questions, AMI – 2 questions, CHF—4 questions, EMP – 5 questions, KID – 2 questions, CAN – 2 questions, DEP – 5 questions)
 - Pain (P – 3 questions)
- Mental Health
 - Happiness (H – 1 question)
 - Depression (PHQ – 9 questions)
- Access and Utilization (U – 18 questions)
- Prevention and Screening
 - General (S – 5 questions)
 - Women (SW – 3 questions)
 - Elderly (SE – 5 questions, including one just for men)
- Health Behaviors
 - Diet and Exercise (EX – 6 questions)
 - Smoking (SMK – 6 questions)
 - Alcohol (A – 3 questions)
- Medication (M – 7 questions)
- Costs (C – 26 questions, mostly probes)
 - Medical Costs (20 questions)
 - Dental Costs (2 questions)
 - Other Costs (4 questions)
- Covering Costs – Includes insurance coverage (INS -13 questions)
- Demographics (DEM – 16 questions)
- Anthropometry (NOT SHOWN)
- Blood Pressure/ Medication lookup (6 questions, BP PROTOCOL NOT SHOWN)
- Dried Blood Spots (NOT SHOWN)
- Contact (CNT – 3 questions)
- Report of Findings (NOT SHOWN)
- Remuneration (NOT SHOWN)
- Post-Interview (PI – 3 questions)

Symbol Key



Blue Box: Logic

Logic related to skip patterns and question display parameters



White box with blue text: Optional help screen for interviewer

This help screen appears if the interviewer moves the mouse over the word or words in the question text that appear in **blue**.



Grey Arrow: Nested Questions

These arrows flag questions that are nested within other questions and are designed only to probe further on the main question – in other words, they are not standalone items. In the CAPI instrument, they do not look any different than regular questions

INTERVIEWER: PLEASE COMPLETE THE FOLLOWING INFORMATION (NOT TO BE READ TO SP):

interviewer1_raw. Interviewer ID: _____

interview_location_inp. Location of interview:

- ☐ PORTLAND EAST CLINIC
- ☐ PORTLAND WEST CLINIC
- ☐ PORTLAND SOUTH CLINIC
- ☐ SP'S HOME

bm_x_scale. Scale ID#: _____

bm_x_stadio. Stadiometer ID#: _____

bm_x_omron. OMRON Blood Pressure Device ID#: _____

1. INTRODUCTION

Let me start by verifying some basic information about you, to make sure we have it right in our files.

name_conf_raw. First, your name appears in our records as {FULL NAME FROM PRELOAD}. Is that correct?

- ☐ Yes, name basically correct (minor corrections can still be made on the next page)
- ☐ No, there are significant changes in SP's name (changes can be recorded on next page)
- ☐ No, WRONG PERSON → **TERMINATE INTERVIEW**

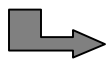
[not in deidentified dataset]. Could you verify the spelling of your name for me? Please begin with your first name, followed by your middle name, and then your last name.

First: _____

Middle: _____

Last: _____

Suffix: _____



new_name_raw: **INTERVIEWER: CHECK HERE IF YOU HAD TO MAKE ANY CHANGES TO THE SP'S NAME**

gender_inp. **ASK ONLY IF NOT OBVIOUS**

And your gender is ...

- ☐ Male
- ☐ Female
- ☐ Transgender: Male to Female
- ☐ Transgender: Female to Male
- ☐ PREFER NOT TO ANSWER

new_gender_raw. INTERVIEWER: CHECK HERE IF YOU HAD TO CHANGE THE GENDER FROM ITS ORIGINAL VALUE ({PRELOADED VALUE})

dob_raw. And what is your date of birth?

INTERVIEWER: DO NOT READ RESPONSE OPTIONS.

- ☐ {DOB FROM PRELOAD}
- ☐ A DIFFERENT DATE. (ENTER CORRECTION ON NEXT PAGE.)
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

dob_conf_raw. In our records, your date of birth is listed as {DOB FROM PRELOAD}. Would you mind just confirming if this is correct?

- ☐ Correct
- ☐ Incorrect. Enter correction on next page.
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF: dob_raw = DK or PNTA



[*_corrected]. ENTER CORRECT DATE OF BIRTH
dob_month_corrected
dob_day_corrected
dob_year_corrected

ASK IF: dob_raw="A different date"
or dob_conf_raw="Incorrect."

INTERVIEWER WARNING: YOU HAVE ENTERED A DATE OF BIRTH BEFORE 1946 OR AFTER 1988.

PLEASE RECHECK THE DATE BEFORE PROCEEDING, AND CORRECT IF NECESSARY BY NAVIGATING BACK TO THE PREVIOUS SCREEN.

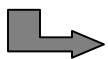
ASK IF DATE CORRECTION
HAS YEAR < 1946 OR > 1988
(THIS MAKES SP INELIGIBLE
FOR THE STUDY, ALTHOUGH
WE WILL KEEP GOING WITH
THE INTERVIEW.)



ageconf_raw. OK, thanks for verifying that information. So you are {CALCULATE AGE} years old. Is that right?

- ☐ Yes.
- ☐ No, the correct age is _____. [ageconfcorrected_raw]
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF: dob is confirmed as
date listed or the correct dob is
entered in one of two possible
places; dob_raw or
dob_conf_raw.
dob_raw = 1 [,] or dob_raw = 0 [A
DIFFERENT DATE] or
dob_conf_raw = 1 [Correct] or
dob_conf_raw = 0 [incorrect]



over50_obvious_raw. INTERVIEWER: IS IT COMPLETELY OBVIOUS WHETHER THE SP IS OVER OR UNDER 50, TO THE EXTENT THAT IT WOULD BE EMBARRASSING TO ASK?

- ☐ Obviously UNDER 50
- ☐ Obviously OVER 50
- ☐ Not obvious; need to ask SP later on.

ASK IF: dob_conf_raw = DK or PNTA

ccsign_raw. Did {SP'S NAME} sign the general consent form for the questionnaire and health measures?

- ☐ Yes
- ☐ No → **TERMINATE INTERVIEW**

want_rof_raw. Does {SP'S NAME} wish to receive the Report of Findings from physical measurements in the mail?

- ☐ Yes
 - ☐ No
-

2. GENERAL HEALTH

[Thanks again for verifying your personal information and for agreeing to participate in our study.] I'd like to start the interview with some general questions about your health.

health_last12_inp. Overall, how would you rate your health during the **past 12 months**? Would you say it has been...
[READ CHOICES]

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Fair
- ☐ Poor, OR
- ☐ Very poor?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

health_change_inp. Compared with 12 months ago, would you say that your health is now better, worse, or about the same?

- ☐ Better
- ☐ Worse
- ☐ About the same
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

The next few questions ask for your views about your health during the **past 4 weeks**. If you are unsure about how to answer a question, please give the best answer you can.

INTERVIEWER: FOR THE NEXT 8 QUESTIONS ("THE SF-8 SCALE"), USE RESPONSE CARDS #1 - 8, ONE CARD PER QUESTION. INSTRUCT SP TO POINT TO THE CORRECT ANSWER ON EACH CARD.

sf1_inp. Overall, how would you rate your health during the **past 4 weeks**? [READ CHOICES OR POINT TO CARD #1]

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Fair
- ☐ Poor
- ☐ Very poor
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

sf2_inp. During **the past 4 weeks**, how much did physical health problems limit your usual physical activities, such as walking or climbing stairs? [READ CHOICES OR POINT TO CARD #2]

- ☐ Not at all
- ☐ Very little
- ☐ Somewhat
- ☐ Quite a lot, or
- ☐ You could not do physical activities?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

sf3_inp. During **the past 4 weeks**, how much difficulty did you have doing your daily work, both at home and away from home, because of your physical health? [READ CHOICES OR POINT TO CARD #3]

- ☐ None at all
- ☐ A little bit
- ☐ Some
- ☐ Quite a lot, or
- ☐ You could not do daily work?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

sf4_inp. How much **bodily** pain have you had during the **past 4 weeks**? [READ CHOICES OR POINT TO CARD #4]

- ☐ None
- ☐ Very mild
- ☐ Mild
- ☐ Moderate
- ☐ Severe, or
- ☐ Very severe?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

sf5_inp. During **the past 4 weeks**, how much energy did you have? [READ CHOICES OR POINT TO CARD #5]

- ☐ Very much
- ☐ Quite a lot
- ☐ Some
- ☐ A little, or
- ☐ None?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

sf6_inp. During the **past 4 weeks**, how much did your physical health or emotional problems limit your usual social activities with family or friends? [READ CHOICES OR POINT TO CARD #6]

- ☐ Not at all
- ☐ Very little
- ☐ Somewhat
- ☐ Quite a lot, or
- ☐ You could not do social activities?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

FOR EXAMPLE, FEELING ANXIOUS, DEPRESSED, OR IRRITABLE

sf7_inp. During the **past 4 weeks**, how much have you been bothered by **emotional problems**, such as feeling anxious, depressed or irritable? [READ CHOICES OR POINT TO CARD #7]

- ☐ Not at all
- ☐ Slightly
- ☐ Moderately
- ☐ Quite a lot, or
- ☐ Extremely?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

sf8_inp. During the **past 4 weeks**, how much did personal or emotional problems keep you from doing your usual work, school, or other daily activities? [READ CHOICES OR POINT TO CARD #8]

- ☐ Not at all
- ☐ Very little
- ☐ Somewhat
- ☐ Quite a lot, or
- ☐ You could not do daily activities?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

3. CONDITIONS AND TREATMENTS

Now I'd like to ask you about a few specific medical conditions. I'll read a list of conditions, and you tell me if you've ever been diagnosed with any of them. When I say diagnosed, I mean that a **doctor or health professional** has told you that you have that condition. When we're done with the list, I may go back and ask you for a little more information about each one.

[Ready?]

ast_dx_inp. Has a doctor or other health professional ever told you that you had **asthma**?

DO NOT ACCEPT ASTHMA THAT IS SELF-DIAGNOSED OR DIAGNOSED BY A PERSON WHO IS NOT A DOCTOR OR OTHER HEALTH PROFESSIONAL.

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

Asthma is a condition that affects the airways that carry air in and out of your lungs. It causes symptoms like wheezing (a whistling sound when you breathe), coughing, chest tightness, and trouble breathing.

ast_inh_inp. When someone has a bad cough or trouble breathing, they may be given medication to inhale or breathe in, even though they have **not** been diagnosed with asthma. Have you used any kind of inhaled medication in the last 12 months?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF: ast_dx_inp is No, DK, or PNTA

dia_dx_inp. [Has a doctor or other health professional ever told you that you had] **diabetes** {, other than during pregnancy}?

IF SP REPORTS "PRE-DIABETES" OR "BORDERLINE DIABETES", ENTER NO.

Insert word in brackets if gender = FEMALE

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

Diabetes is a disease in which the body does not properly process sugar, starch, and other foods. Diabetes is diagnosed by a blood test that shows a very high level of sugar (glucose) in the blood stream.

hbp_dx_inp. [Has a doctor or other health professional ever told you that you had] **hypertension** or high blood pressure?

IF SP REPORTS "HIGH NORMAL BLOOD PRESSURE", "BORDERLINE HYPERTENSION", "PREHYPERTENSION", OR HYPERTENSION ONLY DURING PREGNANCY, ENTER NO.

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

Hypertension, or high blood pressure, refers to repeatedly increased blood pressure with the first number 140 or higher and the second number 90 or higher.

chl_dx_inp. [Has a doctor or other health professional ever told you that you had] [high cholesterol](#)?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

Cholesterol is a type of fat in the bloodstream and is measured with a blood test, usually done in the morning before you've eaten. A high level of cholesterol is a major risk factor for heart disease, which leads to heart attack.

ami_dx_inp. [Has a doctor or other health professional ever told you that you had] [a heart attack](#)?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

A heart attack (myocardial infarction) happens when a blood clot suddenly cuts off most or all blood supply to the heart. Common symptoms include crushing lower chest pain that may radiate to the jaw or arms. The chest pain may be accompanied by nausea, sweating, and shortness of breath.

chf_dx_inp. [Has a doctor or other health professional ever told you that you had] [congestive heart failure](#)?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

Congestive Heart Failure is a condition where the heart cannot pump enough blood throughout the body. Blood and fluid then "back up" into the lungs, which causes shortness of breath. The heart failure causes a buildup of fluid in the feet, ankles, and legs. Do not count heart murmurs, dropped or skipped heart beats, chest pain or heart attacks.

emp_dx_inp. [Has a doctor or other health professional ever told you that you had] [emphysema or COPD](#)?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

Emphysema and COPD ("chronic obstructive pulmonary disease") are lung diseases that make it hard to breathe. They can cause coughing that produces large amounts of mucus (a slimy substance), wheezing (a whistling sound when you breathe), shortness of breath, chest tightness, and other symptoms. Most people who have emphysema or COPD smoke or used to smoke. Long-term exposure to other lung irritants, such as air pollution, chemical fumes, or dust, can also contribute to COPD.

kid_dx_inp. [Has a doctor or other health professional ever told you that you had] [weak or failing kidneys](#)? Do not include kidney stones, bladder infections, or incontinence.

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

Kidney failure can occur either from an acute situation or from chronic problems, such as poorly controlled diabetes or high blood pressure. People whose kidneys are weak or beginning to fail may be able to keep themselves healthy through diet and medication. People whose kidneys have failed completely need to undergo dialysis, a daily or weekly procedure in which the body is cleansed of waste products using an external filter system.

cancer_dx_inp. [Has a doctor or health professional ever told you that you had] **cancer or a malignancy of any kind?**

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

A malignancy is a tumor or growth that is cancerous.

dep_dx_inp. [Has a doctor or other health professional ever told you that you had] **depression or anxiety disorder?**

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

Clinical depression is characterized by an all-encompassing low mood, low self-esteem, and loss of interest or pleasure in normally enjoyable activities. Anxiety disorder includes generalized long-lasting anxiety, panic attacks, and phobias, often accompanied by physical symptoms such as headache, sweating, nausea, hot flashes, muscle spasms, or fatigue.

