Health effects of the recent financial crisis: Has wealth loss contributed to chronic disease treatments and outcomes?

Short title: Health effects of the recent financial crisis

Classification: Economic sciences (major), social sciences (minor)

Authors: Marco Angrisani[a], Srikanth Kadiyala,[b] and Jinkook Lee (corresponding)[c]

[a] University of Southern California, 12015 Waterfront Drive, Playa Vista, CA 90094
[b] RAND Corporation, P. O. 2138, Santa Monica, CA 90407
[c] RAND Corporation, P. O. Box 2138, Santa Monica, CA 90407, tel. 1-310-393-0411 x. 6561, jinkook@rand.org

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Abstract

The recent financial crisis was of a magnitude not seen since the Great Depression. Despite its magnitude, the health effects of the recent recession have not been fully understood, particularly with respect to chronic health outcomes. Using panel data available from the United States Health and Retirement Study, we examine the effects of the recent recession on changes in individual chronic health conditions, namely hypertension, diabetes, and psychiatric problems, and chronic disease treatment (medication use and physician visits). Our analytical approach is innovative in two ways. First, using an instrumental variables approach, we establish the causal effects of the recession on health outcomes. Second, using biomarker data, and thus not solely relying on self-report data, we are able to assess changes in health more objectively. Overall we find that individuals who experience substantial losses in financial and housing wealth due to the recent recession are more likely to reduce their medication use for hypertension and psychiatric problems. Consistent with these reductions, they are more likely to report deterioration in their chronic disease status. Our results suggest that for U.S. individuals aged 50+ the recent recession increased the probability of worsening hypertension by 10% and psychiatric disease status by 12% and lowered the medication usage for hypertension by 15% and psychiatric diseases by 8%.

The recent financial crisis was of a magnitude not seen since the Great Depression. The unemployment rate rose to 10% in 2009, double that of 2007 (1). Over the period 2008–2010, 7.9 million properties went into foreclosure filings (2, 3, 4). Between November 2008 and March 2009, the stock market lost nearly one-third its value (1) and most U.S. pension funds saw the value of their assets plummet. The impact of wealth loss was particularly severe for older adults who are less likely than younger ones to recover lost capital or to re-enter the labor market after unemployment or retirement.

Did the recent recession affect health behaviors and health outcomes of individuals at old ages? The literature on the health effects of the recent economic turmoil is limited, either focusing on small geographic regions (2, 5) or relying on cross-sectional data (6, 7), and has not been able to establish causal relationships between wealth shocks and health outcomes. Theoretically, business cycles can affect individual health in both negatively and positively (8). Unemployment shocks may have negative effects on health due to an increase in financial and job searching stress and a decrease in access to employer-provided health insurance. At the same time, economic downturns make it less costly to undertake healthier but time-intensive activities, such as exercise, and more costly to engage in risky behaviors, such as smoking and drinking, while also reducing deaths due to activities that fluctuate with the business cycle (e.g., auto accidents).

Ruhm (9, 10, 11, 12, 13) finds that a 1 percentage point increase in the state unemployment rate is associated with a 0.5% decrease in total mortality, a result of negative income effects that lead to reduced drinking and smoking. More recent work by Miller, Page, Stevens, and Filipski (14) seeks a deeper understanding of the mechanisms behind this finding and concludes that labor-market involvement does not drive procyclical fluctuations in mortality rate. In fact, only 7% of additional deaths from an increase in unemployment rate occur amongst working age individuals (ages 25-64), while 71% occur among those older than 80. Brenner (15) analyzes the 20th century U.S. macroeconomic experience and finds that rising unemployment rates are followed by

decreasing mortality in the short-run, but increasing mortality over the subsequent decade. The net ultimate effect of increased unemployment is a substantial increase in mortality.

