

Identifying Predictors of Dementia up to 20 years in Advance

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ABSTRACT

Dementia affects a large and growing number of older adults in the U.S. and worldwide, and it is the most expensive medical condition. Though many risk factors of dementia have been identified in prior research, accurately predicting future dementia remains challenging. The ability to detect dementia years before the onset of the disease would help older adults prepare for the risk of developing this condition and help health care providers and the government to identify which parts of the population are at highest risk to more efficiently spend resources to delay the onset or mitigate the impact of the disease.

This paper uses a comprehensive framework to evaluate the predictive power of 181 potential dementia risk factors using a validated probabilistic measure of dementia and cognitive impairment developed in prior research. This measure is available in a large, nationally representative, longitudinal survey, the Health and Retirement Study (HRS), allowing us to evaluate the predictive power of many potential dementia risk factors, such as demographics, socio-economic status (SES), labor market measures, lifestyle and preventative health behaviors (such as exercising and smoking), subjectively reported and objectively measured health, genes, parental health, cognitive abilities, and psychosocial factors (such as personality traits, social activities, and loneliness). We estimate how these factors predict cognitive impairment and dementia 2, 4, and 20 years later.

The primary goal is to identify the strongest predictors of cognitive impairment and dementia, which could be used to evaluate older adults' risks of developing these conditions. The secondary goal is to identify modifiable risk factors that may be used for interventions to slow the progression of cognitive decline. However, we note that the observational data and methods used in this study cannot establish causality, but they may suggest which causal channels should be investigated further.

Introduction

Dementia affects a large and growing number of older adults in the U.S. and worldwide, and it is the most expensive medical condition (Alzheimer's Association 2023; Wimo et al. 2023). Though many risk factors of dementia have been identified in prior research, accurately predicting future dementia remains challenging (Javeed et al. 2023). The ability to detect dementia years before the onset of the disease would help older adults prepare for the risk of developing this condition and help health care providers and the government to identify which parts of the population are at highest risk to more efficiently spend resources to delay the onset or mitigate the impact of the disease.

This study introduces a comprehensive framework to evaluate the predictive power of 181 potential dementia risk factors using a validated probabilistic measure of dementia and cognitive impairment developed in our prior research (Hudomiet, Hurd, and Rohwedder 2022). This measure is available in a large, nationally representative, longitudinal survey, the Health and Retirement Study (HRS), allowing us to evaluate the predictive power of many potential dementia risk factors, such as demographics, socio-economic status (SES), labor market measures, lifestyle and preventative health behaviors (such as exercising and smoking), subjectively reported and objectively measured health, genes, parental health, cognitive abilities, and psychosocial factors (such as personality traits, social activities, and loneliness). We estimate how these factors predict cognitive impairment and dementia 2, 4, and 20 years later.

The primary goal of this study is to identify the strongest predictors of cognitive impairment and dementia, which could be used to evaluate older adults' risks of developing these conditions. The secondary goal is to identify modifiable risk factors that may be used for interventions to slow down the progress of cognitive decline. However, we note that though our findings may suggest certain causal channels between risk factors and outcomes, the observational methods used in this study cannot establish causal mechanisms, which is left for future research.

Overview of Approach

This study uses data from the HRS, a biennial, longitudinal survey of 51+-year-old U.S. individuals. The survey started in 1992, and the latest wave we used is from 2016. We restricted the sample to individuals interviewed at least once between 2000 and 2016 at an age above 65 because the cognition and dementia measures are only available in this subsample. These measures are available on 97,629 person-year observations. They were developed by Hudomiet et al. (2022), and their properties are further discussed in Hudomiet et al. (2023). In short, Hudomiet et al. (2022) estimated a longitudinal latent variable model of cognition, dementia, and mortality. The dementia measure was calibrated to a clinical dementia assessment in the ADAMS subsample of the HRS (Heeringa et al. 2009).

The dementia measure has several key advantages. It is fit to individual longitudinal data and models noise, which, if not addressed, can lead to a large rate of reverse transitions, that is, transition from dementia to not dementia. Cross-sectional cognition models typically predict far more spurious movements (increases and large decreases) in cognition, likely due to noise that is elevated by wave-to-wave differencing. For example, when we classified individuals' dementia status based on the cross-sectional cutoff method of Crimmins et al. (2011), we found 16.2% had a reverse transition. Such classification error will lead to biased estimates of dementia incidence: Our model, which accounts for observation error, just 0.2% had a reverse transition. By using the full sequence of an individual's

longitudinal data, our model produces reduced standard errors of prevalence, permitting analyses of subpopulations. We directly model prevalence of race and ethnic subpopulations, eliminating bias that other commonly used methods produce.

After estimating the model, we predicted the following measures:

- Dementia probability (PrDem): the probability that an individual at a given survey wave has dementia. The variable takes values between 0 and 1 (i.e., 0% and 100% chance of having dementia).
- Probability of Cognitive Impairment, not Dementia (PrCIND): defined analogously. CIND was the terminology used in ADAMS to mark cognitive impairment, and it is similar to Mild Cognitive Impairment (MCI). This variable also takes values between 0 and 1.
- Expected cognition (ECog): the expected value of an individual's latent cognition level. The latent cognition variable (Cog) was normalized so that $\text{Cog} < 0$ corresponded to the dementia range, Cog between 0 and 1 represented the CIND range, and Cog above 1 corresponded to normal cognitive function. ECog, thus, is an unbounded continuous variable.

We use regression models to estimate the relationship between the risk factors and the cognitive outcomes. We study two types of outcomes. The first is dementia and CIND incidence 2 or 4 years later among those who do not have dementia or CIND in the current wave (incidence models). The second is dementia and CIND prevalence at age 80 using individuals' characteristics at age 60 (long prediction models). The details of these models are discussed in the Prediction Models section below.

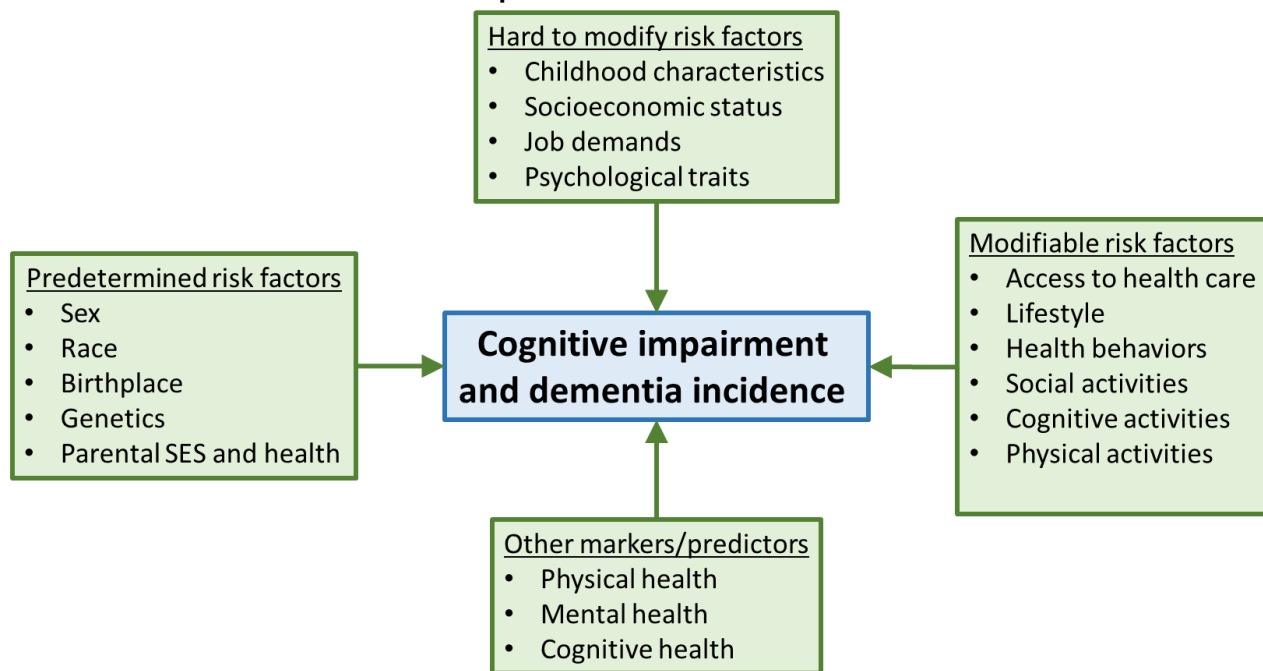
Conceptual Framework

The conceptual framework underlying the prediction models is shown in Figure 1. The primary risk factor for CIND and dementia is age. The prevalence of dementia below age 65 is negligible, but it exponentially increases with age, reaching as high as 50% at advanced old ages. There is a large heterogeneity in the population in the risk of developing this condition. Some risk factors are pre-determined because they cannot be modified or mitigated. Such risk factors include genetic markers such as the ApoE4 gene (Pires and Rego 2023), sex, race and ethnicity, birthplace, and parental characteristics. Prior literature found variation in the dementia risk along these dimensions. For example, women have a slightly elevated chance of living with dementia at advanced old ages (Ferretti et al. 2018; Kim et al. 2018), and racial and ethnic minorities also face higher chances compared to non-Hispanic White individuals (Gianattasio, Ciarleglio, and Power 2020).

Modifiable risk factors cover individual characteristics that can be changed, possibly mitigating individuals' chances of developing cognitive impairment and dementia. Some of these factors are harder to modify, such as childhood characteristics, socioeconomic status, job characteristics, and psychological traits, while others are more easily modifiable, such as lifestyle, health behaviors (smoking, drinking, etc.), engaging in social/cognitive/physical activities, or having access to high-quality health care. Prior literature found significant relationships between these risk factors and dementia. For example, the chance of having dementia is substantially reduced among individuals with higher levels of education (Prince et al. 2014), those who worked in cognitively demanding jobs (Andel, Finkel, and Pedersen 2016; Then et al. 2014), and those who regularly exercised (Ahlskog et al. 2011).

Our prediction models also include factors that are not strictly considered risk factors but potential markers of cognitive decline and dementia. For example, individuals who report being in poor health or score lower on cognition tests may have an elevated chance of dementia incidence in the future, as these factors indicate the presence of pre-diagnosed cognitive problems that may eventually lead to the disease. We also use such factors in our prediction models, but we will analyze them separately from the more traditional risk factors.

Figure 1. Conceptual Framework of the relationship between dementia risk factors and Cognitive Impairment and Dementia



Predictor variables

Table 1 lists the predictor variables we used by type and source of information. The first set of measures includes demographic predictors, such as sex, age, race and ethnicity, individuals' current residence (census regions and urbanicity), birth residence (census regions), and veteran and marital statuses.

The second set includes socioeconomic and labor market measures, such as education, household income, wealth, earnings, labor market status, occupations in the job they held for the longest time, basic job characteristics (whether the job requires physical effort, lifting, kneeling, good eyesight, or involved stress), and total years the individual worked.

The third set includes measures of lifestyle and health behaviors, such as currently or ever smoking, exercising, checking cholesterol levels, taking flu shots, taking breast checks, mammograms, and pap smears among women, or prostate exams among men.

The fourth set includes information about the health status of individuals' parents, such as whether they are alive, their age at death, whether they have or had ADL limitations and other major illnesses, and whether they resided in nursing homes.

The fifth category is about family composition and marital status history, including information about the number of children, brothers, and sisters, household size, prior marriages, and the length of their current and longest marriages.

All information discussed so far is available in the core HRS survey. Most measures are available in the total sample, but some are not available in some survey waves or some subpopulations due to logical skips, such as occupations being only asked from those who have ever worked.

The sixth category covers psychosocial information from the HRS Psychosocial Supplement, available in every other wave (i.e., once every four years) since 2006. We use information about Big 5 personality traits (neuroticism, conscientiousness, extraversion, agreeableness, openness to experience), positive/negative affect, life satisfaction, ongoing stressors, lifetime traumas, loneliness, social support, and various activities (social, physical, cognitive, etc.) More information about these measures is in Smith et al. (2023).

We also use a detailed set of self-reported health and functional limitations measures, including general health (whether excellent, very good, good, fair, or poor), nine ever-had chronic conditions (such as hypertension, diabetes, cancer), number of ADL and IADL limitations, CES-D depression, BMI, having back problems, experiencing chronic pain, restless sleep, survival expectations (the subjective probability to live to age 75 and other target ages), whether individuals have various public and private health insurance coverage, and health care utilization (doctor visits, hospital nights, dental visits, etc.)

In addition, we include objectively measured physical health measures that are collected in Enhanced Face-to-Face interviews every other wave (once every four years) since 2006: pulse rate, a breathing test of lung capacity, grip strength, balance tests, a walking time test, BMI, blood pressure, and a created polygenic score of Alzheimer's disease. More information about these measures is in Crimmins et al. (2008).

Finally, we also use available cognition measures from the core HRS survey on self-rated memory (from excellent to poor), immediate and delayed word recall tests, backward counting and serial 7 subtraction tests, date, and object naming, naming the president and vice president, and a vocabulary test (Fisher et al. 2015).

Table 1. Measures used to predict cognitive impairment and dementia

Predictor type	Measures	Source
Demographic	sex, age, race and ethnicity, current residence, urbanicity, birth residence, veteran status, marital status	core HRS
SES/labor	education, income, wealth, earnings, labor market status, occupations, job characteristics, total years worked	core HRS
Lifestyle/health behaviors	smoking, alcohol, exercising, cholesterol, flu shots, breast check, mammogram, pap smear, prostate exam	core HRS
Parental health	parents alive, age at death, ADLs, illnesses, nursing home status	core HRS
Family size/marital history	household size, number of children/brothers/sisters/marriages, length of current/longest marriages	core HRS
Psychosocial	personality traits, positive/negative affect, life satisfaction, ongoing stressors, lifetime traumas, loneliness, social support, activities (social, physical, cognitive, etc.)	HRS Psychosocial Supplement
Self-reported health & functional limitations	general health, chronic conditions, ADLs, IADLs, depression, BMI, back problems, chronic pain, restless sleep, survival expectations, private/public health insurance plans, health care utilization	core HRS
Physical health measures	Pulse, breathing test, grip strength, balance test, walk test, BMI, blood pressure, polygenic score of Alzheimer's	enhanced face-to-face interviews
Cognitive abilities	Self-rated memory, word recall tests, counting tests, date/object naming, presidents, vocabulary	core HRS

Sample and descriptive statistics

Table 2 shows descriptive statistics about the three samples we use in the prediction models. The first one, “2-year incidence,” corresponds to person-year observations that are observed in two consecutive HRS waves (about two years apart) with the person not having dementia in the first one, measured by whether their ECog value was above 0 (see the Overview of Approach section). There are 69,494 person-year observations in this sample. The “4-year incidence” sample is defined similarly but measures the incidence of dementia two waves later, about 4-year apart. There are 54,816 person-year observations in this sample. Both of these samples are used to model the incidence of dementia. For the models of the incidence of CIND, the samples are further restricted to observations when ECog was in the normal cognition range above one in the first wave. The table shows the means and standard deviations of the predictor variables in the first wave and their dementia outcomes in the second wave.

Our long prediction models predict dementia and CIND prevalence around age 80 using predictor variables around age 60, which we operationalized as follows. The sample consists of individuals observed at least once in the 75-84 age range (outcome window) and at least once in the 55-64 age

range (prediction window). There are 5,873 individuals in this sample. Then, their outcomes were taken from the survey wave when their age was closest to 80, and their predictors came from waves when they had a valid non-missing value, and their age was closest to 60. The latter transformation was carried out separately for each predictor variable because they may have different missing value patterns, so the valid values may come from different waves in the prediction window. The table shows the mean values of age and dementia prevalence in the outcome window and the rest of the variables from the prediction window.

The average age in the incidence samples is about 74 years, while it is a little higher in the long prediction sample (78 years). The latter is less than 80 because of mortality. A little over half of the sample are women since they live longer than men and are more likely to be observed at advanced old ages. Most individuals are either married or widowed, but about 10% are divorced, and 3% never married. The fraction of widows is substantially higher in the incidence samples due to age: the long prediction sample measures marital status in the prediction window (age 55-64), while the incidence sample measures it later, at an average age of 74.

All three samples have a good geographic representation, with about 10% of the samples being born abroad or in one of nine census regions. Nearly a quarter of the sample had less than a high school education; 4-5% had a GED, about the third had a high school education and about 20-20% dropped out of college or had at least a BA degree. All samples were heterogeneous in health, and the incidence samples had worse health on average due to their older age.

The 2-year incidence of dementia is 3-4%, the 4-year incidence is 7%, and 13% of the long-prediction sample had dementia in the outcome window.

Table 2. Descriptive statistics about the three samples

	2-year incidence			4-year incidence			Long predictions		
	N	mean	sd.	N	mean	sd.	N	mean	sd.
Age	69,496	74.1	6.7	54,816	73.6	6.5	5,873	78.4	2.1
Male	69,496	0.42	0.49	54,816	0.42	0.49	5,873	0.45	0.50
Female	69,496	0.58	0.49	54,816	0.58	0.49	5,873	0.55	0.50
Non-Hispanic white	69,494	0.77	0.42	54,815	0.78	0.42	5,873	0.74	0.44
Non-Hispanic black	69,494	0.13	0.33	54,815	0.13	0.33	5,873	0.15	0.36
Non-Hispanic other	69,494	0.02	0.14	54,815	0.02	0.13	5,873	0.02	0.14
Hispanic	69,494	0.08	0.27	54,815	0.08	0.27	5,873	0.09	0.29
Married/partnered	69,457	0.62	0.49	54,789	0.63	0.48	5,873	0.78	0.42
Divorced/separated	69,457	0.09	0.29	54,789	0.09	0.29	5,873	0.11	0.31
Widowed	69,457	0.27	0.44	54,789	0.26	0.44	5,873	0.08	0.28
Never married	69,457	0.03	0.16	54,789	0.02	0.16	5,873	0.03	0.17
Born in New England	69,275	0.05	0.21	54,653	0.05	0.21	5,856	0.04	0.20
Mid Atlantic	69,275	0.15	0.35	54,653	0.14	0.35	5,856	0.13	0.34
East North Central	69,275	0.18	0.38	54,653	0.18	0.38	5,856	0.16	0.36
West North Central	69,275	0.11	0.32	54,653	0.12	0.32	5,856	0.11	0.31
South Atlantic	69,275	0.15	0.35	54,653	0.14	0.35	5,856	0.16	0.37
East South Central	69,275	0.08	0.28	54,653	0.08	0.28	5,856	0.10	0.30
West South Central	69,275	0.10	0.30	54,653	0.10	0.30	5,856	0.10	0.30
Mountain	69,275	0.03	0.18	54,653	0.03	0.18	5,856	0.04	0.19
Pacific	69,275	0.05	0.22	54,653	0.05	0.22	5,856	0.05	0.21
Not in the U.S.	69,275	0.10	0.30	54,653	0.10	0.30	5,856	0.11	0.31
Less than high school	69,484	0.24	0.42	54,807	0.24	0.43	5,872	0.24	0.43
GED	69,484	0.04	0.21	54,807	0.04	0.21	5,872	0.05	0.21
High School	69,484	0.33	0.47	54,807	0.33	0.47	5,872	0.33	0.47
Some college	69,484	0.20	0.40	54,807	0.20	0.40	5,872	0.19	0.39
College or more	69,484	0.19	0.39	54,807	0.19	0.39	5,872	0.18	0.39
Health excellent	69,495	0.09	0.29	54,816	0.10	0.30	5,873	0.17	0.37
Very good	69,495	0.30	0.46	54,816	0.31	0.46	5,873	0.30	0.46
Good	69,495	0.34	0.47	54,816	0.34	0.47	5,873	0.32	0.47
Fair	69,495	0.20	0.40	54,816	0.19	0.40	5,873	0.15	0.36
Poor	69,495	0.06	0.24	54,816	0.05	0.23	5,873	0.06	0.23
DK/RF	69,495	0.00	0.03	54,816	0.00	0.02	5,873	0.00	0.02
Dementia incidence (2yr)	69,496	0.04	0.20	53,924	0.03	0.17			
Dementia incidence (4yr)	53,924	0.07	0.26	54,816	0.07	0.26			
Dementia prevalence							5,873	0.13	0.29

*The incidence samples include person-year observations that are observed in two consecutive waves, with the person not having dementia in the first one. The statistics about the predictor variables are from the first waves, while the incidence outcomes are from the second one. The long predictions sample includes individuals observed at least once in the outcome window (age 75-84) and in the prediction window (55-64). Age and dementia outcomes are measured in the outcome window, while the other measures come from the prediction window.

Prediction models

Basic models

The basic dementia incidence models take the form,

$$\Pr(ECog_{i,w+d} < 0 | ECog_{i,w} \geq 0) = \beta_0 + \beta_1 a_{iw} + \beta_2 a_{iw}^2 + \beta_3 a_{iw}^3 + \gamma x_{iw} \quad (1)$$

We model the probability that an individual's cognition falls from the non-dementia range in wave w to the dementia range in wave $w+d$ as a cubic function of age (a_{iw}) and a predictor variable (x_{iw}) measured in wave w . Categorical predictor variables are included as a set of dummies, and continuous variables are added either linearly or a cubic function if we found evidence for a non-linear relationship.

We run separate regression models for each predictor variable and then rank them by the partial R-squared value on x_{iw} , which is the fraction of the variance of the outcome variable that the predictor variable can explain. The partial R-squared takes values between zero and one, and higher values correspond to more important predictors. In general, the partial R-squared is higher if the predictor has a stronger relationship with the outcome and the variance of the predictor is higher. For example, a factor that very strongly predicts dementia but is very rare in the population may not have a high partial R-squared value.

The basic long prediction model takes the form,

$$\Pr Dem_{i,80} = \beta_0 + \beta_1 a_{i,80} + \gamma x_{i60} \quad (2)$$

Thus, the model only includes individuals' age in the outcome window and the predictor variable in the prediction window. Categorical predictor variables are included as a set of dummies, and continuous variables are added either linearly or in a cubic function. We run separate models for each predictor and rank them by the partial R-squared value.

Multivariate models

The multivariate prediction models are similar to the basic models in (1) and (2) but they include more than one predictor variables. We run models with different sets of predictors, prioritizing ones identified as strong by the basic models, available in larger samples, and have fewer missing values. The precise specifications are discussed in the results section.

Missing values

Most variables have relatively few missing values in the HRS but have some. Values may be missing because the HRS did not ask those questions or because a person did not provide a valid answer, typically because they answered "Don't know" or refused to answer. We model such active missing values as a separate answer category. For example, we used the following categories for the self-reported health question: 1. Excellent, 2. Very good, 3. Good, 4. Fair, 5. Poor, 6. DK/RF, where the last one stands for either "Don't know" or refusal. Active missing values in continuous variables were imputed as the sample mean of that variable, and a flag variable of the missing values was added to the regression models.

We only modeled missing values that were the result of a study participant not answering a question that was posed. When a question was not asked of the person, the values remained missing.

We used cleaned and pre-processed data from the RAND HRS (Bugliari et al. 2019). The missing values in some variables were already replaced by high-quality imputations, such as in the cognitive measures and income and wealth. These imputed values were treated as valid answers in our prediction models.

Results

Basic model results

Table 3 shows the strongest predictors identified by the basic models using the following procedure:

1. We estimated the partial R-squared values of each predictor variable
2. We retained those with at least a value of 0.005 (i.e., half a percent) in the incidence or 0.01 (one percent) in the long prediction models. We used a higher threshold in the latter because the partial R-squared values tended to be higher in those models.
3. If more than five predictor variables passed these thresholds in a predictor category, we selected the top five with the highest partial R-squared values.
4. We implemented this logic in all three models (2/4-year incidence and long prediction) and retained the predictors in the top five in at least one of the models.

Looking through all the predictors in Table 3, we found that the cognitive and health predictors had the highest partial R-squared values, while parental health, family size, marital history, and demographics had the lowest.

Of the demographic predictors, only birth census region and race and ethnicity passed the importance threshold. Panels A & B of Figure 2 show the relationship between these variables and age-adjusted 4-year incidence. Age adjustment adjusts the age of each sample member to be the sample mean. The corresponding 2-year and long prediction relationships are in the appendix. The incidence of dementia is substantially higher among those who were born in the Southern states or abroad compared to the rest of the country. The 4-year dementia incidence is slightly below 10% among those who were born in one of the three Southern Census regions; it is a little over 9% among those who were born abroad, while it is only slightly over 5% among those who were born in New England or the Mid-West. The incidence and prevalence of dementia are also substantially higher among non-Hispanic Black and Hispanic individuals compared to non-Hispanic White individuals.

Table 3. The strongest predictors of dementia in each category in the basic models

Category	Item	Partial R-squared		
		2-year incid	4-year incid	Long
Demographic	Birth census division	0.003	0.006	0.018
	Race	0.002	0.003	0.011
SES/labor	Years of education	0.005	0.010	0.033
	Total years worked	0.003	0.006	0.016
	Labor force status	0.002	0.004	0.025
	Longest occupation	0.001	0.003	0.012
	Has private health insurance	0.002	0.003	0.023
Lifestyle/health behaviors, men	Light physical	0.011	0.012	NA
	Moderate physical	0.008	0.011	NA
	Ever drinking alcohol	0.003	0.006	0.007
	Vigorous physical	0.003	0.005	NA
	# of days drinking alcohol	0.003	0.005	0.012
	# drinks per day	0.003	0.005	0.012
Lifestyle/health behaviors, women	Light physical	0.016	0.022	NA
	Moderate physical	0.008	0.011	NA
	Ever drinking alcohol	0.003	0.005	0.005
	Vigorous physical	0.002	0.004	NA
	# of days drinking alcohol	0.002	0.003	0.011
	# drinks per day	0.002	0.003	0.012
Parental health	-	-	-	-
Family size/marital history	-	-	-	-
Psychosocial	Hobby activities	0.011	0.008	NA
	Positive affect	0.010	0.008	NA
	Negative affect	0.010	0.011	NA
	Novel information activities	0.009	0.009	NA
	Satisfaction with health	0.009	0.015	NA
	Big 5 neuroticism	0.006	0.010	NA
	Big 5 conscientiousness	0.007	0.009	NA
Self-reported health and functional limitations	# of IADLs	0.034	0.039	0.037
	# of ADLs	0.017	0.021	0.027
	Self-reported health	0.016	0.026	0.056
	# of nursing home nights	0.009	0.006	0.004
	CES-D depression	0.007	0.013	0.016
	Health limits work	0.005	0.008	0.025
Physical health measures	Walk test time	0.017	0.026	NA
	Breathing test	0.012	0.013	NA
	Semi tandem balance test time	0.012	0.014	NA
Cognitive abilities	Delayed word recall	0.042	0.057	0.052
	Immediate word recall	0.041	0.054	0.049
	Serial 7	0.020	0.031	0.060
	Knows the year	0.015	0.017	0.004
	Knows day of the week	0.013	0.013	0.001
	Vice-president	0.012	0.017	0.019

Vocabulary	NA	NA	0.039
Self-reported memory	0.010	0.016	0.026

We identified five SES and labor market measures as strong predictors of dementia incidence and prevalence: years of education, total years worked, labor force status, individuals' occupations in their longest jobs, and whether they had a private health insurance plan. The relationship between these predictors and 4-year incidence is shown in Figure 2 and Figure 5. Prior literature found a strong education-based gradient in dementia risk, but the main difference was between those with and without a high school degree, while the gradient above a high school degree was not large (Hudomiet, Hurd, and Rohwedder 2022). We found the same result, but we also found a very strong and monotonic gradient by education below a high school degree. The 4-year incidence is highest among those with no formal education (18.7%). It declines almost linearly to 6.7% among those with 12 years of education but then is practically flat for greater education levels. 74% of the sample has a high school education or greater, which means that the education gradient is mostly a contrast between those lacking a high school degree and those that graduated high school, but that among those with the least education there is very strong heterogeneity.

Total years worked is also a strong predictor of dementia, and the main difference is between those who never worked vs. those who worked at least a few years. At the same time, the differential at the top of the distribution is small. The 4-year age-adjusted incidence is 13.0% among those who never worked, 8.9% among those who worked ten years, and 6.9% among those who worked 40 years.

Labor force status is another strong predictor. The 4-year incidence is by far the largest among those who reported a disability (15.7%). At the same time, the difference in the other labor force status groups (working full-time, part-time, unemployed, partly retired, fully retired, not in the labor force) is small. Some of these relationships may be due to reverse causality: those with a severe cognitive limitation but not yet dementia may report having a disability in the survey. However, we also found a similarly substantial differential in the long-prediction models. Those who had a disability at age 60 had a 32% chance of having dementia at age 80, while dementia prevalence was around 10% in the other groups.

The 4-year incidence of dementia is highest among those who worked in low-skilled blue-collar jobs and lowest among those in high-skilled white-collar jobs. We found that having a private health insurance plan mitigated the risk of dementia as well—the age-adjusted 4-year incidence was 6.1% (vs. 8.7%) among those with private health insurance. The appendix shows a similarly substantial differential in the long prediction models. Individuals who had private health insurance coverage at age 60 had a 10.8% vs. 22.1% chance of having dementia 20 years later.

Factors in the lifestyle and health behavior category were analyzed separately by sex because many of these factors were only available in some sex groups. However, we found that the sex-dependent factors were not strong predictors of dementia, and the strongest factors were similar by sex. We found that exercising—especially light and moderate physical activities—was the strongest predictor of dementia incidence in both genders. Figure 3

shows large differentials in 4-year dementia incidence among those who never exercise and those who exercise at least sometimes, while the differential among those who occasionally vs. regularly exercise is negligible. We observed the same patterns in light and moderate exercising in both sex groups. Alcohol

consumption also affected dementia incidence: the incidence and prevalence of dementia were the lowest among those who moderately drink alcohol, and the risk was elevated among those who never drink or drink excessively. We found the same patterns in both sex groups and all three dementia models we considered, as shown in the appendix. Other lifestyle and health behavior factors were not strong predictors of dementia, such as smoking, checking cholesterol levels, having flu shots, mammograms, pap smears, breast checks, and prostate exams.

None of the parental health measures (mother and father alive, age at death, ADLs, severe sickness, dementia, nursing home status) were found to predict the dementia outcomes strongly. To characterize individuals' risk of developing dementia, it is better to consider the characteristics of the person rather than their parents.

We found similarly weak associations between dementia and the family size/marital history measures (household size, number of children/siblings, number of marriages, etc.)

Our procedure identified seven strong psychosocial predictors of dementia incidence. The long prediction models did not analyze these measures because they have only been available since 2006. Among the strongest predictors, we had two activity measures (hobby and novel information activities), positive and negative affect, two Big 5 personality measures (neuroticism and conscientiousness), and individuals' satisfaction with their health. The hobby activities capture how often individuals engage in 1) doing word games, 2) playing card or board games such as chess, 3) home/car maintenance or gardening, and 4) making clothes, knitting, embroidering, and 5) work on a hobby or a project. The novel information activity measure captures how often individuals 1) participate in education or training, 2) write letters or stories, or 3) use the computer.

Figure 4 demonstrates that those who engage more in these activities have substantially lower chances of dementia incidence, and the primary difference is at the bottom of the distribution among those who never or sometimes participate in these activities. We also investigated the individual items, but we found that the aggregated item predicted dementia stronger than the individual items, perhaps because doing any of these activities is protective. We note, however, that our results may also reflect reverse causality: individuals who experience cognitive problems may stop doing these activities. We could not run the long-term prediction models on these measures due to data limitations, but it will be interesting to investigate these issues in future research.

Figure 4 also shows that those with more conscientious and less neurotic personalities, those who are more satisfied with their health, and those who score lower on negative affect all face substantially smaller chances of developing dementia.

Several health and functional limitations measures strongly predict dementia incidence and prevalence, as evidenced by their high partial R-squared value (Table 3) and the graphical relationships in Figure 5. The strongest ones were self-reported health and the numbers of ADL and IADL limitations: Those with worse self-reported health and more ADL and IADL limitations had a substantially higher chance of developing dementia, and the differentials were largest at the bottom of the distributions again. Though some of these relationships may be due to reverse causality, we found similarly strong associations in the long prediction models that are less prone to reverse causality. That is, individuals' health and functional limitations at age 60 were among the strongest predictors of their dementia chances at age 80.

We analyzed objective physical health measures in the incidence models. Three of them passed our inclusion criteria in the list of strong predictors: a walk time test, a breathing test, and a semi-tandem balance test. The walk time test measures the time individuals took to walk 100 inches, the breathing test measures the amount of air individuals can forcefully breathe out of their lungs, and the semi-tandem balance test measures the amount of time individuals can hold a standing position with one foot in front of the other up to 10 seconds. These measures have been shown to predict and mark underlying health problems (E. Crimmins et al. 2008). We found a very strong gradient in dementia by these measures. Those who could walk 100 inches in two seconds had a 2.1% chance of dementia incidence in 4 years, while this number was 13.3% among those who took six seconds. Individuals who could breathe out six liters of air from their lungs had a 4.3% chance of dementia incidence vs. 17.1% among those who could only breathe out one liter. The semi-tandem balance test was also a strong predictor, especially at the bottom of the distribution. The figure also includes three additional measures that barely missed the inclusion criteria for the strong predictors: the full-tandem balance test, grip strength, and a polygenic dementia score. These extra measures also show steep— though less strong—gradients with 4-year dementia incidence.

The cognitive ability measures were the strongest predictors of dementia in all models. Our models identified eight strong cognitive predictors: the immediate word recall test, the delayed word recall test, and the serial 7 subtraction tests were the strongest. The immediate word recall test counts how many words individuals remember after reading a list of 10 words. The delayed word recall test asked them to repeat the exact words a few minutes later. The serial 7 test instructed individuals to subtract 7 from 100 five times in a row.

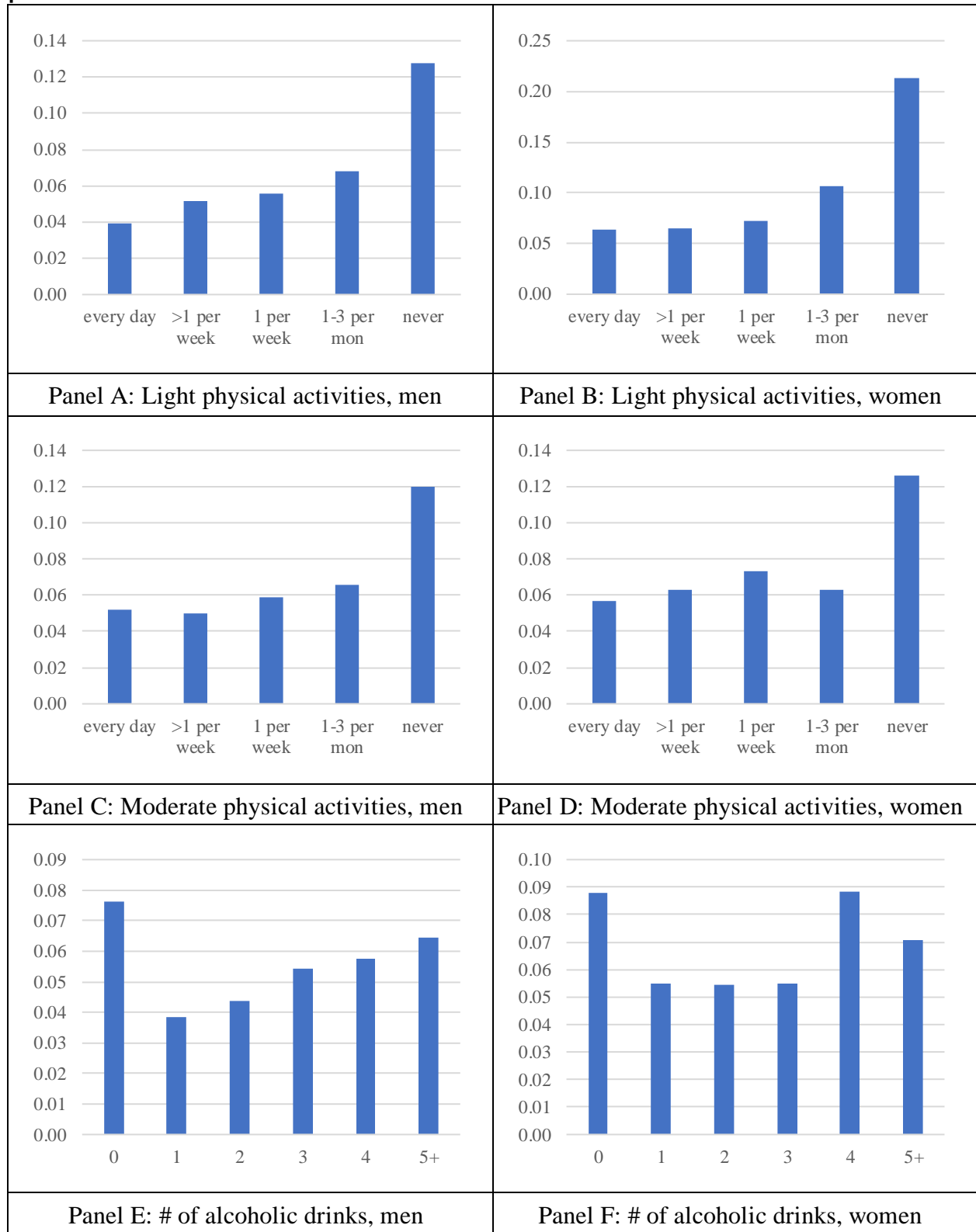
Figure 7 shows a steep gradient in 4-year dementia incidence by these measures, with larger differentials at the bottom of the distribution again. Importantly, we found strong relationships in all three models, including the long prediction models. That is, individuals' cognitive capacity at age 60 is a powerful predictor of their dementia status 20 years later.