ASTHMA FOLLOW UP SECTION: Asked if diagnosed with asthma (ast_dx_inp=Yes) or not diagnosed with asthma but uses an inhaler (ast_dx_inp= No, DK, or PNTA and ast_inh_inp=Yes)

ast_when_inp. Now I have a few questions about your asthma. When were you first told that you had asthma? Was it ...

[READ CHOICES AND/OR USE TIME FRAME CARD]

- ☐ Within the last year,
- ☐ Between 1 and 2 years ago,
- ☐ Between 2 and 3 years ago, OR
- ☐ More than 3 years ago?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF: ast_dx_inp = Yes



ast_month_inp, ast_year_inp. Do you remember what month and year it was?

ASK IF: ast_when_inp= "1-2" or "2-3" in 2010; = "0-1" or "1-2" in 2009

Month: ____*choose month*____ Year: ____*choose year*____
(Choices for both month and year include "don't know" and "PREFER NOT TO ANSWER")



ast_now_inp. Do you still have asthma now?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF: ast_when_inp = "2-3" or ">3" or DK or PNTA

ASTHMA SYMPTOM SECTION: Ask remaining asthma questions if ast_now_inp = Yes or DK OR IF ast_inh_inp = YES.

Note: INTRO READ BY INTERVIEWER DEPENDS ON WHETHER SP has been diagnosed with asthma (ast_dx_inp = Yes) or SP has not been diagnosed with asthma but uses an inhaler (ast_dx_inp ≠ Yes and ast_inh_inp = Yes)

The next few questions are about your asthma symptoms, such as coughing, wheezing, chest tightness, or shortness of breath. For each one, please tell me how often you've had it in the **last 4 weeks** – either never, a few days, some days, most days, or every day.

READ IF: ast_dx_inp = Yes

You mentioned that you've had to use an inhaled medication in the last 12 months, for problems such as coughing, wheezing, chest pain, or shortness of breath. I am going to refer to these kinds of problems as "asthma symptoms", because they are similar to what happens when a person has asthma.

READ IF: ast_inh_inp = Yes

These symptoms do **not** necessarily mean that you have asthma – only a doctor or health professional can tell for sure. But it is possible that you may have undiagnosed asthma, so I would like to get a little more information about your symptoms. I'll read a list of asthma symptoms. For each one, please tell me how often you've had it in the last 4 weeks – either never, a few days, some days, most days, or every day.

USE CARD #9.

READ THE CHOICES ON THE FIRST QUESTION. AFTER THAT, READ THEM ONLY IF NECESSARY.

lass1_inp. [So, in the **last 4 weeks**, how often have you had each of these symptoms?] **Cough?**

- ☐ Never?
- ☐ A few days?
- ☐ Some days?
- ☐ Most days?
- ☐ Every day?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

lass2_inp. [So, in the **last 4 weeks**, how often have you had each of these symptoms?] **Wheezing?**

- ☐ [READ ONLY IF NECESSARY] Never?
- ☐ [READ ONLY IF NECESSARY] A few days?
- ☐ [READ ONLY IF NECESSARY] Some days?
- ☐ [READ ONLY IF NECESSARY] Most days?
- ☐ [READ ONLY IF NECESSARY] Every day?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

lass3_inp. [So, in the **last 4 weeks**, how often have you had each of these symptoms?] **Shortness of breath?**

- ☐ [READ ONLY IF NECESSARY] Never?
- ☐ [READ ONLY IF NECESSARY] A few days?
- ☐ [READ ONLY IF NECESSARY] Some days?
- ☐ [READ ONLY IF NECESSARY] Most days?
- ☐ [READ ONLY IF NECESSARY] Every day?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

lass4_inp. [So, in the **last 4 weeks**, how often have you had each of these symptoms?] **Chest pain?**

- ☐ [READ ONLY IF NECESSARY] Never?
- ☐ [READ ONLY IF NECESSARY] A few days?
- ☐ [READ ONLY IF NECESSARY] Some days?
- ☐ [READ ONLY IF NECESSARY] Most days?
- ☐ [READ ONLY IF NECESSARY] Every day?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

lass5_inp. [So, in the **last 4 weeks**, how often have you had each of these symptoms?] **Asthma attack?**

- ☐ [READ ONLY IF NECESSARY] Never?
- ☐ [READ ONLY IF NECESSARY] A few days?
- ☐ [READ ONLY IF NECESSARY] Some days?
- ☐ [READ ONLY IF NECESSARY] Most days?
- ☐ [READ ONLY IF NECESSARY] Every day?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

An asthma attack is when your asthma symptoms get worse. Breathing becomes difficult and you may need to go to the doctor.



lass6_inp. In the **last 4 weeks**, how many asthma attacks did you have?

- ☐ Enter number of attacks XX
- ☐ Don't know
- ☐ PREFER NOT TO ANSWER

ASK IF lass5_inp = "a few days" OR "some days" OR "most days" OR "every day"

lass7_inp. In the **last 4 weeks**, how often have you been **awakened at night** because of your asthma symptoms [coughing, wheezing, chest pain, shortness of breath]?

USE CARD #9; READ CHOICES IF NECESSARY

- ☐ Never,
- ☐ A few days,
- ☐ Some days,
- ☐ Most days, or
- ☐ Every day?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

lass8_inp. Overall, how would you rate the **severity** of your asthma {symptoms [coughing, wheezing, chest pain, shortness of breath]}? Would you say ... **[READ CHOICES]**

- ☐ Very mild,
- ☐ Mild,
- ☐ Moderate,
- ☐ Severe, or
- ☐ Very severe?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

Insert the part in brackets if
ast_dx_inp does not equal YES

ast_controller_inp. **Long-term controller medications** are taken **every day** to help control asthma symptoms and to **prevent** asthma attacks. In **the last 4 weeks**, have you taken a long-term controller medication for your asthma symptoms?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

Examples of long-term controller
medications include: Singulair, Flovent,
Advair, Pulmicort, Symbicort, Azmacort and
QVAR.

ast_inhaler_inp. Quick-relief inhalers, sometimes called rescue inhalers, are taken only **when needed** and are used to treat asthma symptoms **when they occur**. In **the last 4 weeks**, have you used a quick-relief inhaler for your asthma symptoms?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

So far, we have been talking about your asthma symptoms in the last 4 weeks. Now think back to the last **12 months**.

ast_doc_inp. In the last 12 months, have you talked in person to a doctor or other health professional about your asthma or asthma symptoms [coughing, wheezing, chest pain, or shortness of breath]?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ast_ed_inp. In the **last 12 months**, how many times have you had to go to an emergency room because of asthma symptoms [coughing, wheezing, chest pain, or shortness of breath]?

IF SP ASKS, INCLUDE VISITS TO A HOSPITAL URGENT CARE CLINIC.

- ☐ Enter number of times: XXX
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER



ast_ed_probe_inp. If you were giving your best guess, would you say it was... [READ CHOICES]

- ☐ Never,
- ☐ Once, OR
- ☐ More than once?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

LOGIC
ASK IF: ast_ed_inp=DK

ast_hosp_inp. In the **last 12 months**, did you stay in a hospital overnight because of your asthma symptoms [coughing, wheezing, chest tightness, shortness of breath]?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

DIABETES SECTION: Ask if dia_dx_inp = YES

dia_when_inp. Now I have a few questions about your diabetes. When were you first told that you had diabetes? Was it...

[READ CHOICES AND/OR USE TIME FRAME CARD]

- ☐ Within the last year,
- ☐ Between 1 and 2 years ago,
- ☐ Between 2 and 3 years ago, OR
- ☐ More than 3 years ago?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER



dia_month_inp, dia_year_inp. Do you remember what month and year it was?

LOGIC

ASK IF: dia_when_inp = "1-2" or "2-3" in 2010; dia_when_inp = "0-1" or "1-2" in 2009

Month: ____*choose month*____ Year: ____*choose year*____
(Choices for both month and year include "don't know" and "PREFER NOT TO ANSWER")

dia_insulin_rx_inp. In the last 12 months, has a doctor or other health professional prescribed insulin for your diabetes?
INCLUDE ANY EARLIER PRESCRIPTIONS THAT HAVE BEEN RENEWED IN THE LAST 12 MONTHS.

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

dia_insulin_use_inp. Are you now taking insulin?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF dia_insulin_rx_inp = Y or DK

dia_pills_rx_inp. In the last 12 months, has a doctor or other health professional prescribed any **diabetic pills** to lower your blood sugar?

INCLUDE ANY EARLIER PRESCRIPTIONS THAT HAVE BEEN RENEWED IN THE LAST 12 MONTHS.

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

Also called oral agents or hypoglycemic agents.

dia_pills_use_inp. Are you now taking diabetic pills?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF dia_pills_rx_inp = Y or DK

dia_check_rx_inp. In the last 12 months, has a doctor or other health professional advised you to check your blood sugar at home?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

dia_check_do_inp. Do you now check your blood sugar at home? You can include times when a family member or friend helps you, but don't include times when a doctor or other health professional does it.

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF dia_check_rx_inp= Y or DK

dia_supplies_needed_inp. Checking your blood sugar requires supplies, like testing strips and a meter. In the last 12 months, have you been able to get **all** the testing supplies you needed to check your blood sugar as often as you needed to?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF dia_check_rx_inp = Y
or if dia_check_do_inp = Y

dia_feet_inp. In the last 12 months, has a doctor or other health professional checked your feet for any sores or irritations?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

dia_eyes_inp. In the last 12 months, have you had an eye exam in which your pupils were dilated? This would have made you sensitive to bright light for a little while.

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

dia_diet_inp. Do you follow a special diet to control your diabetes?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

dia_nurse_inp. In the last 12 months have you attended a diabetes training class or one-on-one training with a [diabetes educator](#), dietician, or nutritionist? Don't include regular doctors or other health professionals.

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

A diabetes educator is a nurse who teaches people with diabetes about the day-to-day aspects of diabetes self-care, such as, use of diabetes medications, checking and controlling blood sugar levels, and managing weight through diet and exercise.

High Blood Pressure Follow Up QUESTIONS. Ask IF: hbp_dx_inp = yes

hbp_when_inp. Now I have a few questions about your high blood pressure. When were you first told that you had high blood pressure or hypertension? Was it...

[READ CHOICES AND/OR USE TIME FRAME CARD]

- ☐ Within the last year,
- ☐ Between 1 and 2 years ago,
- ☐ Between 2 and 3 years ago, OR
- ☐ More than 3 years ago?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER



hbp_month_inp, hbp_year_inp. Do you remember what month and year it was?¹

LOGIC

ASK IF: hbp_when_inp = "1-2" or "2-3" in 2010; = "0-1" or "1-2" in 2009

Month: ____*choose month*____ Year: ____*choose year*____
(Choices for both month and year include "don't know" and "PREFER NOT TO ANSWER")

hbp_rx_inp. In the last 12 months, has a doctor or health professional prescribed any medication for your high blood pressure?

INCLUDE ANY EARLIER PRESCRIPTIONS THAT HAVE BEEN RENEWED IN THE LAST 12 MONTHS.

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

hbp_rx_use_inp. Are you now taking prescribed medication for your high blood pressure?

ASK IF: hbp_rx_inp= YES or DK

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

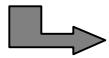
¹ This question should have been posed if the response to hbp_when_inp was '1-2 years ago', or '2-3 years ago', and the interview was being conducted in 2010, or if the response to hbp_when_inp was 'within the last year' or '1-2 years ago', and the interview was being conducted in 2009. In fact, due to a coding error the question was posed to all who responded 1-2 years ago or 2-3 years ago regardless of the year in which the interview was conducted.

CHOLESTEROL FOLLOW UP QUESTIONS ASK IF: chl_dx_inp = yes

chl_when_inp. Now I have a few questions about your high cholesterol. When were you first told that you had high cholesterol? Was it...

[READ CHOICES AND/OR USE TIME FRAME CARD]

- ☐ Within the last year,
- ☐ Between 1 and 2 years ago,
- ☐ Between 2 and 3 years ago, OR
- ☐ More than 3 years ago?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER



chl_month_inp, chl_year_inp. Do you remember what month and year it was?

LOGIC

ASK IF: chl_when_inp= "1-2" or "2-3" in 2010; = "0-1" or "1-2" in 2009

Month: ____*choose month*____ Year: ____*choose year*____
(Choices for both month and year include "DON'T KNOW" and "PREFER NOT TO ANSWER")

chl_test_when1_inp. How long has it been since you last had your cholesterol checked? Was it...

[READ CHOICES AND/OR USE TIME FRAME CARD]

- ☐ Within the last year,
- ☐ Between 1 and 2 years ago,
- ☐ Between 2 and 3 years ago, OR
- ☐ More than 3 years ago?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF chl_when_inp does not equal "within the last year"

chl_rx_inp. In the last 12 months, has a doctor or health professional prescribed any medication to lower your cholesterol?

INCLUDE ANY EARLIER PRESCRIPTIONS THAT HAVE BEEN RENEWED IN THE LAST 12 MONTHS.

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

chl_rx_use_inp. Are you now taking any prescribed medication to lower your cholesterol?

ASK IF chl_rx_inp= YES or DK

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

AMI FOLLOW UP QUESTIONS ASK IF ami_dx_inp = YES

ami_when_inp. You mentioned a heart attack. When were you first told that you had a heart attack? Was it...

[READ CHOICES AND/OR USE TIME FRAME CARD]

- ☐ Within the last year,
- ☐ Between 1 and 2 years ago,
- ☐ Between 2 and 3 years ago, OR
- ☐ More than 3 years ago?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER



ami_month_inp, ami_year_inp. Do you remember what month and year it was?

LOGIC

ASK IF: ami_when_inp = "1-2" or "2-3" in 2010; = "0-1" or "1-2" in 2009

Month: ____*choose month*____ Year: ____*choose year*____
(Choices for both month and year include "don't know" and "PREFER NOT TO ANSWER")

CHF FOLLOW UP QUESTIONS Ask IF chf_dx_inp = Y

chf_when_inp. Now I have a few questions about your congestive heart failure. When were you first told that you had congestive heart failure? Was it...