The health effects of involuntary job loss are well-established in the literature. Gallo, Teng, and Bradley (16) use data from the 1992-2002 Health and Retirement Study (HRS) to understand the effect of unemployment on 10-year risk of heart attacks and strokes. They find that individuals age 50 and older who lost their job are twice more likely to suffer a heart attack or a stroke than someone who did not lose their job. Similarly, Strully (17) shows that involuntary job loss increases by 54% the likelihood that individuals report themselves being in fair or poor health and increases by 83% the odds of a new health condition.

Beyond the adverse consequences of job loss, recessions may take a toll on individuals' well-being through negative wealth shocks and reduction of available financial resources. While these channels have been understudied, they may represent important determinants of health outcomes over the business cycle. In this paper, we study the effects of unexpected wealth changes induced by the recent financial crisis on individuals' health. We do so by drawing longitudinal data from the HRS covering the pre- and post- recession period (2006-2010).

Using individual-level information over time, we perform Instrumental Variables (IV) analyses to estimate the effect of wealth shocks on hypertension, diabetes, and psychiatric problems. We exploit large regional variations in house prices and dramatic swings in financial asset values to identify exogenous, unexpected changes in wealth, uncorrelated with unobservable individual characteristics driving both financial and health behaviors. This allows us to estimate the causal relationship between wealth shocks and health outcomes and to assess the extent to which the recent recession influenced the well-being of older adults. Our analysis uses self-reports of physician diagnosis and treatment of chronic diseases as well as directly-assessed biomarker measures to elucidate how changing economic circumstances influence individual health outcomes.

Methods

Data

The Health and Retirement Study (HRS) is a longitudinal study of a representative sample of U.S. individuals aged 50 and older. Respondents in the HRS are surveyed every two years regarding a variety of economic and health status, including employment, health-insurance status, physical and mental health, income, as well as housing and financial wealth. For our analyses, we use the 2006, 2008 and 2010 HRS waves. This allows us to cover the time before, during, and after the recession, which, according to the National Bureau of Economic Research Business Cycle Dating Committee, began in December 2007 and ended in June 2009. The 2006 HRS data was collected between March 2006 and February 2007, before the onset of the crisis. The 2008 HRS data was collected from February 2008 to February 2009, a time span that falls squarely during the period of the Recession. The 2010 HRS data was collected from March 2010 to May 2011, a post-crisis period by which much stock-market wealth had been recovered, but one in which employment and house prices in the United States were still far lower than their pre-recession levels. We use the publicly available year and month of HRS interview to link reported wealth measures to house prices and stock market fluctuations observed between 2006 and 2010.

Health Measures

We study three chronic disease health conditions based on *self-reports*: hypertension, diabetes and psychiatric problems. These are high-incidence conditions in the United States (18) and important risks for the incidence of acute events such as heart attacks and strokes. In each HRS survey, individuals are first asked whether a physician ever diagnosed them with any of the aforementioned conditions. Individuals who report having been diagnosed state whether the chronic condition has gotten “better”, “worse” or “stayed the same”.

Besides data on diagnosis, the HRS also captures information on medication and doctor visits. More precisely, diagnosed respondents report whether they are taking medication or seeing a doctor regarding their condition. For hypertension and diabetes, compliance with medication is crucial to inhibit disease progression and reduce the probability of more severe incidents, such as heart attacks and strokes. Psychiatric problems may be treated with medication as well as with psychotherapy. Non-compliance with treatment can lead to increased severity of psychiatric problems, which in turn can affect many facets of an individual's life, including their labor-force participation and productivity (19).

For hypertension, we also make use of *biomarker data*. Starting from 2006, the HRS has collected direct measures of blood pressure every other wave, alternating two groups of randomly chosen respondents. This means that, over the period considered in this study, we have blood pressure readings for half of the sample in 2006 and 2010 and only in 2008 for the other half. For those whose blood pressure was measured in both 2006 and 2010, we examine changes in blood pressure readings and diagnosis status and relate them to changes in wealth.

Estimation Strategy Using Self-Reports

We are interested in studying the health effects of unexpected wealth shocks. For this purpose, we exploit the longitudinal dimension of the HRS and consider two different health outcomes based on self-reports.