Figure 2. Age-adjusted 4-year dementia incidence by selected demographic, SES, and labor predictors



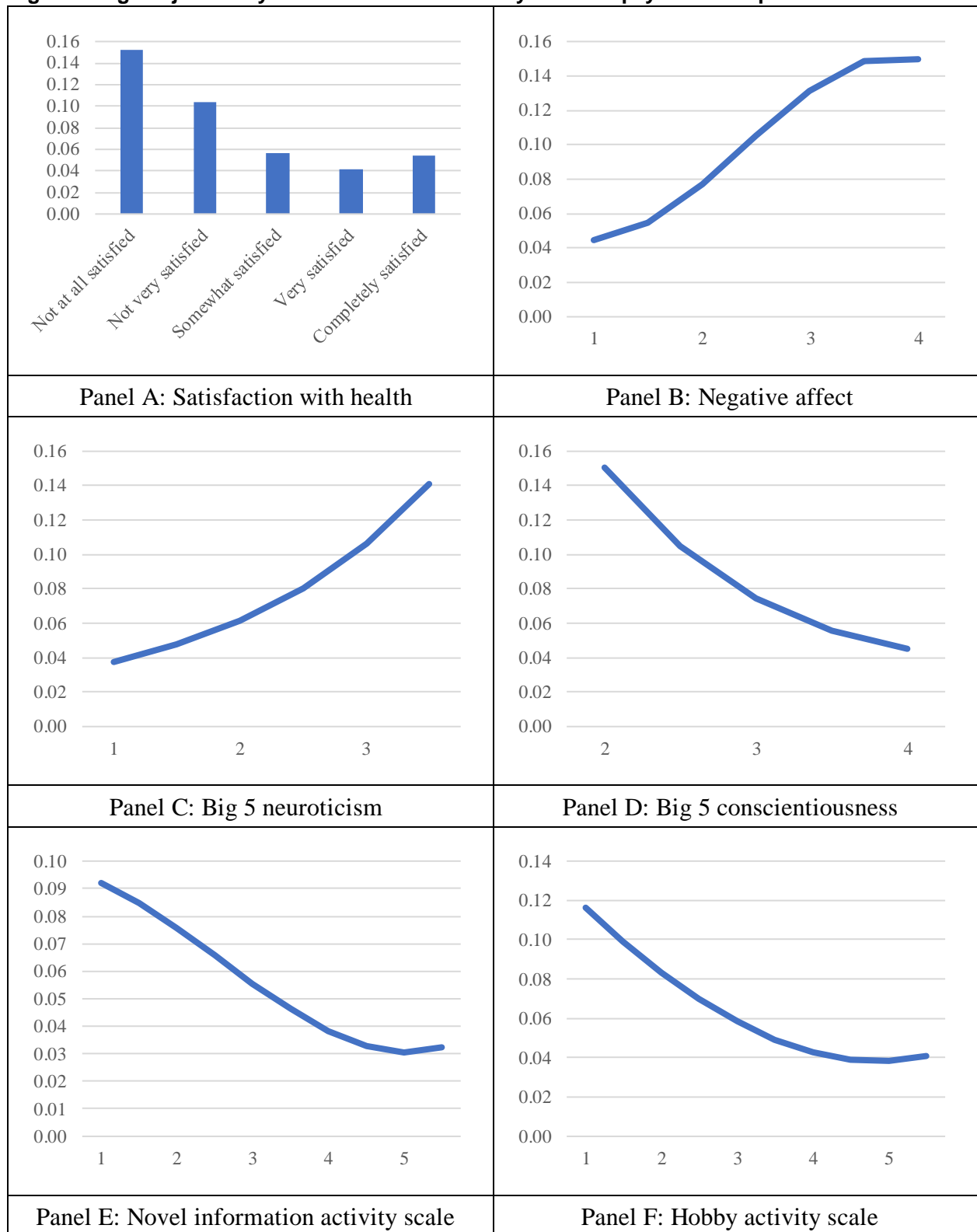
* Sample: HRS 2000-2016, Age 65+, dementia free at wave t . The predictions are based on regression models of dementia status at wave $t+2$ (approximately four years later) as a cubic function of age and the predictors.

Figure 3. Age-adjusted 4-year dementia incidence by selected lifestyle and health behavior predictors



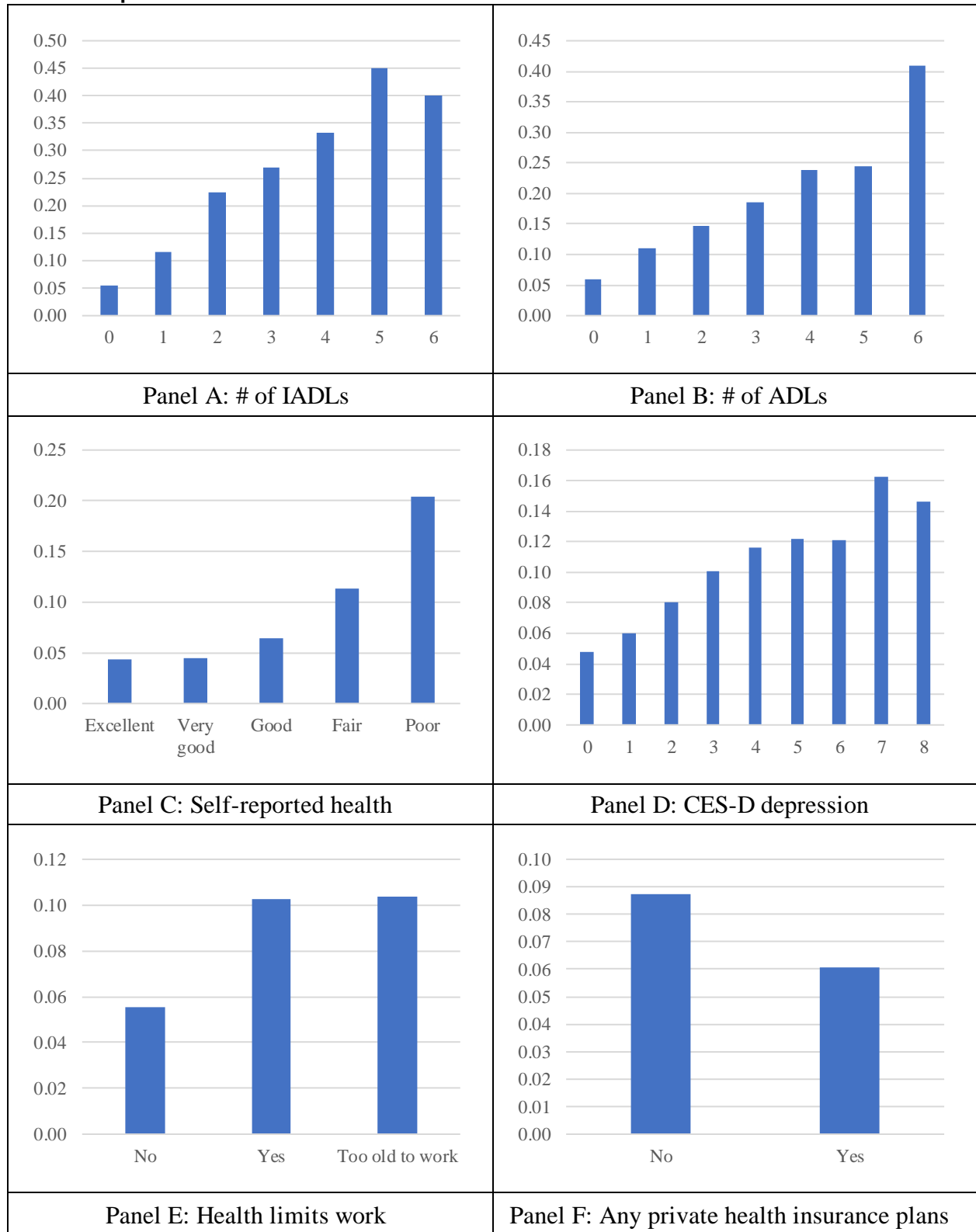
* Sample: HRS 2000-2016, Age 65+, dementia free at wave t . The predictions are based on regression models of dementia status at wave $t+2$ (approximately four years later) as a cubic function of age and the predictors.

Figure 4. Age-adjusted 4-year dementia incidence by selected psychosocial predictors



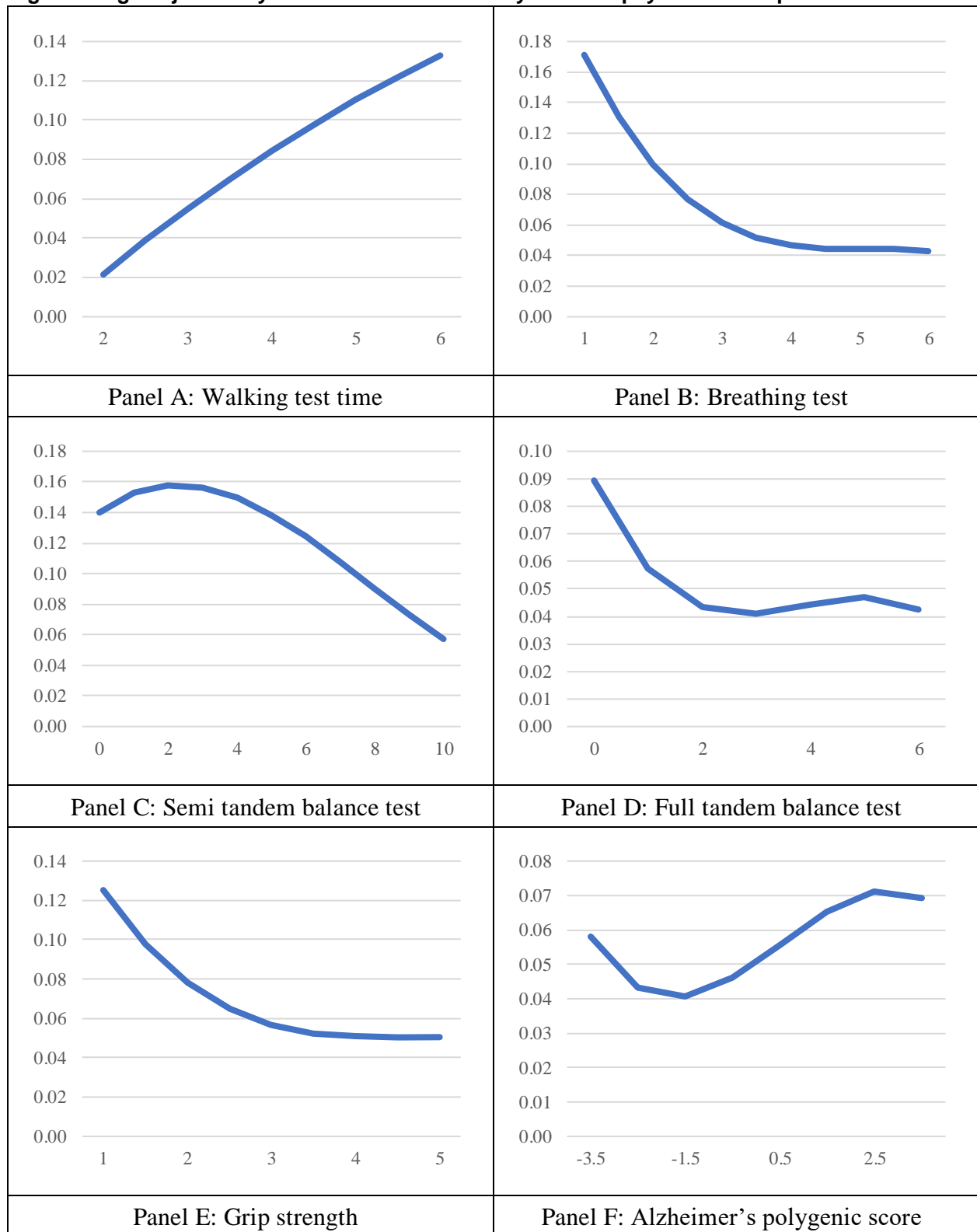
* Sample: HRS 2000-2016, Age 65+, dementia free at wave t . The predictions are based on regression models of dementia status at wave $t+2$ (approximately four years later) as a cubic function of age and the predictors.

Figure 5. Age-adjusted 4-year dementia incidence by selected self-reported health and functional limitations predictors



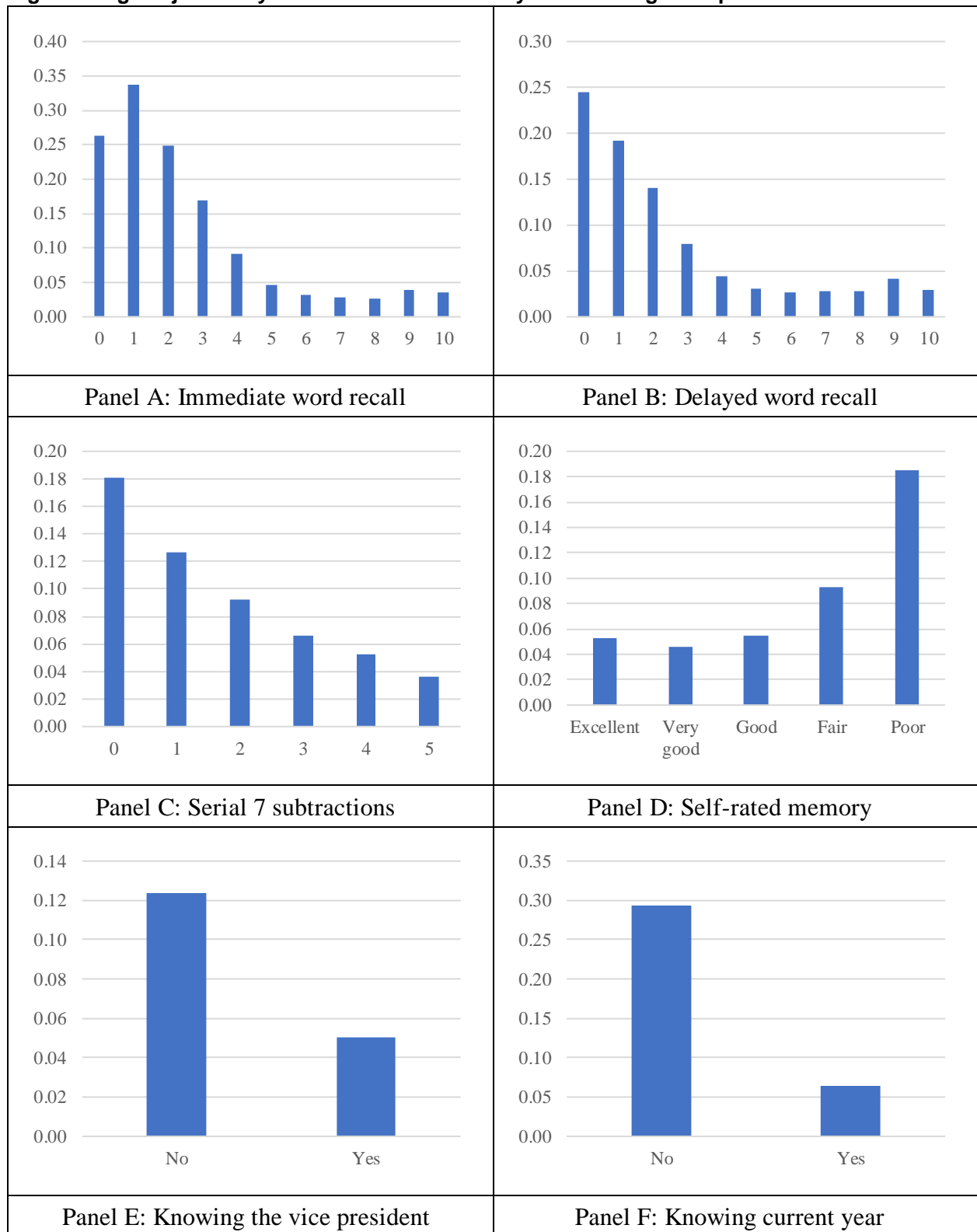
* Sample: HRS 2000-2016, Age 65+, dementia free at wave *t*. The predictions are based on regression models of dementia status at wave *t*+2 (approximately four years later) as a cubic function of age and the predictors.

Figure 6. Age-adjusted 4-year dementia incidence by selected physical health predictors



* Sample: HRS 2000-2016, Age 65+, dementia free at wave t . The predictions are based on regression models of dementia status at wave $t+2$ (approximately four years later) as a cubic function of age and the predictors.

Figure 7. Age-adjusted 4-year dementia incidence by selected cognitive predictors



* Sample: HRS 2000-2016, Age 65+, dementia free at wave t . The predictions are based on regression models of dementia status at wave $t+2$ (approximately four years later) as a cubic function of age and the predictors.

Multivariate model results

The multivariate models test whether the predictor variables remain strongly associated with the outcomes when the other factors are accounted for. We estimated sixteen sets of regression models based on the outcomes (dementia or CIND), the modeling framework (2-year and 4-year incidence, long prediction), the availability of the predictors (predictors with few missing values vs. many missing values), and whether the model was stratified by sex or on the total sample. Each set of regressions included different sets of controls added iteratively. The model outcomes are in the appendix, and Table 4 and Table 5 summarize the most important lessons from these models. Table 4 corresponds to the dementia models, and Table 5 to the CIND models. We categorized the predictor variables in the following way:

- A consistent negative predictor, marked by "--," is a predictor that increases the chances of dementia in a statistically significant way in the narrowest and the broadest models we considered.
- An explainable negative predictor, marked by "-," statistically significantly increases the chances of dementia in the narrowest but not the broadest model.
- Consistent and explainable positive predictors are defined analogously and are marked by "++" and "+," respectively.
- Non-predictors, marked by "0," were not statistically significantly related to the outcome in the narrowest model.

Table 4 and Table 5 list all the predictor variables that were consistent or explainable in at least one model. We first focused on the predictor variables that had relatively few missing values in them and iteratively added them to the models: first, the demographic predictors, followed by SES/labor, lifestyle/health behavior, health, functional limitations, and cognitive abilities. These models were restricted to a consistent sample with no missing values in any predictor variables. The "narrow models" corresponded to the models when the predictor variables were first added, and the "broad models" corresponded to the models with all predictor variables except the cognitive ability measures. We excluded the cognitive measures because these measures very strongly predicted the outcome, and we saw evidence that these models overcontrolled for cognitive function and even reversed the relationship between some important predictor variables.

The rest of the predictor variables (physical measures, genes, psychosocial measures) were analyzed separately because they had many missing values. We estimated models with and without these measures using all predictors except the cognitive ones.

Table 4 and Table 5 show that age is a consistent negative predictor of dementia and CIND in all models: older age increases the chances of cognitive impairment and dementia even when a large number of other predictors are accounted for. Racial and ethnic minority groups faced an elevated chance of dementia in all three models, but these differentials became statistically non-significant after accounting for the other predictors, such as socioeconomic status. The patterns were similar for predicting CIND, but the Hispanic vs. non-Hispanic white differential was not significant in the two incidence models. Being born in the South is a consistent negative predictor in two out of three models (2-year incidence and long prediction), and it is an explainable negative predictor of 4-year dementia incidence. The geographic differences in CIND are less pronounced.

Several SES/labor market variables are consistent positive predictors in the long models and explainable positive predictors in the incidence models. Years of education, total years worked, and having private health insurance at age 60 are protective against dementia, and they all remained statistically significant in the long prediction models, even when all other predictors were included. However, these differentials were not statistically significant in the broad incidence models that accounted for the other predictors. The patterns are similar but slightly different in the CIND models: All three factors are positive predictors (i.e., protective against dementia), but the total years worked is the only one consistent in all three CIND models.

The lifestyle and health behavior predictors are more interesting because they are highly modifiable risk factors. Never doing any light or moderate physical activities are consistent negative predictors in all dementia and CIND incidence models: those who never exercise are more likely to develop cognitive impairment and dementia. These predictors were not available in the long prediction models. The patterns in alcohol consumption are in line with the basic models, too: moderate alcohol consumption is associated with reduced cognitive impairment and dementia. These differentials typically remain statistically significant even when all other predictors are controlled. We found an interesting contrast in BMI: High BMI is a consistent positive predictor in the incidence model and a consistent negative predictor in the long prediction models. Individuals whose BMI was above 35 at age 60 had a statistically significantly higher chance of having cognitive impairment and dementia 20 years later, even in the broad models with many controls. However, high BMI at older ages appears to be protective against dementia incidence 2 and 4 years later. This latter result may reflect reverse causality: individuals whose cognitive health deteriorates may experience weight loss.

Having fair or poor health are consistent negative predictors in all the dementia and CIND models. Having a prior stroke is a consistent negative predictor in the dementia models but not the CIND models. Having diabetes at age 60 statistically significantly increases the chances of having cognitive impairment and dementia at age 80, even when all other controls are included. Diabetes is also a consistent negative predictor in the CIND incidence models but not in the dementia incidence models. Several other health indicators were predictive of dementia incidence but were not predictive in the long prediction models, which may reflect reverse causality. These factors include having psychiatric problems, depression, or restless sleep.

Several functional limitations were consistent negative predictors in the dementia incidence models but not in the long prediction models, which may reflect reverse causality again. The only functional limitation that remained significant in the broad long prediction models was having difficulties using the phone at age 60.

The cognition measures were the strongest and most consistent predictors of dementia and CIND incidence and prevalence, signaling that having cognitive reserve helps delay the onset of cognitive impairment and dementia.

The estimated effects of the psychosocial measures varied widely across models, and we did not see a clear pattern. For example, engaging in hobbies and novel information activities were protective against dementia incidence in 2 years but not in 4 years. Having a conscientious personality was estimated to be protective against dementia incidence in 4 years but not in 2 years. Thus, these results were somewhat sensitive, possibly because of these models' substantially smaller sample sizes and the large number of control variables.

Finally, several objectively measured physical health measures and genes were consistent predictors of CIND and dementia. Grip strength and the Alzheimer’s polygenic score were consistent predictors in all models, while the breathing test, the walking time test, and the semi-tandem balance time test were predictive in some models.

Table 4. List of significant predictors in the multivariate models of dementia

Category	Item	Risk (-) or protecting (+) factor		
		2-year incid	4-year incid	Long
Demographic	Age	--	--	--
	Non-Hispanic Black (vs. NH White)	-	-	-
	Hispanic	-	-	-
	Birthplace South Atlantic (vs. New England)	--	-	--
	East South Central	--	-	--
	West South Central	--	-	--
SES/labor	Years of education	+	+	++
	Total years worked	+	+	++
	White-collar low-skilled (vs. high-skilled)	0	0	++
	Has private health insurance	+	+	++
	On Medicaid	-	-	--
Lifestyle/health behaviors	Never doing moderate physical activities (vs. daily)	--	--	NA
	Never doing light physical activities (vs. daily)	--	--	NA
	1 alcoholic drink per occasion (vs. 0)	++	++	0
	2 drinks	+	+	++
	4 drinks	0	+	0
	5+ drinks	0	+	0
	BMI 25-30 (vs. 0-25)	++	++	0
	BMI 30-35	++	++	0
BMI 35+	++	++	--	
Self-reported health	Self-reported health good (vs. excellent)	0	--	--
	Health fair	--	--	--
	Health poor	--	--	--
	Ever had diabetes	0	0	--
	Ever had a stroke	--	--	--
	Ever had psychiatric problems	--	--	0
	Has work-limiting health problems	++	0	0
	Nursing home nights	-	-	--
	Visited dentist	++	++	NA
	Experiences mild pain (vs. no pain)	+	0	0
Received home care	-	0	0	

	CES-D depression	--	--	0
	Had restless sleep	--	--	0
Functional limitations	Has difficulty walking across room	0	--	0
	Has difficulty dressing	++	0	0
	Has difficulty bathing	--	--	0
	Has difficulty using the map	--	--	0
	Has difficulty using the phone	--	--	--
	Has difficulty with money	--	--	0
	Has difficulty with medications	--	--	0
	Has difficulty shopping	--	--	NA
	Has difficulty preparing meals	--	--	NA
Cognitive abilities	Self-rated memory very good (vs. excellent)	--	0	0
	Good	--	0	0
	Fair	--	--	0
	Poor	--	--	--
	Immediate word recall	++	++	0
	Delayed word recall	++	++	++
	Serial 7	++	++	++
	Knows the year	++	++	NA
Knows the president	++	++	NA	
Knows the vice president	++	++	NA	
Psychosocial	Hobby activities	++	0	NA
	Novel information activities	++	0	NA
	Completely satisfied with health (vs. not at all)	--	0	NA
	Big 5 neuroticism	0	--	NA
	Big 5 conscientiousness	0	++	NA
Physical health measures and genes	Breathing test	0	++	NA
	Semi tandem balance test time	--	--	NA
	Grip strength	++	++	NA
	Alzheimer's polygenic score	--	--	--

-- indicates a consistent negative predictor that increases the chances of dementia statistically significantly in the narrowest and the broadest models we considered. - indicates an explainable negative predictor, which statistically significantly increases the chances of dementia in the narrowest but not the broadest model. ++ and + indicate consistent and explainable positive predictors defined analogously. 0 indicates non-predictors not statistically significantly related to the outcome in the narrowest models. The table only shows predictors that were positive or negative predictors at least in one model.

Table 5. List of significant predictors in the multivariate models of cognitive impairment

Category	Item	Risk (-) or protecting (+) factor		
		2-year incid	4-year incid	Long
Demographic	Age	--	--	--
	Non-Hispanic Black (vs. NH White)	-	-	-
	Hispanic	0	0	-
	Separated/divorced (vs. married)	-	-	-
	Widowed	0	0	-
	Birthplace South Atlantic (vs. New England)	0	0	-
	East South Central	0	0	-
SES/labor	Years of education	+	+	++
	Total years worked	++	++	++
	Blue-collar high skilled (vs. white collar high skilled)	--	--	--
	Blue-collar low skilled	--	--	--
	Never worked	--	--	-
	Has private health insurance	++	++	+
	On Medicaid	-	-	-
Lifestyle/health behaviors	Never doing moderate physical activities (vs. daily)	--	--	NA
	Never doing light physical activities (vs. daily)	--	--	NA
	1-3 times of month light physical activities	--	--	NA
	1 alcoholic drink per occasion (vs. 0)	+	+	++
	2 drinks	+	0	0
	BMI 25-30 (vs. 0-25)	++	++	0
	BMI 30-35	++	++	-
BMI 35+	0	0	--	
Self-reported health	Self-reported health very good (vs. excellent)	--	--	0
	Health good	--	--	--
	Health fair	--	--	--
	Health poor	--	--	--
	Ever had diabetes	--	--	--
	Ever had lung disease	--	0	0
	Ever had a stroke	0	0	--
	Ever had psychiatric problems	--	--	--
	Nursing home nights	-	-	0
	Visited dentist	++	0	NA
	CES-D depression	--	--	-
	Had restless sleep	--	--	0
Has difficulty dressing	0	0	++	

Functional limitations	Has difficulty using the map	--	--	--
	Has difficulty using the phone	--	--	0
	Has difficulty with money	--	--	--
	Has difficulty preparing meals	--	--	NA
Cognitive abilities	Self-rated memory good (vs. excellent)	--	--	0
	Fair	--	--	--
	Poor	--	--	--
	Immediate word recall	++	++	++
	Delayed word recall	++	++	++
	Serial 7	++	++	++
	Knows the year	++	++	NA
	Knows the president	0	++	NA
Psychosocial	Knows the vice president	++	++	NA
	Hobby activities	++	++	NA
	Novel information activities	0	++	NA
	Somewhat satisfied with health (vs. not at all)	++	0	NA
	Very satisfied	++	0	NA
	Completely satisfied	++	0	NA
Physical health measures and genes	Big 5 conscientiousness	0	++	NA
	Breathing test	++	++	NA
	Timed walk test time	++	0	NA
	Semi tandem balance test time	0	--	NA
	Grip strength	++	++	NA
	Alzheimer's polygenic score	--	--	--

-- indicates a consistent negative predictor that increases the chances of dementia statistically significantly in the narrowest and the broadest models we considered. - indicates an explainable negative predictor, which statistically significantly increases the chances of dementia in the narrowest but not the broadest model. ++ and + indicate consistent and explainable positive predictors defined analogously. 0 indicates non-predictors not statistically significantly related to the outcome in the narrowest models. The table only shows predictors that were positive or negative predictors at least in one model.

Limitations

This study has several limitations. We used observational data and statistical methods to estimate the relationship between the dementia risk factors and the outcomes. The primary goal of these models is to find statistical associations that can be used to estimate individuals' risk of developing the disease as a function of their characteristics. Though the models may suggest causal channels between the risk factors and the outcomes, they cannot establish causality. The second limitation is that the cognitive impairment and dementia outcome measures were based on an algorithmic prediction model rather than a clinical assessment. Though the measures were calibrated to a clinical assessment in a subsample of the HRS and were recently validated, they cannot be treated as gold-standard clinical assessments. The third limitation was that our statistical models treated the outcome measure as data, even though it

was based on a statistical model. It is a fairly standard approach in the literature to treat validated measures as data even when they are estimates; nevertheless, it is a limitation. The fourth limitation is that some of the predictor variables were only available in the most recent HRS waves, reducing the sample size in the incidence models and preventing us from using them in the long prediction models. It will be interesting to re-estimate these models when more HRS waves become available.

Discussion

We evaluated the predictive power of about 200 potential dementia risk factors for dementia and cognitive impairment using a large, nationally representative, longitudinal survey, the Health and Retirement Study (HRS), and a recently developed validated measure of cognitive impairment and dementia. We studied the predictive power of many potential dementia risk factors, such as demographics, SES, labor market measures, lifestyle and preventative health behaviors, subjectively reported and objectively measured health, genes, parental health, cognitive abilities, and psychosocial factors. We estimated how these factors predicted cognitive impairment and dementia 2, 4, and 20 years later.

Some of our findings were in line with prior literature, such as that physical health, having had a stroke, cognitive abilities, functional limitations, and genes strongly predict future incidence and prevalence of cognitive impairment and dementia. We also identified predictors that either received less attention in the literature or had mixed results: Those who were born in the South faced significantly higher chances of developing dementia, even when many other factors were controlled for, possibly because education quality is lower in Southern states compared to the rest of the country (Seblova et al. 2023). We found similarly elevated chances of cognitive impairment and dementia among those who did not have a private health insurance plan when they were 60, who never worked or worked fewer years, who had diabetes or had a BMI above 35 at age 60, who never drank alcohol or drank excessively, who never exercised, scored lower on various physical measure exams (pulmonary function, grip strength, walking speed, balance test), who had less conscientious personality traits, and those who engaged less in hobbies and novel information activities. We found that non-Hispanic Black and Hispanic individuals faced significantly higher chances of experiencing dementia incidence and prevalence, but these differentials shrank or disappeared when we accounted for observable differences such as SES.

We found strong associations between the outcomes and several modifiable risk factors, so our results suggest there may be scope for slowing or preventing cognitive decline and dementia among at-risk people by appropriate behavioral changes and interventions. This could be achieved by individuals taking the initiative to make the necessary changes; public policy could also play an important role. Our results suggest for individuals that it is beneficial to exercise at least sometimes, even if it is just a light exercise such as walking; moderate alcohol consumption, working longer, and engaging in hobbies and novel information activities after retirement were also found to be beneficial. We found that maintaining good physical health is protective against future dementia incidence, so it is beneficial for individuals to adopt a healthy lifestyle, and policymakers should promote healthy behaviors in the population and strengthen individuals' access to quality health care. We found that individuals whose BMI index was above 35 at age 60 (i.e., class 2 obesity), those who had diabetes, and those who did not have private health insurance at age 60 had an elevated chance of developing dementia in the next 20 years, and these

differentials remained large and statistically significant even when all other predictors were accounted for.

Our results may find two main uses. The first is in prediction. A macro prediction of prevalence would help plan for the very high monetary and caregiving costs should prevalence increase. At the individual level, identifying those at elevated risk would permit channeling resources to them and it would encourage them to engage in advance planning. The second use is in prevention. While our results do not quantify the effect of an intervention they suggest where to concentrate research which would aim to quantify the effects.

Abbreviations

ADAMS	The Aging, Demographics, and Memory Study
ADL	Activities of daily living
BMI	Body mass index
CES-D	Center for Epidemiologic Studies Depression Scale
CIND	Cognitive impairment, not dementia
Cog	Latent cognition status
DK/RF	Don't know or refusal
ECog	Expected value of latent cognition status
HRS	Health and Retirement Study
IADL	Instrumental activities of daily living
MCI	Mild cognitive impairment
PrCIND	Probability of cognitive impairment
PrDem	Probability of dementia
SES	Socioeconomic status

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Appendix A. Additional figures and tables

Figure A.1. Age-adjusted 2-year dementia incidence by selected demographic, SES, and labor predictors



Figure A.2. Prevalence of dementia at 80 by selected demographic, SES, and labor predictors at age 60

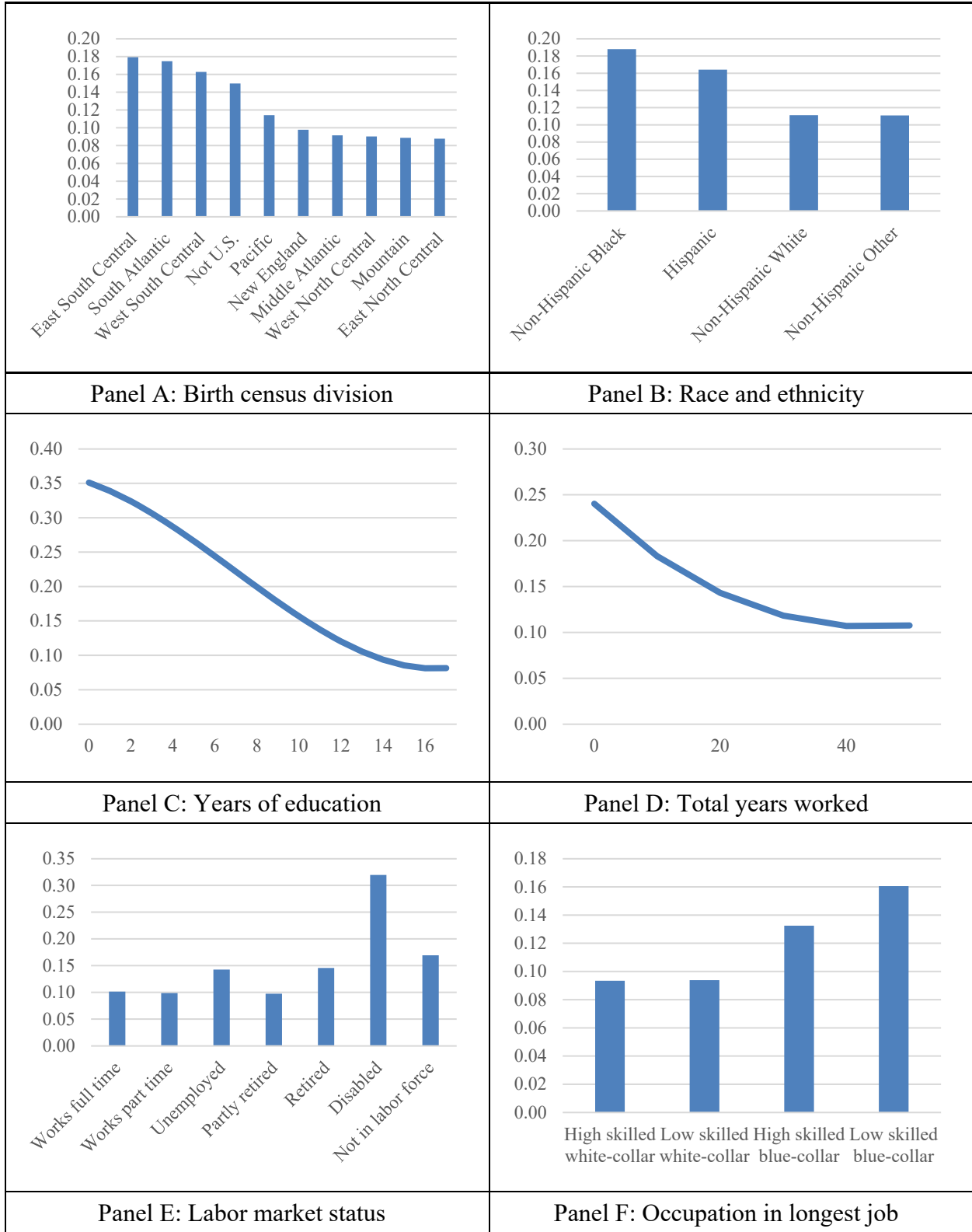


Figure A.3. Age-adjusted 2-year dementia incidence by selected lifestyle and health behavior predictors

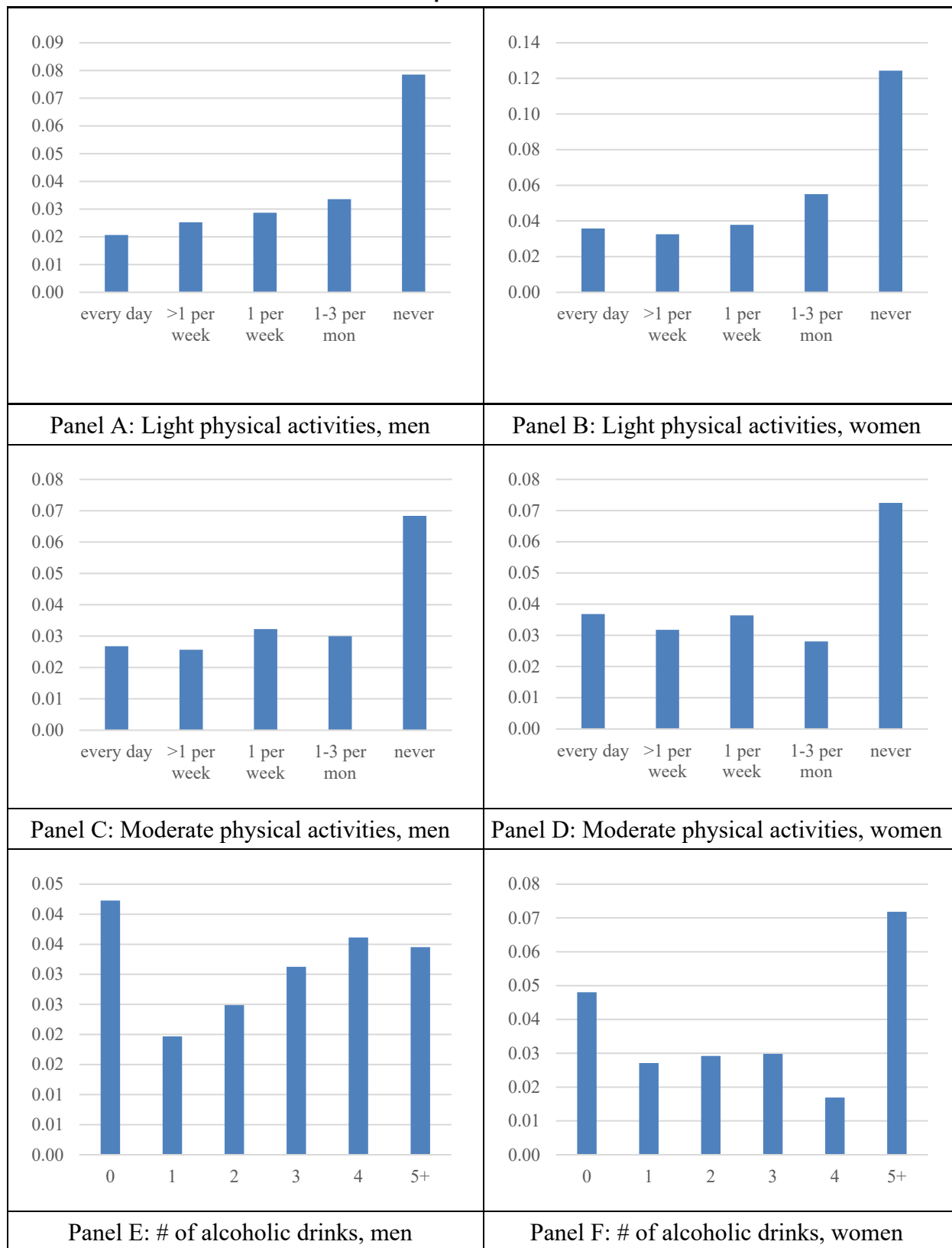


Figure A.4. Prevalence of dementia at 80 by selected lifestyle and health behavior predictors at age 60