[READ CHOICES AND/OR USE TIME FRAME CARD]

- ☐ Within the last year,
- ☐ Between 1 and 2 years ago,
- ☐ Between 2 and 3 years ago, OR
- ☐ More than 3 years ago?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER



chf_month_inp, chf_year_inp. Do you remember what month and year it was?

LOGIC

ASK IF: chf_when_inp = "1-2" or "2-3" in 2010; = "0-1" or "1-2" in 2009

Month: ____*choose month*____ Year: ____*choose year*____
(Choices for both month and year include "don't know" and "PREFER NOT TO ANSWER")

chf_rx_inp. In the last 12 months, has a doctor or health professional prescribed any medication for your congestive heart failure?

INCLUDE ANY EARLIER PRESCRIPTIONS THAT HAVE BEEN RENEWED IN THE LAST 12 MONTHS.

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ PREFER NOT TO ANSWER

chf_rx_use_inp. Are you now taking medication for your congestive heart failure?

ASK IF chf_rx_inp = Y or DK

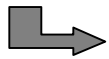
- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

EMPHYSEMA / COPD FOLLOW UP QUESTIONS ASK IF emp_dx_inp = Y

emp_when_inp. Now I have a few questions about your COPD. When were you first told that you had emphysema or COPD? Was it...

[READ CHOICES AND/OR USE TIME FRAME CARD]

- ☐ Within the last year,
- ☐ Between 1 and 2 years ago,
- ☐ Between 2 and 3 years ago, OR
- ☐ More than 3 years ago?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER



emp_month_inp, emp_year_inp. Do you remember what month and year it was?

LOGIC
ASK IF: emp_when_inp = "1-2" or
"2-3" in 2010; = "0-1" or "1-2" in

Month: ____*choose month*____ Year: ____*choose year*____
(Choices for both month and year include "don't know" and "PREFER NOT TO ANSWER")

emp_oxg_told_inp. Because of your emphysema or COPD, have you ever been told to use supplemental oxygen?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

emp_oxg_use_inp. Are you now using supplemental oxygen?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF: emp_oxg_told_inp = Y

emp_oxg_needed_inp. In the last 12 months, have you been able to get **all** the supplies you needed for your supplemental oxygen?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF: emp_oxg_told_inp = Y

KIDNEY FOLLOW UP QUESTIONS ASK IF: kid_dx_inp = Yes

kid_when_inp. You mentioned being diagnosed with weak or failing kidneys. When were you first told that your kidneys were weak or failing? Was it...

[READ CHOICES AND/OR USE TIME FRAME CARD]

Within the last year,

- ☐ Between 1 and 2 years ago,
- ☐ Between 2 and 3 years ago, OR
- ☐ More than 3 years ago?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER



kid_month_inp, kid_year_inp. Do you remember what month and year it was?

LOGIC
ASK IF kid_when_inp= "1-2" or "2-3"
in 2010; = "0-1" or "1-2" in 2009

Month: ____*choose month*____ Year: ____*choose year*____
(Choices for both month and year include "don't know" and "PREFER NOT TO ANSWER")

CANCER FOLLOW UP QUESTIONS ASK IF: cancer_dx_inp = Y

cancer_when_inp. You mentioned being diagnosed with cancer. When were you first told that you had cancer? Was it...

[READ CHOICES AND/OR USE TIME FRAME CARD]

- ☐ Within the last year,
- ☐ Between 1 and 2 years ago,
- ☐ Between 2 and 3 years ago, OR
- ☐ More than 3 years ago?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER



cancer_month_inp, cancer_year_inp. Do you remember what month and year it was?

LOGIC

ASK IF: cancer_when_inp = "1-2" or "2-3" in 2010; = "0-1" or "1-2" in 2009

Month: ____*choose month*____ Year: ____*choose year*____
(Choices for both month and year include "don't know" and "PREFER NOT TO ANSWER")

DEPRESSION FOLLOW UP QUESTIONS ASK IF dep_dx_inp = 1 (yes)

dep_when_inp. You mentioned being diagnosed with depression or anxiety. When were you first told that you had depression or anxiety? Was it...

[READ CHOICES AND/OR USE TIME FRAME CARD]

Within the last year,

- ☐ Between 1 and 2 years ago,
- ☐ Between 2 and 3 years ago, OR
- ☐ More than 3 years ago?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER



dep_month_inp, dep_year_inp. Do you remember what month and year it was?

LOGIC

ASK IF: dep_when_inp = "1-2" or "2-3" in 2010; = "0-1" or "1-2" in 2009

Month: ____*choose month*____ Year: ____*choose year*____
(Choices for both month and year include "don't know" and "PREFER NOT TO ANSWER")

dep_therapy_inp. In the last 12 months, did you have a session of psychological counseling or therapy that lasted 30 minutes or longer with any type of professional?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

dep_rx_inp. In the last 12 months, has a doctor or health professional prescribed any medication for your depression or anxiety?

INCLUDE ANY EARLIER PRESCRIPTIONS THAT HAVE BEEN RENEWED IN THE LAST 12 MONTHS.

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

dep_rx_use_inp. Are you now taking prescribed medication for depression or anxiety?

ASK IF dep_rx_inp = Y or DK

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

PAIN

One other condition people sometimes struggle with is chronic pain.

pain_where_inp. You mentioned earlier that you've had some amount of pain in the last 4 weeks. In which of the following places did you have pain more than once a week? You can say "yes" to more than one. **[READ CHOICES]**

- ☐ Back or neck? [pain_back_inp]
- ☐ Joints? [pain_joints_inp]
- ☐ Head? [pain_head_inp]
- ☐ Other? xxx [pain_other_inp; Text description saved as variable pain_otherdetails_inp]
- ☐ No specific place [pain_general_inp]
- ☐ DON'T KNOW [pain_dk_inp]
- ☐ PREFER NOT TO ANSWER [pain_pnta_inp]

ASK IF sf4_inp ≥ "very mild"

Each answer choice is an indicator variable denoting the selection or selections chosen

pain_interference_inp. **During the last 4 weeks**, how much did pain interfere with your normal work (including both work outside the home and housework)? Would you say ... **[READ OPTIONS]**

- ☐ Not at all,
- ☐ A little,
- ☐ Moderately,
- ☐ Quite a bit, OR
- ☐ Extremely?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF sf4_inp ≥ "very mild"

You mentioned earlier that you have not had any bodily pain in the last 4 weeks, but I wanted to find out if that was because you were using pain medications.

READ IF SF4 = "no pain"

pain_meds_inp. Are you taking any kind of medication ever day or most days to help you control or manage chronic pain?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ALWAYS ASK of everyone interviewed, even if there is no report of pain.

4. HAPPINESS AND MENTAL HEALTH

We've talked a lot about your physical health. Now I have some questions on how you are doing more generally -- thinking not just of your health, but of your life as a whole.

happy_inp. Taken all together, how would you say things are these days -- would you say that you are very happy, pretty happy, or not too happy?

- ☐ Very happy
- ☐ Pretty happy
- ☐ Not too happy
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

The next few questions ask how often you've been bothered by certain kinds of problems in the **last two weeks**. After I read each item on the list, please tell me how often you've experienced it in the last two weeks -- either not at all, several days, more than half the days, or nearly every day.

USE CARD #10.

READ THE CHOICES ON THE FIRST QUESTION. AFTER THAT, READ THEM ONLY IF NECESSARY.

phq1_inp. Over the last two weeks, how often have you been bothered by **having little interest or pleasure in doing things**? Would you say it was...[READ CHOICES AND POINT TO CARD #10]

- ☐ Not at all,
- ☐ Several days,
- ☐ More than half the days, or
- ☐ Nearly every day?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

phq2_inp. [Over the last two weeks, how often have you been bothered by] **feeling down, depressed, or hopeless**?
[READ CHOICES OR USE CARD #10]

- ☐ Not at all
- ☐ Several days
- ☐ More than half the days
- ☐ Nearly every day
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

phq3_inp. [Over the last two weeks, how often have you been bothered by] **trouble falling or staying asleep, or sleeping too much**?
[READ CHOICES OR USE CARD #10]

- ☐ Not at all
- ☐ Several days
- ☐ More than half the days
- ☐ Nearly every day
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

phq4_inp. [Over the last two weeks, how often have you been bothered by] **feeling tired or having little energy?**
[READ CHOICES OR USE CARD #10]

- ☐ Not at all
- ☐ Several days
- ☐ More than half the days
- ☐ Nearly every day
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

phq5_inp. [Over the last two weeks, how often have you been bothered by] **poor appetite or overeating?**
[READ CHOICES OR USE CARD #10]

- ☐ Not at all
- ☐ Several days
- ☐ More than half the days
- ☐ Nearly every day
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

phq6_inp. [Over the last two weeks, how often have you been bothered by] **feeling bad about yourself, or that you're a failure, or have let yourself or your family down?**
[READ CHOICES OR USE CARD #10]

- ☐ Not at all
- ☐ Several days
- ☐ More than half the days
- ☐ Nearly every day
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

phq7_inp. [Over the last two weeks, how often have you been bothered by] **trouble concentrating on things, such as reading the newspaper or watching TV?**
[READ CHOICES OR USE CARD #10]

- ☐ Not at all
- ☐ Several days
- ☐ More than half the days
- ☐ Nearly every day
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

phq8_inp. [Over the last two weeks, how often have you been bothered by] **moving or speaking so slowly that other people could have noticed? Or the opposite - being so fidgety or restless that you have been moving around a lot more than usual?**

[READ CHOICES OR USE CARD #10]

- ☐ Not at all
- ☐ Several days
- ☐ More than half the days
- ☐ Nearly every day
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

dep_impair_inp. We've mentioned some problems that have been bothering you in the last two weeks, such as {FIRST PHQ8 QUESTION >0} and {LAST PHQ8 QUESTION >0}.

How difficult have these problems made it for you to do your work, take care of things at home, or get along with people? Would you say it's been...[READ CHOICES]

- ☐ Not difficult at all,
- ☐ Somewhat difficult,
- ☐ Very difficult, or
- ☐ Extremely difficult?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

LOGIC
ASK IF: At least one of PHQ1 to PHQ8 is 'several days', 'more than half the days', or 'nearly every day'.

5. ACCESS AND UTILIZATION OF MEDICAL CARE

Now I'd like to ask you about the medical care that you have been getting in the last few years.

When I say "medical care", I am talking about any type of care that you get from a doctor or other health professional, such as a nurse, a therapist, a physical therapist, or anyone else who specializes in physical or mental health. Medical care could be anything from an emergency room visit to a routine screening or check-up.

I am **not** including dental care or routine vision services, like glasses or contact lenses. I am also **not** including visits to the pharmacy, if all you are doing is buying medication.

[Does that make sense?]

usual_place_inp. First, is there one place you **usually** go to get medical care?

IF SP SAYS "NO", ASK IF THERE IS **NO** PLACE OR **MORE THAN ONE** PLACE.


- ☐ Yes
- ☐ No place
- ☐ More than one place
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

usual_place_where_inp. What kind of place do you go to most often: is it a doctor's office, a hospital emergency room, or some other place?

SELECT THE APPROPRIATE CATEGORY BASED ON SP'S DESCRIPTION. PROBE IF NECESSARY, USING THE OPTIONS BELOW.

- ☐ Doctor's office
- ☐ Hospital emergency room or urgent care clinic
- ☐ Some other place: _____ (ENTER NAME OR BRIEF DESCRIPTION:
stored as variable usual_place_whereother_inp)
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF:
usual_place_inp is
YES OR >1 OR DK

 usual_doc_inp. What type of doctor's office is it? Is it ... [READ CHOICES]

- ☐ A private doctor's office or clinic that usually requires an appointment?
- ☐ A free or low-cost community health clinic?
- ☐ A walk-in clinic in a commercial center, like a Walmart?
- ☐ Or some other kind of place? _____ (ENTER NAME OR BRIEF DESCRIPTION:)
[Name and description stored as variable usual_doc_otherdetails_inp]
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF:
usual_place_w
here_inp=
doctor's office

 usual_er_inp. Which emergency room do you go to most often?

- ☐ ENTER NAME OR LOCATION OF ER: _____
- ☐ DON'T KNOW

ASK IF: usual_place_where_inp =
Hospital ER

0 PREFER NOT TO ANSWER

Physical Care

needed_care_phys_inp. In the **last 12 months**, was there a time when you needed medical care for a **physical** illness, injury, or condition? [I'll ask about care and treatment for mental health conditions next.] Remember, don't include dental care or routine vision services.

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF WE DON'T ALREADY KNOW FROM PREVIOUS ANSWERS THAT SP RECEIVED MEDICAL CARE FOR PHYSICAL CONDITIONS IN THE LAST 12 MONTHS (CALCULATED VARIABLE) (known_phys_care=0)

got_care_phys_inp. [In the **last 12 months**, when you needed medical care for a physical illness, injury, or condition,] did you always get **all** the care that you needed? [Remember, don't include dental care or routine vision services.]

INTERVIEWER: IF SP SAYS "NO", CLARIFY WHETHER HE/SHE GOT AT LEAST **SOME CARE** WHEN HE/SHE NEEDED IT, OR WHETHER HE/SHE GOT **NO CARE AT ALL**.

- ☐ Yes: got **all** the care that was needed
- ☐ Got **some but not all** the care that was needed
- ☐ Got **no care at all** for any physical conditions in the last 12 months
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF needed_care_phys_inp = YES OR IF WE ALREADY KNOW FROM PREVIOUS ANSWERS THAT SP RECEIVED MEDICAL CARE FOR PHYSICAL CONDITIONS IN THE LAST 12 MONTHS (CALCULATED VARIABLE)

needed_care_phys_inp=YES OR
known_phys_care=1

missed_care_phys_ins_inp. Think back to the last time you didn't get all the care you needed for a physical injury or condition. Did you have health insurance at that time?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF got_care_phys_inp =
"SOME" OR "NONE"

Mental Care

needed_care_ment_inp. In the **last 12 months**, have you needed treatment or counseling for a **mental health condition** or **personal problem**? [Remember, everything you tell me in this interview is confidential.]