First, for each individual, we construct an indicator for negative changes in their chronic disease status across consecutive waves. Such indicator takes value 1 if an individual who had never been diagnosed with the disease until wave t reports having been diagnosed with the disease in wave t+1, or if an individual who had been previously diagnosed with the disease reports that their condition has gotten "worse" from wave t to wave t+1.

Second, for those with a diagnosed condition in wave t, we construct an indicator for whether they are taking medication (for hypertension, diabetes, psychiatric

problems) or getting counseling (for psychiatric problems) for their condition in wave t+1. We regress these two indicators on changes in household wealth and demographics across waves. Our objective is to estimate the causal pathway from wealth shocks to changes in observed health outcomes.

We disentangle unexpected wealth shocks from planned changes in household wealth using house price and stock-market fluctuations over the observation period. We use the RAND HRS definition of total net wealth comprising the net value of the primary residence, and financial and other real assets, but excluding the value of any secondary residence. Since this measure is net of debt, we apply the inverse hyperbolic sine transformation, log [x+((1+x)^2)^.5], which is defined for both positive and non-positive values. We instrument changes in wealth across two consecutive waves with changes in house-price indexes at the census division level and changes in the Standard & Poor (S&P) 500 stock market index. Changes in house prices and stock market indexes are linked to reported changes in household wealth using the specific year and month when the HRS interview took place.

We compute household permanent income by averaging reported household income over time. In order to reduce the influence of outliers on our regression results, we exclude households with $0 of yearly permanent income (224 households) and with more than $500,000 of yearly permanent income (229 households). We also control for sex, age, education, change in household size, change in marital status, change in self-reported overall health status, being overweight or obese, smoking, negative equity, household permanent-income terciles, change in work status, and change in health insurance status. We estimate our regression models using two-stage least squares and report robust standard errors clustered at the household level. In the tables below, ***, ** and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Results

Figures I shows the S&P 500 stock-price index over time and, particularly, its performance during the collection of HRS data that we analyze (Waves 8, 9, and 10). As

indicated, the S&P 500 had modest increases during Wave 8, a steep decrease during Wave 9, and some modest increases, returning to levels of Wave 8, in Wave 10.

<Figure I about here>

Figure II shows the movement of the house-price index for nine Census divisions over the time of HRS data collection. Housing prices were at or approaching peaks in Wave 8, dropping sharply in Wave 9, and low but stabilizing in Wave 10.

<Figure II about here>

Between HRS waves 8 and 9, there is nearly a 50% percent reduction in the value of the S&P 500 index. Similarly, U.S. house prices plummeted more than 30%. The data also reveal considerable heterogeneity across geographic regions: house prices changed little in the Middle Atlantic census division, but dropped nearly 50% in the Pacific census division.

The observed patterns in Figures I and II imply that the erosion of household wealth induced by the recent recession varies greatly with home-ownership status, area of residence, and share of financial wealth held in stocks. We rely on this heterogeneity across households to identify the causal effect of wealth shock on health outcomes.

Our first-stage results, reported at the bottom of each column in Tables I-III, show a strong, positive relationship between changes in observed household wealth and changes in regional house prices and stock-market prices. For the estimated regression models, the F test for excluded instruments and the J test for over-identifying restrictions confirm the explanatory power and goodness of our instruments.

<Table I about here>

In Table I, we present the IV estimates of the effect of unanticipated wealth shocks on the likelihood that individuals experience negative changes in their chronic disease status. We find that the Recession worsened hypertension and psychiatric conditions. Specifically, a 10 percentage point decrease in household wealth increased the probability of worse hypertension by 0.25 percentage points, representing a 4% increase from the mean. Similarly, a 10 percentage point decrease in household wealth increased the probability of a worse psychiatric disease status by 0.20 percentage

points, representing a 5% increase from the mean. We do not find any effect of wealth shocks on diabetes status.