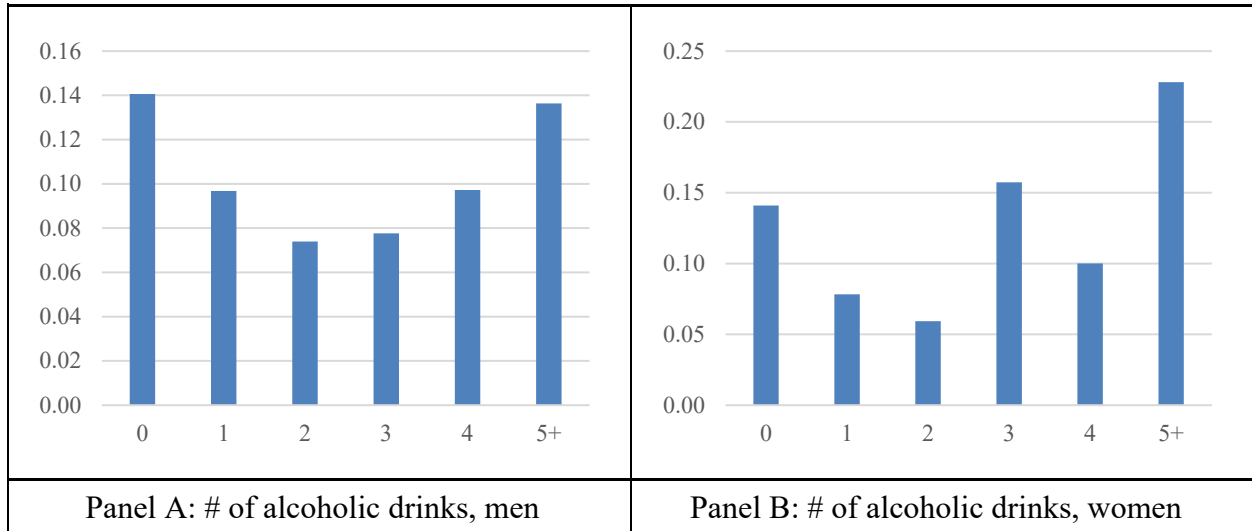


Figure A.5. Age-adjusted 2-year dementia incidence by selected psychosocial predictors

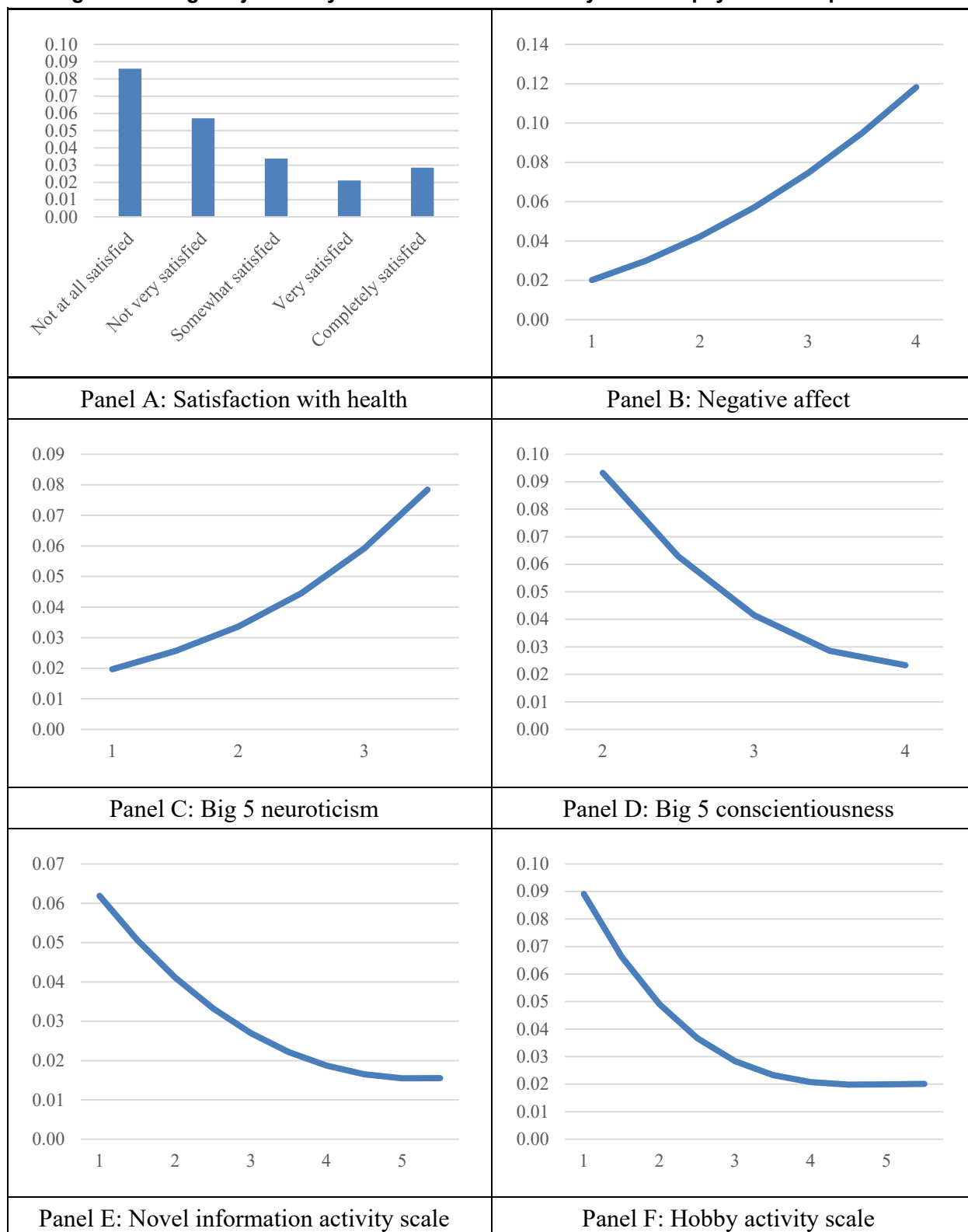


Figure A.6. Age-adjusted 2-year dementia incidence by selected self-reported health and functional limitations predictors

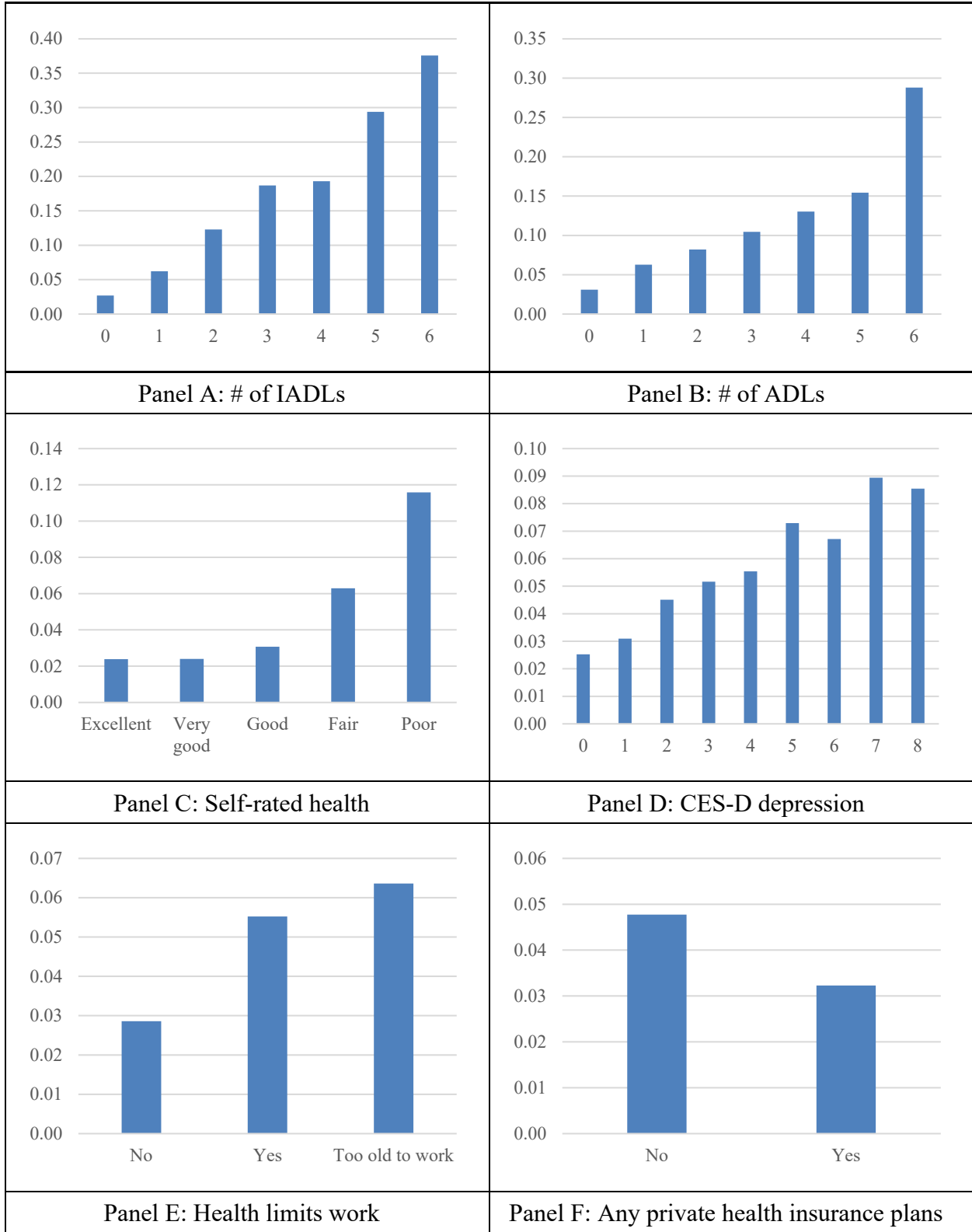


Figure A.7. Prevalence of dementia at 80 by selected self-reported health and functional limitations predictors at age 60

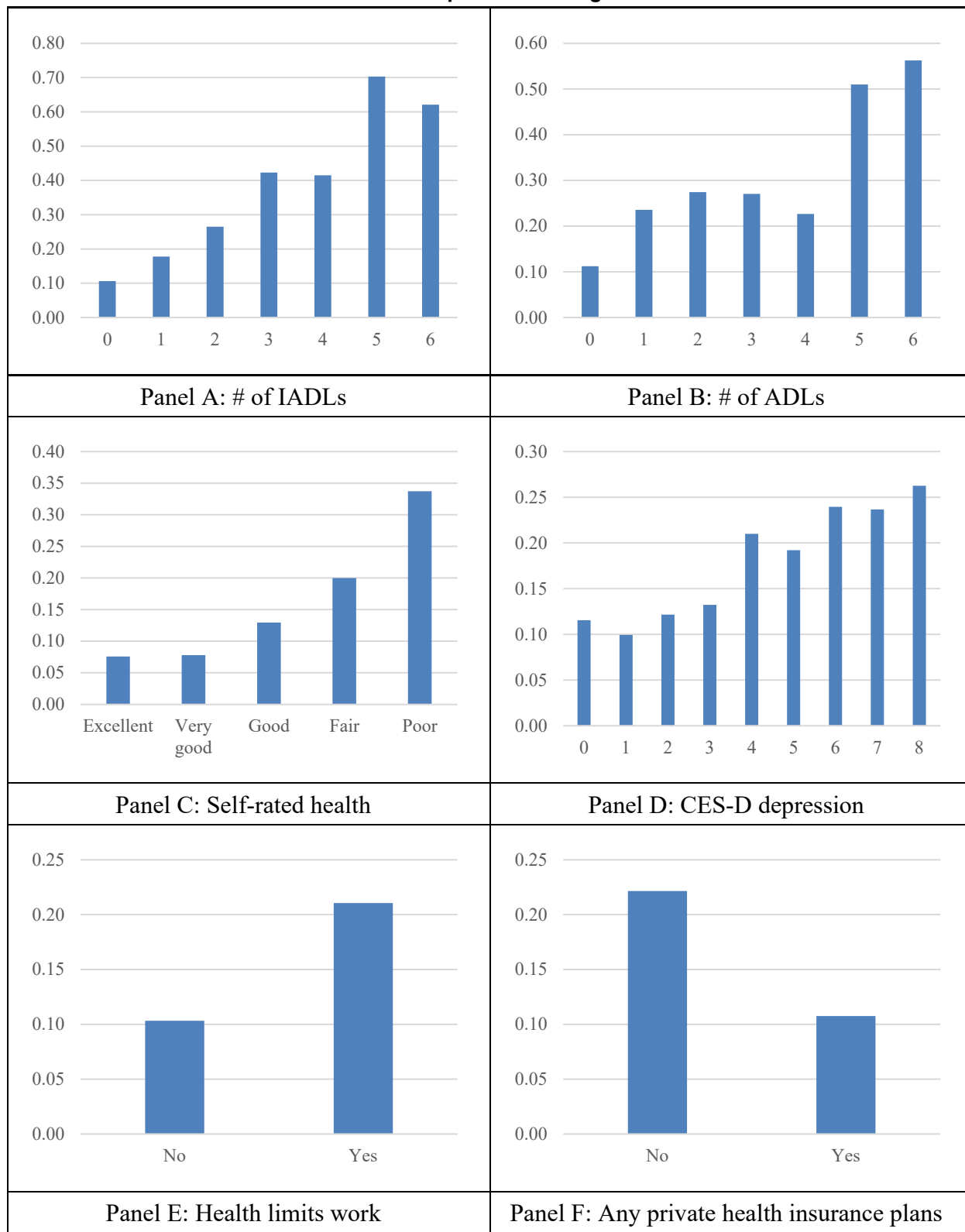


Figure A.8. Age-adjusted 2-year dementia incidence by selected physical health predictors

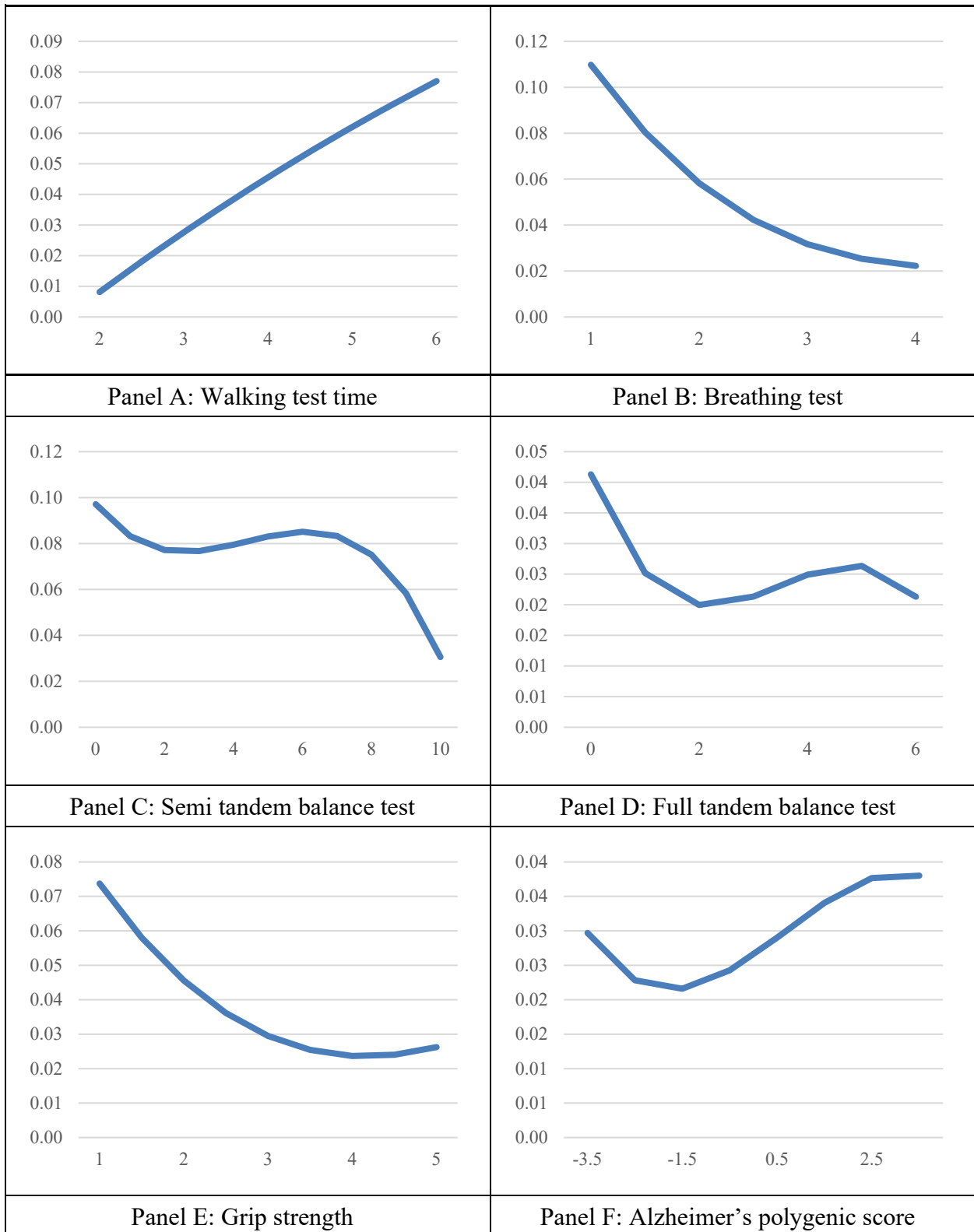


Figure A.9. Age-adjusted 2-year dementia incidence by selected cognitive predictors

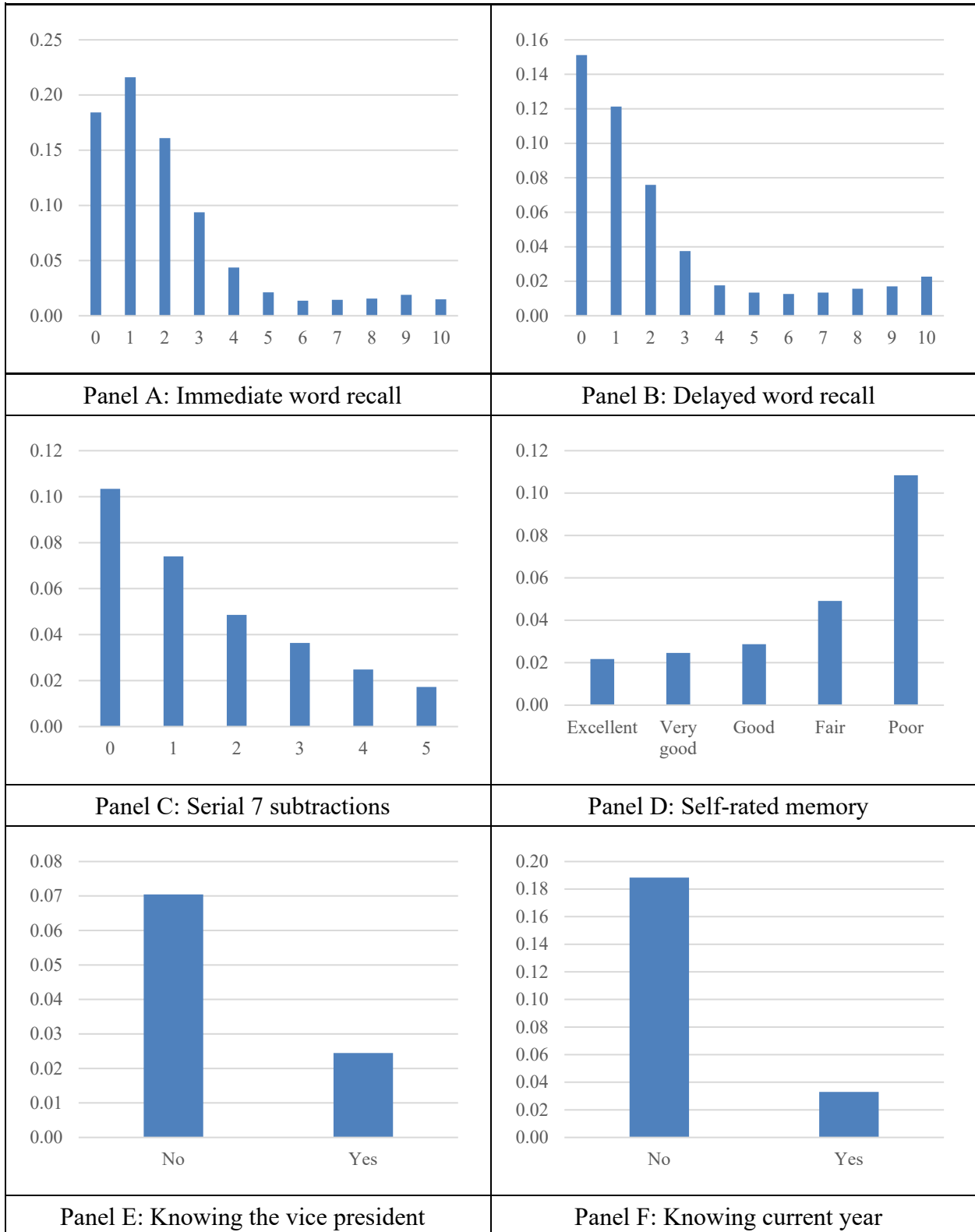


Figure A.10. Prevalence of dementia at 80 by selected cognitive predictors at age 60

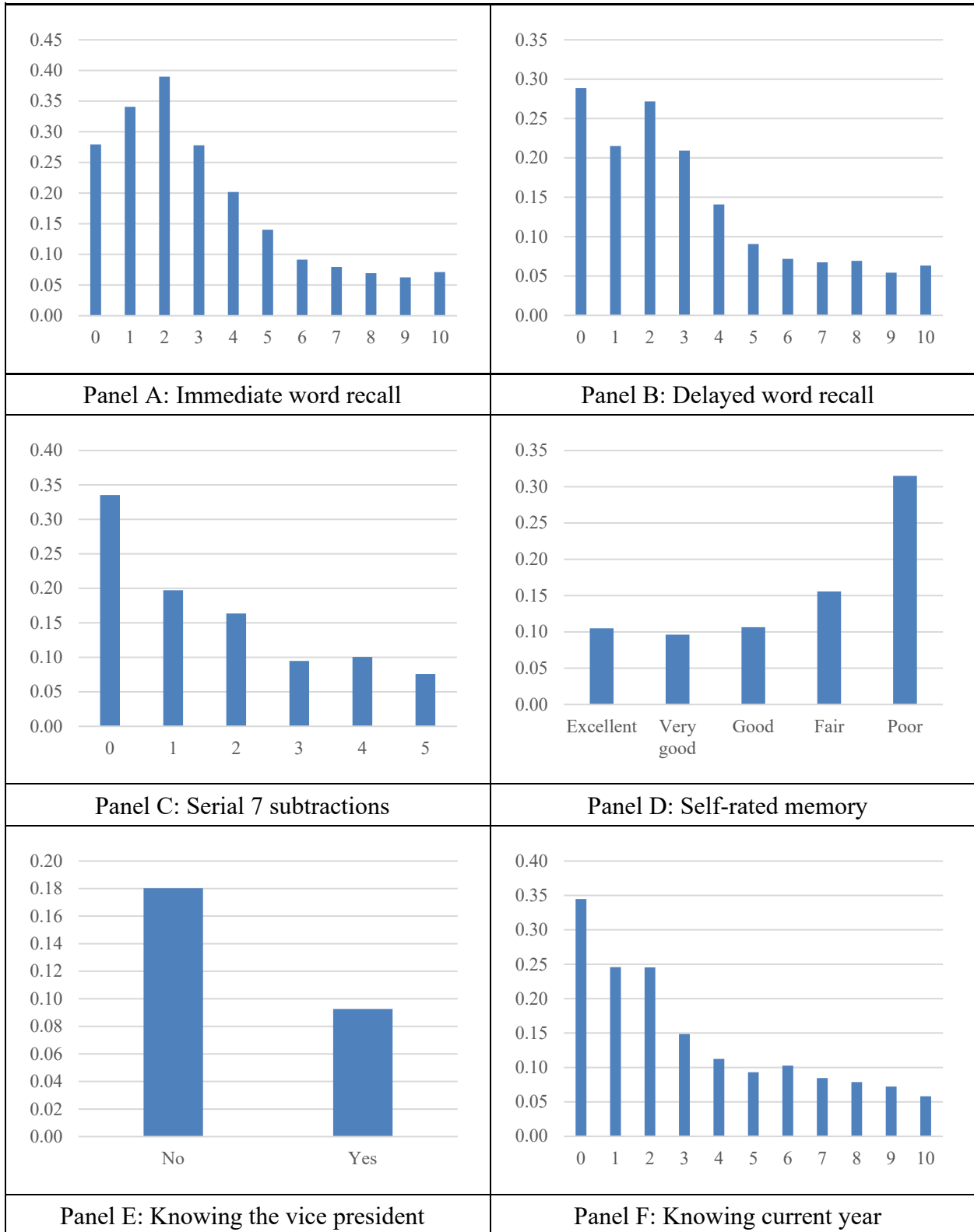


Table A.1. Multivariate models of 2-year dementia incidence, specification 1.

	[1]	[2]	[3]	[4]	[5]	[6]
	Demog	+ SES	+ Behav	+ Health	+ Func	+ Cog
Age next wave	0.020	0.018	0.017	0.018	0.015	0.010
	[0.015]	[0.015]	[0.014]	[0.014]	[0.014]	[0.014]
Age squared	-0.010	-0.010	-0.012	-0.013	-0.010	-0.013
	[0.013]	[0.013]	[0.013]	[0.013]	[0.013]	[0.013]
Age cube	0.010	0.010	0.010	0.010	0.008	0.008
	[0.003]***	[0.003]***	[0.003]***	[0.003]***	[0.003]**	[0.003]***
Female	0.003	-0.001	0.001	0.002	0.001	0.009
	[0.002]*	[0.002]	[0.002]	[0.002]	[0.002]	[0.002]***
Non-Hispanic White	ref.	ref.	ref.	ref.	ref.	ref.
Non-Hispanic Black	0.009	0.004	0.003	0.003	-0.001	-0.018
	[0.003]***	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]***
Non-Hispanic other	0.004	0.001	-0.005	-0.004	-0.002	-0.011
	[0.006]	[0.006]	[0.006]	[0.006]	[0.006]	[0.006]*
Hispanic	0.008	-0.008	-0.008	-0.012	-0.012	-0.023
	[0.004]**	[0.004]**	[0.004]**	[0.004]***	[0.004]***	[0.004]***
Married	ref.	ref.	ref.	ref.	ref.	ref.
Separated/divorced	0.005	0.003	0.001	-0.004	-0.002	-0.002
	[0.003]*	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]
Widowed	0.002	-0.001	-0.001	-0.005	-0.003	-0.003
	[0.003]	[0.003]	[0.003]	[0.003]**	[0.002]	[0.002]
Never married	-0.004	-0.005	-0.008	-0.012	-0.011	-0.012
	[0.005]	[0.005]	[0.005]	[0.005]**	[0.005]**	[0.005]***
Birthplace in New England	ref.	ref.	ref.	ref.	ref.	ref.
Mid atlantic	0.003	0.004	0.003	0.003	0.003	0.005
	[0.004]	[0.004]	[0.004]	[0.004]	[0.004]	[0.004]
East north central	0.004	0.005	0.004	0.005	0.005	0.005
	[0.004]	[0.004]	[0.004]	[0.004]	[0.004]	[0.004]
West north central	0.005	0.006	0.006	0.007	0.007	0.006
	[0.005]	[0.005]	[0.005]	[0.005]	[0.005]	[0.004]
South atlantic	0.017	0.015	0.013	0.012	0.012	0.009
	[0.005]***	[0.005]***	[0.005]***	[0.005]***	[0.005]***	[0.004]**
East south central	0.020	0.018	0.015	0.014	0.015	0.011
	[0.005]***	[0.005]***	[0.005]***	[0.005]***	[0.005]***	[0.005]**
West south central	0.018	0.017	0.014	0.013	0.013	0.009
	[0.005]***	[0.005]***	[0.005]***	[0.005]**	[0.005]***	[0.005]**
Mountain	0.009	0.012	0.012	0.011	0.008	0.005
	[0.006]	[0.006]**	[0.006]*	[0.006]*	[0.006]	[0.006]
Pacific	0.011	0.013	0.014	0.014	0.013	0.010
	[0.005]**	[0.005]**	[0.005]***	[0.005]**	[0.005]**	[0.005]*
Not US	0.010	0.006	0.006	0.005	0.004	0.005
	[0.005]**	[0.005]	[0.005]	[0.005]	[0.005]	[0.005]
Years of education		-0.002	-0.002	-0.001	0.000	0.004
		[0.000]***	[0.000]***	[0.000]	[0.000]	[0.000]***
Has private health insurance		-0.008	-0.007	-0.006	-0.005	-0.001
		[0.002]***	[0.002]***	[0.002]***	[0.002]***	[0.002]
On Medicaid		0.014	0.008	0.000	-0.002	-0.009

	[0.005]***	[0.004]*	[0.004]	[0.004]	[0.004]**
DK/RF	0.113	0.106	0.100	0.089	0.067
	[0.022]***	[0.022]***	[0.022]***	[0.021]***	[0.021]***
White-collar high skilled	ref.	ref.	ref.	ref.	ref.
White-collar low skilled	-0.002	-0.003	-0.002	-0.001	0.000
	[0.002]	[0.002]	[0.002]	[0.002]	[0.002]
Blue-collar high skilled	-0.002	-0.002	-0.001	-0.002	-0.008
	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]***
Blue-collar low skilled	-0.003	-0.003	-0.003	-0.004	-0.013
	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]***
Never worked	0.009	0.008	0.006	0.003	-0.005
	[0.008]	[0.008]	[0.008]	[0.007]	[0.007]
DK/RF	0.002	0.001	0.002	0.001	0.001
	[0.005]	[0.005]	[0.005]	[0.005]	[0.004]
Decades worked	-0.002	-0.002	0.000	0.000	0.001
	[0.001]***	[0.001]**	[0.001]	[0.001]	[0.001]
BMI<=25		ref.	ref.	ref.	ref.
25<BMI<=30		-0.014	-0.013	-0.011	-0.009
		[0.002]***	[0.002]***	[0.002]***	[0.002]***
30<BMI<=35		-0.016	-0.016	-0.015	-0.011
		[0.003]***	[0.003]***	[0.003]***	[0.003]***
35<BMI		-0.020	-0.023	-0.020	-0.016
		[0.003]***	[0.003]***	[0.003]***	[0.003]***
Never drinks		ref.	ref.	ref.	ref.
1 drink per occasion		-0.009	-0.006	-0.005	-0.003
		[0.002]***	[0.002]**	[0.002]**	[0.002]
2 drinks per occasion		-0.005	-0.001	0.000	0.001
		[0.002]**	[0.002]	[0.002]	[0.002]
3 drinks per occasion		-0.006	-0.004	-0.002	-0.001
		[0.004]	[0.004]	[0.004]	[0.004]
4 drinks per occasion		-0.010	-0.006	-0.003	0.002
		[0.006]*	[0.006]	[0.006]	[0.005]
5+ drinks per occasion		-0.007	-0.003	0.000	0.005
		[0.007]	[0.007]	[0.007]	[0.007]
Moderate physical activity daily		ref.	ref.	ref.	ref.
>1 per week		-0.001	0.000	0.001	0.002
		[0.003]	[0.003]	[0.003]	[0.003]
1 per week		0.003	0.002	0.003	0.002
		[0.004]	[0.004]	[0.004]	[0.003]
1-3 per mon		-0.005	-0.006	-0.004	-0.003
		[0.004]	[0.004]*	[0.004]	[0.004]
Never		0.021	0.011	0.009	0.008
		[0.004]***	[0.004]***	[0.004]**	[0.004]**
DK/RF		0.023	0.022	0.022	0.023
		[0.035]	[0.034]	[0.033]	[0.033]
Light physical activity daily		ref.	ref.	ref.	ref.
>1 per week		0.000	0.000	0.000	0.000
		[0.003]	[0.003]	[0.003]	[0.003]
1 per week		0.000	-0.001	-0.001	-0.003

	[0.003]	[0.003]	[0.003]	[0.003]
1-3 per mon	0.006	0.004	0.001	-0.001
	[0.004]	[0.004]	[0.004]	[0.004]
Never	0.048	0.036	0.020	0.013
	[0.005]***	[0.005]***	[0.005]***	[0.005]***
DK/RF	0.054	0.047	0.046	0.012
	[0.050]	[0.049]	[0.047]	[0.047]
<hr/>				
Hospital nights		0.000	0.000	0.000
		[0.000]	[0.000]	[0.000]
Nursing home nights		0.000	0.000	0.000
		[0.000]***	[0.000]*	[0.000]
<hr/>				
Health excellent		ref.	ref.	ref.
Very good		0.000	0.001	0.000
		[0.003]	[0.003]	[0.003]
Good		0.003	0.004	0.003
		[0.003]	[0.003]	[0.003]
Fair		0.026	0.023	0.019
		[0.004]***	[0.004]***	[0.004]***
Poor		0.063	0.052	0.041
		[0.008]***	[0.007]***	[0.007]***
DK/RF		0.049	0.058	0.051
		[0.053]	[0.050]	[0.052]
<hr/>				
Has hypertension		-0.002	-0.001	-0.002
		[0.002]	[0.002]	[0.002]
Diabetes		0.001	0.000	-0.002
		[0.002]	[0.002]	[0.002]
Cancer		-0.003	-0.003	-0.002
		[0.002]	[0.002]	[0.002]
Lung disease		-0.006	-0.008	-0.006
		[0.003]*	[0.003]**	[0.003]*
Heart disease		-0.001	-0.001	-0.001
		[0.002]	[0.002]	[0.002]
Stroke		0.017	0.012	0.008
		[0.004]***	[0.004]***	[0.004]*
Psychiatric problems		0.015	0.008	0.005
		[0.003]***	[0.003]**	[0.003]
Arthritis		0.002	0.002	0.002
		[0.002]	[0.002]	[0.002]
<hr/>				
Has work-limiting health problems		-0.008	-0.013	-0.012
		[0.002]***	[0.002]***	[0.002]***
Not working		0.014	0.009	0.011
		[0.005]***	[0.005]**	[0.004]***
DK/RF		0.001	-0.002	-0.001
		[0.013]	[0.013]	[0.012]
<hr/>				
Experiences no pain		ref.	ref.	ref.
Mild pain		-0.006	-0.005	-0.005
		[0.003]**	[0.003]*	[0.003]*
Moderate pain		0.001	0.000	0.001
		[0.003]	[0.003]	[0.003]

Severe pain	-0.008	-0.013	-0.011
	[0.006]	[0.006]**	[0.006]**
DK/RF	0.015	0.013	0.012
	[0.019]	[0.019]	[0.018]
Visited dentist	-0.005	-0.005	-0.001
	[0.002]**	[0.002]**	[0.002]
DK/RF	0.037	0.038	0.024
	[0.053]	[0.053]	[0.049]
Received home care	0.014	0.008	0.006
	[0.005]***	[0.005]*	[0.005]
DK/RF	0.139	0.122	0.106
	[0.096]	[0.099]	[0.088]
CESD depression score	0.004	0.002	0.001
	[0.001]***	[0.001]***	[0.001]
Has restless sleep	-0.009	-0.008	-0.006
	[0.003]***	[0.003]***	[0.002]**
DK/RF	-0.050	-0.063	-0.058
	[0.033]	[0.036]*	[0.030]*
Has difficulty walking across room		0.013	0.012
		[0.008]*	[0.007]*
Don't do		-0.153	-0.155
		[0.037]***	[0.042]***
DK/RF		0.063	0.075
		[0.142]	[0.138]
Has difficulty dressing		-0.011	-0.010
		[0.005]**	[0.005]**
Don't do		-0.077	-0.107
		[0.088]	[0.083]
DK/RF		0.035	0.019
		[0.135]	[0.140]
Has difficulty bathing		0.029	0.028
		[0.008]***	[0.008]***
Don't do		0.082	0.081
		[0.100]	[0.099]
DK/RF		-0.036	-0.025
		[0.027]	[0.032]
Has difficulty eating		-0.001	0.002
		[0.012]	[0.012]
Don't do		0.178	0.167
		[0.122]	[0.115]
DK/RF		-0.159	-0.161
		[0.024]***	[0.020]***
Has difficulty getting out of bed		0.000	-0.001
		[0.007]	[0.007]
Don't do		-0.084	-0.075
		[0.041]**	[0.040]*
DK/RF		-0.148	-0.186
		[0.051]***	[0.062]***
Has difficulty using the toilet		-0.007	-0.004

Don't do	[0.006]	[0.006]
	-0.007	0.001
DK/RF	[0.112]	[0.110]
	0.139	0.129
	[0.160]	[0.159]
Has difficulty using the map	0.009	0.000
	[0.004]**	[0.003]
Don't do	0.017	0.010
	[0.005]***	[0.004]**
DK/RF	0.111	0.087
	[0.061]*	[0.060]
Has difficulty using the phone	0.036	0.030
	[0.011]***	[0.011]***
Don't do	0.050	0.035
	[0.034]	[0.032]
DK/RF	-0.103	-0.091
	[0.091]	[0.074]
Has difficulty with money	0.087	0.072
	[0.010]***	[0.010]***
Don't do	0.042	0.032
	[0.007]***	[0.007]***
DK/RF	0.052	0.005
	[0.092]	[0.095]
Has difficulty with medications	0.043	0.040
	[0.014]***	[0.013]***
Don't do	-0.002	-0.001
	[0.048]	[0.050]
DK/RF	-0.001	0.001
	[0.007]	[0.007]
Has difficulty shopping	0.016	0.019
	[0.007]**	[0.007]***
Don't do	0.045	0.039
	[0.011]***	[0.011]***
DK/RF	0.117	0.117
	[0.136]	[0.136]
Has difficulty preparing meals	0.022	0.022
	[0.010]**	[0.009]**
Don't do	0.012	0.010
	[0.007]*	[0.007]
DK/RF	0.074	0.080
	[0.170]	[0.171]
Memory excellent		ref.
Very good		0.010
		[0.004]**
Good		0.009
		[0.004]**
Fair		0.012

Poor						[0.005]***	0.046
						[0.008]***	
Immediate word recall							-0.007
						[0.001]***	
Delayed word recall							-0.007
						[0.001]***	
Serial 7s							-0.009
						[0.001]***	
Knows the year							-0.091
						[0.012]***	
Knows the president							-0.075
						[0.012]***	
Knows the vice president							-0.020
						[0.002]***	
Constant	-0.015	0.029	0.030	0.007	-0.008	0.220	
	[0.006]***	[0.009]***	[0.010]***	[0.010]	[0.010]	[0.019]***	
R squared	0.056	0.061	0.073	0.087	0.110	0.148	
N	40,998	40,998	40,998	40,998	40,998	40,998	

Table A.2. Multivariate models of 2-year dementia incidence, specification 2.