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF WE DON'T ALREADY KNOW FROM PREVIOUS ANSWERS THAT SP RECEIVED MEDICAL CARE FOR DEPRESSION IN THE LAST 12 MONTHS (CALCULATED VARIABLE) (known_ment_care = 0)

The most common mental health conditions in the US are depression and anxiety. Other common conditions include panic attacks, phobias, obsessive-compulsive disorder (OCD), bipolar disorder, and post-traumatic stress disorder (PTSD). There are also many other conditions that I have not listed. Alcohol and substance abuse are often counted as mental health conditions, but please do not include them here -- I will ask about them next.

got_care_ment_inp. In the **last 12 months**, when you needed treatment or counseling for a mental health condition or personal problem, did you always get **all** the treatment that you needed?

INTERVIEWER: IF SP SAYS "NO", CLARIFY WHETHER HE/SHE GOT AT LEAST **SOME TREATMENT** WHEN HE/SHE NEEDED IT, OR WHETHER HE/SHE GOT **NO TREATMENT AT ALL**.

- ☐ Yes: got **all** the treatment that was needed
- ☐ Got **some but not all** the treatment that was needed
- ☐ Got **no treatment at all** for any mental health issues in the last 12 months
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF needed_care_ment_inp = YES OR IF WE ALREADY KNOW FROM PREVIOUS ANSWERS THAT SP RECEIVED MEDICAL CARE FOR DEPRESSION IN THE LAST 12 MONTHS (CALCULATED VARIABLE)

needed_care_ment_inp = YES OR
known_ment_care = 1

missed_care_ment_ins_inp. Think back to the last time you didn't get all the treatment you needed for a mental health condition or personal problem. Did you have any kind of health insurance at that time?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF got_care_ment_inp= "SOME"
OR "NONE"

Substance Abuse Care

needed_care_subst_inp. In the **last 12 months**, have you **needed** treatment or counseling for alcohol or drug abuse? [Remember, everything you tell me in this interview is confidential.]

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

got_care_subst_inp. In the **last 12 months**, when you needed treatment or counseling for alcohol or drug abuse, did you always get **all** the treatment that you needed?

INTERVIEWER: IF SP SAYS "NO", CLARIFY WHETHER HE/SHE GOT AT LEAST **SOME TREATMENT** WHEN HE/SHE NEEDED IT, OR WHETHER HE/SHE GOT **NO TREATMENT AT ALL**.

- ☐ Yes: got **all** the treatment that was needed
- ☐ Got **some but not all** the treatment that was needed
- ☐ Got **no treatment at all** for alcohol or drug abuse in the last 12 months
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF need_care_subst_inp
= YES

missed_care_subst_ins_inp. Think back to the last time you didn't get all the treatment that you needed for an alcohol or drug abuse problem. Did you have any kind of health insurance at that time?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF got_care_subst_inp = "SOME" OR
"NONE"

Any Care

care_any_inp. Have you been to a doctor or received any medical care at all in the **last 12 months**? [Remember, I am not including dental or vision services.]

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW (SP unsure of the **timing** of most recent medical care.) **Probe will follow.**
- ☐ INTERVIEWER UNCERTAIN: Does the following count as medical care? _____
[Interview comments saved as care_anytype_inp. No further questions posed in this section if interviewer expressed concerns.]
- ☐ PREFER NOT TO ANSWER

ASK IF SP HAS NOT ALREADY TOLD US IN PREVIOUS QUESTIONS THAT HE/SHE HAS BEEN TO THE DOCTOR IN THE LAST 12 MONTHS TO RECEIVED CARE FOR PHYSICAL, MENTAL, AND/OR SUBSTANCE ABUSE ISSUES. (CALCULATED VARIABLE).
ask_care_any=1

INTERVIEWER: MARK "DON'T KNOW" ONLY IF THE SP IS UNSURE ABOUT THE **TIMING** OF HIS/HER MOST RECENT DOCTOR'S VISIT OR MEDICAL CARE.

IF, AFTER PROBING, **YOU** ARE UNSURE WHETHER THE SP'S EXPERIENCE COUNTS AS MEDICAL CARE AT ALL, CHOOSE THE "**INTERVIEWER UNCERTAIN**" OPTION AND ENTER THE DESCRIPTION IN THE TEXT FIELD PROVIDED.

(FOR THE LOGIC OF THE QUESTIONS THAT FOLLOW, THIS WILL BE EQUIVALENT TO ANSWERING "NO".)

OK. I made a note of it, but since I'm not sure whether it counts as medical care for the purposes of this study, let's agree **not** to include it in all the questions that follow.

READ IF: care_any_inp =
"INTERVIEWER UNCERTAIN"

care_any_probe_inp. Think back to the last time you got any medical care. Was it definitely within the last **2 years**?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF: care_any_inp =DK (SP unsure of timing)

OK. In that case, let's assume it was more than 12 months ago and let's not count it.

READ IF: care_any_probe_inp = No or DK
or PNTA

care_any_count_inp. In that case, since you're unsure, we can count it as medical care received in the last 12 months. Is that OK with you?

ASK IF: care_any_probe_inp =YES

- ☐ OK
- ☐ No: On further reflection, SP realizes it was more than 12 months ago.

care_when_inp. When was the last time you received any medical care? Was it ... [**READ CHOICES**]

- ☐ Within the last 2 years
- ☐ Between 2 and 3 years ago, or
- ☐ More than 3 years ago?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF, BASED ON ALL QUESTIONS SO FAR, SP HAS NOT RECEIVED CARE IN THE LAST 12 MONTHS
(care_last_year = 0) **AND**
care_any_probe_inp is neither
DK nor PNTA

Satisfaction

satisfaction_inp. Overall, how would you rate the **quality** of all the medical care you have received in the last 12 months?
Would you say it was ... **[READ CHOICES]**

- ☐ Excellent,
- ☐ Very good,
- ☐ Good,
- ☐ Fair , OR
- ☐ Poor?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF, BASED ON ALL
QUESTIONS SO FAR, SP HAS
RECEIVED CARE IN THE LAST
12 MONTHS
(care_last_year=1)

ASK SECTION 6 (Screenings, Check-ups and Exams) ONLY IF SP HAS RECEIVED CARE IN THE LAST 12 MONTHS (care_last_year =1) AND AT LEAST ONE OF THE FOLLOWING IS TRUE:

- *dia_dx_inp (diabetes) not equal YES
- *chl_dx_inpl (cholesterol) not equal YES
- * SP is female
- * SP may be over 50

(If none of the above are true, there is nothing to ask in this section, so we skip the whole section)

6. SCREENINGS, CHECK-UPS AND EXAMS

Now I have a few questions about various types of health screenings, checkups, or exams you may have received in the last few years.

Age check

over50_ask_raw, To ask these questions properly, I need to know just a little bit more about your age. Would you mind telling me if you are under 50 or over 50?

- ☐ Under 50
- ☐ 50 or older
- ☐ PREFER NOT TO ANSWER

ASK IF over50_obvious_raw=-98 [Not obvious, need to ask SP later on.]

You mentioned earlier that you've NEVER been diagnosed with high cholesterol.

READ IF: chl_dx_inp=NO

Cholesterol Screening

chl_test_ever_inp. Have you ever had your cholesterol checked?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF chl_dx_inp not equal YES



chl_test_when_inp. About how long has it been since you last had your cholesterol checked? Was it...

[READ CHOICES AND/OR USE TIME FRAME CARD]

- ☐ Within the last year,
- ☐ Between 1 and 2 years ago,
- ☐ Between 2 and 3 years ago, OR
- ☐ More than 3 years ago?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF: chl_test_ever_inp=yes

Diabetes Screening

You mentioned earlier that you've NEVER been diagnosed with diabetes.

READ IF: dia_dx_inp=NO

dia_test_ever_inp. Have you ever had a blood test for high blood sugar or diabetes {, other than during pregnancy}?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF: dia_dx_inp not = "yes"

Insert words in brackets if gender = FEMALE

dia_test_when_inp. About how long has it been since you last had a blood sugar test for diabetes? Was it...

[READ CHOICES AND/OR USE TIME FRAME CARD]

- ☐ Within the last year,
- ☐ Between 1 and 2 years ago,
- ☐ Between 2 and 3 years ago, OR
- ☐ More than 3 years ago?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF: dia_test_ever_inp = yes

Women's Health Screening

ASK THE FOLLOWING 3 QUESTIONS ONLY IF FEMALE. Gender=female

pap_inp. In the last 12 months, have you had a **Pap test or Pap smear**?

- ☐ Yes
- ☐ No
- ☐ N/A: Hysterectomy
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

A Pap test or Pap smear is a test for cancer of the cervix.

mam_inp. In the last 12 months, have you had a **Mammogram**?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF AGE ≥ 40 (OR UNKNOWN)
Ask_40 =1)

A mammogram is an x-ray of each breast to look for breast cancer.

pregnant_inp. Do you have reason to believe that you are pregnant?²

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF AGE IN RANGE [19, 49] **OR** IF SP IS OBVIOUSLY UNDER 50 **OR** SP TOLD US THEY'RE OVER 50

Age<50 AND age>18 OR over50_obvious_raw = 0
[obviously under 50] or over50_ask_raw is any of (0 [under 50] or -99 [PNTA])

Over 50 Screening

ASK THE NEXT 5 QUESTIONS IF SP IS OVER 50 (from DOB or because interviewer can tell, or because SP TOLD US THEY WERE OVER 50).
ask_50=1 (CALCULATED VARIABLE)

fobt_ever_inp. In the last 12 months, has a doctor asked you to do a **Blood stool test**?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW

A blood stool test is a test that you usually do at home, using a special kit that a doctor gives you. It checks whether the stool contains blood, which can be a sign of colorectal cancer.

² This question should have been posed to all women of ages 19-49. Instead the it was posed to all women ages 19-49 who received medical care in the last year.

☐ PREFER NOT TO ANSWER
col_ever_inp. **In the last 12 months**, have you had a sigmoidoscopy or a colonoscopy?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

Both sigmoidoscopy and colonoscopy are exams in which a tube is inserted in the rectum to view the colon for signs of cancer or other health problems.

psa_inp. **In the last 12 months**, have you had a blood test to check for prostate cancer?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF MALE gender=male

told_flu_inp. **In the last 12 months**, has a doctor or other health provider recommended that you have a flu shot?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

did_flu_inp. Have you had a flu shot in the last 12 months?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

7. HEALTH BEHAVIORS

My next few questions are about things people do in their daily lives that can affect their health. Let's start with diet and exercise.

Exercise

exercise_inp. Compared with most men/women/people your age, would you say you are more physically active, less physically active, or about the same?

- ☐ More active
- ☐ Less active
- ☐ About the same
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

told_exercise_inp. In the last 12 months, have you been told by a doctor or health professional to increase your physical activity or exercise?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF SP RECEIVED MEDICAL CARE IN
LAST 12 MONTHS. (calculated
variable) care_last_year=1

now_exercise_inp. Are you currently trying to increase your physical activity or exercise?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

overweight_inp. Do you consider yourself now to be overweight, underweight, or about the right weight?

- ☐ Overweight
- ☐ Underweight
- ☐ About the right weight
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

told_weight_inp. In the last 12 months, have you been told by a doctor or health professional to lose weight?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF SP RECEIVED MEDICAL CARE IN
LAST 12 MONTHS. (calculated
variable) care_last_year=1

now_weight_inp. Are you currently trying to lose weight?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF overweight_inp =
"OVERWEIGHT" OR "DK" OR IF
told_weight_inp = YES

Smoking

smk_100_inp. The next few questions are about smoking. Let me start by asking: Have you smoked at least 100 cigarettes in your **entire life**?

NOTE: 1 PACK = 20 CIGARETTES

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

[Great. In that case, I don't need to ask you any more questions about smoking.]

READ IF smk_100_inp = No

smk_now_inp. Do you *now* smoke cigarettes every day, some days, or not at all?

- ☐ Every day
- ☐ Some days
- ☐ Not at all
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF smk_100_inp= YES or DON'T
KNOW

smk_quit_when_inp. How long ago did you quit smoking? Was it [READ CHOICES OR REFER TO TIME FRAME CARD]

- ☐ Within the last year,
- ☐ Between 1 and 2 years ago,
- ☐ Between 2 and 3 years ago, OR
- ☐ More than 3 years ago?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF smk_now_inp= "not at all"

Current Smokers: Ask the following 3 questions of current smokers
ASK IF smk_now_inp = "every day" OR "some days" OR "don't know"

smk_avg_inp. During the **last 4 weeks**, on the days that you smoked, about how many cigarettes did you smoke per day? [Your best estimate is fine.]

IF SP REPORTS LESS THAN ONE CIGARETTE PER DAY (BUT MORE THAN 0), ENTER 1.

IF SP REPORTS THE NUMBER OF PACKS SMOKED, USE THIS TABLE.

0.5 packs = 10 cigarettes
1 pack = 20 cigarettes
1.5 packs = 30 cigarettes
2 packs = 40 cigarettes
2.5 packs = 50 cigarettes
3 packs = 60 cigarettes
3.5 packs = 70 cigarettes
4 packs = 80 cigarettes
4.5 packs = 90 cigarettes
5 packs = 100 cigarettes

- ☐ Enter number of cigarettes: XXX
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

smk_quit_told_inp. In the last 12 months, has a doctor or other health professional advised you to quit smoking?

ASK IF SP RECEIVED MEDICAL CARE IN
LAST 12 MONTHS. (calculated
variable) care_last_year=1

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

smk_quit_did_inp. Have you tried to quit smoking in the last 12 months?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

Alcohol

The next few questions are about drinking alcohol. This includes beer, wine, wine coolers, liquor (such as whiskey or gin), or any other type of alcoholic beverage.