Next we consider an important mechanism through which changes in chronic disease status may occur, namely a change in medication usage. Negative wealth shocks, if perceived as permanent in a life-cycle perspective, may reduce consumption of medication. In particular, erosion of wealth resulting from the recent economic turmoil may have adversely impacted medical-care expenditure (particularly for non-acute conditions) and worsened individuals' chronic disease status. We test this hypothesis for hypertension and psychiatric problems, the two conditions for which we estimate significant responses to wealth shocks.

<Table II about here>

As shown in Table II, we find that a 10 percentage point decrease in wealth increases the probability of an individual not taking hypertension medication by 0.5 percentage points (a 5.5% increase relative to the mean). It also increases the probability of an individual not taking psychiatric medications by 1.25 percentage point (a 3% increase from the mean). Both coefficients are statistically significant at the 5% level. We do not find evidence that individuals have responded to wealth shocks by seeking less counseling help for their psychiatric conditions.

Discussion

How do recessions affect health? The answer to this question is rather complex and likely to vary with the depth and length of economic turmoil, the sub-populations of interest, and the health conditions studied. In this paper we examine the effect of the recent recession on three high incidence chronic diseases: hypertension, psychiatric problems and diabetes, outcomes that have received relatively little attention in the literature analyzing the health effects of recessions. Our contribution, exploiting dramatic variations in house and financial asset prices during the recent recession, reveals that unexpected wealth shocks have a significant impact on individual health.

Specifically, we find significant deterioration of hypertension and psychiatric conditions as a consequence of the recent economic turmoil. In our HRS sample we compute that the average household has suffered an erosion of wealth of about 25% during the recent recession. Combining this result with the IV estimates presented above, we conclude that in the aftermath of the recent crisis the average older individual is 10% more likely to experience a worsening in hypertension and nearly 15% less likely to treat high blood pressure with medication. Similarly, as a result of the recent recession the average older adult is 12% more likely to experience worse psychiatric problems and nearly 8% less likely to take medication for psychiatric conditions.

Our results point to reductions in medication use as a potential explanation for the deterioration in individual chronic disease status during recessions. This finding is also consistent with cross-sectional studies (2, 3, 6, 7) documenting that individuals are less likely to take medications and more likely to report themselves in poor mental health in recession years.

Yet, because we consider as being in worse condition both newly diagnosed respondents and those who report worsening of previously diagnosed conditions, our results may only indicate that individuals are diagnosed at a higher rate during recessions. Reduced hours of work due to an economic downturn may make it less costly to undertake time-intensive, health-related activities like visiting a doctor's office. We use biomarker data to explore this possible explanation.

Biomarker

We use the HRS hypertension biomarker data and construct two indicators based on actual blood-pressure readings. The first dependent variable of interest, change in measured blood pressure, takes value 1 if an individual was not classified as hypertensive in 2006 but was classified as such in 2010.[*] The second dependent variable, change in diagnosis status, takes value 1 for those, who had not been

[*] Using actual blood pressure readings, an individual is classified as hypertensive if systolic pressure is greater than 140 or diastolic pressure is greater than 90.

diagnosed with hypertension but whose measured blood pressure was high in 2006, reported having been diagnosed with hypertension by the time of 2010. We regress these two indicators on demographic variables and changes in wealth between 2006 and 2010. In order to exploit exogenous variation in wealth induced by the recent recession, we focus only on changes in housing wealth. As shown in Figure I, in fact, the stock market had almost completely recovered in 2010. Hence, changes in financial wealth between 2006 and 2010 would not adequately capture the impact of the crisis on household wealth.

<Table III about here>

Table III presents the results from these regressions. The estimates in the first column show a negative and significant relationship between changes in housing wealth and the incidence of measured hypertension over the period 2006-2010. Specifically, a 10 percentage point decrease in housing wealth leads to a 0.68 percentage point increase in the probability that someone who was not classified as hypertensive in 2006 has measured high blood pressure in 2010, which represents an increase of 4% with respect to the mean. This effect is beyond any worsening due to aging or other demographic changes, which are controlled for in our regression models. Because housing wealth decreased more than 20% in our sample, the estimated coefficient implies that the average older adult is 8% more likely to be found hypertensive following the recent recession. At the same time, the results in the second column of Table III indicate that changes in housing wealth are not related to change in diagnosis status. In other words, we do not find support for the hypothesis that hypertension diagnoses increased because individuals became more likely to visit physicians.