	[1]	[2a]	[2b]	[3a]	[3b]	[4a]	[4b]
	Baseline	Physical measures		Genes		Psychosocial	
Age next wave	0.015	-0.001	-0.007	0.018	0.017	0.015	0.015
	[0.014]	[0.022]	[0.022]	[0.016]	[0.016]	[0.024]	[0.024]
Age squared	-0.010	0.005	0.005	-0.011	-0.011	-0.013	-0.015
	[0.013]	[0.020]	[0.020]	[0.015]	[0.015]	[0.022]	[0.022]
Age cube	0.008	0.004	0.004	0.008	0.008	0.010	0.010
	[0.003]**	[0.005]	[0.005]	[0.004]**	[0.004]**	[0.006]*	[0.006]*
Female	0.001	-0.002	-0.016	0.002	0.002	-0.002	0.003
	[0.002]	[0.003]	[0.005]***	[0.003]	[0.003]	[0.004]	[0.004]
Non-Hispanic White	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Non-Hispanic Black	-0.001	0.000	-0.004	-0.004	-0.003	-0.003	-0.004
	[0.003]	[0.005]	[0.005]	[0.003]	[0.003]	[0.005]	[0.005]
Non-Hispanic other	-0.002	-0.008	-0.009	-	-	-0.006	-0.008
	[0.006]	[0.008]	[0.008]			[0.009]	[0.009]
Hispanic	-0.012	-0.015	-0.017	-	-	-0.024	-0.025
	[0.004]***	[0.006]**	[0.006]***			[0.006]***	[0.006]***
Married	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Separated/divorced	-0.002	0.005	0.004	-0.004	-0.004	-0.005	-0.005
	[0.003]	[0.005]	[0.005]	[0.003]	[0.003]	[0.005]	[0.005]
Widowed	-0.003	-0.004	-0.005	-0.005	-0.005	-0.004	-0.005
	[0.002]	[0.004]	[0.004]	[0.003]*	[0.003]*	[0.004]	[0.004]
Never married	-0.011	-0.013	-0.016	-0.008	-0.008	-0.013	-0.015
	[0.005]**	[0.007]**	[0.007]**	[0.006]	[0.006]	[0.007]*	[0.007]**
Birthplace in New England	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Mid atlantic	0.003	0.001	0.000	0.004	0.003	0.004	0.004

	[0.004]	[0.007]	[0.007]	[0.004]	[0.004]	[0.007]	[0.007]
East north central	0.005	-0.001	-0.001	0.005	0.005	0.007	0.006
	[0.004]	[0.006]	[0.006]	[0.004]	[0.004]	[0.006]	[0.006]
West north central	0.007	-0.001	0.000	0.008	0.009	0.005	0.004
	[0.005]	[0.007]	[0.007]	[0.005]*	[0.005]*	[0.007]	[0.007]
South atlantic	0.012	0.004	0.003	0.010	0.010	0.013	0.012
	[0.005]***	[0.007]	[0.007]	[0.005]**	[0.005]**	[0.007]*	[0.007]*
East south central	0.015	0.011	0.010	0.014	0.014	0.023	0.022
	[0.005]***	[0.008]	[0.008]	[0.005]***	[0.005]***	[0.008]***	[0.008]***
West south central	0.013	0.008	0.009	0.014	0.014	0.017	0.015
	[0.005]***	[0.008]	[0.008]	[0.005]***	[0.005]***	[0.008]**	[0.008]**
Mountain	0.008	0.003	0.002	0.002	0.002	0.006	0.006
	[0.006]	[0.009]	[0.009]	[0.007]	[0.007]	[0.009]	[0.009]
Pacific	0.013	0.008	0.009	0.014	0.014	0.013	0.012
	[0.005]**	[0.008]	[0.008]	[0.006]**	[0.006]**	[0.008]*	[0.008]
Not US	0.004	-0.002	-0.003	0.014	0.014	0.005	0.004
	[0.005]	[0.008]	[0.008]	[0.006]**	[0.006]**	[0.008]	[0.008]
Years of education	0.000	0.000	0.001	0.000	0.000	0.000	0.001
	[0.000]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Has private health insurance	-0.005	-0.006	-0.006	-0.005	-0.005	-0.005	-0.005
	[0.002]***	[0.003]**	[0.003]**	[0.002]**	[0.002]**	[0.003]	[0.003]*
On Medicaid	-0.002	-0.010	-0.012	0.000	-0.001	0.005	0.004
	[0.004]	[0.007]	[0.007]*	[0.006]	[0.006]	[0.008]	[0.008]
DK/RF	0.089	0.016	0.016	0.090	0.090	0.062	0.061
	[0.021]***	[0.029]	[0.029]	[0.026]***	[0.026]***	[0.035]*	[0.034]*
White-collar high skilled	ref.	ref.	ref.	ref.	ref.	ref.	ref.
White-collar low skilled	-0.001	0.005	0.004	0.000	0.000	0.001	0.000
	[0.002]	[0.004]	[0.003]	[0.003]	[0.003]	[0.004]	[0.004]
Blue-collar high skilled	-0.002	-0.003	-0.003	-0.003	-0.003	-0.001	-0.004
	[0.003]	[0.005]	[0.005]	[0.004]	[0.004]	[0.005]	[0.005]
Blue-collar low skilled	-0.004	-0.002	-0.003	-0.005	-0.005	-0.004	-0.008
	[0.003]	[0.004]	[0.004]	[0.003]	[0.003]	[0.005]	[0.005]*
Never worked	0.003	0.009	0.010	0.008	0.008	0.008	0.003
	[0.007]	[0.012]	[0.012]	[0.009]	[0.009]	[0.013]	[0.013]
DK/RF	0.001	0.002	0.002	0.001	0.002	0.006	0.004
	[0.005]	[0.007]	[0.007]	[0.005]	[0.005]	[0.008]	[0.008]
Decades worked	0.000	-0.001	0.000	0.000	0.000	0.000	0.000
	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
BMI<=25	ref.	ref.	ref.	ref.	ref.	ref.	ref.
25<BMI<=30	-0.011	-0.010	-0.009	-0.010	-0.010	-0.007	-0.006
	[0.002]***	[0.003]***	[0.003]**	[0.003]***	[0.003]***	[0.004]*	[0.004]
30<BMI<=35	-0.015	-0.016	-0.014	-0.014	-0.014	-0.009	-0.008
	[0.003]***	[0.004]***	[0.004]***	[0.003]***	[0.003]***	[0.004]**	[0.004]*
35<BMI	-0.020	-0.016	-0.016	-0.018	-0.018	-0.012	-0.010
	[0.003]***	[0.005]***	[0.005]***	[0.004]***	[0.004]***	[0.005]**	[0.005]*
Never drinks	ref.	ref.	ref.	ref.	ref.	ref.	ref.
1 drink per occasion	-0.005	-0.009	-0.008	-0.005	-0.005	-0.007	-0.006
	[0.002]**	[0.003]***	[0.003]**	[0.002]*	[0.002]**	[0.003]**	[0.003]*
2 drinks per occasion	0.000	0.001	0.001	0.001	0.001	0.000	0.000

	[0.002]	[0.004]	[0.004]	[0.003]	[0.003]	[0.004]	[0.004]
3 drinks per occasion	-0.002	-0.005	-0.007	-0.003	-0.003	-0.004	-0.005
	[0.004]	[0.005]	[0.005]	[0.004]	[0.004]	[0.005]	[0.006]
4 drinks per occasion	-0.003	-0.008	-0.009	-0.001	-0.001	-0.004	-0.005
	[0.006]	[0.007]	[0.007]	[0.006]	[0.006]	[0.008]	[0.008]
5+ drinks per occasion	0.000	0.005	0.004	-0.001	-0.001	-0.004	-0.003
	[0.007]	[0.011]	[0.011]	[0.008]	[0.008]	[0.010]	[0.010]
Moderate physical activity daily	ref.	ref.	ref.	ref.	ref.	ref.	ref.
>1 per week	0.001	0.006	0.006	-0.002	-0.002	0.002	0.001
	[0.003]	[0.004]	[0.004]	[0.004]	[0.004]	[0.005]	[0.005]
1 per week	0.003	0.008	0.007	0.000	0.000	0.001	0.000
	[0.004]	[0.005]	[0.005]	[0.004]	[0.004]	[0.006]	[0.006]
1-3 per mon	-0.004	0.001	0.001	-0.003	-0.003	-0.001	-0.002
	[0.004]	[0.005]	[0.005]	[0.004]	[0.004]	[0.006]	[0.006]
Never	0.009	0.011	0.009	0.005	0.005	0.003	0.001
	[0.004]**	[0.006]*	[0.006]	[0.005]	[0.005]	[0.007]	[0.007]
DK/RF	0.022	0.034	0.034	-0.019	-0.019	-0.021	-0.032
	[0.033]	[0.062]	[0.062]	[0.024]	[0.024]	[0.046]	[0.045]
Light physical activity daily	ref.	ref.	ref.	ref.	ref.	ref.	ref.
>1 per week	0.000	-0.004	-0.005	0.000	0.000	-0.002	-0.002
	[0.003]	[0.004]	[0.004]	[0.003]	[0.003]	[0.005]	[0.005]
1 per week	-0.001	-0.003	-0.005	-0.001	-0.001	-0.002	-0.004
	[0.003]	[0.005]	[0.005]	[0.004]	[0.004]	[0.005]	[0.005]
1-3 per mon	0.001	0.004	0.002	0.002	0.001	0.005	0.002
	[0.004]	[0.007]	[0.007]	[0.005]	[0.005]	[0.007]	[0.007]
Never	0.020	0.015	0.010	0.019	0.019	0.011	0.008
	[0.005]***	[0.008]*	[0.008]	[0.006]***	[0.006]***	[0.008]	[0.009]
DK/RF	0.046	0.050	0.044	0.010	0.011	-0.043	-0.051
	[0.047]	[0.101]	[0.102]	[0.056]	[0.056]	[0.023]*	[0.024]**
Hospital nights	0.000	-0.001	-0.001	0.000	0.000	-0.001	-0.001
	[0.000]	[0.000]***	[0.000]***	[0.000]	[0.000]	[0.000]***	[0.000]***
Nursing home nights	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	[0.000]*	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Health excellent	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Very good	0.001	0.000	-0.001	0.001	0.001	0.004	0.003
	[0.003]	[0.004]	[0.004]	[0.003]	[0.003]	[0.004]	[0.004]
Good	0.004	0.001	-0.001	0.005	0.005	0.007	0.006
	[0.003]	[0.004]	[0.004]	[0.003]	[0.003]	[0.005]	[0.005]
Fair	0.023	0.026	0.023	0.023	0.023	0.028	0.028
	[0.004]***	[0.006]***	[0.006]***	[0.005]***	[0.005]***	[0.007]***	[0.007]***
Poor	0.052	0.052	0.046	0.055	0.055	0.067	0.072
	[0.007]***	[0.012]***	[0.012]***	[0.009]***	[0.009]***	[0.013]***	[0.014]***
DK/RF	0.058	0.166	0.161	0.108	0.107	-0.055	-0.044
	[0.050]	[0.134]	[0.137]	[0.083]	[0.083]	[0.021]**	[0.021]**
Has hypertension	-0.001	-0.003	-0.003	-0.001	-0.001	-0.005	-0.005
	[0.002]	[0.003]	[0.003]	[0.002]	[0.002]	[0.003]	[0.003]
Diabetes	0.000	0.003	0.002	0.000	0.000	-0.004	-0.004
	[0.002]	[0.003]	[0.003]	[0.003]	[0.003]	[0.004]	[0.004]
Cancer	-0.003	-0.001	-0.001	-0.002	-0.001	0.001	0.001

Lung disease	[0.002] -0.008	[0.004] -0.007	[0.004] -0.010	[0.003] -0.008	[0.003] -0.008	[0.004] -0.005	[0.004] -0.004
Heart disease	[0.003]** -0.001	[0.005] 0.000	[0.005]** 0.000	[0.004]** -0.001	[0.004]** -0.001	[0.005] -0.006	[0.005] -0.005
Stroke	[0.002] 0.012	[0.003] 0.010	[0.003] 0.007	[0.002] 0.012	[0.002] 0.012	[0.003]* 0.020	[0.003] 0.020
Psychiatric problems	[0.004]*** 0.008	[0.006] 0.011	[0.006] 0.012	[0.005]** 0.008	[0.005]** 0.008	[0.007]*** 0.007	[0.007]*** 0.005
Arthritis	[0.003]** 0.002	[0.005]** 0.001	[0.005]** 0.001	[0.004]** 0.000	[0.004]** 0.000	[0.005] -0.004	[0.005] -0.003
Has work-limiting health problems	[0.002] -0.013	[0.003] -0.017	[0.003] -0.019	[0.002] -0.012	[0.002] -0.012	[0.003] -0.019	[0.003] -0.018
Not working	[0.002]*** 0.009	[0.004]*** 0.001	[0.004]*** -0.001	[0.003]*** 0.003	[0.003]*** 0.003	[0.004]*** 0.001	[0.004]*** 0.002
DK/RF	[0.005]** -0.002	[0.007] -0.021	[0.007] -0.021	[0.005] -0.002	[0.005] -0.002	[0.008] 0.013	[0.008] 0.013
Experiences no pain	[0.013] ref.	[0.015] ref.	[0.015] ref.	[0.016] ref.	[0.016] ref.	[0.022] ref.	[0.022] ref.
Mild pain	ref. -0.005	ref. -0.002	ref. -0.001	ref. -0.008	ref. -0.008	ref. -0.006	ref. -0.005
Moderate pain	[0.003]* 0.000	[0.004] 0.001	[0.004] 0.001	[0.003]*** -0.002	[0.003]*** -0.002	[0.004] 0.003	[0.004] 0.004
Severe pain	[0.003] -0.013	[0.004] -0.003	[0.004] -0.003	[0.003] -0.017	[0.003] -0.017	[0.004] -0.004	[0.004] -0.002
DK/RF	[0.006]** 0.013	[0.009] 0.032	[0.009] 0.032	[0.007]*** 0.023	[0.007]*** 0.023	[0.009] 0.016	[0.010] 0.022
Visited dentist	[0.019] -0.005	[0.036] -0.004	[0.036] -0.002	[0.025] -0.006	[0.025] -0.006	[0.037] -0.005	[0.037] -0.004
DK/RF	[0.002]** 0.038	[0.003] 0.090	[0.003] 0.088	[0.002]*** 0.030	[0.002]*** 0.030	[0.003] -0.039	[0.003] -0.040
Received home care	[0.053] 0.008	[0.112] 0.003	[0.111] 0.001	[0.082] 0.004	[0.082] 0.004	[0.016]** 0.004	[0.016]** 0.004
DK/RF	[0.005]* 0.122	[0.007] 0.204	[0.007] 0.196	[0.005] 0.199	[0.005] 0.199	[0.007] 0.278	[0.007] 0.286
CESD depression score	[0.099] 0.002	[0.259] 0.002	[0.259] 0.002	[0.122] 0.003	[0.122] 0.002	[0.202] 0.003	[0.199] 0.001
Has restless sleep	[0.001]*** -0.008	[0.001] -0.010	[0.001] -0.010	[0.001]*** -0.007	[0.001]*** -0.007	[0.001]** -0.007	[0.002] -0.006
DK/RF	[0.003]*** -0.063	[0.004]*** -0.073	[0.004]*** -0.073	[0.003]** -0.081	[0.003]** -0.080	[0.004]* -0.070	[0.004] -0.071
Has difficulty walking across room	[0.036]* 0.013	[0.027]*** 0.009	[0.028]*** 0.002	[0.026]*** 0.012	[0.026]*** 0.012	[0.037]* 0.011	[0.039]* 0.012
Don't do	[0.008]* -0.153	[0.013] -	[0.013] -	[0.009] -0.143	[0.009] -0.147	[0.013] -0.086	[0.013] -0.085
DK/RF	[0.037]*** 0.063	- -0.128	- -0.156	[0.044]*** -0.075	[0.043]*** -0.075	[0.035]** 0.083	[0.038]** 0.111
Has difficulty dressing	[0.142] -0.011	[0.072]* -0.004	[0.073]** -0.005	[0.075] -0.007	[0.075] -0.007	[0.175] -0.003	[0.174] -0.003
	[0.005]** -0.011	[0.008] -0.004	[0.008] -0.005	[0.006] -0.007	[0.006] -0.007	[0.008] -0.003	[0.008] -0.003

Don't do	-0.077	0.036	0.011	-0.155	-0.153	-0.055	-0.055
	[0.088]	[0.010]***	[0.011]	[0.044]***	[0.044]***	[0.040]	[0.031]*
DK/RF	0.035	-0.241	-0.238	-0.094	-0.094	0.851	0.849
	[0.135]	[0.259]	[0.259]	[0.054]*	[0.055]*	[0.026]***	[0.027]***
Has difficulty bathing	0.029	0.032	0.028	0.029	0.029	0.028	0.029
	[0.008]***	[0.013]**	[0.013]**	[0.009]***	[0.009]***	[0.013]**	[0.013]**
Don't do	0.082	0.069	0.061	0.161	0.160	0.769	0.753
	[0.100]	[0.160]	[0.162]	[0.122]	[0.122]	[0.098]***	[0.106]***
DK/RF	-0.036	0.033	0.053	-0.010	-0.008	-0.044	-0.062
	[0.027]	[0.073]	[0.072]	[0.037]	[0.037]	[0.052]	[0.054]
Has difficulty eating	-0.001	-0.016	-0.019	-0.002	-0.001	0.000	-0.001
	[0.012]	[0.018]	[0.019]	[0.014]	[0.014]	[0.019]	[0.019]
Don't do	0.178	0.026	0.023	0.122	0.122	0.425	0.402
	[0.122]	[0.209]	[0.218]	[0.162]	[0.162]	[0.204]**	[0.196]**
DK/RF	-0.159						
	[0.024]***						
Has difficulty getting out of bed	0.000	0.011	0.011	0.002	0.002	0.012	0.012
	[0.007]	[0.012]	[0.012]	[0.009]	[0.009]	[0.013]	[0.013]
Don't do	-0.084	-0.138	-0.147	-0.068	-0.068	-0.050	-0.053
	[0.041]**	[0.037]***	[0.039]***	[0.052]	[0.052]	[0.090]	[0.090]
DK/RF	-0.148	-0.027	-0.007	-0.132	-0.131	-0.100	-0.095
	[0.051]***	[0.072]	[0.072]	[0.060]**	[0.060]**	[0.050]**	[0.051]*
Has difficulty using the toilet	-0.007	0.006	0.006	-0.012	-0.012	-0.003	-0.002
	[0.006]	[0.010]	[0.010]	[0.007]*	[0.007]*	[0.010]	[0.010]
Don't do	-0.007	-	-	-0.070	-0.070	-0.120	-0.158
	[0.112]			[0.024]***	[0.023]***	[0.094]	[0.098]
DK/RF	0.139	0.459	0.448	0.135	0.136	0.470	0.464
	[0.160]	[0.366]	[0.352]	[0.162]	[0.161]	[0.368]	[0.372]
Has difficulty using the map	0.009	0.004	0.003	0.008	0.008	0.010	0.006
	[0.004]**	[0.005]	[0.005]	[0.004]**	[0.004]*	[0.006]*	[0.006]
Don't do	0.017	0.020	0.018	0.018	0.018	0.026	0.022
	[0.005]***	[0.007]***	[0.007]**	[0.006]***	[0.006]***	[0.008]***	[0.008]***
DK/RF	0.111	0.011	0.009	0.120	0.121	0.033	0.035
	[0.061]*	[0.050]	[0.050]	[0.068]*	[0.068]*	[0.074]	[0.074]
Has difficulty using the phone	0.036	0.055	0.055	0.037	0.037	0.057	0.057
	[0.011]***	[0.018]***	[0.018]***	[0.013]***	[0.013]***	[0.018]***	[0.018]***
Don't do	0.050	-0.027	-0.031	0.036	0.036	-0.047	-0.047
	[0.034]	[0.033]	[0.033]	[0.042]	[0.042]	[0.029]	[0.028]*
DK/RF	-0.103	-0.020	-0.018	-0.136	-0.135	-0.065	-0.057
	[0.091]	[0.018]	[0.020]	[0.128]	[0.130]	[0.024]***	[0.023]**
Has difficulty with money	0.087	0.073	0.071	0.097	0.097	0.072	0.071
	[0.010]***	[0.016]***	[0.016]***	[0.012]***	[0.012]***	[0.017]***	[0.017]***
Don't do	0.042	0.038	0.038	0.045	0.044	0.041	0.040
	[0.007]***	[0.011]***	[0.011]***	[0.009]***	[0.009]***	[0.012]***	[0.012]***
DK/RF	0.052	0.292	0.293	0.116	0.117	0.153	0.132
	[0.092]	[0.244]	[0.246]	[0.152]	[0.153]	[0.168]	[0.174]
Has difficulty with medications	0.043	0.057	0.057	0.040	0.040	0.056	0.056
	[0.014]***	[0.021]***	[0.021]***	[0.016]**	[0.016]**	[0.023]**	[0.023]**
Don't do	-0.002	0.078	0.080	0.037	0.038	0.019	0.022

Negative affect							0.006
							[0.004]
DK/RF							0.058
							[0.025]**
Life satisfaction scale							0.001
							[0.001]
DK/RF							0.012
							[0.025]
Hobby activity scale							-0.004
							[0.001]***
DK/RF							0.039
							[0.030]
Novel information activity scale							-0.004
							[0.001]***
DK/RF							0.004
							[0.023]
Not at all satisfied with health							ref.
Not very satisfied							0.014
							[0.012]
Somewhat satisfied							0.021
							[0.012]*
Very satisfied							0.022
							[0.012]*
Completely satisfied							0.029
							[0.013]**
DK/RF							0.032
							[0.019]
Constant	-0.008	0.008	0.064	-0.008	-0.009	-0.004	-0.001
	[0.010]	[0.016]	[0.026]**	[0.012]	[0.012]	[0.018]	[0.030]
R squared	0.110	0.101	0.106	0.102	0.102	0.130	0.135
N	40,998	16,661	16,661	30,648	30,648	14,410	14,410

Table A.3. Multivariate models of 4-year dementia incidence, specification 1.

	[1]	[2]	[3]	[4]	[5]	[6]
	Demog	+ SES	+ Behav	+ Health	+ Func	+ Cog
Agemod next wave	0.022	0.018	0.015	0.020	0.017	0.003
	[0.034]	[0.034]	[0.033]	[0.033]	[0.032]	[0.031]
Agemod squared	-0.007	-0.006	-0.007	-0.011	-0.008	-0.008
	[0.026]	[0.026]	[0.025]	[0.025]	[0.024]	[0.024]
Agemod cube	0.013	0.013	0.012	0.013	0.012	0.011
	[0.006]**	[0.006]**	[0.006]**	[0.006]**	[0.005]**	[0.005]**
Female	0.003	-0.005	-0.005	-0.002	-0.001	0.012
	[0.004]	[0.004]	[0.004]	[0.004]	[0.004]	[0.004]***
Non-Hispanic White	ref.	ref.	ref.	ref.	ref.	ref.
Non-Hispanic Black	0.017	0.008	0.006	0.005	-0.001	-0.027
	[0.006]***	[0.006]	[0.006]	[0.006]	[0.006]	[0.006]***
Non-Hispanic other	0.004	-0.001	-0.011	-0.011	-0.008	-0.021

	[0.011]	[0.011]	[0.011]	[0.011]	[0.011]	[0.011]**
Hispanic	0.024	-0.007	-0.007	-0.014	-0.015	-0.027
	[0.008]***	[0.008]	[0.008]	[0.008]*	[0.008]*	[0.008]***
Married	ref.	ref.	ref.	ref.	ref.	ref.
Separated/divorced	0.011	0.008	0.005	-0.005	-0.001	-0.001
	[0.006]*	[0.006]	[0.006]	[0.006]	[0.006]	[0.005]
Widowed	0.004	0.000	0.000	-0.006	-0.003	-0.002
	[0.005]	[0.005]	[0.005]	[0.005]	[0.005]	[0.004]
Never married	0.000	-0.001	-0.006	-0.012	-0.010	-0.012
	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]	[0.009]
Birthplace in New England	ref.	ref.	ref.	ref.	ref.	ref.
Mid atlantic	-0.001	0.000	0.000	0.000	-0.001	0.004
	[0.009]	[0.009]	[0.009]	[0.008]	[0.008]	[0.008]
East north central	0.002	0.004	0.002	0.003	0.004	0.005
	[0.008]	[0.008]	[0.008]	[0.008]	[0.008]	[0.008]
West north central	0.001	0.003	0.004	0.006	0.005	0.006
	[0.009]	[0.009]	[0.009]	[0.009]	[0.009]	[0.008]
South atlantic	0.027	0.024	0.020	0.018	0.016	0.012
	[0.009]***	[0.009]***	[0.009]**	[0.009]**	[0.009]*	[0.008]
East south central	0.031	0.027	0.022	0.019	0.021	0.014
	[0.010]***	[0.010]***	[0.010]**	[0.010]*	[0.010]**	[0.009]
West south central	0.027	0.025	0.020	0.017	0.018	0.012
	[0.010]***	[0.010]***	[0.010]**	[0.009]*	[0.009]*	[0.009]
Mountain	0.008	0.014	0.013	0.011	0.009	0.004
	[0.012]	[0.012]	[0.012]	[0.012]	[0.011]	[0.011]
Pacific	0.013	0.017	0.019	0.018	0.016	0.013
	[0.010]	[0.010]*	[0.010]*	[0.010]*	[0.010]	[0.009]
Not US	0.010	0.003	0.002	-0.002	-0.003	-0.001
	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]	[0.009]
Years of education		-0.004	-0.003	-0.001	0.000	0.006
		[0.001]***	[0.001]***	[0.001]*	[0.001]	[0.001]***
Has private health insurance		-0.010	-0.009	-0.006	-0.006	0.001
		[0.003]***	[0.003]***	[0.003]*	[0.003]*	[0.003]
On Medicaid		0.030	0.021	0.009	0.006	-0.005
		[0.008]***	[0.008]***	[0.008]	[0.008]	[0.008]
DK/RF		0.154	0.143	0.136	0.119	0.086
		[0.034]***	[0.034]***	[0.033]***	[0.032]***	[0.031]***
White-collar high skilled		ref.	ref.	ref.	ref.	ref.
White-collar low skilled		-0.005	-0.006	-0.005	-0.003	-0.001
		[0.005]	[0.005]	[0.005]	[0.004]	[0.004]
Blue-collar high skilled		-0.005	-0.004	-0.004	-0.006	-0.015
		[0.006]	[0.006]	[0.006]	[0.006]	[0.006]**
Blue-collar low skilled		-0.005	-0.005	-0.007	-0.008	-0.020
		[0.006]	[0.005]	[0.005]	[0.005]	[0.005]***
Never worked		0.016	0.013	0.011	0.007	-0.004
		[0.015]	[0.015]	[0.014]	[0.014]	[0.014]
DK/RF		0.002	0.001	0.003	0.002	0.001
		[0.009]	[0.009]	[0.009]	[0.009]	[0.008]
Decades worked		-0.005	-0.004	-0.002	-0.001	0.001

	[0.002]***	[0.002]***	[0.002]	[0.001]	[0.001]
BMI<=25	ref.	ref.	ref.	ref.	ref.
25<BMI<=30	-0.022	-0.021	-0.019	-0.015	
	[0.004]***	[0.004]***	[0.004]***	[0.004]***	
30<BMI<=35	-0.027	-0.029	-0.027	-0.021	
	[0.005]***	[0.005]***	[0.005]***	[0.005]***	
35<BMI	-0.032	-0.039	-0.038	-0.032	
	[0.006]***	[0.006]***	[0.006]***	[0.006]***	
Never drinks	ref.	ref.	ref.	ref.	
1 drink per occasion	-0.016	-0.010	-0.008	-0.007	
	[0.004]***	[0.004]**	[0.004]**	[0.004]*	
2 drinks per occasion	-0.013	-0.005	-0.004	-0.003	
	[0.004]***	[0.004]	[0.004]	[0.004]	
3 drinks per occasion	-0.011	-0.005	-0.004	-0.003	
	[0.007]	[0.007]	[0.006]	[0.006]	
4 drinks per occasion	-0.026	-0.021	-0.016	-0.010	
	[0.010]***	[0.010]**	[0.010]	[0.010]	
5+ drinks per occasion	-0.026	-0.019	-0.016	-0.009	
	[0.011]**	[0.011]*	[0.011]	[0.011]	
Moderate physical activity daily	ref.	ref.	ref.	ref.	
>1 per week	0.005	0.005	0.006	0.008	
	[0.005]	[0.005]	[0.005]	[0.005]*	
1 per week	0.012	0.010	0.011	0.010	
	[0.006]**	[0.006]*	[0.006]**	[0.005]*	
1-3 per mon	0.003	-0.001	0.003	0.004	
	[0.006]	[0.006]	[0.006]	[0.006]	
Never	0.041	0.022	0.017	0.016	
	[0.007]***	[0.006]***	[0.006]***	[0.006]**	
DK/RF	0.047	0.051	0.060	0.053	
	[0.070]	[0.067]	[0.065]	[0.062]	
Light physical activity daily	ref.	ref.	ref.	ref.	
>1 per week	0.000	0.001	0.000	0.000	
	[0.005]	[0.005]	[0.005]	[0.004]	
1 per week	-0.001	-0.002	-0.003	-0.006	
	[0.005]	[0.005]	[0.005]	[0.005]	
1-3 per mon	0.014	0.010	0.005	0.001	
	[0.007]*	[0.007]	[0.007]	[0.007]	
Never	0.071	0.051	0.028	0.019	
	[0.009]***	[0.009]***	[0.009]***	[0.008]**	
DK/RF	0.160	0.155	0.155	0.115	
	[0.086]*	[0.085]*	[0.083]*	[0.080]	
Hospital nights		0.000	0.000	0.000	
		[0.000]	[0.000]	[0.000]	
Nursing home nights		0.000	0.000	0.000	
		[0.000]**	[0.000]	[0.000]	
Health excellent		ref.	ref.	ref.	
Very good		0.004	0.004	0.004	
		[0.004]	[0.004]	[0.004]	
Good		0.015	0.017	0.015	

	[0.005]***	[0.005]***	[0.005]***
Fair	0.050	0.045	0.036
	[0.007]***	[0.007]***	[0.006]***
Poor	0.127	0.107	0.087
	[0.013]***	[0.013]***	[0.012]***
DK/RF	0.025	0.024	0.002
	[0.065]	[0.062]	[0.068]
Has hypertension	-0.006	-0.005	-0.006
	[0.004]	[0.003]	[0.003]*
Diabetes	0.007	0.005	0.002
	[0.004]	[0.004]	[0.004]
Cancer	-0.004	-0.003	-0.002
	[0.005]	[0.005]	[0.004]
Lung disease	-0.008	-0.010	-0.006
	[0.006]	[0.006]	[0.006]
Heart disease	-0.005	-0.004	-0.003
	[0.004]	[0.004]	[0.004]
Stroke	0.034	0.026	0.019
	[0.008]***	[0.008]***	[0.008]**
Psychiatric problems	0.022	0.013	0.008
	[0.006]***	[0.006]**	[0.006]
Arthritis	0.001	0.001	0.002
	[0.004]	[0.004]	[0.003]
Has work-limiting health problems	-0.007	-0.015	-0.012
	[0.004]*	[0.004]***	[0.004]***
Not working	0.013	0.005	0.008
	[0.007]*	[0.007]	[0.007]
DK/RF	-0.018	-0.019	-0.019
	[0.017]	[0.017]	[0.017]
Experiences no pain	ref.	ref.	ref.
Mild pain	-0.003	-0.002	-0.001
	[0.005]	[0.005]	[0.005]
Moderate pain	-0.006	-0.008	-0.005
	[0.004]	[0.004]*	[0.004]
Severe pain	-0.005	-0.015	-0.012
	[0.010]	[0.010]	[0.009]
DK/RF	-0.015	-0.018	-0.029
	[0.025]	[0.025]	[0.025]
Visited dentist	-0.009	-0.009	-0.002
	[0.004]**	[0.004]**	[0.004]
DK/RF	0.101	0.096	0.078
	[0.077]	[0.080]	[0.072]
Received home care	0.013	0.004	0.002
	[0.007]*	[0.007]	[0.007]
DK/RF	0.080	0.094	0.103
	[0.114]	[0.122]	[0.114]
CESD depression score	0.007	0.004	0.002
	[0.001]***	[0.001]***	[0.001]
Has restless sleep	-0.014	-0.012	-0.009

DK/RF	[0.004]*** 0.062 [0.087]	[0.004]*** 0.016 [0.086]	[0.004]** 0.021 [0.086]
Has difficulty walking across room		0.034	0.031
Don't do		[0.013]*** -0.301	[0.012]** -0.321
DK/RF		[0.112]*** 0.451	[0.135]** 0.422
Has difficulty dressing		[0.210]** -0.004	[0.231]* -0.004
Don't do		[0.008] -0.224	[0.008] -0.352
DK/RF		[0.152] -0.131	[0.151]** -0.154
Has difficulty bathing		[0.045]*** 0.034	[0.041]*** 0.034
Don't do		[0.013]*** 0.071	[0.013]*** 0.081
DK/RF		[0.113] 0.452	[0.113] 0.427
Has difficulty eating		[0.288] -0.003	[0.256]* 0.000
Don't do		[0.020] 0.086	[0.019] 0.071
DK/RF		[0.195] -0.299	[0.168] -0.276
Has difficulty getting out of bed		[0.150]** -0.004	[0.155]* -0.004
Don't do		[0.012] 0.041	[0.012] 0.070
DK/RF		[0.117] -0.299	[0.112] -0.276
Has difficulty using the toilet		[0.150]** -0.005	[0.155]* -0.003
Don't do		[0.010] 0.049	[0.010] 0.074
DK/RF		[0.196] 0.452	[0.206] 0.376
Has difficulty using the map		[0.256]* 0.015	[0.278] 0.003
Don't do		[0.006]*** 0.024	[0.006] 0.014
DK/RF		[0.007]*** 0.226	[0.007]** 0.182
Has difficulty using the phone		[0.100]** 0.051	[0.098]* 0.040
Don't do		[0.017]*** 0.088	[0.016]** 0.077
DK/RF		[0.053]* -0.113	[0.050] -0.046
		[0.028]***	[0.029]

Has difficulty with money					0.112	0.090
					[0.016]***	[0.015]***
Don't do					0.064	0.050
					[0.012]***	[0.011]***
DK/RF					-0.021	-0.082
					[0.175]	[0.172]
Has difficulty with medications					0.056	0.051
					[0.020]***	[0.019]***
Don't do					-0.030	-0.044
					[0.056]	[0.061]
DK/RF					0.007	0.010
					[0.013]	[0.013]
Has difficulty shopping					0.033	0.038
					[0.012]***	[0.011]***
Don't do					0.059	0.052
					[0.017]***	[0.016]***
DK/RF					-0.042	-0.024
					[0.023]*	[0.025]
Has difficulty preparing meals					0.037	0.036
					[0.016]**	[0.015]**
Don't do					0.029	0.027
					[0.011]**	[0.011]**
DK/RF					-0.158	-0.208
					[0.042]***	[0.039]***
Memory excellent						ref.
Very good						0.013
						[0.007]*
Good						0.009
						[0.007]
Fair						0.021
						[0.008]***
Poor						0.064
						[0.013]***
Immediate word recall						-0.012
						[0.001]***
Delayed word recall						-0.012
						[0.001]***
Serial 7s						-0.014
						[0.001]***
Knows the year						-0.144
						[0.017]***
Knows the president						-0.104
						[0.018]***
Knows the vice president						-0.024
						[0.004]***
Constant	-0.019	0.067	0.066	0.021	-0.001	0.351
	[0.014]	[0.020]***	[0.021]***	[0.021]	[0.021]	[0.033]***

R squared	0.090	0.099	0.113	0.134	0.159	0.206
N	29,643	29,643	29,643	29,643	29,643	29,643

Table A.4. Multivariate models of 4-year dementia incidence, specification 2.