[Remember, your answers to **all** the questions on this survey are confidential and will never be reported with your name to anyone.]

alc_freq_inp³. In **the last 4 weeks**, on how many days did you drink any type of alcoholic beverage?

- ☐ Never
- ☐ Enter number of days XX days [select unit: per week/ total in the last 4 weeks]
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

³ alc_freq_inp merges all responses. Its units are Number of days SP drank alcohol in the last 4 weeks. The appropriate conversion was made if the SP gave the number of days per week instead of the total number of days in the last 4 weeks. The number of days is also stored as alc_freq_number_inp and the units variable is stored as alc_freq_unit_inp. This provides no additional information to that given by alc_freq_inp and is stored only for completeness of data.

alc_avg_inp. On the days when you did drink alcohol, I'd like to know how many drinks you usually had.

ASK IF alc_freq_inp ≠ "never"

This can be a little tricky to count, since drinks come in different sizes. When I say one "drink", I'm thinking of a **12 ounce** can of beer, a 5 ounce glass of wine, or a 1 ½ ounce shot of liquor. If you often have drinks in other sizes, tell me about them and we can figure out how much they should count for.

So, in the **last 4 weeks**, on the days when you **did** drink alcohol, how many drinks did you usually have per day?

- ☐ Enter number of drinks XX
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

INTERVIEWER: USE THIS [CONVERSION TABLE](#) FOR OTHER DRINKS AND DRINK SIZES.

Regular bottle of beer = 1 drink;
40 oz can/bottle of beer (a "forty") = 3 drinks;
Regular bottle of wine = 5 drinks;
Wine cooler (normal size) = 1 drink;
Mixed drink (normal size) = 1 drink

binge_freq_inp⁴. In the **last 4 weeks**, on how many days did you have {4 FOR WOMEN, 5 FOR MEN} or more drinks in one day? [Once again, when I say one "drink", I'm thinking of a 12 ounce can of beer, a 5 ounce glass of wine, or a 1 ½ ounce shot of liquor.]

ASK IF alc_freq_inp ≠ "never"

- ☐ Never
- ☐ Enter number of days XX days [select unit: per week/total in the last 4 weeks]⁵
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

INTERVIEWER: USE THIS [CONVERSION TABLE](#) FOR OTHER DRINKS AND DRINK SIZES.

Regular bottle of beer = 1 drink;
40 oz bottle of beer (a "forty") = 3 drinks
Regular bottle of wine = 5 drinks
Wine cooler (normal size) = 1 drink
Mixed drink (normal size) = 1 drink

⁴ binge_freq_inp merges all responses. Its units are Number of days SP binge drank in the last 4 weeks. The appropriate conversion was made if the SP gave the number of days per week instead of the total number of days in the last 4 weeks. The number of days is also stored as binge_freq_number_inp and the units variable is stored as binge_freq_unit_inp. This provides no additional information to that given by binge_freq_inp and is stored only for completeness of data.

⁵ NOTE: Due to a coding error binge_freq_unit_inp was not stored for a number of surveys.

8. MEDICATIONS

Now I have a few questions about any medications you may be taking.

rx_inp. In the **last 12 months**, has a doctor or other health professional given you a prescription for any medication?
INCLUDE ANY EARLIER PRESCRIPTIONS THAT HAVE BEEN RENEWED IN THE LAST 12 MONTHS.

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF WE DO NOT ALREADY KNOW THAT SP WAS PRESCRIBED MEDICATIONS FOR A SPECIFIC CONDITION: E.g. Asthma, diabetes, etc.
(ast_controller_inp is not YES AND ast_inhaler_inp is not YES AND dia_insulin_rx_inp is not YES AND dia_pills_rx_inp is not YES AND hbp_rx_inp is not YES AND chf_rx_inp is not YES and dep_dx_inp is not YES)

rx_cost_inp. In a typical month, about how much do you pay out-of-pocket for your prescription medications?

[I'm thinking of costs you pay yourself, not costs paid by insurance.]

- ☐ Enter dollar amount: \$__XXX__ (Enter 0 if none.)
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF rx_inp = YES, DK, OR IF WE ALREADY KNOW SP WAS PRESCRIBED MEDICATIONS IN THE LAST 12 MONTHS. (ast_controller_inp = YES OR ast_inhaler_inp = YES OR...dep_dx_inp = YES)



rx_cost_pr1_inp. Just to give me a rough sense of the amount: would you guess it's more than \$25 or less than \$25?

ASK IF: rx_cost_inp= DK

- ☐ More than \$25
- ☐ Less than \$25
- ☐ About \$25
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER



rx_cost_pr2_inp. And would you say it's more than {\$10/ \$50} or less than {\$10/ \$50}?

- ☐ More than {\$10/50}
- ☐ Less than {\$10/50}
- ☐ About {\$10/50}
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK WITH \$50 IF rx_cost_pr1_inp IS "more than \$25"
ASK WITH \$10 IF rx_cost_pr2_inp IS "less than \$25"

Thanks, that gives me a rough idea of the amount.

READ IF: rx_cost_pr2_inp not equal to DK or PNTA

rx_delay_inp. Sometimes people delay taking medication or filling prescriptions because of the cost. In the **last 12 months**, have you ever had to skip prescription medications or take less than was prescribed for you because of the cost?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF rx_inp = YES, DK, OR IF WE ALREADY KNOW SP WAS PRESCRIBED MEDICATIONS IN THE LAST 12 MONTHS. (ast_controller_inp = YES OR ast_inhaler_inp = YES OR...dep_dx_inp = YES)

rx_any_inp. Now think just about the **last 4 weeks**. Have you taken any prescription medications during that time, whether they were originally prescribed to you or to someone else?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF SP HAS NOT ALREADY TOLD US
THAT HE/SHE IS CURRENTLY TAKING
MEDS FOR SPECIFIC CONDITIONS
(calculated variable)
known_meds = 0

otc_any_inp. So far we've only talked about **prescription** medications. Are there any **over-the-counter** medications that you take **on a regular basis**, at least once a week? Do not include vitamins or nutritional supplements.

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

Over-the-counter medications are medications that
you can buy without a doctor's prescription, such
as Advil or Sudafed.

9. COSTS OF CARE

ASK QUESTIONS IN THIS SECTION ONLY IF SP HAS RECEIVED MEDICAL CARE IN THE LAST 12 MONTHS. care_last_year=1

We've talked about the medical care you've received in the last 12 months. Now I'd like to figure out how much it cost you to get that care.

When we talk about your costs, I'm thinking about money you have paid yourself, out of your own pocket, or that friends or relatives have helped you pay.

I'm **not** including money that an insurance company or some other organization paid on your behalf. I'm also **not** including money that you owe or that you put on your credit card, but haven't paid yet -- I'll ask about that later. Also, as usual, I'm **not** including dental or routine vision care.

[Does that make sense?]

INTERVIEWER: OFFER SP PAPER, PENCIL, AND A CALCULATOR TO HELP WITH THE COST CALCULATIONS.

doc_use_inp. In the last 12 months, about how many times have you seen a doctor or other health care professional at a doctor's office, a clinic, or at home? I'm thinking of regular doctor visits, not hospital stays, emergency room visits, surgery, or dental care -- I'll ask about those later.

- ☐ Enter number of times: XXX (Enter 0 if none.)
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER



doc_use_probe_inp. If you were giving your best guess, would you say it was....[**READ CHOICES**]

- ☐ Zero times
- ☐ Once, OR
- ☐ More than once?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF: doc use inp= DK

doc_cost_inp. Altogether, about how much did you pay out-of-pocket for these doctor's visits in the last 12 months, including any lab tests that the doctor ordered?

[Again, by out-of- pocket, I mean money that you have paid yourself, possibly with help from family or friends. You can just give me your best estimate.]

- ☐ Enter dollar amount: \$ XXX (Enter 0 if none.)
- ☐ DON'T KNOW. If this option is marked, detailed probe will follow.
- ☐ PREFER NOT TO ANSWER

ASK IF doc_use_inp>0 OR
doc_use_probe_inp = "ONCE" OR
"MORE THAN ONCE"

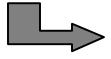


doc_cost_pr1_inp. Just to give me a rough sense of the amount: would you guess it was more than \$500 or less than \$500?

- ☐ More than \$500
- ☐ Less than \$500
- ☐ About \$500
- ☐ DON'T KNOW

ASK IF doc cost inp = DK

☐ PREFER NOT TO ANSWER



doc_cost_pr2_inp. And would you say it was more than {\$100/\$1000} or less than {\$100/ \$1000}?

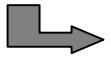
- ☐ More than {\$100/\$1000}
- ☐ Less than {\$100/\$1000}
- ☐ About {\$100/\$1000}
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK USING \$100 IF doc_cost_pr1_inp = "LESS"
ASK USING \$1000 IF doc_cost_pr1_inp = "MORE"

[Thanks, that gives me a rough idea of the amount.]

ed_use_inp. In the last 12 months, about how many times have you gone to an emergency room or urgent care clinic?

- ☐ Enter number of times: XXX (Enter 0 if none.)
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER



ed_use_probe_inp. If you were giving your best guess, would you say it was....[READ CHOICES]

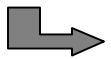
ASK IF ed_use_inp = DK

- ☐ Zero times
- ☐ Once, OR
- ☐ More than once?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ed_cost_inp. Altogether, about how much did you pay out-of-pocket for these emergency room or urgent care visits in the last 12 months? [Again, your best estimate is fine.]

- ☐ Enter dollar amount: \$ XXX (Enter 0 if none.)
- ☐ DON'T KNOW. If this option is marked, detailed probe will follow.
- ☐ PREFER NOT TO ANSWER

ASK IF ed_use_inp>0 OR
ed_use_probe_inp="ONCE" OR
"MORE THAN ONCE"



ed_cost_pr1_inp. Just to give me a rough sense of the amount: would you guess it was more than \$500 or less than \$500?

- ☐ More than \$500
- ☐ Less than \$500
- ☐ About \$500
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF ed_cost_inp = DK



ed_cost_pr2_inp. And would you say it was more than {\$100/\$1000} or less than {\$100/ \$1000}?

- ☐ More than {\$100/\$1000}
- ☐ Less than {\$100/\$1000}
- ☐ About {\$100/\$1000}
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK USING \$100 IF ed_cost_pr1_inp = "LESS"
ASK USING \$1000 IF ed_cost_pr1_inp = "MORE"

[Thanks, that gives me a rough idea of the amount.]

surg_use_inp. In the last 12 months, how many times have you had outpatient surgery?

Outpatient surgery is any surgery where you did not have to stay in the hospital overnight.

- ☐ Enter number of times: XXX (Enter 0 if none.)
- ☐ Don't know
- ☐ PREFER NOT TO ANSWER



surg_use_probe_inp. If you were giving your best guess, would you say it was... [READ CHOICES]

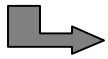
ASK IF surg_use_inp= DK

- ☐ Zero times,
- ☐ Once, or
- ☐ More than once?
- ☐ Don't know
- ☐ PREFER NOT TO ANSWER

surg_cost_inp. Altogether, about how much did you pay out-of-pocket for these outpatient surgeries in the last 12 months? [Again, your best estimate is fine.]

ASK IF surg_use_inp>0 OR
surg_use_probe_inp = "ONCE" OR
"MORE THAN ONCE"

- ☐ Enter dollar amount: XXX (Enter 0 if none.)
- ☐ DON'T KNOW. If this option is marked, detailed probe will follow.
- ☐ PREFER NOT TO ANSWER



surg_cost_pr1_inp. Just to give me a rough sense of the amount: would you guess it was more than \$500 or less than \$500?

ASK IF surg_cost_inp = DK

- ☐ More than \$500
- ☐ Less than \$500
- ☐ About \$500
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER



surg_cost_pr2_inp. And would you say it was more than {\$100/\$1000} or less than {\$100/ \$1000}?

- ☐ More than {\$100/\$1000}
- ☐ Less than {\$100/\$1000}
- ☐ About {\$100/\$1000}
- ☐ DON'T KNOW

ASK USING \$100 IF surg_cost_pr1_inp = "LESS"
ASK USING \$1000 IF surg_cost_pr1_inp = "MORE"

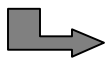
☐ PREFER NOT TO ANSWER

[Thanks, that gives me a rough idea of the amount.]

hosp_use_inp. In the last 12 months, how many times have you had to stay in a **hospital** at least overnight?

- ☐ Enter number of times: XXX (Enter 0 if none.)
- ☐ Don't know
- ☐ PREFER NOT TO ANSWER

If SP asks, include mental hospitals
and sanatoriums.



hosp_use_probe_inp. If you were giving your best guess, would you say it was... **[READ CHOICES]**

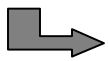
ASK IF hosp_use_inp = DK

- ☐ Zero times,
- ☐ Once, or
- ☐ More than once?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

hosp_cost_inp. Altogether, about how much did you pay out-of-pocket for hospital bills in the last 12 months? [Again, your best estimate is fine.]

- ☐ Enter dollar amount: XXX (Enter 0 if none.)
- ☐ DON'T KNOW. If this option is marked, detailed probe will follow.
- ☐ PREFER NOT TO ANSWER

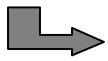
ASK IF hosp_use_inp>0 OR
hosp_use_probe_inp = "ONCE" OR
"MORE THAN ONCE"



hosp_cost_pr1_inp. Just to give me a rough sense of the amount: would you guess it was more than \$500 or less than \$500?

ASK IF hosp_cost_inp = DK

- ☐ More than \$500
- ☐ Less than \$500
- ☐ About \$500
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER



hosp_cost_pr2_inp. And would you say it was more than {\$100/\$1000} or less than {\$100/ \$1000}?