Conclusion

In this paper, we explore the effect of the recent recession on chronic disease health outcomes. Taking an innovative instrumental variables approach, we identify exogenous wealth shocks induced by the recent economic downturn and investigate how unexpected changes in wealth affect chronic conditions. We find that the recent

financial crisis has led to significant deterioration in hypertension and psychiatric conditions and has substantially decreased the likelihood that individuals diagnosed with chronic diseases take medication to treat them. Using biomarker data, we are able to show that worsening of hypertension in response to adverse wealth shocks is likely driven by financial distress and reduction in medication usage, while there is no evidence that the rate of doctor diagnosis increased during the recession.

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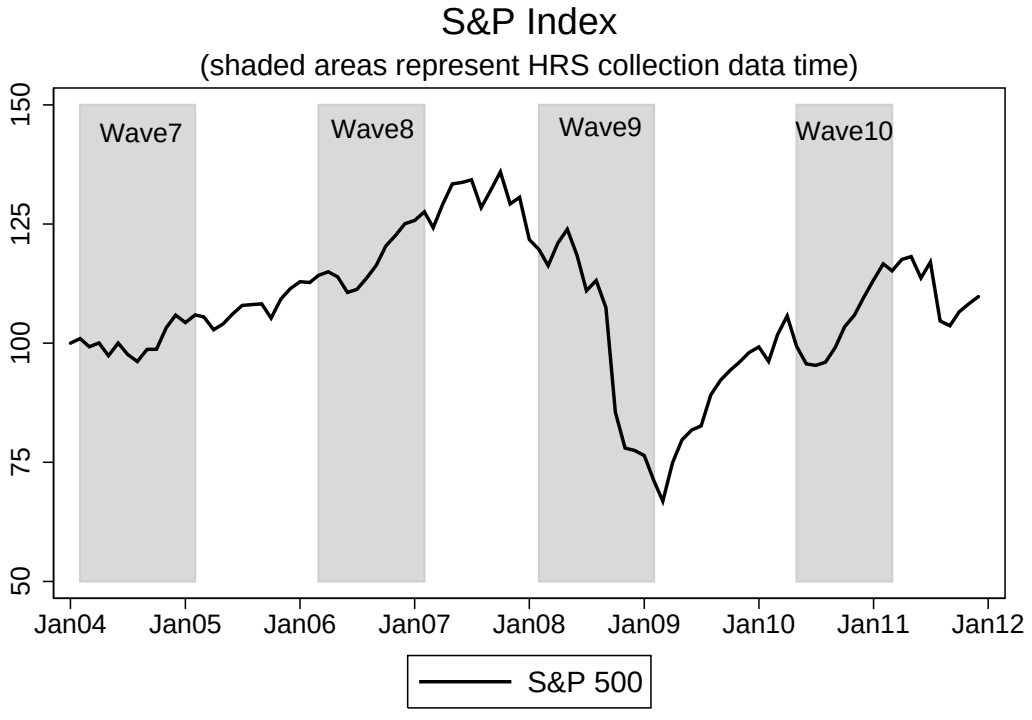
S&P Index
(shaded areas represent HRS collection data time)
Wave7
Wave8
Wave9
Wave10
150
125
100
75
50
Jan04
Jan05
Jan06
Jan07
Jan08
Jan09
Jan10
Jan11
Jan12
S&P 500

House Price Index by Census Division

(shaded areas represent HRS data collection time)