	[1]	[2a]	[2b]	[3a]	[3b]	[4a]	[4b]
	Baseline	Physical measures		Genes		Psychosocial	
Age (decades after 65)	0.017	0.035	0.022	0.028	0.027	0.039	0.038
	[0.032]	[0.046]	[0.045]	[0.037]	[0.037]	[0.045]	[0.045]
Age squared	-0.008	-0.023	-0.020	-0.016	-0.016	-0.027	-0.028
	[0.024]	[0.035]	[0.035]	[0.028]	[0.028]	[0.034]	[0.034]
Age cube	0.012	0.014	0.013	0.013	0.013	0.016	0.016
	[0.005]**	[0.008]*	[0.008]*	[0.006]**	[0.006]**	[0.008]**	[0.008]**
Female	-0.001	-0.001	-0.020	-0.001	-0.001	-0.005	-0.001
	[0.004]	[0.005]	[0.008]**	[0.005]	[0.005]	[0.006]	[0.006]
Non-Hispanic White	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Non-Hispanic Black	-0.001	-0.001	-0.008	-0.003	-0.003	0.002	0.000
	[0.006]	[0.007]	[0.007]	[0.007]	[0.007]	[0.008]	[0.008]
Non-Hispanic other	-0.008	-0.012	-0.014	-	-	-0.010	-0.014
	[0.011]	[0.014]	[0.013]			[0.015]	[0.015]
Hispanic	-0.015	-0.006	-0.007	-	-	-0.017	-0.018
	[0.008]*	[0.010]	[0.010]			[0.011]	[0.011]*
Married	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Separated/divorced	-0.001	0.008	0.007	-0.005	-0.005	-0.003	-0.003
	[0.006]	[0.007]	[0.007]	[0.006]	[0.006]	[0.007]	[0.008]
Widowed	-0.003	-0.001	-0.002	-0.003	-0.003	-0.001	-0.001
	[0.005]	[0.006]	[0.006]	[0.005]	[0.005]	[0.006]	[0.007]
Never married	-0.010	-0.013	-0.017	-0.008	-0.008	-0.007	-0.008
	[0.010]	[0.011]	[0.011]	[0.012]	[0.012]	[0.012]	[0.012]
Birthplace in New England	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Mid atlantic	-0.001	0.001	0.000	0.000	-0.001	-0.001	-0.002
	[0.008]	[0.010]	[0.010]	[0.009]	[0.009]	[0.012]	[0.011]
East north central	0.004	0.005	0.004	0.003	0.004	0.003	0.002
	[0.008]	[0.010]	[0.010]	[0.009]	[0.009]	[0.011]	[0.011]
West north central	0.005	0.011	0.013	0.006	0.007	0.004	0.001
	[0.009]	[0.011]	[0.011]	[0.009]	[0.009]	[0.012]	[0.012]
South atlantic	0.016	0.009	0.007	0.010	0.010	0.009	0.007
	[0.009]*	[0.011]	[0.011]	[0.009]	[0.009]	[0.012]	[0.012]
East south central	0.021	0.016	0.014	0.018	0.018	0.015	0.013
	[0.010]**	[0.012]	[0.012]	[0.010]*	[0.010]*	[0.013]	[0.013]
West south central	0.018	0.016	0.016	0.018	0.018	0.011	0.007
	[0.009]*	[0.011]	[0.011]	[0.010]*	[0.010]*	[0.013]	[0.013]
Mountain	0.009	0.012	0.013	-0.003	-0.002	0.011	0.010
	[0.011]	[0.014]	[0.014]	[0.013]	[0.013]	[0.016]	[0.016]
Pacific	0.016	0.009	0.012	0.017	0.018	0.008	0.007
	[0.010]	[0.012]	[0.012]	[0.011]	[0.011]	[0.013]	[0.013]

Not US	-0.003 [0.010]	0.003 [0.012]	0.003 [0.012]	0.011 [0.012]	0.011 [0.012]	0.002 [0.013]	0.000 [0.013]
Years of education	0.000 [0.001]	0.000 [0.001]	0.000 [0.001]	0.000 [0.001]	0.000 [0.001]	0.001 [0.001]	0.002 [0.001]
Has private health insurance	-0.006 [0.003]*	-0.004 [0.004]	-0.004 [0.004]	-0.005 [0.004]	-0.005 [0.004]	-0.009 [0.005]*	-0.010 [0.005]**
On Medicaid	0.006 [0.008]	0.006 [0.012]	0.001 [0.012]	0.010 [0.011]	0.010 [0.011]	-0.006 [0.012]	-0.009 [0.012]
DK/RF	0.119 [0.032]***	0.126 [0.053]**	0.130 [0.053]**	0.127 [0.038]***	0.127 [0.038]***	0.164 [0.060]***	0.159 [0.059]***
White-collar high skilled	ref.	ref.	ref.	ref.	ref.	ref.	ref.
White-collar low skilled	-0.003 [0.004]	0.000 [0.005]	-0.001 [0.005]	-0.003 [0.005]	-0.003 [0.005]	-0.011 [0.006]*	-0.012 [0.006]**
Blue-collar high skilled	-0.006 [0.006]	-0.003 [0.008]	-0.003 [0.008]	-0.009 [0.007]	-0.009 [0.007]	-0.003 [0.009]	-0.005 [0.009]
Blue-collar low skilled	-0.008 [0.005]	-0.008 [0.006]	-0.009 [0.006]	-0.007 [0.006]	-0.007 [0.006]	-0.008 [0.007]	-0.011 [0.007]
Never worked	0.007 [0.014]	0.021 [0.017]	0.021 [0.017]	0.011 [0.017]	0.012 [0.017]	0.010 [0.020]	0.006 [0.020]
DK/RF	0.002 [0.009]	-0.003 [0.010]	-0.004 [0.010]	0.000 [0.009]	0.000 [0.009]	-0.002 [0.012]	-0.004 [0.012]
Decades worked	-0.001 [0.001]	0.000 [0.002]	0.000 [0.002]	-0.001 [0.002]	0.000 [0.002]	-0.001 [0.002]	-0.001 [0.002]
BMI≤25	ref.	ref.	ref.	ref.	ref.	ref.	ref.
25<BMI≤30	-0.019 [0.004]***	-0.016 [0.005]***	-0.016 [0.005]***	-0.015 [0.005]***	-0.015 [0.005]***	-0.012 [0.006]**	-0.012 [0.006]*
30<BMI≤35	-0.027 [0.005]***	-0.028 [0.006]***	-0.027 [0.006]***	-0.025 [0.005]***	-0.025 [0.005]***	-0.020 [0.006]***	-0.019 [0.006]***
35<BMI	-0.038 [0.006]***	-0.042 [0.007]***	-0.043 [0.007]***	-0.036 [0.006]***	-0.036 [0.006]***	-0.031 [0.008]***	-0.029 [0.008]***
Never drinks	ref.	ref.	ref.	ref.	ref.	ref.	ref.
1 drink per occasion	-0.008 [0.004]**	-0.013 [0.005]**	-0.011 [0.005]**	-0.008 [0.004]*	-0.008 [0.004]*	-0.016 [0.005]***	-0.015 [0.005]***
2 drinks per occasion	-0.004 [0.004]	0.001 [0.006]	0.002 [0.006]	-0.002 [0.005]	-0.002 [0.005]	-0.002 [0.007]	-0.004 [0.006]
3 drinks per occasion	-0.004 [0.006]	-0.012 [0.009]	-0.015 [0.009]*	-0.008 [0.006]	-0.008 [0.006]	-0.002 [0.010]	-0.004 [0.010]
4 drinks per occasion	-0.016 [0.010]	-0.021 [0.010]**	-0.024 [0.010]**	-0.009 [0.012]	-0.009 [0.012]	-0.019 [0.011]*	-0.021 [0.012]*
5+ drinks per occasion	-0.016 [0.011]	-0.016 [0.015]	-0.018 [0.015]	-0.007 [0.015]	-0.007 [0.015]	-0.010 [0.017]	-0.009 [0.017]
Moderate physical activity daily	ref.	ref.	ref.	ref.	ref.	ref.	ref.
>1 per week	0.006 [0.005]	0.013 [0.007]*	0.013 [0.007]*	0.005 [0.005]	0.005 [0.005]	0.010 [0.008]	0.011 [0.008]
1 per week	0.011 [0.006]**	0.017 [0.008]**	0.015 [0.008]**	0.014 [0.006]**	0.014 [0.006]**	0.007 [0.009]	0.008 [0.009]
1-3 per mon	0.003 [0.006]	0.008 [0.009]	0.007 [0.009]	0.005 [0.007]	0.005 [0.007]	0.008 [0.010]	0.009 [0.010]
Never	0.017	0.016	0.012	0.016	0.016	0.013	0.013

	[0.006]***	[0.009]*	[0.009]	[0.007]**	[0.007]**	[0.010]	[0.010]
DK/RF	0.060	0.319	0.305	0.005	0.004	0.123	0.125
	[0.065]	[0.171]*	[0.164]*	[0.060]	[0.060]	[0.160]	[0.159]
Light physical activity daily	ref.	ref.	ref.	ref.	ref.	ref.	ref.
>1 per week	0.000	-0.002	-0.004	-0.001	-0.002	-0.002	-0.002
	[0.005]	[0.007]	[0.007]	[0.005]	[0.005]	[0.007]	[0.007]
1 per week	-0.003	-0.012	-0.015	-0.008	-0.009	-0.006	-0.007
	[0.005]	[0.007]	[0.007]**	[0.006]	[0.006]	[0.008]	[0.008]
1-3 per mon	0.005	0.007	0.003	-0.002	-0.002	0.008	0.006
	[0.007]	[0.011]	[0.011]	[0.008]	[0.008]	[0.012]	[0.012]
Never	0.028	0.016	0.007	0.023	0.023	0.014	0.011
	[0.009]***	[0.012]	[0.012]	[0.010]**	[0.010]**	[0.014]	[0.014]
DK/RF	0.155	-0.093	-0.117	0.027	0.029	-0.117	-0.120
	[0.083]*	[0.037]**	[0.047]**	[0.078]	[0.079]	[0.057]**	[0.062]*
Hospital nights	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.001]	[0.000]
Nursing home nights	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Health excellent	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Very good	0.004	0.001	0.000	0.007	0.007	0.011	0.013
	[0.004]	[0.006]	[0.006]	[0.004]	[0.004]	[0.006]*	[0.006]**
Good	0.017	0.006	0.003	0.019	0.019	0.017	0.021
	[0.005]***	[0.007]	[0.007]	[0.005]***	[0.005]***	[0.007]**	[0.008]**
Fair	0.045	0.029	0.023	0.046	0.046	0.037	0.040
	[0.007]***	[0.009]***	[0.009]**	[0.008]***	[0.008]***	[0.010]***	[0.011]***
Poor	0.107	0.098	0.087	0.119	0.119	0.102	0.106
	[0.013]***	[0.019]***	[0.019]***	[0.015]***	[0.015]***	[0.020]***	[0.021]***
DK/RF	0.024	0.012	0.007	0.105	0.104	-0.111	-0.093
	[0.062]	[0.153]	[0.153]	[0.098]	[0.099]	[0.055]**	[0.050]*
Has hypertension	-0.005	-0.001	-0.001	-0.007	-0.007	-0.010	-0.010
	[0.003]	[0.004]	[0.004]	[0.004]*	[0.004]*	[0.005]**	[0.005]**
Diabetes	0.005	0.017	0.016	0.005	0.005	0.011	0.011
	[0.004]	[0.006]***	[0.006]***	[0.005]	[0.005]	[0.006]*	[0.006]*
Cancer	-0.003	-0.002	-0.002	0.001	0.001	-0.003	-0.002
	[0.005]	[0.006]	[0.006]	[0.005]	[0.005]	[0.006]	[0.006]
Lung disease	-0.010	-0.015	-0.020	-0.009	-0.009	-0.009	-0.009
	[0.006]	[0.008]*	[0.008]**	[0.007]	[0.007]	[0.008]	[0.008]
Heart disease	-0.004	-0.002	-0.002	-0.005	-0.005	-0.012	-0.011
	[0.004]	[0.005]	[0.005]	[0.004]	[0.004]	[0.006]**	[0.006]*
Stroke	0.026	0.015	0.011	0.023	0.023	0.026	0.025
	[0.008]***	[0.010]	[0.010]	[0.009]***	[0.009]**	[0.011]**	[0.011]**
Psychiatric problems	0.013	0.007	0.007	0.013	0.013	0.010	0.007
	[0.006]**	[0.007]	[0.007]	[0.007]*	[0.007]*	[0.008]	[0.008]
Arthritis	0.001	-0.001	-0.001	-0.002	-0.002	-0.005	-0.005
	[0.004]	[0.005]	[0.004]	[0.004]	[0.004]	[0.005]	[0.005]
Has work-limiting health							
problems	-0.015	-0.008	-0.010	-0.014	-0.013	-0.019	-0.018
	[0.004]***	[0.006]	[0.006]*	[0.004]***	[0.004]***	[0.006]***	[0.006]***
Not working	0.005	-0.005	-0.008	-0.002	-0.002	-0.018	-0.017
	[0.007]	[0.010]	[0.010]	[0.008]	[0.008]	[0.011]	[0.011]

DK/RF	-0.019	-0.014	-0.011	-0.001	-0.002	0.010	0.008
	[0.017]	[0.026]	[0.025]	[0.022]	[0.022]	[0.033]	[0.033]
Experiences no pain	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Mild pain	-0.002	-0.002	-0.001	-0.005	-0.005	-0.003	-0.002
	[0.005]	[0.007]	[0.007]	[0.005]	[0.005]	[0.007]	[0.007]
Moderate pain	-0.008	-0.010	-0.009	-0.007	-0.007	-0.003	-0.001
	[0.004]*	[0.006]	[0.006]	[0.005]	[0.005]	[0.007]	[0.007]
Severe pain	-0.015	-0.013	-0.016	-0.028	-0.028	0.000	0.002
	[0.010]	[0.013]	[0.013]	[0.011]**	[0.011]**	[0.015]	[0.015]
DK/RF	-0.018	-0.013	-0.011	-0.008	-0.008	-0.016	-0.006
	[0.025]	[0.040]	[0.039]	[0.032]	[0.032]	[0.045]	[0.045]
Visited dentist	-0.009	-0.004	-0.001	-0.009	-0.009	-0.005	-0.005
	[0.004]**	[0.005]	[0.005]	[0.004]**	[0.004]**	[0.005]	[0.005]
DK/RF	0.096	0.108	0.107	0.170	0.170	-0.089	-0.083
	[0.080]	[0.132]	[0.130]	[0.143]	[0.142]	[0.041]**	[0.045]*
Received home care	0.004	0.002	-0.001	-0.003	-0.003	0.012	0.011
	[0.007]	[0.010]	[0.010]	[0.008]	[0.008]	[0.011]	[0.011]
DK/RF	0.094	-0.042	-0.027	0.136	0.137	0.428	0.428
	[0.122]	[0.013]***	[0.013]**	[0.163]	[0.164]	[0.315]	[0.315]
CESD depression score	0.004	0.005	0.005	0.005	0.005	0.004	0.002
	[0.001]***	[0.002]***	[0.002]***	[0.002]***	[0.002]***	[0.002]*	[0.002]
Has restless sleep	-0.012	-0.011	-0.011	-0.013	-0.013	-0.002	-0.002
	[0.004]***	[0.006]*	[0.006]*	[0.005]***	[0.005]***	[0.006]	[0.006]
DK/RF	0.016	-0.128	-0.125	-0.130	-0.131	-0.041	-0.037
	[0.086]	[0.061]**	[0.064]**	[0.052]**	[0.051]**	[0.030]	[0.032]
Has difficulty walking across room	0.034	0.032	0.017	0.044	0.044	0.028	0.028
	[0.013]***	[0.019]*	[0.019]	[0.015]***	[0.015]***	[0.021]	[0.020]
Don't do	-0.301	-	-	-0.188	-0.193	-0.166	-0.153
	[0.112]***			[0.054]***	[0.054]***	[0.044]***	[0.043]***
DK/RF	0.451	0.815	0.789	0.358	0.357	0.774	0.788
	[0.210]**	[0.105]***	[0.100]***	[0.184]*	[0.181]**	[0.119]***	[0.113]***
Has difficulty dressing	-0.004	-0.003	-0.006	-0.003	-0.004	0.002	0.003
	[0.008]	[0.012]	[0.012]	[0.009]	[0.009]	[0.012]	[0.012]
Don't do	-0.224	0.023	-0.024	-0.137	-0.136	-0.058	-0.075
	[0.152]	[0.017]	[0.018]	[0.024]***	[0.024]***	[0.068]	[0.059]
DK/RF	-0.131	-0.030	-0.052	-0.112	-0.111	-	-
	[0.045]***	[0.017]*	[0.017]***	[0.020]***	[0.021]***		
Has difficulty bathing	0.034	0.024	0.020	0.028	0.029	0.028	0.030
	[0.013]***	[0.019]	[0.019]	[0.015]*	[0.015]*	[0.020]	[0.020]
Don't do	0.071	0.144	0.133	0.128	0.126	0.360	0.326
	[0.113]	[0.187]	[0.201]	[0.129]	[0.129]	[0.074]***	[0.079]***
DK/RF	0.452	-0.020	0.006	0.875	0.876	-0.037	-0.035
	[0.288]	[0.106]	[0.100]	[0.084]***	[0.082]***	[0.121]	[0.116]
Has difficulty eating	-0.003	0.015	0.010	0.011	0.011	0.047	0.045
	[0.020]	[0.032]	[0.031]	[0.025]	[0.025]	[0.032]	[0.032]
Don't do	0.086	-0.034	0.022	-0.151	-0.151	0.259	0.226
	[0.195]	[0.285]	[0.272]	[0.296]	[0.298]	[0.236]	[0.212]
Has difficulty getting out of bed	-0.004	0.010	0.011	-0.003	-0.003	0.035	0.035

	[0.012]	[0.018]	[0.018]	[0.015]	[0.015]	[0.019]*	[0.019]*
Don't do	0.041	0.126	0.100	0.098	0.097	0.108	0.110
	[0.117]	[0.177]	[0.187]	[0.142]	[0.142]	[0.162]	[0.161]
DK/RF	-0.299	-0.073	-0.045	-0.419	-0.415	-0.050	-0.037
	[0.150]**	[0.105]	[0.099]	[0.100]***	[0.101]***	[0.119]	[0.114]
Has difficulty using the toilet	-0.005	-0.010	-0.011	-0.006	-0.006	-0.033	-0.034
	[0.010]	[0.016]	[0.015]	[0.011]	[0.011]	[0.016]**	[0.016]**
Don't do	0.049	-	-	-0.101	-0.116	-	-
	[0.196]			[0.030]***	[0.030]***		
DK/RF	0.452	-	-	0.488	0.493	-	-
	[0.256]*			[0.228]**	[0.229]**		
Has difficulty using the map	0.015	0.011	0.009	0.020	0.019	0.026	0.022
	[0.006]***	[0.008]	[0.008]	[0.007]***	[0.007]***	[0.009]***	[0.009]**
Don't do	0.024	0.034	0.030	0.021	0.021	0.043	0.039
	[0.007]***	[0.010]***	[0.010]***	[0.008]**	[0.008]**	[0.012]***	[0.012]***
DK/RF	0.226	-0.048	-0.044	0.232	0.231	0.118	0.127
	[0.100]**	[0.020]**	[0.023]*	[0.127]*	[0.128]*	[0.134]	[0.131]
Has difficulty using the phone	0.051	0.097	0.097	0.060	0.059	0.061	0.059
	[0.017]***	[0.028]***	[0.028]***	[0.021]***	[0.021]***	[0.028]**	[0.028]**
Don't do	0.088	0.153	0.148	0.138	0.137	0.138	0.141
	[0.053]*	[0.077]**	[0.078]*	[0.069]**	[0.068]**	[0.083]*	[0.083]*
DK/RF	-0.113	-0.042	-0.030	-0.110	-0.120	-0.108	-0.098
	[0.028]***	[0.027]	[0.030]	[0.034]***	[0.036]***	[0.040]***	[0.042]**
Has difficulty with money	0.112	0.096	0.091	0.134	0.134	0.104	0.102
	[0.016]***	[0.024]***	[0.024]***	[0.019]***	[0.019]***	[0.027]***	[0.027]***
Don't do	0.064	0.062	0.061	0.068	0.068	0.065	0.064
	[0.012]***	[0.016]***	[0.016]***	[0.013]***	[0.013]***	[0.020]***	[0.020]***
DK/RF	-0.021	0.895	0.904	0.101	0.104	0.398	0.395
	[0.175]	[0.040]***	[0.040]***	[0.245]	[0.246]	[0.365]	[0.375]
Has difficulty with medications	0.056	0.039	0.039	0.057	0.057	0.052	0.054
	[0.020]***	[0.028]	[0.028]	[0.024]**	[0.024]**	[0.033]	[0.033]
Don't do	-0.030	-0.064	-0.059	-0.057	-0.056	-0.139	-0.137
	[0.056]	[0.025]**	[0.025]**	[0.069]	[0.069]	[0.058]**	[0.062]**
DK/RF	0.007	-0.034	-0.031	-0.008	-0.007	-0.014	-0.016
	[0.013]	[0.016]**	[0.016]**	[0.013]	[0.013]	[0.020]	[0.020]
Has difficulty shopping	0.033	0.043	0.036	0.034	0.034	0.038	0.039
	[0.012]***	[0.019]**	[0.018]**	[0.014]**	[0.014]**	[0.019]**	[0.019]**
Don't do	0.059	0.070	0.068	0.039	0.038	0.059	0.060
	[0.017]***	[0.024]***	[0.024]***	[0.018]**	[0.018]**	[0.028]**	[0.028]**
DK/RF	-0.042	-0.082	-0.075	-0.029	-0.025	-0.037	-0.033
	[0.023]*	[0.021]***	[0.024]***	[0.030]	[0.031]	[0.034]	[0.035]
Has difficulty preparing meals	0.037	0.023	0.022	0.042	0.042	0.015	0.013
	[0.016]**	[0.025]	[0.025]	[0.019]**	[0.019]**	[0.026]	[0.026]
Don't do	0.029	0.017	0.018	0.029	0.029	0.017	0.015
	[0.011]**	[0.016]	[0.016]	[0.012]**	[0.012]**	[0.018]	[0.017]
DK/RF	-0.158	-	-	-0.096	-0.095	-	-
	[0.042]***			[0.012]***	[0.012]***		
Breathing test			-0.007				
			[0.003]***				

RF	0.043	
	[0.020]**	
Grip strength	-0.010	
	[0.002]***	
RF	-0.017	
	[0.020]	
Timed walk test time	-0.002	
	[0.003]	
RF	-0.036	
	[0.023]	
Semi tandem balance test time	0.010	
	[0.002]***	
RF	0.000	
	[0.019]	
Alzheimer's polygenic score		0.005
		[0.002]***
Big 5 neuroticism		0.009
		[0.005]*
DK/RF		-0.012
		[0.053]
Big 5 conscientiousness		-0.017
		[0.006]***
DK/RF		0.060
		[0.054]
Loneliness		0.005
		[0.006]
DK/RF		0.049
		[0.029]*
Positive affect		0.006
		[0.004]
DK/RF		-0.023
		[0.071]
Negative affect		0.006
		[0.006]
DK/RF		0.001
		[0.072]
Life satisfaction scale		0.003
		[0.002]
DK/RF		-0.002
		[0.031]
Hobby activity scale		-0.003
		[0.002]
DK/RF		0.030
		[0.044]
Novel information activity scale		-0.003
		[0.002]
DK/RF		0.036
		[0.039]
Not at all satisfied with health		ref.

Not very satisfied							0.005
							[0.020]
Somewhat satisfied							0.004
							[0.020]
Very satisfied							0.006
							[0.020]
Completely satisfied							0.020
							[0.022]
DK/RF							0.050
							[0.033]
Constant	-0.001	-0.009	0.092	-0.004	-0.005	-0.013	-0.032
	[0.021]	[0.028]	[0.041]**	[0.024]	[0.024]	[0.030]	[0.049]
R squared	0.159	0.141	0.151	0.153	0.153	0.157	0.163
N	29,643	12,014	12,014	22,446	22,446	9,731	9,731

Table A.5. Multivariate models of dementia prevalence at age 80, specification 1.

	[1]	[2]	[3]	[4]	[5]
	Demog	+ SES	+ Behav	+ Health	+ Func
Age (decades after 80)	0.037	0.036	0.044	0.064	0.060
	[0.018]**	[0.018]**	[0.018]**	[0.018]***	[0.018]***
Female	0.014	-0.005	-0.005	-0.004	-0.002
	[0.008]*	[0.009]	[0.009]	[0.009]	[0.009]
Non-Hispanic White	ref.	ref.	ref.	ref.	ref.
Non-Hispanic Black	0.036	0.017	0.010	0.003	-0.001
	[0.012]***	[0.013]	[0.013]	[0.014]	[0.014]
Non-Hispanic other	-0.016	-0.021	-0.024	-0.024	-0.027
	[0.029]	[0.027]	[0.027]	[0.026]	[0.025]
Hispanic	0.045	-0.033	-0.035	-0.039	-0.040
	[0.016]***	[0.017]*	[0.017]**	[0.016]**	[0.016]**
Married	ref.	ref.	ref.	ref.	ref.
Separated/divorced	0.009	-0.003	-0.002	-0.009	-0.008
	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]
Widowed	0.021	0.009	0.008	0.004	0.002
	[0.014]	[0.015]	[0.015]	[0.015]	[0.014]
Never married	-0.006	-0.016	-0.015	-0.009	-0.008
	[0.022]	[0.019]	[0.019]	[0.019]	[0.019]
Birthplace in New England	ref.	ref.	ref.	ref.	ref.
Mid atlantic	-0.002	0.002	0.002	0.009	0.009
	[0.021]	[0.017]	[0.017]	[0.017]	[0.017]
East north central	-0.007	-0.004	-0.004	0.002	0.002
	[0.021]	[0.017]	[0.017]	[0.017]	[0.017]
West north central	0.004	0.008	0.009	0.015	0.014
	[0.021]	[0.018]	[0.018]	[0.018]	[0.018]
South atlantic	0.062	0.051	0.053	0.051	0.050
	[0.021]***	[0.019]***	[0.019]***	[0.018]***	[0.018]***

East south central	0.074	0.056	0.059	0.052	0.052
	[0.022]***	[0.021]***	[0.021]***	[0.020]**	[0.020]**
West south central	0.046	0.040	0.042	0.039	0.039
	[0.022]**	[0.020]**	[0.020]**	[0.020]**	[0.020]**
Mountain	-0.011	0.007	0.010	0.013	0.011
	[0.027]	[0.023]	[0.023]	[0.022]	[0.022]
Pacific	0.012	0.027	0.028	0.035	0.034
	[0.025]	[0.022]	[0.022]	[0.022]	[0.022]
Not US	0.031	0.014	0.019	0.017	0.017
	[0.023]	[0.020]	[0.020]	[0.020]	[0.020]
Years of education		-0.010	-0.009	-0.007	-0.006
		[0.002]***	[0.002]***	[0.002]***	[0.002]***
Has private health insurance		-0.043	-0.041	-0.028	-0.027
		[0.013]***	[0.013]***	[0.013]**	[0.013]**
On Medicaid		0.112	0.107	0.059	0.051
		[0.027]***	[0.027]***	[0.027]**	[0.026]*
DK/RF		0.085	0.088	0.094	0.084
		[0.089]	[0.088]	[0.087]	[0.086]
White-collar high skilled		ref.	ref.	ref.	ref.
White-collar low skilled		-0.032	-0.031	-0.031	-0.031
		[0.010]***	[0.010]***	[0.010]***	[0.010]***
Blue-collar high skilled		-0.005	-0.007	-0.009	-0.008
		[0.013]	[0.013]	[0.013]	[0.013]
Blue-collar low skilled		-0.009	-0.009	-0.011	-0.012
		[0.012]	[0.012]	[0.012]	[0.012]
Never worked		0.016	0.015	0.011	0.008
		[0.029]	[0.029]	[0.029]	[0.029]
DK/RF		0.011	0.010	0.006	0.006
		[0.018]	[0.018]	[0.017]	[0.017]
Decades worked		-0.013	-0.014	-0.011	-0.010
		[0.004]***	[0.004]***	[0.004]***	[0.004]***
BMI<=25			ref.	ref.	ref.
25<BMI<=30			0.014	0.007	0.007
			[0.009]	[0.009]	[0.009]
30<BMI<=35			0.012	-0.006	-0.002
			[0.011]	[0.011]	[0.011]
35<BMI			0.072	0.038	0.042
			[0.017]***	[0.017]**	[0.017]**
Hospital nights			0.000	0.000	
			[0.001]	[0.001]	
Nursing home nights			0.017	0.019	
			[0.003]***	[0.004]***	
Health excellent			ref.	ref.	
Very good			-0.007	-0.006	
			[0.010]	[0.010]	
Good			0.016	0.016	
			[0.011]	[0.011]	
Fair			0.050	0.052	
			[0.016]***	[0.016]***	

Poor	0.128	0.116
	[0.027]***	[0.027]***
DK/RF	-0.115	-0.115
	[0.028]***	[0.035]***
Has hypertension	0.012	0.014
	[0.008]	[0.008]*
Diabetes	0.059	0.059
	[0.016]***	[0.016]***
Cancer	0.003	0.007
	[0.017]	[0.017]
Lung disease	0.007	0.002
	[0.021]	[0.021]
Heart disease	-0.018	-0.017
	[0.013]	[0.013]
Stroke	0.096	0.090
	[0.032]***	[0.032]***
Psychiatric problems	0.034	0.028
	[0.018]*	[0.018]
Arthritis	0.006	0.007
	[0.008]	[0.008]
Has work-limiting health problems	0.009	0.006
	[0.012]	[0.012]
DK/RF	-0.022	-0.063
	[0.097]	[0.105]
Experiences no pain	ref.	ref.
Mild pain	0.004	0.003
	[0.014]	[0.014]
Moderate pain	-0.008	-0.006
	[0.012]	[0.012]
Severe pain	0.002	-0.004
	[0.023]	[0.023]
DK/RF	-0.114	-0.116
	[0.036]***	[0.041]***
Received home care	0.022	0.014
	[0.033]	[0.033]
CESD depression score	0.002	0.001
	[0.003]	[0.003]
Has restless sleep	0.002	0.002
	[0.010]	[0.010]
DK/RF	0.249	0.260
	[0.249]	[0.247]
Has difficulty walking across room		0.028
		[0.035]
Don't do		0.612
		[0.068]***
DK/RF		0.008
		[0.029]
Has difficulty dressing		-0.029
		[0.027]

DK/RF					-0.206
					[0.047]***
Has difficulty bathing					0.002
					[0.037]
DK/RF					0.236
					[0.224]
Has difficulty eating					0.080
					[0.058]
DK/RF					0.395
					[0.044]***
Has difficulty getting out of bed					-0.006
					[0.026]
Don't do					-0.139
					[0.046]***
Has difficulty using the map					0.025
					[0.013]*
Don't do					-0.009
					[0.016]
DK/RF					-0.059
					[0.084]
Has difficulty using the phone					0.106
					[0.044]**
Don't do					-0.091
					[0.177]
Has difficulty with money					0.046
					[0.031]
Don't do					0.016
					[0.035]
DK/RF					0.455
					[0.228]**
Has difficulty with medications					-0.007
					[0.038]
Don't do					0.049
					[0.028]*
DK/RF					0.016
					[0.019]
Constant	0.080	0.311	0.294	0.218	0.202
	[0.019]***	[0.035]***	[0.036]***	[0.037]***	[0.037]***
R squared	0.023	0.062	0.066	0.097	0.107
N	5,346	5,346	5,346	5,346	5,346

Table A.6. Multivariate models of dementia prevalence at age 80, specification 2.

	[1]	[2a]	[2b]	[3a]	[3b]	[4a]	[4b]
	Baseline	Drinking measures		Cognition measures		Genes	

Age (decades after 80)	0.060 [0.018]***	0.063 [0.019]***	0.063 [0.019]***	0.060 [0.019]***	0.048 [0.019]**	0.065 [0.021]***	0.066 [0.021]***
Female	-0.002 [0.009]	-0.003 [0.009]	-0.006 [0.010]	-0.003 [0.009]	0.007 [0.009]	0.002 [0.010]	0.002 [0.010]
Non-Hispanic White	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Non-Hispanic Black	-0.001 [0.014]	-0.008 [0.014]	-0.009 [0.014]	-0.008 [0.014]	-0.033 [0.014]**	0.006 [0.015]	0.008 [0.015]
Non-Hispanic other	-0.027 [0.025]	-0.021 [0.027]	-0.025 [0.027]	-0.037 [0.025]	-0.056 [0.025]**	-	-
Hispanic	-0.040 [0.016]**	-0.044 [0.017]***	-0.044 [0.017]***	-0.044 [0.017]***	-0.050 [0.017]***	-	-
Married	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Separated/divorced	-0.008 [0.012]	-0.009 [0.012]	-0.007 [0.012]	-0.008 [0.012]	-0.009 [0.012]	-0.019 [0.013]	-0.018 [0.013]
Widowed	0.002 [0.014]	0.001 [0.014]	0.001 [0.014]	0.001 [0.014]	0.001 [0.014]	0.017 [0.017]	0.017 [0.017]
Never married	-0.008 [0.019]	-0.013 [0.018]	-0.014 [0.018]	-0.012 [0.018]	-0.008 [0.018]	0.002 [0.022]	0.000 [0.022]
Birthplace in New England	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Mid atlantic	0.009 [0.017]	0.007 [0.017]	0.007 [0.017]	0.012 [0.017]	0.021 [0.017]	0.011 [0.018]	0.010 [0.018]
East north central	0.002 [0.017]	0.005 [0.017]	0.003 [0.017]	0.010 [0.017]	0.016 [0.017]	0.001 [0.017]	0.002 [0.017]
West north central	0.014 [0.018]	0.020 [0.018]	0.018 [0.018]	0.026 [0.018]	0.028 [0.018]	0.014 [0.018]	0.016 [0.018]
South atlantic	0.050 [0.018]***	0.055 [0.019]***	0.052 [0.019]***	0.061 [0.018]***	0.057 [0.018]***	0.038 [0.019]**	0.038 [0.019]**
East south central	0.052 [0.020]**	0.060 [0.021]***	0.057 [0.021]***	0.066 [0.021]***	0.067 [0.021]***	0.046 [0.021]**	0.045 [0.021]**
West south central	0.039 [0.020]**	0.037 [0.020]*	0.034 [0.020]*	0.044 [0.020]**	0.048 [0.019]**	0.034 [0.021]	0.033 [0.021]
Mountain	0.011 [0.022]	0.001 [0.023]	-0.001 [0.023]	0.007 [0.023]	0.009 [0.022]	-0.006 [0.022]	-0.004 [0.022]
Pacific	0.034 [0.022]	0.049 [0.023]**	0.049 [0.023]**	0.055 [0.023]**	0.059 [0.023]**	0.059 [0.026]**	0.058 [0.026]**
Not US	0.017 [0.020]	0.025 [0.021]	0.025 [0.020]	0.033 [0.020]	0.042 [0.020]**	0.039 [0.025]	0.039 [0.025]
Years of education	-0.006 [0.002]***	-0.006 [0.002]***	-0.006 [0.002]***	-0.006 [0.002]***	-0.001 [0.002]	-0.004 [0.002]**	-0.004 [0.002]*
Has private health insurance	-0.027 [0.013]**	-0.030 [0.014]**	-0.030 [0.014]**	-0.028 [0.014]**	-0.022 [0.013]*	-0.021 [0.015]	-0.021 [0.015]
On Medicaid	0.051 [0.026]*	0.045 [0.027]*	0.046 [0.027]*	0.049 [0.027]*	0.038 [0.026]	0.047 [0.035]	0.046 [0.035]
DK/RF	0.084 [0.086]	0.234 [0.127]*	0.234 [0.127]*	0.236 [0.127]*	0.206 [0.120]*	-0.004 [0.100]	-0.003 [0.100]
White-collar high skilled	ref.	ref.	ref.	ref.	ref.	ref.	ref.
White-collar low skilled	-0.031 [0.010]***	-0.034 [0.010]***	-0.034 [0.010]***	-0.034 [0.010]***	-0.032 [0.010]***	-0.033 [0.011]***	-0.033 [0.011]***
Blue-collar high skilled	-0.008 [0.013]	-0.001 [0.014]	0.000 [0.014]	-0.002 [0.014]	-0.011 [0.014]	-0.019 [0.015]	-0.019 [0.015]

Blue-collar low skilled	-0.012	-0.011	-0.011	-0.011	-0.025	-0.006	-0.007
	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]**	[0.013]	[0.013]
Never worked	0.008	0.015	0.016	0.013	-0.001	-0.031	-0.029
	[0.029]	[0.030]	[0.030]	[0.030]	[0.029]	[0.030]	[0.030]
DK/RF	0.006	0.003	0.002	0.000	-0.004	0.008	0.010
	[0.017]	[0.018]	[0.018]	[0.018]	[0.017]	[0.020]	[0.020]
Decades worked	-0.010	-0.009	-0.009	-0.010	-0.008	-0.005	-0.005
	[0.004]***	[0.004]**	[0.004]**	[0.004]**	[0.004]**	[0.004]	[0.004]
BMI<=25	ref.	ref.	ref.	ref.	ref.	ref.	ref.
25<BMI<=30	0.007	0.002	0.001	0.002	0.000	0.006	0.007
	[0.009]	[0.009]	[0.009]	[0.009]	[0.009]	[0.009]	[0.009]
30<BMI<=35	-0.002	-0.005	-0.007	-0.007	-0.007	0.002	0.003
	[0.011]	[0.011]	[0.011]	[0.011]	[0.011]	[0.012]	[0.012]
35<BMI	0.042	0.036	0.033	0.035	0.035	0.029	0.030
	[0.017]**	[0.018]**	[0.018]*	[0.018]**	[0.018]**	[0.018]	[0.018]
Hospital nights	0.000	0.001	0.001	0.001	0.001	0.000	0.000
	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.002]	[0.002]
Nursing home nights	0.019	0.019	0.019	0.019	0.017	0.018	0.018
	[0.004]***	[0.004]***	[0.004]***	[0.004]***	[0.004]***	[0.009]**	[0.009]**
Health excellent	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Very good	-0.006	0.000	-0.001	0.001	0.002	0.003	0.003
	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]
Good	0.016	0.017	0.016	0.018	0.022	0.023	0.023
	[0.011]	[0.011]	[0.011]	[0.011]	[0.012]*	[0.012]*	[0.012]*
Fair	0.052	0.055	0.054	0.054	0.049	0.062	0.062
	[0.016]***	[0.016]***	[0.016]***	[0.016]***	[0.016]***	[0.018]***	[0.018]***
Poor	0.116	0.111	0.110	0.109	0.086	0.110	0.108
	[0.027]***	[0.028]***	[0.028]***	[0.028]***	[0.027]***	[0.034]***	[0.034]***
DK/RF	-0.115	-0.116	-0.106	-0.114	-0.146	-	-
	[0.035]***	[0.039]***	[0.045]**	[0.038]***	[0.038]***		
Has hypertension	0.014	0.017	0.018	0.017	0.015	0.004	0.003
	[0.008]*	[0.008]**	[0.008]**	[0.008]**	[0.008]*	[0.009]	[0.009]
Diabetes	0.059	0.056	0.054	0.055	0.056	0.034	0.034
	[0.016]***	[0.017]***	[0.017]***	[0.017]***	[0.016]***	[0.018]*	[0.018]*
Cancer	0.007	0.006	0.006	0.003	0.006	0.008	0.007
	[0.017]	[0.017]	[0.017]	[0.017]	[0.017]	[0.018]	[0.018]
Lung disease	0.002	-0.015	-0.016	-0.014	-0.015	-0.014	-0.013
	[0.021]	[0.021]	[0.021]	[0.021]	[0.021]	[0.022]	[0.021]
Heart disease	-0.017	-0.020	-0.021	-0.022	-0.015	-0.017	-0.018
	[0.013]	[0.013]	[0.013]	[0.013]*	[0.012]	[0.014]	[0.014]
Stroke	0.090	0.064	0.065	0.064	0.055	0.058	0.059
	[0.032]***	[0.032]**	[0.032]**	[0.031]**	[0.031]*	[0.036]	[0.036]
Psychiatric problems	0.028	0.032	0.030	0.033	0.028	0.015	0.015
	[0.018]	[0.019]*	[0.019]	[0.019]*	[0.018]	[0.020]	[0.020]
Arthritis	0.007	0.006	0.007	0.007	0.004	0.008	0.008
	[0.008]	[0.008]	[0.008]	[0.008]	[0.008]	[0.009]	[0.009]
Has work-limiting health problems	0.006	0.011	0.011	0.012	0.016	0.010	0.012
	[0.012]	[0.013]	[0.013]	[0.013]	[0.013]	[0.013]	[0.013]
DK/RF	-0.063	-0.011	-0.014	-0.012	0.013	0.065	0.072