- ☐ More than {\$100/\$1000}
- ☐ Less than {\$100/\$1000}
- ☐ About {\$100/\$1000}
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK USING \$100 IF hosp_cost_pr1_inp = "LESS"
ASK USING \$1000 IF hosp_cost_pr1_inp = "MORE"

[Thanks, that gives me a rough idea of the amount.]

dent_use_inp. During the last 12 months, have you seen a dentist or other professional for dental care?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

dent_cost_inp. Altogether, about how much did you pay out-of-pocket for dental care in the last 12 months? [Your best estimate is fine.]

- ☐ Enter dollar amount: XXX (Enter 0 if none.)
- ☐ Don't know
- ☐ PREFER NOT TO ANSWER

ASK IF: dent_use_inp
= YES

other_use_inp. In the last 12 months, have you used any other form of healthcare that we have not yet talked about, such as [a chiropractor](#), [acupuncture](#), [naturopathic medicine](#), or [medical massage](#)? If you have already included these forms of healthcare in your previous responses, you don't need to mention them again.

These are examples of alternative medicine, which some people use instead of or in addition to traditional medical care.

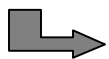
INTERVIEWER: IF SP HAD ALREADY INCLUDED ALTERNATIVE HEALTHCARE IN PREVIOUS RESPONSES, ENTER "NO".

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW. If this option is marked, detailed probe will follow.
- ☐ PREFER NOT TO ANSWER

other_cost_inp. Altogether, about how much did you pay out-of-pocket for these services in the last 12 months? [Again, your best estimate is fine.]

- ☐ Enter dollar amount: XXX (Enter 0 if none.)
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF other_use_inp=YES



other_cost_pr1_inp. Just to give me a rough sense of the amount: would you guess it was more than \$500 or less than \$500?

- ☐ More than \$500
- ☐ Less than \$500
- ☐ About \$500
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF other_cost_inp = DK



other_cost_pr2_inp. And would you say it was more than {\$100/\$1000} or less than {\$100/ \$1000}?

- ☐ More than {\$100/\$1000}
- ☐ Less than {\$100/\$1000}
- ☐ About {\$100/\$1000}
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK USING \$100 IF other_cost_pr1_inp = "LESS"
ASK USING \$1000 IF other_cost_pr2_inp = "MORE"

[Thanks, that gives me a rough idea of the amount.]

10. INSURANCE

The next few questions are about how you manage your health care costs.

ins_type_inp First, I'd like to get some basic information about your health insurance, if you have any. I'm only talking about medical insurance, not dental insurance.

I'm going to read a few common types of health insurance. For each one, please tell me "yes" if you have it and "no" if you don't. You can answer "yes" more than once.

INTERVIEWER: READ ONLY THE FIRST 4 CHOICES TO SP.

CHECK EACH BOX WHERE SP INDICATES "YES", LEAVE BLANK IF "NO". MULTIPLE "YES" RESPONSES ARE ALLOWED.

IF SP SAYS "NO" TO EACH OF THE FOUR CHOICES, CHECK THE FIFTH BOX ("NONE OF THE ABOVE").

- ☐ Oregon Health Plan (also called OHP or Medicaid).
[ins_typeohp_med_inp]
- ☐ A health plan you get through an employer or a union, or through a family member's employer or union.
[ins_typeemployer_inp]
- ☐ A health plan that you buy directly from an insurance company, not through an employer or union.
[ins_typepriv_inp]
- ☐ Some other kind of insurance that I haven't already mentioned: [] (ENTER DESCRIPTION. DO NOT INCLUDE DENTAL.)
[ins_typeother_inp] / Details saved as ins_typeotherdetails_inp
- ☐ **NONE OF THE ABOVE: SP answered "no" to each type of insurance.**
[ins_typenone_inp]
- ☐ DON'T KNOW: [] (GIVE DETAILS IF POSSIBLE – WHAT EXACTLY IS THE SP UNCERTAIN ABOUT?.)
[ins_typedontknow_inp] / Details saved as ins_typedontknowdetails_inp
- ☐ PREFER NOT TO ANSWER
[ins_typeno_answer_inp]

Each answer choice is an indicator variable denoting the selection or selections chosen.

ins_any_inp. Do you have any type of medical insurance right now, not counting dental insurance?

- ☐ Yes: [] (Describe.)
Descriptive details saved as ins_anydetails_inp
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF: ins_type_inp =
NONE or DK or RF

ins_premium_inp. Does your medical insurance require you to pay a monthly premium?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF KNOW SP IS
INSURED BASED ON
ins_type_inp and
ins_any_inp

ins_premium_amt_inp. About how much do you have to pay each month for your medical insurance coverage? {I am thinking of money that you pay out of your own pocket or that is deducted from your paycheck, not any costs covered by your employer.} [Your best estimate is fine.]

ASK IF ins_premium_inp = Yes
Read sentence in brackets if
ins_type_inp = EMPLOYER or OTHER
or if ins_any_inp = YES

IF SP'S INSURANCE COVERAGE IS THROUGH A FAMILY PLAN, ASK FOR THE TOTAL PREMIUM FOR THE ENTIRE FAMILY.

- ☐ Enter amount: \$____XXX____ (Enter 0 if none.)
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ins_premium_who_inp. Does this premium also cover other members of your family?

ASK IF: ins_premium_amt_inp is
neither DK nor PNTA

- ☐ Yes – how many others? _____ [Number saved as
ins_premium_whonum_inp]
- ☐ No, just the SP
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ins_this_year_cont_inp. Have you been covered by your current medical insurance for the whole time since the beginning of this year, {CURRENT YEAR}?

INTERVIEWER: USE {CURRENT_YEAR} CALENDAR CARD

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF: ins_type_inp=one of the first
4 choices or ins_any_inp= "Yes"

ins_this_year_any_inp. Was there any time this year, {CURRENT YEAR}, when you did have some kind of medical insurance?

INTERVIEWER: USE {CURRENT_YEAR} CALENDAR CARD

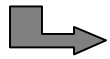
- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF ins_any_inp = NO or RF or DK

ins_this_year_inp. For how many months in {CURRENT YEAR} did you have some kind of medical insurance [not including dental]?

- ☐ Enter number of months _____
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF: Current month is not January (month_now>1) and
(ins_this_year_cont_inp=No OR ins_this_year_any_inp = Yes)



ins_this_year_probe_inp. If you were taking your best guess, would you say it was... [READ CHOICES]

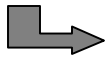
- ☐ Less than 3 months,
- ☐ 4-6 months,
- ☐ 7-9 months,
- ☐ or more than 9 months?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF: ins_this_year_inp= DK and current month is May or onward (month_now>=5); response options change depending on current month

ins_last_year_inp. Now let's go back a year, to {LAST CALENDAR YEAR}. For how many months in {LAST CALENDAR YEAR} did you have some kind of medical insurance [not including dental]?

INTERVIEWER: USE {LAST CALENDAR YEAR} CALENDAR CARD

- ☐ Enter number of months: _____ (Enter 0 if none.)
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER



ins_last_year_probe_inp. If you were taking your best guess, would you say it was... [READ CHOICES]

- ☐ Less than 3 months,
- ☐ 4-6 months,
- ☐ 7-9 months,
- ☐ or more than 9 months?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF: ins_last_year_inp= DK

ins_two_years_ago_inp⁶. Finally, let's go back to 2008. [Don't worry, I won't ask you to go back any further.] For how many months in 2008 did you have some kind of medical insurance [not including dental]?

INTERVIEWER: USE 2008 CALENDAR CARD

- ☐ Enter number of months _____
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF: CURRENT YEAR = 2010



ins_two_years_ago_probe_inp. If you were taking your best guess, would you say it was... [READ CHOICES]

- ☐ Less than 3 months,
- ☐ 4-6 months,
- ☐ 7-9 months,
- ☐ or more than 9 months?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF: ins_two_years_ago_inp= DK

⁶ This question was asked only of Subject Participants interviewed in 2010.

list_conf_inp. [A few final questions on insurance.] Our records indicate that your name was placed on the reservation list for **OHP Standard** in **early 2008**. Is that correct?

OHP Standard is Oregon's medical insurance program for low-income, non-pregnant adults 19 years of age and older. It is different from OHP Plus, which is provided to low-income children and adults who are eligible for Medicaid.

OHP Standard was closed to new enrollments from 2004 to 2007. Then, in January and February 2008, the Department of Human Services invited uninsured, low-income Oregonians to put their names on a reservation list for a chance to enroll in OHP Standard. Over 100,000 people, from all corners of the state, placed their names on this list. We believe that some people's names may have been placed on the list without their knowledge -- for example, by a hospital or other institution where a person frequently received care

INTERVIEWER: IF SP HAS NEVER HEARD OF THE LIST, ENTER "DON'T KNOW": {HE/SHE} MAY HAVE BEEN SIGNED UP WITHOUT {HIS/HER} KNOWLEDGE.

ENTER "NO" ONLY IF SP IS QUITE SURE {HE/SHE} WAS NEVER ON THE LIST.

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER



list_who_inp. Did you sign yourself up for the reservation list or did someone else sign you up?

INTERVIEWER: DO NOT READ THE RESPONSE OPTIONS, BUT PROBE AS NECESSARY.

- ☐ Self.
- ☐ Family member
- ☐ Other: _____ (Specify relationship to SP)
- ☐ Don't remember any more (but did know once)
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF: SP was placed on
list_conf_inp = YES

list_new_inp⁶. The state reopened the Oregon Health Plan reservation list in late 2009. As before, they are now randomly selecting people every month for a chance to enroll in OHP Standard. People whose names were on the old list have to sign up again in order to be considered.

Have you or anyone in your household put your name on the new list?

INTERVIEWER: IF SP ANSWERS "NO" BUT EXPRESSES INTEREST IN THE NEW LIST, EXPLAIN THAT YOU CAN PROVIDE MORE INFORMATION AT THE END OF THE INTERVIEW.

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

new_list_who_inp⁶. Whose name is on that list – is it you, or someone in your household, or both?

MARK ALL THAT APPLY

Ask If: list_new_inp=Y

- ☐ SP's name is on the list
[new_list_whoself_inp]
- ☐ Household member name(s) on the list [_____] (Request actual names, if possible)
[new_list_whohousehold_inp] / Names saved as new_list_whohhnames_raw
- ☐ DON'T KNOW
[new_list_whodk_raw]
- ☐ PREFER NOT TO ANSWER
[new_list_whona_raw]

Answer choices saved as indicator variables.
new_list_who_inp not saved.

list_new_selected_inp⁶. Have you or anyone in your household been notified by the state in 2010 that your name has been selected from the new list?

Ask If: list_new_inp=Y

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

owe_inp. Do you currently owe money to a health care provider, credit card company, or anyone else for medical expenses {from previous years}?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER



owe_amt_inp. About how much do you owe? [Again, your best estimate is fine.]

- ☐ Enter dollar amount: __XXX__ (Enter 0 if none.)
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF owe_inp =
YES



owe_pr1_inp. Just to give me a rough sense of the amount: would you guess it's more than \$1000 or less than \$1000?

- ☐ More than \$1000?
- ☐ Less than \$1000?
- ☐ About \$1000?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF
owe_amt=DK



owe_pr2_inp. And would you say it's more than {\$300/ \$3000} or less than {\$300/ \$3000}?

- ☐ More than {\$300/ \$3000}
- ☐ Less than {\$300/ \$3000}
- ☐ About {\$300/ \$3000}
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK USING \$300 IF owe_pr1_inp = "LESS THAN"
ASK USING \$3000 IF owe_pr1_inp = "MORE THAN"

[Thanks, that gives me a rough idea of the amount.]

refused_inp. In the last 12 months, has a doctor, clinic, or medical service refused to treat you because you owed them money for past treatment?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

borrow_inp. In the last 12 months, have you had to borrow money, skip paying other bills, or pay other bills late in order to pay health care bills?

- ☐ Yes
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

11. DEMOGRAPHICS

[We're almost done with the questions.] I'd like to finish by asking you a few general questions about yourself.

Education and Employment

edu_inp. What is the highest degree or level of school you have **completed**? [I'm just thinking of programs or degrees that you have already finished, not ones you're currently enrolled in.]

INTERVIEWER: ALLOW FREE RESPONSE AND PLACE IN APPROPRIATE CATEGORY.
PROBE AS NECESSARY, USING CARD #11.

- ☐ Did not finish high school
- ☐ High school diploma or the equivalent (GED)
- ☐ Some degree beyond high school, but not a four-year college degree
- ☐ Four- year college degree
- ☐ Beyond college (Master's, professional degree, or doctorate/PhD)
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

employ_now_inp. Are you currently employed by someone else, **self-employed**, or not employed? Please include any sort of work that you get paid for.

IF SP SAYS BOTH "EMPLOYED BY SOMEONE ELSE" AND "SELF-EMPLOYED", MARK BOTH CHOICES..

- ☐ Employed by someone else
[employ_nowemployed_inp]
- ☐ Self-employed [employ_nowself_employed_inp]
- ☐ Not employed [employ_nownot_employed_inp]
- ☐ DON'T KNOW [employ_nowdont_know_inp]
- ☐ PREFER NOT TO ANSWER [employ_nownoanswer_inp]

A self-employed person does not have a boss or employer, but makes money by running his or her own business.

Answer choices saved as indicator variables.
employ_now_inp not saved in dataset.

unemploy_reason_inp. What is the main reason you are not working right now?

ASK IF: employ_now_inp ="not employed"

DO NOT READ CHOICES. ALLOW FREE RESPONSE AND PLACE IN APPROPRIATE CATEGORY. PROBE AS NEEDED.

- ☐ Looking for a job, haven't found one
- ☐ Taking care of house or family
- ☐ Going to school
- ☐ Retired
- ☐ Unable to work for health reasons/ Disabled
- ☐ Other (please explain): _____
[Descriptive reasons saved as unemploy_reasondetails_inp]
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

employ_hrs_inp. About how many hours a week do you usually work at your current job or jobs?

- ☐ Fewer than 20 hours
- ☐ 20 to 30 hours
- ☐ More than 30 hours
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

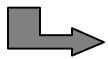
ASK IF: employ_now_inp=
"employed by someone else" or
"self-employed"

employ_months_inp. Of the **last 12 months**, how many months were you working? [Your best estimate is fine.]