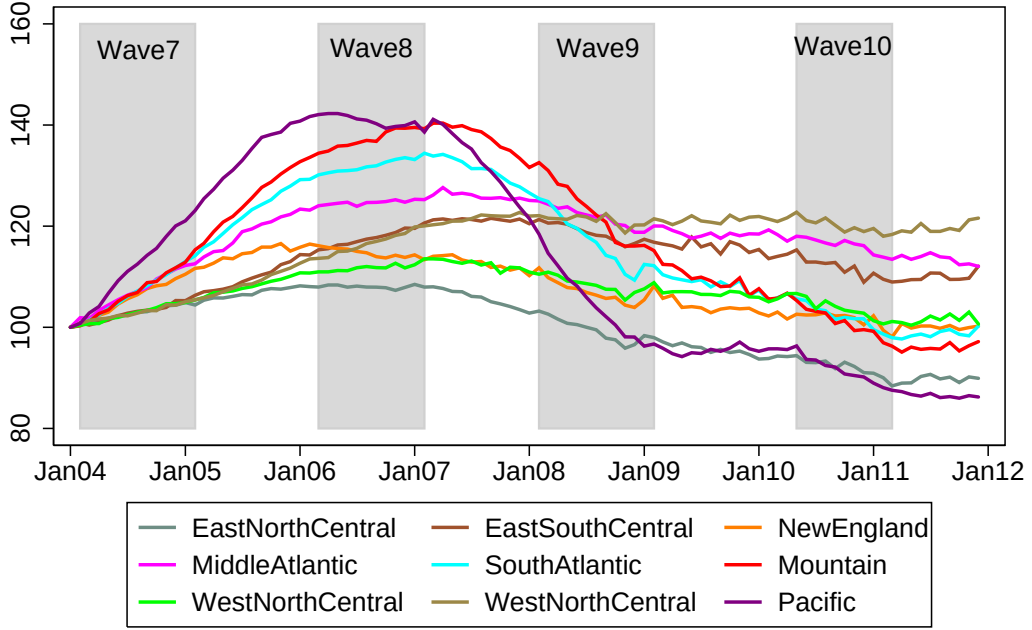

Table I: Likelihood of Negative Changes in Chronic Disease Status

	High Blood Pressure	Psychiatric Problems	Diabetes
$\Delta Wealth$	-0.025*	-0.021**	-0.003
	(0.013)	(0.009)	(0.009)
$Male$	0.000	-0.010***	0.012***
	(0.003)	(0.002)	(0.003)
Age	0.000	-0.001***	-0.000**
	(0.000)	(0.000)	(0.000)
$High\ School\ Graduate$	-0.007	-0.010***	-0.005
	(0.005)	(0.004)	(0.004)
$Some\ College$	-0.006	-0.008**	-0.007*
	(0.005)	(0.004)	(0.004)
$College\ or\ More$	-0.004	-0.006	-0.007
	(0.006)	(0.004)	(0.004)
$\Delta HH\ Size$	-0.001	0.003	-0.003
	(0.002)	(0.002)	(0.002)
$Partnered \rightarrow Single$	-0.003	0.029***	-0.007
	(0.013)	(0.011)	(0.009)
$Single \rightarrow Partnered$	0.026	0.015	0.010
	(0.023)	(0.016)	(0.017)
$Overall\ Health\ Worsened$	0.022***	0.014***	0.013***
	(0.005)	(0.004)	(0.004)
$Overall\ Health\ Improved$	-0.009**	-0.007**	-0.007**
	(0.004)	(0.003)	(0.003)
$Overweight\ Indicator$	-0.000	-0.004	0.020***
	(0.004)	(0.003)	(0.003)
$Obesity\ Indicator$	-0.002	-0.002	0.049***
	(0.005)	(0.003)	(0.003)
$Smoking\ Indicator$	0.019***	0.012***	0.001
	(0.006)	(0.004)	(0.004)
$Uninsured \rightarrow Uninsured$	-0.000	0.004	-0.018**
	(0.013)	(0.010)	(0.008)
$Insured \rightarrow Uninsured$	-0.002	-0.001	0.004
	(0.016)	(0.013)	(0.011)
$Uninsured \rightarrow Insured$	0.046***	0.018	0.023**
	(0.015)	(0.011)	(0.011)
$Working \rightarrow Working$	-0.004	-0.022***	-0.011***
	(0.004)	(0.003)	(0.003)
$Not\ Working \rightarrow Working$	0.007	-0.003	-0.009
	(0.011)	(0.008)	(0.008)
$Working \rightarrow Not\ Working$	0.007	-0.011**	-0.005
	(0.008)	(0.006)	(0.005)
$2nd\ Permanent\ Income\ Tercile$	-0.012***	-0.006*	-0.005
	(0.004)	(0.003)	(0.003)
$3rd\ Permanent\ Income\ Tercile$	-0.004	-0.007*	-0.009**
	(0.005)	(0.004)	(0.004)
$Negative\ Equity\ Indicator$	0.283**	0.226**	0.020
	(0.139)	(0.102)	(0.097)
$Constant$	0.047**	0.080***	0.051***
	(0.019)	(0.014)	(0.014)
1st Stage: House Price Index	1.307***	1.307***	1.307***
1st Stage: S&P Index	0.466*	0.466*	0.466*
F Test Excluded Inst. (p-value)	0.000	0.000	0.000
J Statistic	0.109	0.736	1.279
J p-value	0.741	0.391	0.258
N	28718	28718	28718