	[0.105]	[0.141]	[0.141]	[0.142]	[0.137]	[0.183]	[0.186]
Experiences no pain	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Mild pain	0.003	0.007	0.006	0.009	0.008	-0.004	-0.004
	[0.014]	[0.014]	[0.014]	[0.014]	[0.014]	[0.015]	[0.015]
Moderate pain	-0.006	-0.007	-0.008	-0.006	-0.003	-0.010	-0.011
	[0.012]	[0.012]	[0.012]	[0.013]	[0.012]	[0.014]	[0.014]
Severe pain	-0.004	-0.004	-0.004	-0.001	0.002	-0.002	-0.003
	[0.023]	[0.024]	[0.024]	[0.024]	[0.023]	[0.026]	[0.027]
DK/RF	-0.116	-0.118	-0.115	-0.117	-0.119	-0.066	-0.072
	[0.041]***	[0.042]***	[0.043]***	[0.044]***	[0.054]**	[0.021]***	[0.022]***
Received home care	0.014	0.024	0.024	0.017	0.014	-0.022	-0.020
	[0.033]	[0.034]	[0.034]	[0.033]	[0.032]	[0.035]	[0.035]
CESD depression score	0.001	0.002	0.002	0.002	0.000	0.001	0.001
	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]
Has restless sleep	0.002	0.003	0.003	0.001	0.002	0.002	0.001
	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]
DK/RF	0.260	0.262	0.257	0.475	0.474	0.866	0.876
	[0.247]	[0.245]	[0.246]	[0.272]*	[0.272]*	[0.060]***	[0.061]***
Has difficulty walking across room	0.028	0.040	0.038	0.032	0.029	0.060	0.057
	[0.035]	[0.037]	[0.037]	[0.037]	[0.037]	[0.041]	[0.041]
Don't do	0.612	0.606	0.600	0.594	0.597		
	[0.068]***	[0.069]***	[0.070]***	[0.069]***	[0.067]***		
DK/RF	0.008	0.030	0.028	0.035	0.039	0.014	0.013
	[0.029]	[0.035]	[0.035]	[0.036]	[0.035]	[0.037]	[0.037]
Has difficulty dressing	-0.029	-0.032	-0.032	-0.036	-0.028	-0.069	-0.071
	[0.027]	[0.027]	[0.027]	[0.027]	[0.026]	[0.029]**	[0.030]**
DK/RF	-0.206	-0.207	-0.216	-0.197	-0.134	-0.142	-0.143
	[0.047]***	[0.048]***	[0.048]***	[0.048]***	[0.049]***	[0.054]***	[0.054]***
Has difficulty bathing	0.002	-0.001	0.001	0.006	0.007	0.023	0.021
	[0.037]	[0.037]	[0.037]	[0.037]	[0.036]	[0.047]	[0.047]
DK/RF	0.236	0.230	0.227	0.232	0.230		
	[0.224]	[0.228]	[0.228]	[0.232]	[0.208]		
Has difficulty eating	0.080	0.090	0.089	0.095	0.090	0.129	0.135
	[0.058]	[0.059]	[0.059]	[0.059]	[0.058]	[0.085]	[0.085]
DK/RF	0.395	0.420	0.418	0.417	0.416	0.447	0.423
	[0.044]***	[0.045]***	[0.045]***	[0.045]***	[0.047]***	[0.049]***	[0.050]***
Has difficulty getting out of bed	-0.006	-0.003	-0.002	-0.005	-0.005	-0.003	0.000
	[0.026]	[0.027]	[0.027]	[0.027]	[0.027]	[0.032]	[0.032]
Don't do	-0.139	-0.142	-0.143	-0.139	-0.080		
	[0.046]***	[0.047]***	[0.047]***	[0.047]***	[0.047]*		
Has difficulty using the map	0.025	0.032	0.031	0.033	0.016	0.034	0.033
	[0.013]*	[0.014]**	[0.014]**	[0.014]**	[0.014]	[0.016]**	[0.015]**
Don't do	-0.009	-0.005	-0.005	-0.004	-0.009	0.023	0.022
	[0.016]	[0.017]	[0.017]	[0.017]	[0.016]	[0.021]	[0.021]
DK/RF	-0.059	0.009	0.008	0.015	0.029	-0.106	-0.116
	[0.084]	[0.102]	[0.103]	[0.103]	[0.109]	[0.061]*	[0.065]*
Has difficulty using the phone	0.106	0.091	0.090	0.079	0.066	0.102	0.101
	[0.044]**	[0.045]**	[0.045]**	[0.044]*	[0.043]	[0.053]*	[0.053]*
Don't do	-0.091	-0.099	-0.102	-0.098	-0.130	-0.027	-0.004

	[0.177]	[0.175]	[0.175]	[0.176]	[0.206]	[0.039]	[0.039]
Has difficulty with money	0.046	0.045	0.045	0.047	0.037	0.013	0.012
	[0.031]	[0.033]	[0.033]	[0.033]	[0.032]	[0.036]	[0.036]
Don't do	0.016	0.023	0.026	0.022	0.001	0.059	0.060
	[0.035]	[0.036]	[0.036]	[0.036]	[0.035]	[0.044]	[0.044]
DK/RF	0.455	0.448	0.444	0.449	0.435	0.024	0.027
	[0.228]**	[0.260]*	[0.257]*	[0.262]*	[0.251]*	[0.184]	[0.186]
Has difficulty with medications	-0.007	0.003	0.002	0.007	-0.005	0.005	0.006
	[0.038]	[0.039]	[0.039]	[0.039]	[0.038]	[0.042]	[0.042]
Don't do	0.049	0.042	0.042	0.045	0.047	0.009	0.010
	[0.028]*	[0.027]	[0.027]	[0.027]*	[0.027]*	[0.029]	[0.029]
DK/RF	0.016	0.017	0.016	0.017	0.018	-0.007	-0.006
	[0.019]	[0.018]	[0.018]	[0.018]	[0.018]	[0.018]	[0.018]
Never drinks			ref.				
1 drink per occasion			-0.006				
			[0.010]				
2 drinks per occasion			-0.027				
			[0.009]***				
3 drinks per occasion			-0.009				
			[0.017]				
4 drinks per occasion			-0.028				
			[0.024]				
5+ drinks per occasion			0.000				
			[0.033]				
Memory excellent					ref.		
Very good					0.007		
					[0.015]		
Good					-0.002		
					[0.014]		
Fair					0.000		
					[0.016]		
Poor					0.072		
					[0.029]**		
Immediate word recall					-0.006		
					[0.004]		
Delayed word recall					-0.011		
					[0.003]***		
Serial 7s					-0.022		
					[0.003]***		
Alzheimer's polygenic score							0.013
							[0.004]***
Constant	0.202	0.187	0.193	0.180	0.283	0.137	0.134
	[0.037]***	[0.039]***	[0.039]***	[0.038]***	[0.042]***	[0.044]***	[0.043]***
R squared	0.107	0.117	0.118	0.118	0.146	0.090	0.092
N	5,346	4,829	4,829	4,799	4,799	3,742	3,742

Table A.7. Multivariate models of 4-year dementia incidence, specification 1, men

	[1]	[2]	[3]	[4]	[5]	[6]
	Demog	+ SES	+ Behav	+ Health	+ Func	+ Cog
Age (decades after 65)	-0.001 [0.055]	0.000 [0.055]	0.002 [0.055]	0.007 [0.053]	0.011 [0.052]	-0.007 [0.049]
Age squared	0.003 [0.043]	0.002 [0.043]	-0.003 [0.043]	-0.008 [0.041]	-0.012 [0.040]	-0.009 [0.038]
Age cube	0.011 [0.010]	0.012 [0.010]	0.012 [0.010]	0.013 [0.009]	0.014 [0.009]	0.012 [0.009]
Non-Hispanic White	ref.	ref.	ref.	ref.	ref.	ref.
Non-Hispanic Black	0.018 [0.010]*	0.003 [0.010]	-0.001 [0.010]	0.003 [0.010]	0.000 [0.010]	-0.023 [0.010]**
Non-Hispanic other	-0.011 [0.014]	-0.015 [0.014]	-0.022 [0.014]	-0.018 [0.014]	-0.013 [0.014]	-0.017 [0.014]
Hispanic	0.005 [0.011]	-0.028 [0.013]**	-0.028 [0.013]**	-0.031 [0.012]**	-0.027 [0.012]**	-0.030 [0.012]**
Married	ref.	ref.	ref.	ref.	ref.	ref.
Separated/divorced	0.013 [0.010]	0.007 [0.010]	0.004 [0.010]	-0.002 [0.010]	0.004 [0.009]	0.003 [0.009]
Widowed	-0.002 [0.011]	-0.008 [0.011]	-0.007 [0.011]	-0.013 [0.011]	-0.004 [0.011]	-0.004 [0.010]
Never married	-0.004 [0.015]	-0.010 [0.015]	-0.017 [0.015]	-0.023 [0.015]	-0.013 [0.015]	-0.015 [0.014]
Birthplace in New England	ref.	ref.	ref.	ref.	ref.	ref.
Mid atlantic	-0.024 [0.013]*	-0.022 [0.013]*	-0.022 [0.013]*	-0.018 [0.013]	-0.021 [0.013]*	-0.017 [0.012]
East north central	-0.008 [0.013]	-0.008 [0.013]	-0.007 [0.013]	-0.004 [0.012]	-0.004 [0.013]	-0.007 [0.012]
West north central	-0.009 [0.013]	-0.009 [0.013]	-0.006 [0.013]	0.000 [0.013]	-0.003 [0.013]	-0.007 [0.013]
South atlantic	0.019 [0.014]	0.014 [0.014]	0.013 [0.014]	0.009 [0.013]	0.008 [0.013]	0.000 [0.013]
East south central	0.023 [0.016]	0.016 [0.016]	0.014 [0.015]	0.013 [0.015]	0.014 [0.015]	0.000 [0.015]
West south central	0.017 [0.015]	0.016 [0.014]	0.014 [0.014]	0.011 [0.014]	0.009 [0.014]	0.003 [0.014]
Mountain	-0.001 [0.018]	0.008 [0.018]	0.008 [0.018]	0.010 [0.018]	0.001 [0.018]	-0.005 [0.017]
Pacific	0.005 [0.016]	0.009 [0.016]	0.012 [0.016]	0.008 [0.015]	0.005 [0.015]	0.001 [0.015]
Not US	0.002 [0.015]	-0.007 [0.015]	-0.005 [0.015]	-0.002 [0.015]	-0.004 [0.015]	-0.001 [0.014]
Years of education		-0.006 [0.001]***	-0.005 [0.001]***	-0.003 [0.001]***	-0.002 [0.001]	0.004 [0.001]***
Has private health insurance		-0.014 [0.005]***	-0.013 [0.005]**	-0.011 [0.005]**	-0.012 [0.005]**	-0.007 [0.005]
On Medicaid		0.002 [0.013]	-0.004 [0.013]	-0.011 [0.013]	-0.015 [0.012]	-0.020 [0.012]*
DK/RF		0.180	0.174	0.168	0.150	0.114

	[0.052]***	[0.053]***	[0.052]***	[0.050]***	[0.048]**
White-collar high skilled	ref.	ref.	ref.	ref.	ref.
White-collar low skilled	0.005	0.004	0.003	0.004	0.006
	[0.008]	[0.008]	[0.008]	[0.008]	[0.008]
Blue-collar high skilled	-0.010	-0.009	-0.009	-0.010	-0.016
	[0.008]	[0.008]	[0.008]	[0.008]	[0.007]**
Blue-collar low skilled	-0.003	-0.004	-0.006	-0.009	-0.022
	[0.008]	[0.008]	[0.008]	[0.007]	[0.007]***
Never worked	0.013	0.011	0.013	-0.010	-0.021
	[0.041]	[0.041]	[0.039]	[0.037]	[0.035]
DK/RF	-0.011	-0.010	-0.007	-0.007	-0.008
	[0.013]	[0.012]	[0.013]	[0.012]	[0.012]
Decades worked	-0.007	-0.006	-0.002	-0.001	0.001
	[0.003]**	[0.003]**	[0.003]	[0.003]	[0.003]
BMI<=25		ref.	ref.	ref.	ref.
25<BMI<=30		-0.020	-0.019	-0.015	-0.011
		[0.007]***	[0.007]***	[0.006]**	[0.006]*
30<BMI<=35		-0.020	-0.022	-0.018	-0.014
		[0.008]***	[0.008]***	[0.008]**	[0.007]*
35<BMI		-0.032	-0.039	-0.036	-0.031
		[0.009]***	[0.009]***	[0.009]***	[0.009]***
Never drinks		ref.	ref.	ref.	ref.
1 drink per occasion		-0.017	-0.011	-0.009	-0.007
		[0.006]***	[0.006]*	[0.006]	[0.006]
2 drinks per occasion		-0.010	-0.003	-0.001	0.002
		[0.006]*	[0.006]	[0.006]	[0.006]
3 drinks per occasion		-0.007	-0.004	-0.002	-0.001
		[0.008]	[0.008]	[0.008]	[0.008]
4 drinks per occasion		-0.030	-0.026	-0.022	-0.014
		[0.010]***	[0.010]**	[0.011]**	[0.010]
5+ drinks per occasion		-0.023	-0.018	-0.013	-0.006
		[0.013]*	[0.012]	[0.012]	[0.012]
Moderate physical activity daily		ref.	ref.	ref.	ref.
>1 per week		-0.008	-0.008	-0.005	-0.002
		[0.008]	[0.007]	[0.007]	[0.007]
1 per week		-0.005	-0.008	-0.006	-0.006
		[0.009]	[0.008]	[0.008]	[0.008]
1-3 per mon		0.001	-0.006	-0.001	-0.001
		[0.010]	[0.010]	[0.010]	[0.010]
Never		0.037	0.016	0.010	0.011
		[0.011]***	[0.011]	[0.010]	[0.010]
DK/RF		0.077	0.095	0.103	0.095
		[0.123]	[0.119]	[0.120]	[0.115]
Light physical activity daily		ref.	ref.	ref.	ref.
>1 per week		0.017	0.016	0.015	0.011
		[0.008]**	[0.008]**	[0.008]*	[0.007]
1 per week		0.010	0.009	0.008	0.001
		[0.008]	[0.008]	[0.008]	[0.008]
1-3 per mon		0.016	0.012	0.008	0.001

	[0.010]	[0.010]	[0.010]	[0.010]
Never	0.050	0.037	0.020	0.008
	[0.011]***	[0.011]***	[0.011]*	[0.010]
DK/RF	0.053	0.047	0.060	0.037
	[0.080]	[0.086]	[0.089]	[0.082]
Hospital nights		0.001	0.000	0.000
		[0.000]	[0.000]	[0.000]
Nursing home nights		0.000	0.000	0.000
		[0.000]	[0.000]	[0.000]
Health excellent		ref.	ref.	ref.
Very good		0.003	0.003	0.002
		[0.006]	[0.006]	[0.006]
Good		0.012	0.013	0.008
		[0.007]	[0.007]*	[0.007]
Fair		0.046	0.041	0.031
		[0.010]***	[0.010]***	[0.010]***
Poor		0.130	0.113	0.096
		[0.021]***	[0.021]***	[0.020]***
DK/RF		-0.085	-0.066	-0.082
		[0.042]**	[0.040]*	[0.039]**
Has hypertension		-0.003	-0.004	-0.005
		[0.005]	[0.005]	[0.005]
Diabetes		-0.002	-0.001	-0.001
		[0.006]	[0.006]	[0.006]
Cancer		-0.008	-0.007	-0.004
		[0.007]	[0.006]	[0.006]
Lung disease		-0.027	-0.026	-0.020
		[0.009]***	[0.009]***	[0.009]**
Heart disease		0.000	0.001	0.002
		[0.006]	[0.006]	[0.005]
Stroke		0.034	0.026	0.017
		[0.012]***	[0.011]**	[0.011]
Psychiatric problems		0.020	0.010	0.007
		[0.011]*	[0.011]	[0.011]
Arthritis		0.005	0.004	0.003
		[0.005]	[0.005]	[0.005]
Has work-limiting health problems		0.003	-0.006	-0.002
		[0.006]	[0.006]	[0.006]
Not working		0.019	0.011	0.013
		[0.012]	[0.012]	[0.011]
DK/RF		-0.021	-0.017	-0.020
		[0.027]	[0.028]	[0.027]
Experiences no pain		ref.	ref.	ref.
Mild pain		-0.006	-0.007	-0.005
		[0.007]	[0.007]	[0.007]
Moderate pain		-0.003	-0.007	-0.007
		[0.007]	[0.007]	[0.007]
Severe pain		0.007	-0.011	-0.009
		[0.019]	[0.019]	[0.018]
DK/RF		-0.027	-0.022	-0.019

	[0.035]	[0.035]	[0.036]
Visited dentist	-0.006	-0.004	0.001
	[0.005]	[0.005]	[0.005]
DK/RF	0.052	0.039	0.046
	[0.090]	[0.100]	[0.096]
Received home care	0.001	-0.005	-0.012
	[0.011]	[0.010]	[0.010]
DK/RF	0.267	0.263	0.254
	[0.226]	[0.236]	[0.222]
CESD depression score	0.007	0.003	-0.001
	[0.003]***	[0.002]	[0.002]
Has restless sleep	-0.004	-0.002	0.003
	[0.007]	[0.007]	[0.007]
DK/RF	-0.158	-0.191	-0.184
	[0.038]***	[0.066]***	[0.058]***
Has difficulty walking across room		0.053	0.047
		[0.024]**	[0.023]**
Don't do			
DK/RF			
Has difficulty dressing		-0.003	-0.006
		[0.012]	[0.011]
Don't do		-0.111	-0.152
		[0.022]***	[0.023]***
DK/RF			
Has difficulty bathing		-0.004	0.000
		[0.024]	[0.023]
Don't do			
DK/RF		-0.205	-0.162
		[0.044]***	[0.042]***
Has difficulty eating		-0.009	-0.002
		[0.033]	[0.031]
Don't do			
Has difficulty getting out of bed		0.009	0.008
		[0.020]	[0.020]
Don't do		0.035	0.055
		[0.196]	[0.184]
DK/RF			
Has difficulty using the toilet		-0.003	-0.002
		[0.020]	[0.020]
Don't do		0.713	0.670
		[0.050]***	[0.049]***
DK/RF			

Has difficulty using the map	0.051 [0.015]***	0.037 [0.014]***
Don't do	0.024 [0.016]	0.012 [0.015]
DK/RF	0.310 [0.256]	0.296 [0.239]
Has difficulty using the phone	0.055 [0.024]**	0.047 [0.023]**
Don't do	0.096 [0.067]	0.099 [0.066]
DK/RF		
Has difficulty with money	0.119 [0.026]***	0.091 [0.025]***
Don't do	0.066 [0.015]***	0.053 [0.014]***
DK/RF	-0.023 [0.016]	-0.285 [0.034]***
Has difficulty with medications	0.059 [0.033]*	0.053 [0.031]*
Don't do	-0.098 [0.029]***	-0.121 [0.031]***
DK/RF	-0.015 [0.015]	-0.014 [0.015]
Has difficulty shopping	0.063 [0.024]***	0.073 [0.023]***
Don't do	0.050 [0.018]***	0.037 [0.017]**
DK/RF	-0.060 [0.034]*	-0.003 [0.023]
Has difficulty preparing meals	0.032 [0.028]	0.026 [0.027]
Don't do	0.011 [0.011]	0.012 [0.011]
DK/RF	-0.109 [0.016]***	-0.247 [0.029]***
Memory excellent		ref.
Very good		0.013 [0.009]
Good		0.005 [0.008]
Fair		0.017 [0.009]*
Poor		0.066 [0.017]***
Immediate word recall		-0.012 [0.002]***
Delayed word recall		-0.010 [0.002]***

Serial 7s						-0.017 [0.002]***
Knows the year						-0.128 [0.026]***
Knows the president						-0.095 [0.028]***
Knows the vice president						-0.013 [0.006]**
Constant	0.009 [0.023]	0.133 [0.032]***	0.126 [0.032]***	0.070 [0.032]**	0.040 [0.032]	0.372 [0.050]***
R squared	0.077	0.089	0.100	0.124	0.155	0.200
N	12,197	12,197	12,197	12,197	12,197	12,197

Table A.8. Multivariate models of 4-year dementia incidence, specification 1, women

	[1] Demog	[2] + SES	[3] + Behav	[4] + Health	[5] + Func	[6] + Cog
Age (decades after 65)	0.034 [0.043]	0.029 [0.044]	0.021 [0.043]	0.027 [0.042]	0.023 [0.040]	0.009 [0.041]
Age squared	-0.011 [0.032]	-0.009 [0.033]	-0.006 [0.032]	-0.011 [0.032]	-0.007 [0.030]	-0.006 [0.030]
Age cube	0.014 [0.007]**	0.013 [0.007]*	0.012 [0.007]*	0.013 [0.007]*	0.011 [0.007]*	0.009 [0.007]
Non-Hispanic White	ref.	ref.	ref.	ref.	ref.	ref.
Non-Hispanic Black	0.017 [0.008]**	0.010 [0.008]	0.009 [0.008]	0.005 [0.008]	-0.002 [0.008]	-0.029 [0.008]***
Non-Hispanic other	0.015 [0.017]	0.009 [0.017]	-0.002 [0.016]	-0.006 [0.016]	-0.005 [0.016]	-0.026 [0.015]*
Hispanic	0.037 [0.011]***	0.009 [0.011]	0.009 [0.011]	-0.002 [0.011]	-0.006 [0.011]	-0.027 [0.010]**
Married	ref.	ref.	ref.	ref.	ref.	ref.
Separated/divorced	0.010 [0.007]	0.006 [0.007]	0.002 [0.007]	-0.009 [0.007]	-0.007 [0.007]	-0.005 [0.007]
Widowed	0.005 [0.005]	0.002 [0.005]	0.000 [0.005]	-0.007 [0.005]	-0.005 [0.005]	-0.004 [0.005]
Never married	0.002 [0.014]	0.002 [0.014]	-0.003 [0.014]	-0.005 [0.013]	-0.009 [0.013]	-0.010 [0.012]
Birthplace in New England	ref.	ref.	ref.	ref.	ref.	ref.
Mid atlantic	0.017 [0.012]	0.019 [0.012]	0.017 [0.012]	0.016 [0.012]	0.014 [0.011]	0.020 [0.011]*
East north central	0.011 [0.011]	0.013 [0.011]	0.009 [0.011]	0.009 [0.011]	0.009 [0.011]	0.014 [0.010]
West north central	0.010 [0.012]	0.013 [0.012]	0.010 [0.012]	0.011 [0.012]	0.010 [0.012]	0.015 [0.011]
South atlantic	0.035 [0.012]***	0.033 [0.012]***	0.027 [0.012]**	0.026 [0.012]**	0.022 [0.011]*	0.022 [0.011]**
East south central	0.038	0.037	0.027	0.024	0.026	0.025

	[0.013]***	[0.013]***	[0.013]**	[0.013]*	[0.013]**	[0.012]**
West south central	0.035	0.033	0.025	0.022	0.025	0.019
	[0.013]***	[0.013]**	[0.013]**	[0.013]*	[0.012]**	[0.012]*
Mountain	0.015	0.018	0.017	0.015	0.015	0.012
	[0.015]	[0.015]	[0.015]	[0.015]	[0.015]	[0.014]
Pacific	0.020	0.024	0.024	0.024	0.022	0.021
	[0.014]	[0.014]*	[0.013]*	[0.013]*	[0.013]*	[0.012]*
Not US	0.017	0.011	0.007	0.001	0.000	0.003
	[0.013]	[0.013]	[0.013]	[0.013]	[0.012]	[0.012]
Years of education		-0.002	-0.002	0.000	0.001	0.007
		[0.001]*	[0.001]	[0.001]	[0.001]	[0.001]***
Has private health insurance		-0.007	-0.006	-0.003	-0.002	0.005
		[0.004]*	[0.004]	[0.004]	[0.004]	[0.004]
On Medicaid		0.046	0.032	0.020	0.018	0.005
		[0.010]***	[0.010]***	[0.010]**	[0.010]*	[0.010]
DK/RF		0.133	0.117	0.112	0.094	0.066
		[0.043]***	[0.042]***	[0.041]***	[0.041]**	[0.039]*
White-collar high skilled		ref.	ref.	ref.	ref.	ref.
White-collar low skilled		-0.008	-0.009	-0.007	-0.004	-0.004
		[0.006]	[0.006]	[0.006]	[0.006]	[0.005]
Blue-collar high skilled		0.002	0.000	0.002	0.002	-0.013
		[0.011]	[0.011]	[0.011]	[0.011]	[0.010]
Blue-collar low skilled		-0.006	-0.008	-0.009	-0.008	-0.022
		[0.008]	[0.008]	[0.008]	[0.008]	[0.007]***
Never worked		0.017	0.011	0.010	0.009	-0.003
		[0.016]	[0.016]	[0.016]	[0.016]	[0.015]
DK/RF		0.007	0.003	0.007	0.006	0.003
		[0.012]	[0.012]	[0.012]	[0.011]	[0.011]
Decades worked		-0.004	-0.003	-0.002	-0.001	0.001
		[0.002]**	[0.002]*	[0.002]	[0.002]	[0.002]
BMI<=25			ref.	ref.	ref.	ref.
25<BMI<=30			-0.024	-0.023	-0.022	-0.017
			[0.005]***	[0.005]***	[0.005]***	[0.005]***
30<BMI<=35			-0.033	-0.034	-0.034	-0.025
			[0.006]***	[0.006]***	[0.006]***	[0.006]***
35<BMI			-0.035	-0.040	-0.040	-0.033
			[0.008]***	[0.008]***	[0.008]***	[0.007]***
Never drinks			ref.	ref.	ref.	ref.
1 drink per occasion			-0.016	-0.009	-0.008	-0.005
			[0.005]***	[0.005]*	[0.005]	[0.005]
2 drinks per occasion			-0.018	-0.010	-0.009	-0.009
			[0.006]***	[0.006]	[0.006]	[0.006]
3 drinks per occasion			-0.018	-0.010	-0.009	-0.009
			[0.012]	[0.012]	[0.011]	[0.011]
4 drinks per occasion			0.013	0.011	0.023	0.020
			[0.037]	[0.038]	[0.038]	[0.035]
5+ drinks per occasion			-0.039	-0.041	-0.034	-0.034
			[0.023]*	[0.025]	[0.027]	[0.028]
Moderate physical activity daily			ref.	ref.	ref.	ref.

>1 per week	0.012 [0.006]*	0.014 [0.006]**	0.014 [0.006]**	0.015 [0.006]**
1 per week	0.025 [0.007]***	0.023 [0.007]***	0.024 [0.007]***	0.023 [0.007]***
1-3 per mon	0.008 [0.008]	0.005 [0.008]	0.007 [0.008]	0.008 [0.007]
Never	0.045 [0.008]***	0.028 [0.008]***	0.023 [0.008]***	0.021 [0.008]***
DK/RF	0.045 [0.082]	0.049 [0.078]	0.054 [0.074]	0.053 [0.070]
Light physical activity daily	ref.	ref.	ref.	ref.
>1 per week	-0.008 [0.006]	-0.007 [0.006]	-0.006 [0.006]	-0.005 [0.005]
1 per week	-0.006 [0.007]	-0.007 [0.007]	-0.007 [0.007]	-0.009 [0.006]
1-3 per mon	0.018 [0.012]	0.013 [0.012]	0.007 [0.012]	0.006 [0.011]
Never	0.103 [0.014]***	0.074 [0.014]***	0.042 [0.014]***	0.035 [0.013]***
DK/RF	0.263 [0.151]*	0.252 [0.147]*	0.234 [0.141]*	0.180 [0.141]
Hospital nights		0.000 [0.000]	0.000 [0.001]	0.000 [0.001]
Nursing home nights		0.000 [0.000]***	0.000 [0.000]*	0.000 [0.000]
Health excellent		ref.	ref.	ref.
Very good		0.006 [0.006]	0.007 [0.005]	0.007 [0.005]
Good		0.020 [0.007]***	0.021 [0.006]***	0.020 [0.006]***
Fair		0.054 [0.009]***	0.049 [0.009]***	0.039 [0.009]***
Poor		0.125 [0.016]***	0.106 [0.016]***	0.083 [0.016]***
DK/RF		0.071 [0.098]	0.070 [0.096]	0.046 [0.108]
Has hypertension		-0.007 [0.005]	-0.006 [0.005]	-0.007 [0.005]
Diabetes		0.013 [0.006]**	0.011 [0.006]*	0.004 [0.006]
Cancer		0.000 [0.007]	-0.001 [0.007]	0.000 [0.006]
Lung disease		0.004 [0.008]	0.002 [0.008]	0.002 [0.008]
Heart disease		-0.009 [0.006]	-0.009 [0.006]	-0.007 [0.006]
Stroke		0.033 [0.011]***	0.025 [0.011]**	0.021 [0.011]**
Psychiatric problems		0.024 [0.007]***	0.016 [0.007]**	0.009 [0.007]

Arthritis	-0.002 [0.005]	-0.002 [0.005]	0.000 [0.005]
Has work-limiting health problems	-0.013 [0.005]**	-0.022 [0.005]***	-0.020 [0.005]***
Not working	0.008 [0.009]	0.000 [0.009]	0.003 [0.008]
DK/RF	-0.017 [0.020]	-0.019 [0.020]	-0.021 [0.021]
Experiences no pain	ref.	ref.	ref.
Mild pain	-0.001 [0.007]	0.000 [0.006]	0.001 [0.006]
Moderate pain	-0.008 [0.006]	-0.008 [0.006]	-0.004 [0.005]
Severe pain	-0.011 [0.011]	-0.019 [0.011]*	-0.014 [0.011]
DK/RF	-0.017 [0.032]	-0.027 [0.033]	-0.043 [0.033]
Visited dentist	-0.012 [0.005]**	-0.012 [0.005]**	-0.004 [0.005]
DK/RF	0.134 [0.104]	0.128 [0.108]	0.095 [0.095]
Received home care	0.018 [0.010]*	0.007 [0.010]	0.008 [0.010]
DK/RF	-0.056 [0.019]***	-0.052 [0.018]***	-0.031 [0.023]
CESD depression score	0.007 [0.002]***	0.005 [0.002]***	0.003 [0.002]*
Has restless sleep	-0.020 [0.005]***	-0.017 [0.005]***	-0.015 [0.005]***
DK/RF	0.123 [0.102]	0.079 [0.099]	0.086 [0.101]
Has difficulty walking across room		0.025 [0.015]*	0.024 [0.014]
Don't do		-0.304 [0.110]***	-0.326 [0.138]**
DK/RF		0.308 [0.185]*	0.285 [0.212]
Has difficulty dressing		-0.006 [0.011]	-0.004 [0.011]
Don't do		-0.222 [0.154]	-0.359 [0.163]**
DK/RF		-0.061 [0.031]*	-0.088 [0.041]**
Has difficulty bathing		0.050 [0.016]***	0.048 [0.015]***
Don't do		0.053 [0.108]	0.066 [0.110]
DK/RF		0.781 [0.069]***	0.706 [0.074]***
Has difficulty eating		0.004	0.004

Don't do	[0.025]	[0.023]
	0.087	0.072
	[0.195]	[0.167]
Has difficulty getting out of bed	-0.008	-0.007
	[0.015]	[0.014]
Don't do	0.025	0.064
	[0.137]	[0.132]
DK/RF	-0.269	-0.207
	[0.072]***	[0.076]***
Has difficulty using the toilet	-0.006	-0.004
	[0.012]	[0.012]
Don't do	0.001	0.033
	[0.158]	[0.171]
DK/RF	0.098	-0.043
	[0.072]	[0.077]
Has difficulty using the map	0.005	-0.008
	[0.006]	[0.006]
Don't do	0.023	0.014
	[0.008]***	[0.008]*
DK/RF	0.197	0.145
	[0.108]*	[0.106]
Has difficulty using the phone	0.043	0.029
	[0.024]*	[0.023]
Don't do	0.075	0.031
	[0.081]	[0.075]
DK/RF	-0.075	0.027
	[0.042]*	[0.032]
Has difficulty with money	0.107	0.090
	[0.020]***	[0.019]***
Don't do	0.059	0.043
	[0.018]***	[0.017]**
DK/RF	-0.019	-0.042
	[0.209]	[0.199]
Has difficulty with medications	0.052	0.046
	[0.025]**	[0.024]*
Don't do	0.003	0.000
	[0.088]	[0.095]
DK/RF	0.026	0.033
	[0.020]	[0.020]*
Has difficulty shopping	0.023	0.025
	[0.014]*	[0.013]*
Don't do	0.071	0.075
	[0.034]**	[0.032]**
DK/RF	-0.069	-0.085
	[0.038]*	[0.026]***
Has difficulty preparing meals	0.036	0.039
	[0.019]*	[0.018]**
Don't do	0.119	0.115

DK/RF					[0.035]***	[0.033]***
					-0.193	-0.157
					[0.050]***	[0.048]***
Memory excellent						ref.
Very good						0.017
						[0.011]
Good						0.016
						[0.011]
Fair						0.030
						[0.011]***
Poor						0.067
						[0.019]***
Immediate word recall						-0.012
						[0.002]***
Delayed word recall						-0.013
						[0.002]***
Serial 7s						-0.012
						[0.001]***
Knows the year						-0.156
						[0.023]***
Knows the president						-0.109
						[0.023]***
Knows the vice president						-0.032
						[0.005]***
Constant	-0.036	0.015	0.024	-0.017	-0.034	0.345
	[0.018]*	[0.026]	[0.027]	[0.027]	[0.027]	[0.043]***
R squared	0.099	0.106	0.126	0.148	0.171	0.221
N	17,446	17,446	17,446	17,446	17,446	17,446

Table A.9. Multivariate models of dementia prevalence at age 80, specification 1, men

	[1]	[2]	[3]	[4]	[5]
	Demog	+ SES	+ Behav	+ Health	+ Func
Age (decades after 80)	-0.002	-0.004	0.001	0.003	-0.006
	[0.026]	[0.025]	[0.025]	[0.025]	[0.026]
Non-Hispanic White	ref.	ref.	ref.	ref.	ref.
Non-Hispanic Black	0.028	-0.009	-0.010	-0.006	-0.007
	[0.018]	[0.020]	[0.020]	[0.020]	[0.020]
Non-Hispanic other	-0.006	-0.013	-0.017	-0.016	-0.021
	[0.039]	[0.040]	[0.040]	[0.039]	[0.039]
Hispanic	0.036	-0.055	-0.056	-0.055	-0.051
	[0.023]	[0.026]**	[0.026]**	[0.026]**	[0.025]**
Married	ref.	ref.	ref.	ref.	ref.
Separated/divorced	-0.001	-0.021	-0.020	-0.036	-0.039
	[0.020]	[0.019]	[0.019]	[0.019]*	[0.018]**
Widowed	0.019	0.016	0.017	0.000	-0.007
	[0.035]	[0.038]	[0.038]	[0.039]	[0.038]

Never married	0.030 [0.034]	0.013 [0.030]	0.015 [0.030]	0.025 [0.031]	0.022 [0.029]
Birthplace in New England	ref.	ref.	ref.	ref.	ref.
Mid atlantic	-0.035 [0.029]	-0.033 [0.027]	-0.034 [0.027]	-0.025 [0.027]	-0.031 [0.027]
East north central	-0.029 [0.028]	-0.027 [0.026]	-0.028 [0.026]	-0.022 [0.027]	-0.025 [0.027]
West north central	-0.050 [0.029]*	-0.049 [0.026]*	-0.048 [0.026]*	-0.044 [0.027]	-0.045 [0.027]*
South atlantic	0.027 [0.029]	0.016 [0.028]	0.017 [0.028]	0.016 [0.029]	0.010 [0.029]
East south central	0.044 [0.031]	0.021 [0.032]	0.022 [0.032]	0.014 [0.032]	0.010 [0.032]
West south central	0.000 [0.031]	0.000 [0.030]	0.000 [0.030]	-0.001 [0.031]	-0.006 [0.031]
Mountain	-0.037 [0.037]	-0.009 [0.036]	-0.008 [0.036]	0.000 [0.036]	-0.014 [0.035]
Pacific	-0.014 [0.036]	0.003 [0.035]	0.003 [0.035]	0.002 [0.036]	-0.003 [0.036]
Not US	-0.016 [0.032]	-0.033 [0.032]	-0.030 [0.031]	-0.023 [0.032]	-0.030 [0.031]
Years of education		-0.014 [0.002]***	-0.014 [0.002]***	-0.011 [0.002]***	-0.010 [0.002]***
Has private health insurance		-0.043 [0.020]**	-0.043 [0.020]**	-0.026 [0.019]	-0.026 [0.019]
On Medicaid		0.088 [0.051]*	0.088 [0.051]*	0.020 [0.048]	-0.007 [0.043]
DK/RF		0.393 [0.300]	0.399 [0.300]	0.392 [0.272]	0.398 [0.270]
White-collar high skilled		ref.	ref.	ref.	ref.
White-collar low skilled		-0.019 [0.016]	-0.021 [0.016]	-0.015 [0.016]	-0.016 [0.016]
Blue-collar high skilled		0.005 [0.016]	0.003 [0.016]	0.001 [0.016]	0.005 [0.016]
Blue-collar low skilled		-0.001 [0.016]	-0.002 [0.016]	-0.001 [0.016]	-0.004 [0.016]
Never worked		-0.034 [0.114]	-0.032 [0.114]	-0.031 [0.109]	-0.035 [0.100]
DK/RF		0.000 [0.026]	-0.002 [0.026]	-0.010 [0.025]	-0.008 [0.025]
Decades worked		-0.022 [0.009]**	-0.022 [0.009]**	-0.016 [0.009]*	-0.016 [0.009]*
BMI<=25			ref.	ref.	ref.
25<BMI<=30			0.006 [0.013]	0.010 [0.013]	0.011 [0.013]
30<BMI<=35			0.011 [0.016]	0.004 [0.016]	0.010 [0.016]
35<BMI			0.056 [0.028]*	0.036 [0.028]	0.045 [0.027]
Hospital nights				0.001	0.001

Nursing home nights	[0.001] 0.019 [0.004]***	[0.001] 0.023 [0.004]***
Health excellent	ref.	ref.
Very good	-0.024 [0.015]	-0.021 [0.015]
Good	-0.009 [0.017]	-0.009 [0.017]
Fair	0.017 [0.023]	0.022 [0.023]
Poor	0.166 [0.045]***	0.149 [0.044]***
DK/RF		
Has hypertension	-0.013 [0.011]	-0.013 [0.011]
Diabetes	0.021 [0.021]	0.023 [0.021]
Cancer	-0.020 [0.027]	-0.018 [0.027]
Lung disease	-0.070 [0.024]***	-0.077 [0.023]***
Heart disease	0.003 [0.016]	0.000 [0.016]
Stroke	0.088 [0.045]**	0.070 [0.044]
Psychiatric problems	0.039 [0.035]	0.033 [0.034]
Arthritis	0.028 [0.012]**	0.028 [0.012]**
Has work-limiting health problems	0.023 [0.017]	0.020 [0.018]
DK/RF	-0.097 [0.058]*	-0.134 [0.048]***
Experiences no pain	ref.	ref.
Mild pain	-0.024 [0.018]	-0.024 [0.017]
Moderate pain	-0.048 [0.017]***	-0.047 [0.017]***
Severe pain	0.001 [0.045]	-0.011 [0.044]
DK/RF	-0.113 [0.025]***	-0.103 [0.031]***
Received home care	0.021 [0.054]	0.004 [0.055]
CESD depression score	0.003 [0.005]	0.000 [0.005]
Has restless sleep	0.010 [0.015]	0.012 [0.014]
DK/RF	-0.075	-0.055