IF SP ASKS FOR CLARIFICATION, TELL THEM TO COUNT AS "WORKING" ANY MONTH IN WHICH THEY WORKED AT LEAST HALF THE MONTH.

FOR INSTANCE, A MONTH IN WHICH THEY WORKED ONE DAY WOULD NOT COUNT AS "WORKING". PART-TIME WORK DOES COUNT.

- ☐ Enter number of months: XXX (Enter 0 if none.)
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER



employ_months_probe_inp. If you were taking your best guess, would you say it was...
[READ CHOICES]

- ☐ less than 3 months,
- ☐ 4-6 months,
- ☐ 7-9 months, OR
- ☐ more than 9 months?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF employ_months_inp= DK

missed_work_inp⁷. In the **last 12 months**, about how many days of work have you missed because of disability or poor health?

[Your best estimate is fine. You can also tell me the number of weeks or months you've missed, if that's easier.]

ASK IF:
employ_months_inp ≠ 0.
DK/PNTA are asked.

- ☐ No work missed due to disability or poor health
- ☐ Enter number: XX and unit {select unit: days, weeks, months}
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

⁷ missed_work_inp merges all responses. Its units are Number of Work Days Missed in last 12 months. The appropriate conversion was made if the SP gave the number of week or months missed in the last 12 months. The number reported is stored as missed_work_number_inp. The unit reported is stored as missed_work_unit_inp. This provides no additional information to that given by missed_work_inp and is stored only for completeness of data.



missed_work_probe_inp. If you were taking your best guess, would you say it was...

[READ CHOICES]

ASK IF missed_work_inp= DK

- ☐ A week or less,
- ☐ More than a week but less than a month, OR
- ☐ More than a month of work missed?
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

hh_income_inp. My next question is about your total household income in the last 12 months. This is the combined income from **everyone** who lives in your **household, before taxes.**

Please include income from **all** sources, including unemployment and disability benefits, social security, welfare, gambling, child support, and so on.

By a household, I mean people who live together, usually eat together, and have common financial resources.

A household is often built around a family, but it doesn't have to be. If you are living with a partner and you generally pool your incomes, then please include their income here. But if you have roommates whose incomes and spending are mostly separate from yours, then please don't include them.

[Talking points for refusal conversion]

Here is a card with a list of income ranges. Please show me the one that you think includes your household or say the corresponding letter.

USE CARD #12.

Income is important in analyzing the information we collect. For example, this information helps us learn whether people in one income group use certain types of medical care or have certain medical conditions more or less often than people in another group.

- ☐ A. \$1 to \$2500,
- ☐ B. \$2,501 to \$5,000,
- ☐ C. \$5,001 to \$7,500,
- ☐ D. \$7,501 to \$10,000,
- ☐ E. \$10,001 to \$12,500,
- ☐ F. \$12,501 to \$15,000,
- ☐ G. \$15,001 to \$17,500,
- ☐ H. \$17,501 to \$20,000,
- ☐ I. \$20,001 to \$22,500,
- ☐ J. \$22,501 to \$25,000,
- ☐ K. \$25,001 to \$27,500,
- ☐ L. \$27,501 to \$30,000,
- ☐ M. \$30,001 to \$32,500,
- ☐ N. \$32,501 to \$35,000,
- ☐ O. \$35,001 to \$37,500,
- ☐ P. \$37,501 to \$40,000,
- ☐ Q. \$40,001 to \$42,500,

- ☐ R. \$42,501 to \$45,000,
- ☐ S. \$45,001 to \$47,500,
- ☐ T. \$47,501 to \$50,000,
- ☐ U. \$50,001 or more
- ☐ NO INCOME
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

Household

num_hh_inp. How many people, including yourself, live in your household?

- ☐ Enter number of adults: XX
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

By a household, I mean people who live together, usually eat together, and have common financial resources. Please include everyone whose income you included in the last question. Also include everyone who lives with you and is supported by that income.

num_adult_inp. Including yourself, how many of the people living in your household are 19 or older?

- ☐ Enter number of people: XX
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

ASK IF num_hh_inp > 1 or
num hh inp = DK



num_children_check_inp. So this means you have {num_hh_inp – num_adult_inp} child(ren) under 19 living in your household. Is that correct?

- ☐ Yes
- ☐ No. Enter correct number of children: [XXX]
- ☐ Don't know
- ☐ PREFER NOT TO ANSWER

ASK IF: estimated number of children, #HH-#adults is a number between 0 and 20.
num_children_inp_calc >= 0 AND <= 20



num_children_ask_inp. How many people living in your household are under the age of 19?

- ☐ Enter number of children under 19: XX (Enter 0 if none.)
- ☐ Don't know
- ☐ PREFER NOT TO ANSWER

ASK IF: DEM10 OR DEM11 = DK, OR IF DEM10 – DEM11 IS OUT OF RANGE
num_hh_inp = DK OR num_children_check_inp = DN or PNTA OR numc_children_inp_calc > 20

marital_inp. Are you currently married, widowed, divorced, separated, or have you never been married?

IF SP REPORTS LIVING WITH A PARTNER AS MARRIED, EXPLAIN THAT WE ARE TALKING ONLY ABOUT OFFICIAL MARITAL STATUS.

- ☐ Married
- ☐ Widowed
- ☐ Divorced
- ☐ Separated
- ☐ Never married
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

Race/Ethnicity

hispanic_inp [I have just a couple more questions about your race and ethnicity.] Do you consider yourself to be [Hispanic or Latino/a](#)?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ PREFER NOT TO ANSWER

HISPANIC OR LATINO PEOPLE MAY BE OF ANY RACE. LISTED BELOW ARE HISPANIC OR LATINO CATEGORIES AND COUNTRIES:

LATIN AMERICAN	CENTRAL AMERICAN	
SOUTH AMERICAN	SPANISH AMERICAN	
MEXICAN	PUERTO RICAN	CUBAN
DOMINICAN	COSTA RICAN	GUATEMALAN
HONDURAN	NICARAGUAN	PANAMANIAN
SALVADORAN	ARGENTINEAN	BOLIVIAN
CHILEAN	COLOMBIAN	ECUADORIAN
PARAGUAYAN	PERUVIAN	URUGUAYAN
VENEZUELAN	SPANIARD/SPANISH	

race_inp. And how would you describe your race?

USE CARD #13. READ CHOICES ONLY IF NECESSARY.

Here are some options. You can answer "yes" to more than one.

Although Hispanic people can be of any race, many of them identify their race as "Hispanic" or "Latino". This option should NOT be read to the SP, but should be marked if the SP volunteers it under "Some other race".

- ☐ American Indian or Alaska Native? [racenative_inp]
- ☐ Asian? [raceasian_inp]
- ☐ Black or African American? [raceblack_inp]
- ☐ Native Hawaiian or Pacific Islander? [raceislander_inp]
- ☐ White? [racewhite_inp]
- ☐ Some other race: [_____] (Please describe.) [raceother_inp]
[Descriptive details saved as raceother_details_inp]
- ☐ **[DO NOT READ]** Mark here if SP identifies their race as [Hispanic](#), [Latino](#), [Mexican](#), etc. Do not mark "Some other race" above. [racehispanic_inp]
- ☐ DON'T KNOW [racedontknow_inp]
- ☐ PREFER NOT TO ANSWER [racenoanswer_inp]

Answer choices saved as indicator variables.
race_inp not saved in dataset.

14. CONTACT INFORMATION

We are now done with the questionnaire section of the interview.

Before we go on to the Body Measurements section, I would like to verify your contact information, in case we need to get in touch with you again about your test results or about the study. We will always keep all your contact information private and will not share it with anyone else.

address_provide_raw. To make sure we have the right address for you on file, could you tell me your primary **mailing** address?

DO NOT READ ADDRESS TO SP:

{ADDRESS ON RECORD DISPLAYED}

- ☐ SP reports address exactly as above (or with minor corrections)
- ☐ SP reports a different address
- ☐ PREFER NOT TO ANSWER

address_conf_raw. Would you mind just confirming the address we have for you in our records:

{DISPLAY ADDRESS ON RECORD}

ASK IF address_provide_raw = PNTA

Is this an address at which you can receive mail?

- ☐ Yes (possibly with minor corrections)
- ☐ No
- ☐ DON'T KNOW
- ☐ PREFER NOT TO ANSWER

This sounds different from the address we have for you in our records. Before I take down your new address, I'd like to ask you about the address that we currently have for you: it's {ADDRESS ON RECORD}

READ IF
address_provide_raw
= DIFFERENT
ADDRESS

address_recognized_raw: Do you recognize this address? Could you tell me what it is?

- ☐ Yes, valid address (although not primary mailing address)
- ☐ Yes, old address
- ☐ Yes, address of individual whom SP knows
- ☐ Yes, address of institution that SP is familiar with
- ☐ Yes, other: XXX [Details saved as address_recognizedother_raw]
- ☐ No, SP does not recognize address
- ☐ PREFER NOT TO ANSWER

ASK IF
address_provide_raw
= DIFFERENT
ADDRESS OR
address_conf_raw =
NO

Enter the rest of SP's contact information directly into the RMS

On {NAME}'s "View Participant" page (Study ID = {ID#}):

Edit the current mailing address

Make corrections in the primary mailing address if necessary.
Ask SP if this mailing address is also physical address.

ASK IF address_provide_raw = address as above

Edit the current mailing address

Uncheck the "primary mailing address" box.
If this is still a valid physical address, mark it as such. Otherwise, mark this address as inactive.
Add a brief note of what the SP has told you about this address (e.g. old address, alternate address, friend's address, institutional address, or "never heard of it")

ASK IF address_provide_raw = DIFFERENT ADDRESS

Edit the current mailing address

If SP has told you that cannot receive mail at this address, mark it as inactive.
Add a brief note of what the SP has told you about this address (e.g. refused to confirm or deny, old address, alternate address, friend's address, institutional address, or "never heard of it".)
If possible, probe for any other information SP is willing to give about address, mailing or physical.

ASK IF address_provide_raw = PNTA

Add/update other address, phone, and email information

Verify each address, phone number, or email address that we have on file
Ask for any additional ones

Add/update locator information

Ask SP for contact information for two relatives or friends who do not live with SP but would know where can be reached.
Assure SP that we will not contact their locators for any other purpose.
Fill out all the information on the locator form except for the locator's date of birth and timezone.
Of the four checkboxes at the bottom of the form, always check the first and last boxes and leave the two middle ones unchecked.

DO NOT DELETE OR OVERWRITE ANY EXISTING CONTACT INFORMATION IN THE RMS, EXCEPT TO MAKE MINOR CHANGES.

why_participate_raw: [One very last question:] What were your main reasons for agreeing to participate in our survey today?

INTERVIEWER: ALLOW FREE RESPONSE, PROBE IF NECESSARY.

- ☐ Free health screening [why_participatescreening_raw]
- ☐ Compensation offered [why_participatemoney_raw]
- ☐ Helping the researchers and/or the community [why_participatehelp_raw]
- ☐ Interview Persistence [why_participatepersistence_raw]
- ☐ Other (please specify): _____ [why_participateother_raw]
[Descriptive details saved as why_participateotherreason_raw]
- ☐ DON'T KNOW [why_participatedontknow_raw]
- ☐ PREFER NOT TO ANSWER [why_participatena_raw]

END OF QUESTIONNAIRE SECTION

(Optional interviewer comments on next page.)

questionnaire_comments_raw. INTERVIEWER NOTES ON QUESTIONNAIRE SECTION (OPTIONAL):

PLEASE DO NOT USE SP'S NAME OR OTHER IDENTIFYING INFORMATION IN THESE NOTES

TEXT THAT NEEDS TO BE READ TO SP DURING THE HEALTH MEASUREMENTS SECTION

11. BODY MEASUREMENTS (ANTHROPOMETRY)

TALKING POINTS (OPTIONAL):

Now, that we have completed the questionnaire portion of the interview, we are going to conduct the Body Measurement part of the health measures section.

I am going to take your height, weight, and a couple of measurements on your arm, and a waist measurement.

I will explain each of the procedures as I conduct the measurements.

Do you have any questions?

INTERVIEWER: BE SURE TO HIT "NEXT" BEFORE YOU BEGIN THE ACTUAL PHYSICAL MEASUREMENTS.

12. BLOOD PRESSURE / MEDICATION LOOKUP

BLOOD PRESSURE TALKING POINTS (READ IF NECESSARY):

DISPLAY IF BP WILL BE MEASURED

- For this part of the physical exam, I will take your pulse and your blood pressure with this Omron machine.
- The machine will take 3 blood pressure measurements. There will be a 30-second resting period between the measurements.
- When the machine inflates the cuff, it may feel tight and you will feel some pressure.
- While the machine is taking your blood pressure, I ask that you not talk or move and I will not talk either. Talking and moving can change your blood pressure.
- Before taking your blood pressure reading, there is going to be a 5-minute waiting period. I would like for you to sit down comfortably and quietly for those 5 minutes. At the four-minute mark, I will take your pulse.
- I will give you your results at the end of the exam.
- Do you have any questions?

DISPLAY TALKING POINTS, ML1 AND ML2 IF SP MAY HAVE MEDS AND INTERVIEW IS BEING CONDUCTED IN A CLINIC

To save time, I would like to use the 5-minute rest period to record any medications that you are currently taking. I can enter the information from the labels on the containers directly into our system.

DISPLAY IF BP WILL BE MEASURED

Now I'd like to record any medications that you are currently taking. I can enter the information from the labels on the containers directly into our system.

DISPLAY IF BP **WON'T** BE MEASURED

ML1. Did you remember to bring your medications, including prescription medications that you've taken in the last 4 weeks and any over-the-counter medications that you take regularly?

- ☐ SP brought **all** of {his/her} medications
- ☐ SP brought **all** of {his/her} medications, **EXCEPT** medications that {he/she} has no way of bringing (e.g. methadone administered in a clinic, medical marijuana)
- ☐ SP brought **some** of {his/her} medications
- ☐ SP is taking some medications, but brought **none** of them
- ☐ SP is **not taking any medications**
- ☐ PREFER NOT TO ANSWER

ML2. Would you be able to tell me the names the medications that you **didn't** bring with you?