Table II: Likelihood of not Using Medication/Seeing a Doctor

	High Blood Pressure	Psychiatric Problems		Diabetes
	Medication	*Medication*	*Seeing a Doctor*	*Medication*
$\Delta Wealth$	-0.051**	-0.124**	-0.059	-0.111
	(0.023)	(0.060)	(0.036)	(0.075)
$Male$	0.009	0.061**	-0.040**	-0.055***
	(0.006)	(0.026)	(0.017)	(0.019)
Age	-0.003***	0.002	0.005***	0.001
	(0.000)	(0.001)	(0.001)	(0.002)
$High\ School\ Graduate$	0.004	-0.040	0.010	0.011
	(0.009)	(0.031)	(0.018)	(0.024)
$Some\ College$	0.002	-0.017	-0.027	0.059**
	(0.009)	(0.038)	(0.024)	(0.026)
$College\ or\ More$	0.009	0.014	-0.068**	0.059*
	(0.011)	(0.042)	(0.027)	(0.033)
$\Delta HH\ Size$	0.004	-0.001	0.004	-0.003
	(0.004)	(0.013)	(0.008)	(0.012)
$Partnered \rightarrow Single$	-0.036*	-0.149*	-0.118**	-0.081
	(0.019)	(0.088)	(0.051)	(0.075)
$Single \rightarrow Partnered$	0.077*	0.132	0.031	0.184*
	(0.042)	(0.133)	(0.078)	(0.107)
$Overall\ Health\ Worsened$	-0.009	-0.079**	-0.026	-0.029
	(0.010)	(0.035)	(0.020)	(0.030)
$Overall\ Health\ Improved$	0.016**	0.044	0.018	0.010
	(0.007)	(0.031)	(0.018)	(0.025)
$Overweight\ Indicator$	-0.031***	-0.018	0.003	-0.037
	(0.008)	(0.028)	(0.018)	(0.027)
$Obesity\ Indicator$	-0.062***	-0.084**	-0.010	-0.075***
	(0.009)	(0.033)	(0.020)	(0.026)
$Smoking\ Indicator$	0.027**	0.003	0.004	0.095**
	(0.011)	(0.035)	(0.021)	(0.045)
$Uninsured \rightarrow Uninsured$	0.153***	0.143*	0.075*	0.067
	(0.033)	(0.086)	(0.046)	(0.087)
$Insured \rightarrow Uninsured$	0.082**	0.150	0.046	-0.019
	(0.036)	(0.100)	(0.057)	(0.097)
$Uninsured \rightarrow Insured$	0.043	0.146	0.046	-0.008
	(0.028)	(0.106)	(0.059)	(0.080)
$Working \rightarrow Working$	0.010	0.049	0.057***	0.027
	(0.009)	(0.035)	(0.021)	(0.025)
$Not\ Working \rightarrow Working$	0.027	0.153*	0.104**	0.102
	(0.022)	(0.087)	(0.051)	(0.072)
$Working \rightarrow Not\ Working$	-0.017	-0.036	0.006	-0.015
	(0.012)	(0.055)	(0.032)	(0.040)
$2nd\ Permanent\ Income\ Tercile$	-0.018**	-0.055	0.038*	0.029
	(0.008)	(0.034)	(0.020)	(0.021)
$3rd\ Permanent\ Income\ Tercile$	-0.009	-0.114***	-0.001	0.062**
	(0.009)	(0.042)	(0.026)	(0.027)
$Negative\ Equity\ Indicator$	0.562**	1.321**	0.621	1.329
	(0.250)	(0.651)	(0.387)	(0.877)
$Constant$	0.270***	0.301**	0.405***	0.028
	(0.040)	(0.119)	(0.077)	(0.151)
1st Stage: House Price Index	1.009**	2.089**	1.996**	1.360*
1st Stage: S&P Index	0.599*	0.374	0.449	0.079
F Test Excluded Inst. (p-value)	0.006	0.033	0.039	0.196
J Statistic	3.628	0.681	0.243	0.184
J p-value	0.057	0.409	0.622	0.668
N	17998	5852	5870	6646