				[0.090]	[0.091]
Has difficulty walking across room					0.068
Don't do					[0.064]
DK/RF					-0.029
					[0.034]
Has difficulty dressing					-0.035
DK/RF					[0.040]
					-0.208
					[0.072]***
Has difficulty bathing					0.069
DK/RF					[0.078]
Has difficulty eating					0.052
DK/RF					[0.108]
Has difficulty getting out of bed					-0.035
Don't do					[0.041]
Has difficulty using the map					0.063
Don't do					[0.027]**
DK/RF					0.001
					[0.037]
					-0.236
					[0.098]**
Has difficulty using the phone					0.075
Don't do					[0.057]
Has difficulty with money					0.035
Don't do					[0.048]
DK/RF					-0.021
					[0.043]
					0.848
					[0.087]***
Has difficulty with medications					0.069
Don't do					[0.071]
DK/RF					0.075
					[0.036]**
					-0.006
					[0.024]
Constant	0.109	0.423	0.415	0.334	0.313
	[0.025]***	[0.060]***	[0.060]***	[0.061]***	[0.062]***
R squared	0.019	0.069	0.071	0.117	0.136

N 2,276 2,276 2,276 2,276 2,276

Table A.10. Multivariate models of dementia prevalence at age 80, specification 1, women

	[1] Demog	[2] + SES	[3] + Behav	[4] + Health	[5] + Func
Age (decades after 80)	0.066 [0.025]***	0.063 [0.025]**	0.073 [0.025]***	0.103 [0.025]***	0.104 [0.025]***
Non-Hispanic White	ref.	ref.	ref.	ref.	ref.
Non-Hispanic Black	0.041 [0.016]***	0.029 [0.018]	0.018 [0.018]	0.001 [0.018]	-0.003 [0.019]
Non-Hispanic other	-0.023 [0.041]	-0.026 [0.037]	-0.026 [0.038]	-0.031 [0.035]	-0.030 [0.034]
Hispanic	0.051 [0.021]**	-0.018 [0.022]	-0.020 [0.022]	-0.030 [0.022]	-0.031 [0.022]
Married	ref.	ref.	ref.	ref.	ref.
Separated/divorced	0.011 [0.015]	0.001 [0.016]	0.003 [0.016]	-0.004 [0.016]	0.000 [0.016]
Widowed	0.022 [0.015]	0.009 [0.016]	0.008 [0.016]	0.008 [0.016]	0.006 [0.016]
Never married	-0.027 [0.029]	-0.037 [0.024]	-0.036 [0.024]	-0.032 [0.023]	-0.031 [0.024]
Birthplace in New England	ref.	ref.	ref.	ref.	ref.
Mid atlantic	0.030 [0.030]	0.035 [0.021]*	0.036 [0.021]*	0.039 [0.021]*	0.041 [0.021]*
East north central	0.014 [0.030]	0.018 [0.021]	0.018 [0.021]	0.016 [0.021]	0.017 [0.021]
West north central	0.053 [0.031]*	0.059 [0.023]**	0.060 [0.023]**	0.060 [0.023]***	0.060 [0.024]**
South atlantic	0.095 [0.030]***	0.085 [0.023]***	0.087 [0.023]***	0.077 [0.023]***	0.080 [0.023]***
East south central	0.104 [0.031]***	0.090 [0.026]***	0.094 [0.026]***	0.084 [0.026]***	0.084 [0.026]***
West south central	0.086 [0.031]***	0.078 [0.025]***	0.083 [0.025]***	0.071 [0.025]***	0.074 [0.025]***
Mountain	0.017 [0.039]	0.027 [0.029]	0.033 [0.028]	0.026 [0.028]	0.026 [0.028]
Pacific	0.040 [0.035]	0.054 [0.027]**	0.056 [0.027]**	0.058 [0.027]**	0.058 [0.028]**
Not US	0.071 [0.033]**	0.055 [0.026]**	0.060 [0.026]**	0.051 [0.025]**	0.051 [0.025]**
Years of education		-0.006 [0.002]***	-0.005 [0.002]**	-0.002 [0.002]	-0.002 [0.002]
Has private health insurance		-0.047 [0.018]***	-0.044 [0.018]**	-0.034 [0.017]*	-0.033 [0.017]*
On Medicaid		0.117 [0.033]***	0.111 [0.033]***	0.071 [0.033]**	0.066 [0.033]**

DK/RF	0.048 [0.092]	0.053 [0.091]	0.058 [0.089]	0.039 [0.087]
White-collar high skilled	ref.	ref.	ref.	ref.
White-collar low skilled	-0.035 [0.013]***	-0.035 [0.013]***	-0.036 [0.013]***	-0.037 [0.013]***
Blue-collar high skilled	-0.021 [0.024]	-0.021 [0.024]	-0.022 [0.023]	-0.022 [0.023]
Blue-collar low skilled	-0.016 [0.017]	-0.014 [0.017]	-0.019 [0.017]	-0.020 [0.017]
Never worked	0.024 [0.032]	0.026 [0.032]	0.017 [0.031]	0.012 [0.031]
DK/RF	0.019 [0.024]	0.021 [0.024]	0.013 [0.023]	0.015 [0.023]
Decades worked	-0.012 [0.004]***	-0.012 [0.004]***	-0.009 [0.004]**	-0.009 [0.004]**
BMI<=25		ref.	ref.	ref.
25<BMI<=30		0.021 [0.012]*	0.005 [0.012]	0.005 [0.012]
30<BMI<=35		0.011 [0.014]	-0.013 [0.014]	-0.010 [0.014]
35<BMI		0.082 [0.022]***	0.036 [0.022]*	0.042 [0.022]*
Hospital nights			-0.002 [0.001]	-0.002 [0.001]
Nursing home nights			0.013 [0.011]	0.013 [0.011]
Health excellent			ref.	ref.
Very good			0.009 [0.013]	0.009 [0.013]
Good			0.036 [0.015]**	0.035 [0.015]**
Fair			0.077 [0.022]***	0.079 [0.022]***
Poor			0.115 [0.033]***	0.103 [0.034]***
DK/RF			-0.093 [0.034]***	-0.092 [0.040]**
Has hypertension			0.032 [0.011]***	0.033 [0.011]***
Diabetes			0.088 [0.024]***	0.089 [0.024]***
Cancer			0.007 [0.022]	0.011 [0.022]
Lung disease			0.059 [0.031]*	0.057 [0.031]*
Heart disease			-0.041 [0.021]**	-0.038 [0.021]*
Stroke			0.102 [0.045]**	0.106 [0.045]**
Psychiatric problems			0.033	0.026

	[0.021]	[0.021]
Arthritis	-0.007	-0.005
	[0.011]	[0.011]
Has work-limiting health problems	0.000	-0.004
	[0.017]	[0.017]
DK/RF	-0.002	0.004
	[0.137]	[0.158]
Experiences no pain	ref.	ref.
Mild pain	0.024	0.024
	[0.020]	[0.020]
Moderate pain	0.012	0.014
	[0.016]	[0.016]
Severe pain	0.018	0.014
	[0.027]	[0.027]
DK/RF	-0.139	-0.130
	[0.066]**	[0.061]**
Received home care	0.043	0.039
	[0.041]	[0.041]
CESD depression score	0.002	0.002
	[0.004]	[0.004]
Has restless sleep	-0.004	-0.003
	[0.012]	[0.012]
DK/RF	0.871	0.899
	[0.044]***	[0.064]***
Has difficulty walking across room		0.017
		[0.041]
Don't do		0.648
		[0.088]***
DK/RF		0.030
		[0.043]
Has difficulty dressing		-0.041
		[0.035]
DK/RF		
Has difficulty bathing		-0.008
		[0.042]
DK/RF		0.268
		[0.208]
Has difficulty eating		0.086
		[0.068]
DK/RF		0.298
		[0.058]***
Has difficulty getting out of bed		0.007
		[0.033]
Don't do		-0.165
		[0.061]***
Has difficulty using the map		0.010
		[0.015]
Don't do		-0.010

DK/RF					[0.019]
					-0.003
					[0.091]
Has difficulty using the phone					0.115
					[0.063]*
Don't do					-0.069
					[0.164]
Has difficulty with money					0.060
					[0.039]
Don't do					0.057
					[0.057]
DK/RF					0.057
					[0.159]
Has difficulty with medications					-0.064
					[0.044]
Don't do					0.010
					[0.042]
DK/RF					0.038
					[0.030]
Constant	0.066	0.231	0.203	0.126	0.120
	[0.027]**	[0.043]***	[0.043]***	[0.044]***	[0.045]***
R squared	0.028	0.065	0.071	0.111	0.121
N	3,070	3,070	3,070	3,070	3,070

Table A.11. Multivariate models of 2-year incidence of cognitive impairment, specification 1.

	[1]	[2]	[3]	[4]	[5]	[6]
	Demog	+ SES	+ Behav	+ Health	+ Func	+ Cog
Age (decades after 65)	-0.017	-0.021	-0.020	-0.012	-0.017	-0.027
	[0.025]	[0.025]	[0.025]	[0.024]	[0.024]	[0.023]
Age squared	0.057	0.059	0.055	0.046	0.050	0.046
	[0.023]**	[0.023]**	[0.023]**	[0.022]**	[0.022]**	[0.021]**
Age cube	-0.002	-0.002	-0.002	0.000	-0.001	0.000
	[0.006]	[0.006]	[0.006]	[0.006]	[0.006]	[0.005]
Female	-0.007	-0.013	-0.012	-0.007	-0.008	0.000
	[0.003]**	[0.004]***	[0.004]***	[0.004]*	[0.004]**	[0.004]
Non-Hispanic White	ref.	ref.	ref.	ref.	ref.	ref.
Non-Hispanic Black	0.018	0.006	0.001	-0.002	-0.008	-0.045
	[0.006]***	[0.006]	[0.006]	[0.006]	[0.006]	[0.006]***
Non-Hispanic other	0.009	0.003	-0.008	-0.014	-0.014	-0.031
	[0.012]	[0.011]	[0.012]	[0.012]	[0.012]	[0.011]***
Hispanic	0.000	-0.032	-0.035	-0.042	-0.045	-0.068
	[0.007]	[0.007]***	[0.007]***	[0.007]***	[0.007]***	[0.007]***
Married	ref.	ref.	ref.	ref.	ref.	ref.
Separated/divorced	0.020	0.016	0.014	0.002	0.003	0.004
	[0.005]***	[0.006]***	[0.005]**	[0.005]	[0.005]	[0.005]

Widowed	0.014 [0.005]***	0.009 [0.005]*	0.008 [0.005]*	0.000 [0.005]	0.002 [0.005]	0.005 [0.004]
Never married	-0.015 [0.009]*	-0.015 [0.009]*	-0.021 [0.009]**	-0.027 [0.009]***	-0.024 [0.009]***	-0.024 [0.009]***
Birthplace in New England	ref.	ref.	ref.	ref.	ref.	ref.
Mid atlantic	-0.014 [0.009]*	-0.013 [0.009]	-0.014 [0.008]*	-0.017 [0.008]**	-0.017 [0.008]**	-0.010 [0.008]
East north central	-0.009 [0.008]	-0.008 [0.008]	-0.010 [0.008]	-0.010 [0.008]	-0.009 [0.008]	-0.004 [0.008]
West north central	-0.013 [0.009]	-0.011 [0.009]	-0.011 [0.009]	-0.010 [0.009]	-0.008 [0.009]	-0.005 [0.008]
South atlantic	0.007 [0.009]	0.005 [0.009]	0.002 [0.009]	0.001 [0.009]	0.001 [0.009]	-0.002 [0.008]
East south central	0.007 [0.010]	0.003 [0.010]	-0.001 [0.010]	-0.004 [0.009]	-0.002 [0.009]	-0.006 [0.009]
West south central	0.017 [0.010]*	0.016 [0.010]	0.011 [0.009]	0.006 [0.009]	0.007 [0.009]	0.003 [0.009]
Mountain	0.006 [0.011]	0.011 [0.011]	0.010 [0.011]	0.008 [0.011]	0.009 [0.011]	0.004 [0.010]
Pacific	0.005 [0.010]	0.009 [0.010]	0.013 [0.010]	0.013 [0.010]	0.014 [0.010]	0.013 [0.009]
Not US	0.004 [0.010]	-0.002 [0.010]	-0.001 [0.010]	-0.002 [0.010]	-0.002 [0.009]	0.007 [0.009]
Years of education		-0.002 [0.001]***	-0.001 [0.001]	0.001 [0.001]	0.002 [0.001]***	0.009 [0.001]***
Has private health insurance		-0.015 [0.003]***	-0.014 [0.003]***	-0.012 [0.003]***	-0.011 [0.003]***	-0.006 [0.003]*
On Medicaid		0.034 [0.009]***	0.026 [0.009]***	0.012 [0.009]	0.009 [0.009]	0.000 [0.008]
DK/RF		0.012 [0.030]	0.005 [0.030]	0.002 [0.030]	-0.004 [0.030]	-0.023 [0.030]
White-collar high skilled		ref.	ref.	ref.	ref.	ref.
White-collar low skilled		0.001 [0.004]	0.000 [0.004]	0.000 [0.004]	0.001 [0.004]	0.001 [0.004]
Blue-collar high skilled		0.028 [0.007]***	0.027 [0.007]***	0.024 [0.006]***	0.022 [0.006]***	0.009 [0.006]
Blue-collar low skilled		0.021 [0.005]***	0.020 [0.005]***	0.016 [0.005]***	0.015 [0.005]***	-0.002 [0.005]
Never worked		0.041 [0.015]***	0.040 [0.014]***	0.041 [0.014]***	0.039 [0.014]***	0.028 [0.013]**
DK/RF		-0.009 [0.008]	-0.010 [0.008]	-0.009 [0.008]	-0.008 [0.008]	-0.007 [0.007]
Decades worked		-0.007 [0.001]***	-0.007 [0.001]***	-0.004 [0.001]***	-0.004 [0.001]***	-0.002 [0.001]
BMI<=25			ref.	ref.	ref.	ref.
25<BMI<=30			-0.019 [0.004]***	-0.020 [0.004]***	-0.020 [0.004]***	-0.018 [0.004]***
30<BMI<=35			-0.014 [0.005]***	-0.021 [0.005]***	-0.020 [0.005]***	-0.016 [0.004]***
35<BMI			-0.006	-0.022	-0.021	-0.018

	[0.006]	[0.006]***	[0.006]***	[0.006]***
Never drinks	ref.	ref.	ref.	ref.
1 drink per occasion	-0.016 [0.004]***	-0.007 [0.004]*	-0.006 [0.004]	-0.004 [0.004]
2 drinks per occasion	-0.011 [0.005]**	-0.001 [0.005]	0.001 [0.005]	0.002 [0.005]
3 drinks per occasion	-0.001 [0.008]	0.004 [0.008]	0.007 [0.008]	0.007 [0.008]
4 drinks per occasion	0.003 [0.014]	0.010 [0.014]	0.012 [0.014]	0.019 [0.013]
5+ drinks per occasion	-0.002 [0.015]	0.005 [0.015]	0.008 [0.015]	0.016 [0.014]
<hr/>				
Moderate physical activity				
daily	ref.	ref.	ref.	ref.
>1 per week	-0.001 [0.006]	-0.001 [0.006]	-0.001 [0.006]	0.003 [0.006]
1 per week	0.016 [0.007]**	0.011 [0.007]	0.012 [0.007]*	0.012 [0.007]*
1-3 per mon	0.009 [0.007]	-0.001 [0.007]	0.001 [0.007]	0.001 [0.007]
Never	0.042 [0.007]***	0.015 [0.007]**	0.012 [0.007]*	0.013 [0.007]*
DK/RF	0.076 [0.059]	0.067 [0.058]	0.059 [0.058]	0.056 [0.058]
<hr/>				
Light physical activity daily	ref.	ref.	ref.	ref.
>1 per week	0.003 [0.005]	0.003 [0.005]	0.003 [0.005]	0.004 [0.005]
1 per week	0.007 [0.006]	0.006 [0.006]	0.005 [0.006]	0.002 [0.006]
1-3 per mon	0.031 [0.008]***	0.026 [0.008]***	0.022 [0.008]***	0.019 [0.008]**
Never	0.070 [0.009]***	0.052 [0.009]***	0.039 [0.009]***	0.035 [0.009]***
DK/RF	0.119 [0.084]	0.108 [0.082]	0.113 [0.084]	0.078 [0.079]
<hr/>				
Hospital nights		0.000 [0.000]	0.000 [0.000]	0.000 [0.000]
Nursing home nights		0.000 [0.000]**	0.000 [0.000]*	0.000 [0.000]
<hr/>				
Health excellent		ref.	ref.	ref.
Very good		0.015 [0.004]***	0.014 [0.004]***	0.014 [0.004]***
Good		0.036 [0.005]***	0.035 [0.005]***	0.033 [0.005]***
Fair		0.087 [0.007]***	0.083 [0.007]***	0.076 [0.007]***
Poor		0.131 [0.015]***	0.122 [0.015]***	0.111 [0.014]***
DK/RF		-0.008 [0.066]	-0.008 [0.065]	-0.015 [0.063]

Has hypertension	0.001 [0.003]	0.001 [0.003]	-0.001 [0.003]
Diabetes	0.015 [0.004]***	0.014 [0.004]***	0.011 [0.004]***
Cancer	-0.003 [0.004]	-0.003 [0.004]	0.000 [0.004]
Lung disease	0.014 [0.007]**	0.015 [0.007]**	0.015 [0.006]**
Heart disease	0.007 [0.004]*	0.008 [0.004]**	0.008 [0.004]**
Stroke	0.010 [0.008]	0.005 [0.008]	0.006 [0.007]
Psychiatric problems	0.021 [0.006]***	0.017 [0.006]***	0.015 [0.005]***
Arthritis	-0.004 [0.003]	-0.004 [0.003]	-0.005 [0.003]*
Has work-limiting health problems	0.005 [0.004]	-0.002 [0.004]	0.000 [0.004]
Not working	0.018 [0.008]**	0.013 [0.008]	0.015 [0.008]**
DK/RF	0.006 [0.022]	0.001 [0.022]	0.010 [0.020]
Experiences no pain	ref.	ref.	ref.
Mild pain	-0.004 [0.006]	-0.004 [0.005]	-0.003 [0.005]
Moderate pain	-0.007 [0.005]	-0.008 [0.005]*	-0.007 [0.005]
Severe pain	0.019 [0.011]*	0.013 [0.011]	0.013 [0.011]
DK/RF	0.054 [0.036]	0.054 [0.036]	0.053 [0.035]
Visited dentist	-0.011 [0.004]***	-0.011 [0.004]***	-0.006 [0.004]*
DK/RF	0.037 [0.081]	0.035 [0.082]	0.022 [0.078]
Received home care	-0.002 [0.008]	-0.006 [0.008]	-0.004 [0.008]
DK/RF	-0.105 [0.017]***	-0.108 [0.028]***	-0.114 [0.035]***
CESD depression score	0.009 [0.002]***	0.008 [0.002]***	0.005 [0.001]***
Has restless sleep	-0.010 [0.005]**	-0.010 [0.005]**	-0.010 [0.005]**
DK/RF	-0.066 [0.058]	-0.060 [0.062]	-0.058 [0.063]
Has difficulty walking across room		0.018 [0.014]	0.020 [0.014]
Don't do		0.034 [0.232]	0.023 [0.214]
DK/RF		-0.100	-0.216

	[0.017]***	[0.017]***
Has difficulty dressing	0.005	0.006
	[0.009]	[0.009]
Don't do	-0.238	-0.245
	[0.110]**	[0.086]***
DK/RF	-0.134	-0.159
	[0.052]***	[0.075]**
Has difficulty bathing	0.008	0.012
	[0.015]	[0.014]
Don't do	-0.265	-0.246
	[0.068]***	[0.046]***
DK/RF	0.185	0.219
	[0.240]	[0.250]
Has difficulty eating	0.040	0.040
	[0.025]	[0.024]
DK/RF	-0.286	-0.302
	[0.038]***	[0.037]***
Has difficulty getting out of bed	0.004	0.003
	[0.014]	[0.013]
Don't do	-0.207	-0.184
	[0.028]***	[0.021]***
DK/RF	0.698	0.644
	[0.020]***	[0.020]***
Has difficulty using the toilet	0.004	0.006
	[0.012]	[0.011]
Don't do	-0.157	-0.174
	[0.028]***	[0.027]***
DK/RF	0.281	0.234
	[0.364]	[0.372]
Has difficulty using the map	0.033	0.016
	[0.007]***	[0.006]**
Don't do	0.038	0.027
	[0.008]***	[0.008]***
DK/RF	0.024	0.018
	[0.092]	[0.094]
Has difficulty using the phone	0.061	0.056
	[0.020]***	[0.020]***
Don't do	0.015	0.019
	[0.067]	[0.067]
DK/RF	-0.091	-0.085
	[0.023]***	[0.026]***
Has difficulty with money	0.077	0.070
	[0.019]***	[0.018]***
Don't do	0.041	0.031
	[0.013]***	[0.012]**
DK/RF	0.479	0.421
	[0.235]**	[0.241]*
Has difficulty with medications	0.042	0.044

Don't do					[0.025]*	[0.024]*
					0.033	0.012
					[0.064]	[0.065]
DK/RF					-0.029	-0.025
					[0.011]***	[0.011]**
Has difficulty shopping					0.015	0.022
					[0.014]	[0.013]*
Don't do					0.035	0.032
					[0.019]*	[0.019]*
DK/RF					-0.113	-0.081
					[0.028]***	[0.021]***
Has difficulty preparing meals					0.039	0.040
					[0.018]**	[0.018]**
Don't do					0.049	0.050
					[0.013]***	[0.012]***
DK/RF					0.065	0.069
					[0.310]	[0.280]
Memory excellent						ref.
Very good						0.012
						[0.008]
Good						0.019
						[0.007]**
Fair						0.050
						[0.008]***
Poor						0.097
						[0.015]***
Immediate word recall						-0.012
						[0.002]***
Delayed word recall						-0.014
						[0.001]***
Serial 7s						-0.027
						[0.001]***
Knows the year						-0.043
						[0.019]**
Knows the president						-0.034
						[0.022]
Knows the vice president						-0.023
						[0.004]***
Constant	0.034	0.097	0.081	0.009	-0.008	0.211
	[0.010]***	[0.017]***	[0.018]***	[0.018]	[0.018]	[0.034]***
R squared	0.068	0.075	0.085	0.104	0.113	0.149
N	32,813	32,813	32,813	32,813	32,813	32,813

Table A.12. Multivariate models of 2-year incidence of cognitive impairment, specification 2.

	[1]	[2a]	[2b]	[3a]	[3b]	[4a]	[4b]
	Baseline	Physical measures		Genes		Psychosocial	

White-collar low skilled	0.001 [0.004]	0.004 [0.006]	0.002 [0.006]	0.007 [0.005]	0.007 [0.005]	0.004 [0.007]	0.003 [0.007]
Blue-collar high skilled	0.022 [0.006]***	0.020 [0.010]**	0.020 [0.010]**	0.019 [0.007]***	0.019 [0.007]***	0.022 [0.011]**	0.020 [0.011]*
Blue-collar low skilled	0.015 [0.005]***	0.016 [0.008]**	0.015 [0.008]*	0.017 [0.006]***	0.017 [0.006]***	0.019 [0.009]**	0.016 [0.009]*
Never worked	0.039 [0.014]***	0.088 [0.023]***	0.089 [0.023]***	0.041 [0.017]**	0.042 [0.017]**	0.092 [0.027]***	0.087 [0.027]***
DK/RF	-0.008 [0.008]	-0.009 [0.012]	-0.009 [0.012]	-0.006 [0.009]	-0.005 [0.009]	-0.023 [0.013]*	-0.025 [0.013]*
Decades worked	-0.004 [0.001]***	-0.002 [0.002]	-0.002 [0.002]	-0.003 [0.002]**	-0.003 [0.002]*	-0.004 [0.002]*	-0.004 [0.002]
BMI<=25	ref.	ref.	ref.	ref.	ref.	ref.	ref.
25<BMI<=30	-0.020 [0.004]***	-0.013 [0.006]**	-0.010 [0.006]	-0.023 [0.005]***	-0.022 [0.005]***	-0.017 [0.007]**	-0.015 [0.007]**
30<BMI<=35	-0.020 [0.005]***	-0.014 [0.007]**	-0.010 [0.007]	-0.026 [0.005]***	-0.025 [0.005]***	-0.019 [0.008]**	-0.017 [0.008]**
35<BMI	-0.021 [0.006]***	-0.017 [0.009]*	-0.013 [0.010]	-0.027 [0.007]***	-0.026 [0.007]***	-0.019 [0.010]*	-0.016 [0.010]
Never drinks	ref.	ref.	ref.	ref.	ref.	ref.	ref.
1 drink per occasion	-0.006 [0.004]	-0.015 [0.006]**	-0.014 [0.006]**	-0.010 [0.004]**	-0.010 [0.004]**	-0.016 [0.007]**	-0.015 [0.007]**
2 drinks per occasion	0.001 [0.005]	0.003 [0.007]	0.003 [0.007]	0.000 [0.005]	0.000 [0.005]	-0.007 [0.008]	-0.008 [0.008]
3 drinks per occasion	0.007 [0.008]	-0.001 [0.012]	-0.003 [0.012]	0.010 [0.009]	0.009 [0.009]	0.006 [0.014]	0.006 [0.014]
4 drinks per occasion	0.012 [0.014]	-0.004 [0.020]	-0.005 [0.019]	-0.007 [0.014]	-0.007 [0.014]	-0.022 [0.019]	-0.023 [0.019]
5+ drinks per occasion	0.008 [0.015]	0.020 [0.023]	0.018 [0.023]	0.008 [0.020]	0.007 [0.020]	0.046 [0.028]*	0.043 [0.027]
Moderate physical activity daily	ref.	ref.	ref.	ref.	ref.	ref.	ref.
>1 per week	-0.001 [0.006]	0.003 [0.009]	0.004 [0.009]	-0.001 [0.007]	-0.001 [0.007]	-0.003 [0.010]	-0.003 [0.010]
1 per week	0.012 [0.007]*	0.010 [0.010]	0.009 [0.010]	0.015 [0.008]*	0.015 [0.008]*	0.011 [0.012]	0.010 [0.012]
1-3 per mon	0.001 [0.007]	0.007 [0.012]	0.006 [0.012]	0.006 [0.009]	0.006 [0.009]	-0.004 [0.012]	-0.006 [0.012]
Never	0.012 [0.007]*	0.009 [0.011]	0.006 [0.011]	0.014 [0.008]*	0.014 [0.008]*	0.005 [0.012]	-0.001 [0.012]
DK/RF	0.059 [0.058]	0.026 [0.092]	0.030 [0.091]	0.088 [0.073]	0.087 [0.073]	0.172 [0.107]	0.159 [0.104]
Light physical activity daily	ref.	ref.	ref.	ref.	ref.	ref.	ref.
>1 per week	0.003 [0.005]	0.004 [0.008]	0.003 [0.008]	0.001 [0.006]	0.001 [0.006]	0.009 [0.009]	0.007 [0.009]
1 per week	0.005 [0.006]	0.005 [0.009]	0.002 [0.009]	-0.002 [0.007]	-0.002 [0.007]	0.006 [0.010]	0.002 [0.010]
1-3 per mon	0.022 [0.008]***	0.024 [0.013]*	0.021 [0.013]	0.020 [0.010]**	0.019 [0.010]**	0.017 [0.013]	0.008 [0.013]
Never	0.039 [0.009]***	0.024 [0.015]	0.016 [0.015]	0.045 [0.011]***	0.044 [0.011]***	0.030 [0.016]*	0.023 [0.016]

DK/RF	0.113 [0.084]	-0.110 [0.042]***	-0.114 [0.048]**	0.298 [0.151]**	0.301 [0.150]**	0.123 [0.137]	0.112 [0.128]
Hospital nights	0.000 [0.000]	0.001 [0.000]	0.000 [0.000]	0.000 [0.000]	0.000 [0.000]	0.001 [0.001]	0.001 [0.000]
Nursing home nights	0.000 [0.000]*	0.000 [0.000]	0.000 [0.000]	0.000 [0.000]	0.000 [0.000]	0.000 [0.000]	0.000 [0.000]
Health excellent	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Very good	0.014 [0.004]***	0.010 [0.007]	0.009 [0.007]	0.015 [0.005]***	0.015 [0.005]***	0.007 [0.007]	0.006 [0.008]
Good	0.035 [0.005]***	0.035 [0.008]***	0.032 [0.008]***	0.039 [0.006]***	0.038 [0.006]***	0.029 [0.009]***	0.024 [0.010]**
Fair	0.083 [0.007]***	0.085 [0.011]***	0.080 [0.011]***	0.086 [0.009]***	0.086 [0.009]***	0.072 [0.013]***	0.056 [0.014]***
Poor	0.122 [0.015]***	0.167 [0.026]***	0.157 [0.025]***	0.134 [0.018]***	0.134 [0.018]***	0.164 [0.028]***	0.134 [0.028]***
DK/RF	-0.008 [0.065]	-0.135 [0.060]**	-0.136 [0.067]**	0.063 [0.139]	0.062 [0.138]	-0.120 [0.056]**	-0.133 [0.062]**
Has hypertension	0.001 [0.003]	0.004 [0.005]	0.003 [0.005]	0.003 [0.004]	0.003 [0.004]	0.006 [0.005]	0.006 [0.005]
Diabetes	0.014 [0.004]***	0.008 [0.007]	0.007 [0.007]	0.010 [0.005]**	0.010 [0.005]**	0.019 [0.007]***	0.017 [0.007]**
Cancer	-0.003 [0.004]	0.004 [0.007]	0.005 [0.007]	-0.001 [0.005]	-0.001 [0.005]	0.006 [0.007]	0.007 [0.007]
Lung disease	0.015 [0.007]**	0.014 [0.010]	0.007 [0.010]	0.015 [0.007]**	0.015 [0.007]**	0.007 [0.011]	0.007 [0.011]
Heart disease	0.008 [0.004]**	0.014 [0.006]**	0.014 [0.006]**	0.008 [0.005]*	0.007 [0.005]*	0.015 [0.007]**	0.015 [0.007]**
Stroke	0.005 [0.008]	-0.001 [0.012]	-0.003 [0.012]	0.000 [0.009]	0.000 [0.009]	0.004 [0.013]	0.004 [0.013]
Psychiatric problems	0.017 [0.006]***	0.023 [0.009]***	0.024 [0.009]***	0.019 [0.007]***	0.019 [0.007]***	0.019 [0.009]**	0.016 [0.010]
Arthritis	-0.004 [0.003]	0.003 [0.005]	0.002 [0.005]	-0.002 [0.004]	-0.001 [0.004]	0.006 [0.006]	0.007 [0.006]
Has work-limiting health problems	-0.002 [0.004]	-0.002 [0.007]	-0.005 [0.007]	0.003 [0.005]	0.003 [0.005]	-0.004 [0.007]	-0.007 [0.007]
Not working	0.013 [0.008]	0.020 [0.013]	0.018 [0.013]	0.016 [0.009]*	0.016 [0.009]*	0.047 [0.016]***	0.045 [0.016]***
DK/RF	0.001 [0.022]	-0.027 [0.032]	-0.026 [0.032]	0.024 [0.028]	0.023 [0.028]	-0.049 [0.028]*	-0.055 [0.027]**
Experiences no pain	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Mild pain	-0.004 [0.005]	-0.002 [0.008]	-0.002 [0.008]	-0.010 [0.006]*	-0.010 [0.006]*	-0.001 [0.009]	-0.002 [0.009]
Moderate pain	-0.008 [0.005]*	-0.004 [0.008]	-0.004 [0.008]	-0.007 [0.006]	-0.007 [0.006]	-0.008 [0.008]	-0.009 [0.008]
Severe pain	0.013 [0.011]	-0.011 [0.017]	-0.013 [0.017]	0.003 [0.014]	0.004 [0.014]	0.010 [0.019]	0.009 [0.018]
DK/RF	0.054 [0.036]	0.107 [0.065]*	0.108 [0.064]*	0.111 [0.049]**	0.111 [0.049]**	0.099 [0.070]	0.105 [0.069]
Visited dentist	-0.011	-0.016	-0.013	-0.013	-0.013	-0.012	-0.012

	[0.004]***	[0.006]***	[0.006]**	[0.005]***	[0.005]***	[0.006]*	[0.006]*
DK/RF	0.035	0.152	0.156	0.003	0.003	0.270	0.278
	[0.082]	[0.160]	[0.163]	[0.106]	[0.105]	[0.187]	[0.190]
Received home care	-0.006	-0.007	-0.010	-0.005	-0.005	-0.012	-0.013
	[0.008]	[0.012]	[0.012]	[0.009]	[0.009]	[0.012]	[0.012]
DK/RF	-0.108	-0.220	-0.216	-0.137	-0.138	-0.054	-0.034
	[0.028]***	[0.144]	[0.149]	[0.033]***	[0.032]***	[0.016]***	[0.018]*
CESD depression score	0.008	0.008	0.007	0.007	0.007	0.006	0.003
	[0.002]***	[0.002]***	[0.002]***	[0.002]***	[0.002]***	[0.003]**	[0.003]
Has restless sleep	-0.010	-0.012	-0.012	-0.009	-0.010	-0.011	-0.008
	[0.005]**	[0.007]*	[0.007]	[0.005]*	[0.005]*	[0.008]	[0.008]
DK/RF	-0.060	-0.001	-0.003	-0.047	-0.047	-0.084	-0.077
	[0.062]	[0.157]	[0.159]	[0.110]	[0.110]	[0.041]**	[0.046]*
Has difficulty walking across room	0.018	0.026	0.015	0.013	0.012	0.026	0.025
	[0.014]	[0.023]	[0.023]	[0.017]	[0.017]	[0.024]	[0.024]
Don't do	0.034	-	-	-0.252	-0.254	0.575	0.560
	[0.232]			[0.083]***	[0.079]***	[0.044]***	[0.047]***
DK/RF	-0.100	-	-	-0.095	-0.086		
	[0.017]***			[0.020]***	[0.020]***		
Has difficulty dressing	0.005	0.014	0.012	0.001	0.001	-0.001	-0.001
	[0.009]	[0.014]	[0.014]	[0.011]	[0.011]	[0.015]	[0.015]
Don't do	-0.238	0.032	0.004	-0.357	-0.350	0.021	-0.079
	[0.110]**	[0.020]	[0.022]	[0.031]***	[0.031]***	[0.022]	[0.046]*
DK/RF	-0.134	0.117	0.106	-0.202	-0.201		
	[0.052]***	[0.145]	[0.150]	[0.061]***	[0.059]***		
Has difficulty bathing	0.008	0.013	0.009	0.005	0.005	0.010	0.006
	[0.015]	[0.024]	[0.024]	[0.017]	[0.017]	[0.024]	[0.024]
Don't do	-0.265	-0.170	-0.201	-0.111	-0.115		
	[0.068]***	[0.100]*	[0.094]**	[0.040]***	[0.037]***		
DK/RF	0.185	-0.165	-0.135	0.352	0.358	-0.119	-0.140
	[0.240]	[0.046]***	[0.046]***	[0.276]	[0.271]	[0.049]**	[0.060]**
Has difficulty eating	0.040	0.112	0.107	0.075	0.075	0.102	0.100
	[0.025]	[0.041]***	[0.041]***	[0.032]**	[0.032]**	[0.043]**	[0.043]**
DK/RF	-0.286	-	-	-	-	-	-
	[0.038]***						
Has difficulty getting out of bed	0.004	0.009	0.006	0.028	0.027	-0.012	-0.012
	[0.014]	[0.023]	[0.023]	[0.018]	[0.018]	[0.023]	[0.023]
Don't do	-0.207	-0.140	-0.154	-0.194	-0.195	-0.145	-0.171
	[0.028]***	[0.040]***	[0.037]***	[0.033]***	[0.034]***	[0.029]***	[0.037]***
DK/RF	0.698	-	-	-	-	-	-
	[0.020]***						
Has difficulty using the toilet	0.004	0.011	0.011	0.008	0.008	0.014	0.014
	[0.012]	[0.018]	[0.019]	[0.014]	[0.014]	[0.019]	[0.019]
Don't do	-0.157	-	-	-0.149	-0.169	-	-
	[0.028]***			[0.034]***	[0.034]***		
DK/RF	0.281	-	-	0.281	0.278	-	-
	[0.364]			[0.349]	[0.356]		
Has difficulty using the map	0.033	0.034	0.033	0.036	0.035	0.040	0.034
	[0.007]***	[0.010]***	[0.010]***	[0.008]***	[0.008]***	[0.011]***	[0.011]***

Don't do	0.038	0.055	0.053	0.042	0.042	0.048	0.043
	[0.008]***	[0.013]***	[0.013]***	[0.010]***	[0.010]***	[0.014]***	[0.014]***
DK/RF	0.024	0.111	0.103	0.052	0.053	0.144	0.136
	[0.092]	[0.130]	[0.127]	[0.109]	[0.110]	[0.146]	[0.147]
Has difficulty using the phone	0.061	0.049	0.047	0.051	0.050	0.049	0.049
	[0.020]***	[0.032]	[0.032]	[0.023]**	[0.023]**	[0.035]	[0.035]
Don't do	0.015	0.060	0.050	-0.003	-0.004	0.081	0.078
	[0.067]	[0.102]	[0.102]	[0.079]	[0.078]	[0.100]	[0.101]
DK/RF	-0.091	-0.003	0.000	-0.090	-0.088	-0.019	-0.005
	[0.023]***	[0.038]	[0.040]	[0.024]***	[0.030]***	[0.056]	[0.068]
Has difficulty with money	0.077	0.089	0.090	0.094	0.094	0.044	0.040
	[0.019]***	[0.031]***	[0.031]***	[0.024]***	[0.024]***	[0.032]	[0.032]
Don't do	0.041	0.012	0.010	0.036	0.036	0.006	0.002
	[0.013]***	[0.017]	[0.017]	[0.014]**	[0.014]**	[0.020]	[0.020]
DK/RF	0.479	0.939	0.938	0.539	0.536	0.593	0.578
	[0.235]**	[0.017]***	[0.016]***	[0.310]*	[0.310]*	[0.278]**	[0.252]**
Has difficulty with medications	0.042	0.006	0.004	0.032	0.032	0.024	0.023
	[0.025]*	[0.034]	[0.034]	[0.029]	[0.029]	[0.038]	[0.038]
Don't do	0.033	0.162	0.162	0.105	0.106	0.158	0.152
	[0.064]	[0.178]	[0.174]	[0.113]	[0.114]	[0.139]	[0.139]
DK/RF	-0.029	-0.016	-0.014	-0.025	-0.024	-0.034	-0.036
	[0.011]***	[0.018]	[0.018]	[0.014]*	[0.014]*	[0.017]**	[0.017]**
Has difficulty shopping	0.015	-0.010	-0.013	0.010	0.010	0.000	-0.004
	[0.014]	[0.022]	[0.022]	[0.016]	[0.016]	[0.023]	[0.023]
Don't do	0.035	-0.007	-0.006	0.020	0.020	0.022	0.021
	[0.019]*	[0.027]	[0.027]	[0.021]	[0.021]	[0.034]	[0.034]
DK/RF	-0.113	-0.187	-0.174	-0.101	-0.100	-0.159	-0.160
	[0.028]***	[0.030]***	[0.033]***	[0.030]***	[0.031]***	[0.050]***	[0.062]***
Has difficulty preparing meals	0.039	0.059	0.059	0.035	0.035	0.094	0.096
	[0.018]**	[0.030]*	[0.031]*	[0.022]	[0.022]	[0.032]***	[0.032]***
Don't do	0.049	0.066	0.066	0.065	0.066	0.060	0.058
	[0.013]***	[0.020]***	[0.020]***	[0.014]***	[0.014]***	[0.022]***	[0.022]***
DK/RF	0.065			0.072	0.077		
	[0.310]			[0.311]	[0.310]		
Breathing test			-0.009				
			[0.003]***				
RF			0.045				
			[0.023]**				
Grip strength			-0.012				
			[0.003]***				
RF			-0.047				
			[0.020]**				
Timed walk test time			-0.009				
			[0.004]**				
RF			0.032				
			[0.029]				
Semi tandem balance test time			0.003				
			[0.002]				
RF			-0.005				
			[0.022]				

Alzheimer's polygenic score							0.007 [0.002]***
Big 5 neuroticism							0.001 [0.006]
DK/RF							0.096 [0.058]*
Big 5 conscientiousness							-0.013 [0.007]*
DK/RF							-0.073 [0.054]
Loneliness							0.001 [0.007]
DK/RF							0.062 [0.031]**
Positive affect							-0.008 [0.005]*
DK/RF							0.123 [0.062]**
Negative affect							0.008 [0.008]
DK/RF							-0.080 [0.064]
Life satisfaction scale							0.004 [0.002]*
DK/RF							0.022 [0.040]
Hobby activity scale							-0.009 [0.003]***
DK/RF							0.002 [0.047]
Novel information activity scale							-0.003 [0.002]
DK/RF							0.063 [0.038]*
Not at all satisfied with health							ref.
Not very satisfied							-0.044 [0.025]*
Somewhat satisfied							-0.071 [0.024]***
Very satisfied							-0.076 [0.025]***
Completely satisfied							-0.067 [0.026]***
DK/RF							-0.061 [0.038]
Constant	-0.008 [0.018]	-0.005 [0.029]	0.175 [0.048]***	-0.012 [0.021]	-0.013 [0.021]	0.000 [0.032]	0.144 [0.053]***
R squared	0.113	0.124	0.129	0.116	0.116	0.124	0.131
N	32,813	13,685	13,685	24,954	24,954	11,703	11,703

Table A.13. Multivariate models of 4-year incidence of cognitive impairment, specification 1.