DISPLAY IF SP IS TAKING SOME MEDS, BUT DID NOT BRING THEM ALL.

[Once again, I'm interested in any prescription medications that you've taken in the last 4 weeks, as well as any over-the-counter medications that you take regularly, at least once a week.]

IF SP REMEMBERS THE NAMES OF SOME BUT NOT ALL OF {HIS/HER} MEDICATIONS, ENTER "YES".

- ☐ Yes
- ☐ No
- ☐ PREFER NOT TO ANSWER

DISPLAY TALKING POINTS, ML# and ML\$ IF SP MAY HAVE MEDS AND INTERVIEW IS BEING CONDUCTED AT SP'S HOME

TALKING POINTS (READ OR PARAPHRASE):

To save time, I would like to use the 5-minute rest period to record any medications that you are currently taking. I can enter the information from the labels on the containers directly into our system.

DISPLAY IF BP **WILL** BE MEASURED

Now I'd like to record any medications that you are currently taking. I can enter the information from the labels on the containers directly into our system.

DISPLAY IF BP **WON'T** BE MEASURED

Would you mind taking a minute right now to bring me all your medications in their original containers? This includes:

- Any prescription medications that you have taken within the last month, whether originally prescribed for you or for someone else.
- Any over-the-counter medications that you take regularly (at least once a week), except for vitamins and dietary supplements.

ML3. Did SP bring any of {his/her} medications?

- ☐ Yes: SP brought all or some of medications (containers or list)
- ☐ No: SP is taking medications but cannot or will not bring any of them
- ☐ SP is not taking any medications

ML4. Are there medications which the SP did not bring, but which {he/she} can name from memory?

- ☐ Yes

BP protocol includes one question to be read to SP

☐ No

BP1. Have you had any of the following in the last 30 minutes?

(ANSWERING YES TO ANY ITEM DOES NOT EXCLUDE SP FROM EXAMINATION)

(a) Food? (Y/N)

(b) Alcohol? (Y/N)

(c) Coffee? (Y/N)

(d) Cigarettes? (Y/N)

The following is done during the BP rest period (if BP is being done), if SP brought any meds

MEDICATION LOOKUP: MEDICATIONS THAT SP BROUGHT TO THE INTERVIEW

{CLICK HERE TO ACCESS THE MEDICATION LOOKUP DATABASE}

The following is done after the BP measurements (if BP is being done), if SP has any meds that he/she can list from memory

MEDICATION LOOKUP: MEDICATIONS THAT SP LISTS FROM MEMORY

You mentioned that you also have other medications that you can tell me about.

Could you please tell me the names of all your medications, one by one?

[Once again, I'm interested in any prescription medications that you've taken in the last 4 weeks, as well as any over-the-counter medications that you take regularly, at least once a week.]

I'll ask you for some additional information about each medication. Please tell me as much as you can remember.

INTERVIEWER: OPEN THE MEDICATION LOOKUP SURVEY AND TRY TO OBTAIN AS MUCH INFORMATION AS POSSIBLE ABOUT EACH MEDICATION THAT THE SP LISTS.

{CLICK HERE TO ACCESS THE MEDICATION LOOKUP DATABASE}

Show if interview is conducted at a CLINIC and SP did not bring ALL his/her medications (even if he/she listed the rest from memory)

ML5. INTERVIEWER: REQUEST TO MAKE A FOLLOW-UP MEDICATION APPOINTMENT WITH SP. IF SP AGREES, SCHEDULE THE APPOINTMENT IMMEDIATELY.

What kind of appointment was scheduled for medication follow-up?

☐ SP will come to clinic (Portland East)

☐ SP will come to clinic (Portland West)

- ☐ Home appointment
- ☐ Phone appointment
- ☐ NONE: Unable to schedule appointment

BLOOD SAMPLE COLLECTION

REPORT OF FINDINGS

REMUNERATION

INTERVIEWER'S FINAL NOTES: DO NOT READ TO SP

PI1. Was the interview interrupted or suspended for a significant length of time?

- ☐ Yes
- ☐ No

PI2. At any point during the interview, did SP ask not to be contacted again by OHS?

- ☐ No, SP did not refuse further contact.
- ☐ Do not contact again about the current study.
- ☐ Do not contact again about future studies.
- ☐ Do not contact again at all (about this study or future studies).
- ☐ Other (give details): _____

PI3. Were any of the following present during the interview? (Mark all that apply.)

- ☐ Interpreter (Language: _____)
- ☐ Another adult in the room (other than OHS observers)?
(Relationship to SP: _____)
- ☐ Computer problems? (Specify: _____)
- ☐ Loud noises or other strong distractions (e.g. children, frequent interruptions, etc)?

PI4. Interviewer Notes (optional):

IMPORTANT: DO NOT USE SP'S NAME, ADDRESS, OR ANY IDENTIFYING INFORMATION IN THESE NOTES!!

APPENDIX: LIST OF CALCULATED VARIABLES USED IN LOGIC:

inp_dob_year(month, day)_correct: year (month, day) of birth. Default preload, but can be corrected.

if dob_inp=0 | dob_conf_raw=0; dob_*_corrected;

else; dob_*_preload

dob_*_preload are calculated from datastat_dateofbirth

calc_age:

var today = new Date();

var yearDiff = today.getFullYear() - {Value:INP_DOB_YEAR_CORRECT};

var monthDiff = today.getMonth() - ({Value:INP_DOB_MONTH_CORRECT}-1);

var dayDiff = today.getDate() - {Value:INP_DOB_DAY_CORRECT};

if(monthDiff < 0 || (monthDiff == 0 && dayDiff < 0))

yearDiff--;

yearDiff;

age_inp: age calculated from birthday, or explicitly stated by SP; if DOB is not confirmed, value is -98

if ageconf_raw=0, ageconf_corrected_raw

if dob_conf_raw=-98|dob_conf_raw=-99, -98

else, calc_age

ineligible_by_age: 1 if ineligible by age (dob before 1946 or after 1988)

ins_uncertain: 1 if SP's insurance status is uncertain at some point during last 12 months, otherwise 0.

if (ins_this_year_any=0 & (ins_last_year_number=0 | month_now=12))|(ins_this_year_cont_yes=1 &

(ins_last_year_number=12|month_now=12)), 0;

else, 1;

phq8_score_inp:

= max(q1,0)+max(q2,0)+max(q3,0)+max(q4,0)+max(q5,0)+max(q6,0)+max(q7,0)+max(q8,0)

depression_diagnosis_inp: diagnose depression based on phq8 (1 if yes, 0 if no)

var q=0;

var ans = 1;

if ({Value:INP_DEP_IMPAIR}<=0)

ans = 0;

else {

if ({Value:INP_PHQ1}>1)

q++;

if ({Value:INP_PHQ2}>1)

q++;

if (q==0)

ans=0;

else {

if ({Value:INP_PHQ3}>1)

q++;

if ({Value:INP_PHQ4}>1)

q++;

if ({Value:INP_PHQ5}>1)

q++;

if ({Value:INP_PHQ6}>1)

q++;

if ({Value:INP_PHQ7}>1)

q++;

if ({Value:INP_PHQ8}>1)

```

        q++;
    if (q<5)
        ans=0;
    }
}

```

inp_depression_severity: depression severity based on phq8

```

    if phq8_score_inp >= 10, `mild`
    if phq8_score_inp >= 15, `moderately severe`
    if phq8_score_inp >= 20, `severe`

```

known_phys_care: 1 if we know before asking inp_care_any that SP has received care for a physical condition in last 12 months; 0 else:

```

    if ( ast_when_inp = 1 | dia_when_inp = 1 | hbp_when_inp = 1 | chl_when_inp = 1 |
        ami_when_inp = 1 | chf_when_inp = 1 | emp_when_inp = 1 | kid_when_inp = 1 |
        cancer_when_inp = 1 | chl_test_when1_inp = 1 |
        ast_doc_inp = 1 | ast_ed_number_inp > 0 | ast_ed_probe_inp > 0 | ast_hosp_inp = 1 |
        dia_feet_inp = 1 | dia_eyes_inp = 1 | dia_nurse_inp = 1 |
        dia_insulin_rx_inp = 1 | dia_pills_rx_inp = 1 | dia_check_rx_inp = 1 |
        hbp_rx_inp = 1 | chl_rx_inp = 1 | chf_rx_inp = 1 ) 1;
    else 0;

```

known_ment_care: 1 if we know before asking inp_doc_any that SP has seen a doctor for depression/anxiety in last 12 months; 0 else:

```

    if ( dep_when_inp = 1 | dep_therapy_inp = 1 | dep_rx_inp = 1 ) 1;
    else 0;

```

ask_care_any: Ask whether received medical care last year if 1; don't ask if 0:

```

    if ( known_phys_care = 1 | known_ment_care = 1 |
        got_care_phys_inp = 1 | got_care_phys_inp = 2 |
        got_care_ment_inp = 1 | got_care_ment_inp = 2 |
        got_care_subst_inp = 1 | got_care_subst_inp = 2 )
    0;
    else 1

```

care_last_year: 1 if SP received care last year, 0 if not:

```

    if ( ask_care_inp = 0 | care_any_inp = 1 | care_any_count_inp = 1 ) 1;
    else 0;

```

ask_40: 1 if SP should be asked questions for people over 40, 0 otherwise:

```

    if ( age_inp >= 40 | over50_obvious_inp = 1 | over50_obvious_inp = -98 ) 1;

```

ask_50: 1 if SP should be asked questions for people over 40, 0 otherwise:

```

    if ( age_inp >= 50 | over50_obvious_inp = 1 | over50_ask_inp = 1 ) 1;

```

known_meds: 1 if we know of specific prescription medications that SP is taking, 0 otherwise:

```

    if ( ast_controller_inp = 1 | ast_inhaler_inp = 1 | dia_insulin_use_inp = 1 | dia_pills_use_inp = 1 |
        chl_rx_use_inp = 1 | chf_rx_use_inp = 1 | hbp_rx_use_inp = 1 | dep_rx_use_inp = 1 ) 1;
    else 0;

```

day_now: current day

month_now: current month

year_now: current year

erof_gender: data label for gender_inp

bmaerof: weight message:

```

if bmxbmi < 18.5, 1;
else if bmxbmi >=25, 2;
else if bmxbmi >=18.5 & bmxbmi<25, 3

```

bpaerof: Blood Pressure Early Report of Findings:

```

if bpxsar <120 & bpxdar < 80, 1
if bpxsar >=120 & bpxsar <140 & bpxdar < 80, 2
if bpxsar >=140 & bpxsar <160 & bpxdar <80, 3
if bpxsar >=160 & bpxsar <180 & bpxdar <80, 4
if bpxsar >=180 & bpxsar <210 & bpxdar <80, 5
if bpxsar >=210& & bpxdar <80, 6
if bpxsar <120 & bpxdar >=80 & bpxdar<90, 2
if bpxsar >=120 & bpxsar <140 & bpxdar >=80 & bpxdar<90, 2
if bpxsar >=140 & bpxsar <160 & bpxdar >=80 & bpxdar<90, 3
if bpxsar >=160 & bpxsar <180 & bpxdar >=80 & bpxdar<90, 4
if bpxsar >=180 & bpxsar <210 & bpxdar >=80 & bpxdar<90, 5
if bpxsar >=210& & bpxdar >=80 & bpxdar<90, 6
if bpxsar <120 & bpxdar >=90 & bpxdar<100, 3
if bpxsar >=120 & bpxsar <140 & bpxdar >=90 & bpxdar<100, 3
if bpxsar >=140 & bpxsar <160 & bpxdar >=90 & bpxdar<100, 3
if bpxsar >=160 & bpxsar <180 & bpxdar >=90 & bpxdar<100, 4
if bpxsar >=180 & bpxsar <210 & bpxdar >=90 & bpxdar<100, 5
if bpxsar >=210& & bpxdar >=90 & bpxdar<100, 6
if bpxsar <120 & bpxdar >=100 & bpxdar<110, 4
if bpxsar >=120 & bpxsar <140 & bpxdar >=100 & bpxdar<110, 4
if bpxsar >=140 & bpxsar <160 & bpxdar >=100 & bpxdar<110, 4
if bpxsar >=160 & bpxsar <180 & bpxdar >=100 & bpxdar<110, 4
if bpxsar >=180 & bpxsar <210 & bpxdar >=100 & bpxdar<110, 5
if bpxsar >=210& & bpxdar >=100 & bpxdar<110, 6
if bpxsar <120 & bpxdar >=110 & bpxdar<120, 5
if bpxsar >=120 & bpxsar <140 & bpxdar >=110 & bpxdar<120, 5
if bpxsar >=140 & bpxsar <160 & bpxdar >=110 & bpxdar<120, 5
if bpxsar >=160 & bpxsar <180 & bpxdar >=110 & bpxdar<120, 5
if bpxsar >=180 & bpxsar <210 & bpxdar >=110 & bpxdar<120, 5
if bpxsar >=210& & bpxdar >=100 & bpxdar<110, 6
if bpxdar >=120, 6

```

insured: 1 if insured, 0 if not

```

if ins_type_ohp_med_inp=1 | ins_type_employer_inp=1 | ins_type_priv_inp=1 |
ins_type_other_inp=1|ins_any_inp=1, 1;
else, 0;

```

do_bp: do bp if 1, don't do if 0

```

if bpiarmc=3 | bmauprel=1 | bmuplel=1, 0
else, 1;

```

taking_meds: 1 if sp is taking medications that we need to record, 0 if not, -99 if unknown

```

if rx_any_inp=0|rx_any_inp=-99) & (otc_any_inp=0|otc_any_inp=-99), 0
else if rx_any_inp=1 | rx_any_inp=-98) | otc_any_inp=1 | otc_any_inp=-98|known_meds=1, 1
else, -99

```