Table III: Analysis based on Biomarkers

	Likelihood of Negative Change in Measured Blood Pressure	Likelihood of Moving from Undiagnosed to Diagnosed
$\Delta Housing\ Wealth$	-0.068**	-0.007
	(0.034)	(0.013)
$Male$	-0.005	0.012**
	(0.016)	(0.006)
Age	0.000	0.000
	(0.001)	(0.001)
$High\ School\ Graduate$	-0.012	-0.003
	(0.022)	(0.009)
$Some\ College$	-0.031	-0.010
	(0.025)	(0.010)
$College\ or\ More$	-0.049*	-0.018*
	(0.029)	(0.011)
$\Delta HH\ Size$	-0.020*	-0.001
	(0.011)	(0.004)
$Partnered \rightarrow Single$	-0.045	-0.014
	(0.047)	(0.017)
$Single \rightarrow Partnered$	0.022	0.009
	(0.086)	(0.030)
$Overall\ Health\ Worsened$	-0.021	0.005
	(0.020)	(0.008)
$Overall\ Health\ Improved$	-0.038**	-0.013*
	(0.019)	(0.007)
$Overweight\ Indicator$	0.023	0.005
	(0.019)	(0.008)
$Obesity\ Indicator$	0.007	-0.002
	(0.022)	(0.009)
$Smoking\ Indicator$	0.013	0.037***
	(0.024)	(0.012)
$Uninsured \rightarrow Uninsured$	0.011	0.041
	(0.060)	(0.029)
$Insured \rightarrow Uninsured$	0.070	-0.014
	(0.071)	(0.017)
$Uninsured \rightarrow Insured$	0.091	0.025
	(0.060)	(0.026)
$Working \rightarrow Working$	-0.003	0.003
	(0.020)	(0.007)
$Not\ Working \rightarrow Working$	0.045	-0.027***
	(0.048)	(0.010)
$Working \rightarrow Not\ Working$	0.001	0.004
	(0.023)	(0.009)
$2nd\ Permanent\ Income\ Tercile$	0.000	-0.016**
	(0.020)	(0.008)
$3rd\ Permanent\ Income\ Tercile$	0.028	-0.000
	(0.023)	(0.009)
$Negative\ Equity\ Indicator$	-0.630**	-0.067
	(0.311)	(0.120)
$Constant$	0.117	0.017
	(0.095)	(0.037)
1st Stage: House Price Index	1.725	1.750
F Test Excluded Inst. (p-value)	0.002	0.003
N	4883	4870