	[1]	[2]	[3]	[4]	[5]	[6]
	Demog	+ SES	+ Behav	+ Health	+ Func	+ Cog
Age (decades after 65)	-0.095 [0.055]*	-0.102 [0.055]*	-0.101 [0.055]*	-0.082 [0.054]	-0.085 [0.053]	-0.098 [0.050]*
Age squared	0.142 [0.041]***	0.146 [0.041]***	0.143 [0.041]***	0.125 [0.040]***	0.126 [0.040]***	0.116 [0.037]***
Age cube	-0.016 [0.009]*	-0.017 [0.009]*	-0.017 [0.009]*	-0.013 [0.009]	-0.014 [0.009]	-0.012 [0.008]
Female	-0.010 [0.006]	-0.019 [0.007]***	-0.019 [0.007]***	-0.015 [0.007]**	-0.019 [0.007]**	-0.002 [0.007]
Non-Hispanic White	ref.	ref.	ref.	ref.	ref.	ref.
Non-Hispanic Black	0.025 [0.010]**	0.006 [0.010]	-0.002 [0.010]	-0.008 [0.010]	-0.016 [0.010]	-0.077 [0.010]***
Non-Hispanic other	0.024 [0.023]	0.016 [0.023]	0.000 [0.023]	-0.007 [0.023]	-0.009 [0.023]	-0.036 [0.021]*
Hispanic	0.000 [0.014]	-0.052 [0.014]***	-0.054 [0.014]***	-0.070 [0.014]***	-0.073 [0.014]***	-0.107 [0.013]***
Married	ref.	ref.	ref.	ref.	ref.	ref.
Separated/divorced	0.032 [0.010]***	0.026 [0.010]***	0.022 [0.010]**	0.003 [0.010]	0.006 [0.010]	0.008 [0.009]
Widowed	0.020 [0.008]**	0.011 [0.008]	0.010 [0.008]	-0.001 [0.008]	0.002 [0.008]	0.007 [0.007]
Never married	-0.026 [0.016]	-0.024 [0.016]	-0.034 [0.017]**	-0.043 [0.017]**	-0.039 [0.017]**	-0.038 [0.016]**
Birthplace in New England	ref.	ref.	ref.	ref.	ref.	ref.
Mid atlantic	-0.017 [0.015]	-0.014 [0.015]	-0.018 [0.015]	-0.020 [0.015]	-0.020 [0.014]	-0.007 [0.013]
East north central	-0.009 [0.015]	-0.008 [0.015]	-0.013 [0.015]	-0.012 [0.014]	-0.011 [0.014]	-0.001 [0.013]
West north central	-0.020 [0.016]	-0.017 [0.016]	-0.020 [0.016]	-0.017 [0.015]	-0.015 [0.015]	-0.007 [0.014]
South atlantic	0.020 [0.016]	0.017 [0.016]	0.011 [0.016]	0.010 [0.015]	0.010 [0.015]	0.008 [0.014]
East south central	0.017 [0.017]	0.010 [0.017]	0.003 [0.017]	0.001 [0.017]	0.003 [0.016]	-0.001 [0.015]
West south central	0.031 [0.017]*	0.028 [0.017]	0.019 [0.017]	0.013 [0.016]	0.014 [0.016]	0.009 [0.015]
Mountain	0.008 [0.020]	0.016 [0.020]	0.014 [0.020]	0.013 [0.019]	0.013 [0.019]	0.006 [0.018]
Pacific	0.010 [0.018]	0.017 [0.018]	0.020 [0.018]	0.020 [0.017]	0.022 [0.017]	0.025 [0.016]
Not US	0.025 [0.018]	0.014 [0.018]	0.015 [0.018]	0.010 [0.017]	0.009 [0.017]	0.024 [0.016]
Years of education		-0.003 [0.001]**	-0.001 [0.001]	0.002 [0.001]	0.004 [0.001]**	0.015 [0.001]***

Has private health insurance	-0.018 [0.006]***	-0.016 [0.006]***	-0.013 [0.005]**	-0.012 [0.005]**	-0.002 [0.005]
On Medicaid	0.054 [0.015]***	0.043 [0.015]***	0.023 [0.015]	0.020 [0.015]	0.009 [0.014]
DK/RF	0.112 [0.053]**	0.097 [0.052]*	0.099 [0.052]*	0.084 [0.052]	0.037 [0.050]
White-collar high skilled	ref.	ref.	ref.	ref.	ref.
White-collar low skilled	0.000 [0.008]	-0.001 [0.008]	0.000 [0.008]	0.000 [0.008]	0.001 [0.007]
Blue-collar high skilled	0.049 [0.012]***	0.048 [0.012]***	0.045 [0.012]***	0.042 [0.012]***	0.020 [0.011]*
Blue-collar low skilled	0.042 [0.010]***	0.041 [0.010]***	0.036 [0.010]***	0.034 [0.009]***	0.007 [0.009]
Never worked	0.074 [0.025]***	0.072 [0.025]***	0.073 [0.024]***	0.072 [0.023]***	0.054 [0.021]**
DK/RF	-0.010 [0.014]	-0.012 [0.014]	-0.009 [0.014]	-0.009 [0.014]	-0.009 [0.013]
Decades worked	-0.011 [0.002]***	-0.010 [0.002]***	-0.006 [0.002]***	-0.006 [0.002]**	-0.003 [0.002]
BMI<=25		ref.	ref.	ref.	ref.
25<BMI<=30		-0.028 [0.007]***	-0.031 [0.007]***	-0.030 [0.007]***	-0.026 [0.006]***
30<BMI<=35		-0.019 [0.008]**	-0.033 [0.008]***	-0.032 [0.008]***	-0.026 [0.008]***
35<BMI		-0.002 [0.011]	-0.030 [0.011]***	-0.029 [0.011]***	-0.024 [0.010]**
Never drinks		ref.	ref.	ref.	ref.
1 drink per occasion		-0.018 [0.007]***	-0.006 [0.007]	-0.005 [0.007]	-0.001 [0.006]
2 drinks per occasion		-0.013 [0.008]	0.003 [0.008]	0.004 [0.008]	0.004 [0.008]
3 drinks per occasion		-0.022 [0.013]*	-0.015 [0.013]	-0.013 [0.013]	-0.012 [0.012]
4 drinks per occasion		0.015 [0.025]	0.021 [0.025]	0.022 [0.024]	0.034 [0.023]
5+ drinks per occasion		-0.008 [0.024]	0.003 [0.023]	0.006 [0.023]	0.020 [0.023]
Moderate physical activity daily		ref.	ref.	ref.	ref.
>1 per week		-0.010 [0.009]	-0.010 [0.009]	-0.010 [0.009]	-0.004 [0.008]
1 per week		0.014 [0.010]	0.006 [0.010]	0.006 [0.010]	0.007 [0.010]
1-3 per mon		0.013 [0.012]	-0.004 [0.011]	-0.003 [0.011]	-0.002 [0.011]
Never		0.071 [0.011]***	0.027 [0.011]**	0.023 [0.011]**	0.023 [0.011]**
DK/RF		0.073 [0.116]	0.069 [0.107]	0.074 [0.107]	0.058 [0.111]
Light physical activity daily		ref.	ref.	ref.	ref.

>1 per week	-0.015 [0.008]*	-0.014 [0.008]*	-0.014 [0.008]*	-0.013 [0.008]*
1 per week	-0.003 [0.010]	-0.004 [0.009]	-0.005 [0.009]	-0.008 [0.009]
1-3 per mon	0.038 [0.013]***	0.030 [0.013]**	0.026 [0.013]**	0.022 [0.012]*
Never	0.070 [0.014]***	0.043 [0.014]***	0.030 [0.014]**	0.024 [0.013]*
DK/RF	-0.018 [0.088]	-0.037 [0.086]	-0.029 [0.090]	-0.059 [0.088]
Hospital nights		0.000 [0.000]	0.000 [0.000]	0.000 [0.000]
Nursing home nights		0.000 [0.000]**	0.000 [0.000]	0.000 [0.000]
Health excellent		ref.	ref.	ref.
Very good		0.029 [0.007]***	0.028 [0.007]***	0.029 [0.007]***
Good		0.070 [0.008]***	0.067 [0.008]***	0.065 [0.008]***
Fair		0.153 [0.011]***	0.146 [0.011]***	0.135 [0.011]***
Poor		0.244 [0.022]***	0.231 [0.022]***	0.215 [0.021]***
DK/RF		0.127 [0.137]	0.112 [0.132]	0.071 [0.125]
Has hypertension		0.003 [0.006]	0.002 [0.006]	-0.002 [0.006]
Diabetes		0.023 [0.008]***	0.022 [0.008]***	0.018 [0.007]**
Cancer		-0.005 [0.008]	-0.006 [0.008]	-0.002 [0.007]
Lung disease		0.021 [0.011]*	0.021 [0.011]*	0.022 [0.011]**
Heart disease		0.005 [0.007]	0.006 [0.007]	0.007 [0.007]
Stroke		0.012 [0.014]	0.006 [0.013]	0.008 [0.013]
Psychiatric problems		0.034 [0.010]***	0.029 [0.010]***	0.025 [0.010]***
Arthritis		-0.007 [0.006]	-0.007 [0.006]	-0.010 [0.006]*
Has work-limiting health problemts		0.006 [0.007]	-0.002 [0.007]	0.001 [0.007]
Not working		0.039 [0.012]***	0.033 [0.012]***	0.037 [0.011]***
DK/RF		-0.009 [0.032]	-0.010 [0.032]	-0.007 [0.030]
Experiences no pain		ref.	ref.	ref.
Mild pain		-0.002 [0.009]	-0.003 [0.008]	-0.001 [0.008]

Moderate pain	-0.002 [0.008]	-0.003 [0.008]	-0.002 [0.007]
Severe pain	0.003 [0.016]	-0.003 [0.016]	0.000 [0.015]
DK/RF	0.024 [0.051]	0.021 [0.051]	0.014 [0.050]
Visited dentist	-0.010 [0.006]	-0.009 [0.006]	-0.001 [0.006]
DK/RF	0.187 [0.109]*	0.189 [0.112]*	0.169 [0.102]*
Received home care	0.019 [0.012]	0.015 [0.012]	0.016 [0.011]
DK/RF	-0.182 [0.023]***	-0.211 [0.049]***	-0.191 [0.053]***
CESD depression score	0.014 [0.002]***	0.011 [0.002]***	0.008 [0.002]***
Has restless sleep	-0.014 [0.007]**	-0.014 [0.007]**	-0.014 [0.007]**
DK/RF	0.101 [0.117]	0.095 [0.119]	0.052 [0.131]
Has difficulty walking across room		0.000 [0.021]	0.000 [0.020]
Don't do		-0.206 [0.036]***	-0.101 [0.034]***
DK/RF		-0.138 [0.026]***	-0.328 [0.026]***
Has difficulty dressing		0.008 [0.014]	0.009 [0.013]
Don't do		0.983 [0.023]***	0.869 [0.023]***
DK/RF		0.080 [0.249]	0.017 [0.258]
Has difficulty bathing		-0.015 [0.021]	-0.005 [0.020]
Don't do		0.011 [0.358]	-0.020 [0.312]
DK/RF		-0.269 [0.043]***	-0.213 [0.041]***
Has difficulty eating		0.068 [0.035]*	0.073 [0.033]**
Has difficulty getting out of bed		-0.001 [0.020]	-0.004 [0.019]
Don't do		-0.128 [0.145]	-0.093 [0.131]
Has difficulty using the toilet		0.027 [0.017]	0.026 [0.016]
Don't do		-0.313 [0.042]***	-0.336 [0.040]***
Has difficulty using the map		0.052	0.024

Don't do	[0.010]***	[0.010]**
	0.049	0.030
DK/RF	[0.012]***	[0.011]***
	-0.106	-0.168
	[0.112]	[0.110]
Has difficulty using the phone	0.081	0.068
	[0.029]***	[0.027]**
Don't do	0.063	0.092
	[0.093]	[0.092]
DK/RF	0.807	0.924
	[0.055]***	[0.045]***
Has difficulty with money	0.133	0.117
	[0.026]***	[0.025]***
Don't do	0.077	0.059
	[0.018]***	[0.018]***
DK/RF	0.134	0.100
	[0.273]	[0.302]
Has difficulty with medications	0.049	0.052
	[0.033]	[0.032]
Don't do	-0.040	-0.105
	[0.088]	[0.090]
DK/RF	-0.032	-0.028
	[0.019]*	[0.019]
Has difficulty shopping	0.022	0.034
	[0.020]	[0.019]*
Don't do	0.055	0.049
	[0.027]**	[0.026]*
DK/RF	-0.214	-0.183
	[0.049]***	[0.038]***
Has difficulty preparing meals	0.068	0.069
	[0.027]**	[0.026]***
Don't do	0.022	0.025
	[0.018]	[0.017]
DK/RF	0.659	0.625
	[0.034]***	[0.067]***
Memory excellent		ref.
Very good		0.018
		[0.011]
Good		0.031
		[0.011]***
Fair		0.074
		[0.012]***
Poor		0.157
		[0.022]***
Immediate word recall		-0.016
		[0.002]***
Delayed word recall		-0.026
		[0.002]***
Serial 7s		-0.043

						[0.002]***
Knows the year						-0.078
						[0.027]***
Knows the president						-0.105
						[0.029]***
Knows the vice president						-0.028
						[0.006]***
Constant	0.080	0.170	0.165	0.042	0.019	0.432
	[0.025]***	[0.034]***	[0.035]***	[0.035]	[0.035]	[0.052]***
R squared	0.104	0.115	0.128	0.158	0.167	0.226
N	24,533	24,533	24,533	24,533	24,533	24,533

Table A.14. Multivariate models of 4-year incidence of cognitive impairment, specification 2.

	[1]	[2a]	[2b]	[3a]	[3b]	[4a]	[4b]
	Baseline	Physical measures		Genes		Psychosocial	
Age (decades after 65)	-0.085	-0.068	-0.091	-0.114	-0.114	-0.125	-0.141
	[0.053]	[0.070]	[0.070]	[0.061]*	[0.061]*	[0.080]	[0.080]*
Age squared	0.126	0.119	0.125	0.141	0.140	0.147	0.151
	[0.040]***	[0.051]**	[0.052]**	[0.045]***	[0.045]***	[0.059]**	[0.059]**
Age cube	-0.014	-0.014	-0.016	-0.016	-0.016	-0.018	-0.018
	[0.009]	[0.011]	[0.011]	[0.010]*	[0.010]	[0.013]	[0.013]
Female	-0.019	-0.022	-0.056	-0.025	-0.025	-0.020	-0.004
	[0.007]**	[0.009]**	[0.014]***	[0.008]***	[0.008]***	[0.010]*	[0.011]
Non-Hispanic White	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Non-Hispanic Black	-0.016	0.002	-0.006	-0.017	-0.015	-0.015	-0.019
	[0.010]	[0.013]	[0.014]	[0.012]	[0.012]	[0.015]	[0.015]
Non-Hispanic other	-0.009	0.001	0.001	-	-	0.007	0.003
	[0.023]	[0.030]	[0.030]			[0.034]	[0.034]
Hispanic	-0.073	-0.081	-0.083	-	-	-0.096	-0.098
	[0.014]***	[0.018]***	[0.018]***			[0.018]***	[0.018]***
Married	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Separated/divorced	0.006	0.008	0.007	0.009	0.010	0.005	-0.002
	[0.010]	[0.013]	[0.013]	[0.012]	[0.012]	[0.013]	[0.014]
Widowed	0.002	-0.008	-0.009	0.001	0.000	-0.006	-0.010
	[0.008]	[0.010]	[0.010]	[0.009]	[0.009]	[0.011]	[0.011]
Never married	-0.039	-0.034	-0.040	-0.044	-0.045	-0.031	-0.035
	[0.017]**	[0.022]	[0.022]*	[0.020]**	[0.020]**	[0.024]	[0.024]
Birthplace in New England	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Mid atlantic	-0.020	-0.012	-0.012	-0.018	-0.019	-0.038	-0.041
	[0.014]	[0.018]	[0.018]	[0.015]	[0.015]	[0.021]*	[0.021]**
East north central	-0.011	-0.008	-0.007	-0.011	-0.009	-0.019	-0.022
	[0.014]	[0.018]	[0.018]	[0.015]	[0.015]	[0.020]	[0.020]
West north central	-0.015	-0.004	0.001	-0.014	-0.013	-0.020	-0.023
	[0.015]	[0.019]	[0.019]	[0.016]	[0.016]	[0.021]	[0.021]
South atlantic	0.010	0.007	0.005	0.014	0.015	0.002	-0.006
	[0.015]	[0.019]	[0.019]	[0.016]	[0.016]	[0.022]	[0.022]

>1 per week	-0.010 [0.009]	-0.006 [0.013]	-0.006 [0.013]	-0.013 [0.010]	-0.013 [0.010]	0.007 [0.015]	0.007 [0.014]
1 per week	0.006 [0.010]	0.014 [0.015]	0.013 [0.015]	0.003 [0.012]	0.003 [0.012]	0.025 [0.017]	0.023 [0.017]
1-3 per mon	-0.003 [0.011]	0.015 [0.017]	0.013 [0.017]	-0.004 [0.013]	-0.004 [0.013]	0.019 [0.019]	0.014 [0.018]
Never	0.023 [0.011]**	0.031 [0.016]*	0.027 [0.016]*	0.019 [0.013]	0.019 [0.013]	0.037 [0.018]**	0.028 [0.018]
DK/RF	0.074 [0.107]	-0.008 [0.335]	-0.013 [0.329]	0.037 [0.131]	0.034 [0.131]	0.158 [0.238]	0.114 [0.239]
Light physical activity daily	ref.	ref.	ref.	ref.	ref.	ref.	ref.
>1 per week	-0.014 [0.008]*	-0.013 [0.012]	-0.016 [0.012]	-0.013 [0.009]	-0.013 [0.009]	-0.037 [0.014]***	-0.040 [0.014]***
1 per week	-0.005 [0.009]	-0.006 [0.014]	-0.010 [0.014]	-0.005 [0.010]	-0.006 [0.010]	-0.029 [0.015]*	-0.037 [0.015]**
1-3 per mon	0.026 [0.013]**	0.007 [0.018]	0.000 [0.018]	0.037 [0.015]**	0.036 [0.015]**	-0.019 [0.020]	-0.030 [0.020]
Never	0.030 [0.014]**	0.016 [0.021]	0.006 [0.021]	0.043 [0.017]***	0.042 [0.017]**	0.010 [0.024]	-0.002 [0.023]
DK/RF	-0.029 [0.090]	-0.225 [0.086]***	-0.245 [0.098]**	0.123 [0.164]	0.125 [0.163]	-0.022 [0.191]	0.001 [0.214]
Hospital nights	0.000 [0.000]	0.001 [0.001]	0.000 [0.001]	0.000 [0.001]	0.000 [0.001]	0.000 [0.001]	0.000 [0.001]
Nursing home nights	0.000 [0.000]	0.000 [0.000]	-0.001 [0.000]	0.000 [0.000]	0.000 [0.000]	0.001 [0.000]**	0.001 [0.000]**
Health excellent	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Very good	0.028 [0.007]***	0.039 [0.010]***	0.037 [0.010]***	0.028 [0.008]***	0.028 [0.008]***	0.040 [0.011]***	0.039 [0.012]***
Good	0.067 [0.008]***	0.077 [0.011]***	0.072 [0.011]***	0.073 [0.009]***	0.073 [0.009]***	0.076 [0.013]***	0.066 [0.014]***
Fair	0.146 [0.011]***	0.165 [0.016]***	0.158 [0.016]***	0.156 [0.013]***	0.155 [0.013]***	0.169 [0.018]***	0.149 [0.020]***
Poor	0.231 [0.022]***	0.263 [0.034]***	0.248 [0.034]***	0.255 [0.027]***	0.255 [0.027]***	0.248 [0.037]***	0.224 [0.039]***
DK/RF	0.112 [0.132]	-0.220 [0.076]***	-0.213 [0.085]**	0.206 [0.202]	0.205 [0.202]	0.031 [0.260]	0.033 [0.266]
Has hypertension	0.002 [0.006]	-0.002 [0.007]	-0.003 [0.007]	0.008 [0.007]	0.008 [0.007]	0.006 [0.008]	0.008 [0.008]
Diabetes	0.022 [0.008]***	0.017 [0.010]*	0.016 [0.010]	0.015 [0.009]*	0.016 [0.009]*	0.030 [0.011]***	0.026 [0.011]**
Cancer	-0.006 [0.008]	0.002 [0.010]	0.003 [0.010]	-0.004 [0.008]	-0.003 [0.008]	-0.001 [0.010]	0.001 [0.010]
Lung disease	0.021 [0.011]*	0.020 [0.015]	0.012 [0.015]	0.020 [0.013]	0.020 [0.013]	0.022 [0.016]	0.020 [0.016]
Heart disease	0.006 [0.007]	-0.004 [0.009]	-0.003 [0.009]	0.000 [0.008]	0.000 [0.008]	-0.004 [0.010]	-0.003 [0.010]
Stroke	0.006 [0.013]	0.006 [0.017]	0.004 [0.017]	-0.001 [0.015]	-0.001 [0.015]	0.005 [0.019]	0.004 [0.018]
Psychiatric problems	0.029 [0.010]***	0.026 [0.013]**	0.027 [0.013]**	0.033 [0.011]***	0.033 [0.011]***	0.030 [0.014]**	0.025 [0.014]*

Arthritis	-0.007 [0.006]	-0.009 [0.008]	-0.010 [0.008]	-0.005 [0.007]	-0.004 [0.007]	-0.011 [0.009]	-0.010 [0.009]
Has work-limiting health problems	-0.002 [0.007]	0.003 [0.010]	-0.001 [0.010]	0.001 [0.008]	0.002 [0.008]	0.006 [0.011]	0.002 [0.011]
Not working	0.033 [0.012]***	0.029 [0.017]*	0.026 [0.017]	0.037 [0.013]***	0.037 [0.013]***	0.041 [0.021]**	0.037 [0.021]*
DK/RF	-0.010 [0.032]	-0.003 [0.058]	0.000 [0.058]	0.023 [0.042]	0.022 [0.042]	-0.079 [0.054]	-0.085 [0.055]
Experiences no pain	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Mild pain	-0.003 [0.008]	-0.004 [0.012]	-0.002 [0.012]	-0.011 [0.009]	-0.011 [0.009]	-0.005 [0.013]	-0.006 [0.013]
Moderate pain	-0.003 [0.008]	-0.005 [0.011]	-0.004 [0.011]	0.000 [0.009]	0.000 [0.009]	-0.019 [0.012]	-0.019 [0.012]
Severe pain	-0.003 [0.016]	-0.011 [0.023]	-0.014 [0.023]	-0.002 [0.019]	-0.001 [0.019]	-0.014 [0.025]	-0.010 [0.025]
DK/RF	0.021 [0.051]	0.059 [0.085]	0.060 [0.084]	0.083 [0.070]	0.083 [0.070]	0.076 [0.098]	0.095 [0.096]
Visited dentist	-0.009 [0.006]	-0.002 [0.009]	0.002 [0.009]	-0.009 [0.007]	-0.008 [0.007]	-0.007 [0.009]	-0.006 [0.009]
DK/RF	0.189 [0.112]*	0.306 [0.180]*	0.311 [0.176]*	0.146 [0.153]	0.150 [0.150]	0.554 [0.154]***	0.557 [0.152]***
Received home care	0.015 [0.012]	0.015 [0.018]	0.011 [0.018]	0.015 [0.013]	0.015 [0.013]	0.010 [0.019]	0.009 [0.018]
DK/RF	-0.211 [0.049]***	-0.159 [0.022]***	-0.138 [0.022]***	-0.185 [0.037]***	-0.186 [0.033]***	-0.147 [0.024]***	-0.118 [0.027]***
CESD depression score	0.011 [0.002]***	0.012 [0.003]***	0.012 [0.003]***	0.014 [0.003]***	0.014 [0.003]***	0.010 [0.004]**	0.004 [0.004]
Has restless sleep	-0.014 [0.007]**	-0.015 [0.010]	-0.015 [0.010]	-0.014 [0.008]*	-0.014 [0.008]*	-0.012 [0.012]	-0.008 [0.012]
DK/RF	0.095 [0.119]	0.239 [0.164]	0.237 [0.163]	0.261 [0.146]*	0.257 [0.148]*	0.112 [0.226]	0.124 [0.218]
Has difficulty walking across room	0.000 [0.021]	-0.027 [0.031]	-0.039 [0.031]	-0.019 [0.024]	-0.019 [0.024]	-0.025 [0.033]	-0.025 [0.033]
Don't do	-0.206 [0.036]***	-	-	-0.202 [0.042]***	-0.216 [0.042]***	-	-
DK/RF	-0.138 [0.026]***	-	-	-0.142 [0.031]***	-0.128 [0.031]***	-	-
Has difficulty dressing	0.008 [0.014]	0.002 [0.021]	-0.003 [0.021]	0.007 [0.017]	0.007 [0.017]	-0.027 [0.022]	-0.027 [0.022]
Don't do	0.983 [0.023]***	0.986 [0.030]***	0.923 [0.033]***	-	-	1.013 [0.032]***	0.942 [0.066]***
DK/RF	0.080 [0.249]	-0.057 [0.029]**	-0.091 [0.030]***	0.095 [0.338]	0.098 [0.346]	-	-
Has difficulty bathing	-0.015 [0.021]	-0.047 [0.031]	-0.048 [0.031]	-0.021 [0.025]	-0.021 [0.025]	-0.036 [0.032]	-0.038 [0.032]
Don't do	0.011 [0.358]	0.170 [0.488]	0.174 [0.484]	0.299 [0.394]	0.292 [0.389]	-	-
DK/RF	-0.269	-0.268	-0.234	-	-	-0.230	-0.321

	[0.043]***	[0.063]***	[0.063]***			[0.069]***	[0.085]***
Has difficulty eating	0.068	0.132	0.121	0.129	0.130	0.150	0.151
	[0.035]*	[0.057]**	[0.057]**	[0.044]***	[0.044]***	[0.056]***	[0.055]***
Has difficulty getting out of bed	-0.001	-0.029	-0.028	0.015	0.014	-0.007	-0.004
	[0.020]	[0.030]	[0.030]	[0.024]	[0.024]	[0.033]	[0.033]
Don't do	-0.128	-0.024	-0.043	-0.181	-0.182	0.150	0.145
	[0.145]	[0.228]	[0.224]	[0.142]	[0.142]	[0.202]	[0.213]
Has difficulty using the toilet	0.027	0.057	0.055	0.021	0.022	0.072	0.069
	[0.017]	[0.026]**	[0.026]**	[0.019]	[0.019]	[0.028]**	[0.028]**
Don't do	-0.313	-	-	-0.313	-0.345	-	-
	[0.042]***			[0.051]***	[0.052]***		
Has difficulty using the map	0.052	0.061	0.059	0.052	0.051	0.056	0.045
	[0.010]***	[0.015]***	[0.015]***	[0.013]***	[0.013]***	[0.016]***	[0.016]***
Don't do	0.049	0.075	0.070	0.051	0.051	0.077	0.067
	[0.012]***	[0.018]***	[0.018]***	[0.015]***	[0.015]***	[0.020]***	[0.020]***
DK/RF	-0.106	-0.149	-0.144	-0.026	-0.032	-0.169	-0.164
	[0.112]	[0.065]**	[0.059]**	[0.145]	[0.148]	[0.083]**	[0.103]
Has difficulty using the phone	0.081	0.089	0.085	0.067	0.066	0.164	0.157
	[0.029]***	[0.042]**	[0.043]**	[0.033]**	[0.033]**	[0.048]***	[0.049]***
Don't do	0.063	0.065	0.042	0.010	0.009	0.117	0.133
	[0.093]	[0.141]	[0.136]	[0.116]	[0.115]	[0.165]	[0.168]
DK/RF	0.807	0.921	0.941	0.798	0.775	0.825	0.812
	[0.055]***	[0.051]***	[0.055]***	[0.069]***	[0.071]***	[0.076]***	[0.090]***
Has difficulty with money	0.133	0.174	0.171	0.137	0.137	0.089	0.076
	[0.026]***	[0.041]***	[0.041]***	[0.031]***	[0.031]***	[0.045]**	[0.045]*
Don't do	0.077	0.089	0.087	0.092	0.092	0.094	0.088
	[0.018]***	[0.027]***	[0.027]***	[0.021]***	[0.021]***	[0.031]***	[0.030]***
DK/RF	0.134	-	-	-0.322	-0.319	-	-
	[0.273]			[0.152]**	[0.154]**		
Has difficulty with medications	0.049	0.031	0.025	0.031	0.030	0.059	0.058
	[0.033]	[0.046]	[0.046]	[0.037]	[0.037]	[0.052]	[0.051]
Don't do	-0.040	0.084	0.087	0.046	0.047	0.203	0.167
	[0.088]	[0.159]	[0.157]	[0.124]	[0.123]	[0.141]	[0.163]
DK/RF	-0.032	-0.017	-0.014	-0.014	-0.012	-0.011	-0.014
	[0.019]*	[0.032]	[0.032]	[0.024]	[0.023]	[0.033]	[0.034]
Has difficulty shopping	0.022	0.044	0.041	0.022	0.023	0.052	0.055
	[0.020]	[0.030]	[0.030]	[0.023]	[0.023]	[0.032]	[0.032]*
Don't do	0.055	0.053	0.053	0.033	0.033	-0.008	-0.006
	[0.027]**	[0.039]	[0.039]	[0.030]	[0.030]	[0.047]	[0.047]
DK/RF	-0.214	-0.310	-0.304	-0.197	-0.190	-0.221	-0.221
	[0.049]***	[0.039]***	[0.045]***	[0.063]***	[0.064]***	[0.067]***	[0.081]***
Has difficulty preparing meals	0.068	0.089	0.092	0.081	0.080	0.091	0.085
	[0.027]**	[0.041]**	[0.041]**	[0.032]**	[0.032]**	[0.044]**	[0.044]*
Don't do	0.022	0.037	0.037	0.026	0.027	0.019	0.015
	[0.018]	[0.026]	[0.026]	[0.020]	[0.020]	[0.029]	[0.029]
DK/RF	0.659			0.676	0.678		
	[0.034]***			[0.020]***	[0.020]***		
Breathing test			-0.012				
			[0.004]***				
RF			0.010				

	[0.030]	
Grip strength	-0.015	
RF	[0.004]***	
	-0.037	
	[0.033]	
Timed walk test time	-0.006	
RF	[0.006]	
	0.024	
	[0.041]	
Semi tandem balance test time	0.013	
RF	[0.003]***	
	0.001	
	[0.031]	
Alzheimer's polygenic score		0.011
		[0.003]***
Big 5 neuroticism		-0.003
		[0.009]
DK/RF		0.111
		[0.082]
Big 5 conscientiousness		-0.029
		[0.010]***
DK/RF		0.016
		[0.080]
Loneliness		0.013
		[0.010]
DK/RF		0.000
		[0.041]
Positive affect		-0.006
		[0.007]
DK/RF		-0.038
		[0.103]
Negative affect		0.009
		[0.011]
DK/RF		0.119
		[0.110]
Life satisfaction scale		-0.001
		[0.004]
DK/RF		-0.052
		[0.051]
Hobby activity scale		-0.012
		[0.004]***
DK/RF		0.108
		[0.065]*
Novel information activity scale		-0.016
		[0.004]***
DK/RF		-0.042
		[0.050]
Not at all satisfied with health		ref.
Not very satisfied		-0.005
		[0.037]

Somewhat satisfied							-0.026 [0.036]
Very satisfied							-0.044 [0.037]
Completely satisfied							-0.014 [0.038]
DK/RF							-0.065 [0.053]
Constant	0.019 [0.035]	-0.013 [0.046]	0.168 [0.069]**	0.017 [0.041]	0.015 [0.041]	0.046 [0.052]	0.244 [0.082]***
R squared	0.167	0.165	0.171	0.173	0.173	0.178	0.187
N	24,533	10,176	10,176	18,920	18,920	8,148	8,148

Table A.15. Multivariate models of cognitive impairment prevalence at age 80, specification 1.

	[1] Demog	[2] + SES	[3] + Behav	[4] + Health	[5] + Func
Age (decades after 80)	0.112 [0.027]***	0.115 [0.026]***	0.129 [0.027]***	0.181 [0.026]***	0.164 [0.026]***
Female	-0.006 [0.011]	-0.032 [0.013]**	-0.034 [0.013]**	-0.032 [0.013]**	-0.040 [0.013]***
Non-Hispanic White	ref.	ref.	ref.	ref.	ref.
Non-Hispanic Black	0.072 [0.017]***	0.025 [0.017]	0.012 [0.017]	-0.003 [0.017]	-0.013 [0.017]
Non-Hispanic other	-0.009 [0.042]	-0.016 [0.036]	-0.020 [0.037]	-0.018 [0.036]	-0.029 [0.035]
Hispanic	0.071 [0.023]***	-0.076 [0.024]***	-0.080 [0.024]***	-0.094 [0.023]***	-0.098 [0.023]***
Married	ref.	ref.	ref.	ref.	ref.
Separated/divorced	0.040 [0.018]**	0.027 [0.017]	0.029 [0.017]*	0.007 [0.017]	0.006 [0.017]
Widowed	0.058 [0.020]***	0.037 [0.019]*	0.035 [0.019]*	0.023 [0.019]	0.023 [0.019]
Never married	0.018 [0.032]	0.013 [0.030]	0.015 [0.030]	0.018 [0.029]	0.025 [0.029]
Birthplace in New England	ref.	ref.	ref.	ref.	ref.
Mid atlantic	-0.053 [0.031]*	-0.050 [0.029]*	-0.050 [0.029]*	-0.030 [0.028]	-0.025 [0.028]
East north central	-0.050 [0.030]*	-0.051 [0.029]*	-0.053 [0.028]*	-0.040 [0.027]	-0.032 [0.027]
West north central	-0.047 [0.032]	-0.047 [0.030]	-0.046 [0.030]	-0.033 [0.028]	-0.027 [0.028]
South atlantic	0.070 [0.031]**	0.043 [0.030]	0.046 [0.029]	0.044 [0.028]	0.048 [0.028]*
East south central	0.071 [0.033]**	0.030 [0.031]	0.035 [0.031]	0.024 [0.030]	0.030 [0.030]
West south central	0.064	0.047	0.051	0.040	0.046

	[0.033]*	[0.031]	[0.031]	[0.030]	[0.029]
Mountain	-0.015	0.012	0.019	0.025	0.028
	[0.040]	[0.038]	[0.037]	[0.036]	[0.036]
Pacific	-0.016	0.006	0.008	0.021	0.028
	[0.037]	[0.037]	[0.037]	[0.035]	[0.035]
Not US	0.048	0.015	0.023	0.021	0.023
	[0.034]	[0.032]	[0.032]	[0.031]	[0.031]
Years of education	-0.016	-0.015	-0.009	-0.007	
	[0.002]***	[0.002]***	[0.002]***	[0.002]***	
Has private health insurance	-0.052	-0.048	-0.017	-0.017	
	[0.017]***	[0.017]***	[0.017]	[0.017]	
On Medicaid	0.138	0.129	0.033	0.022	
	[0.029]***	[0.029]***	[0.028]	[0.028]	
DK/RF	0.016	0.021	0.010	0.000	
	[0.095]	[0.094]	[0.087]	[0.086]	
White-collar high skilled	ref.	ref.	ref.	ref.	
White-collar low skilled	-0.024	-0.023	-0.024	-0.021	
	[0.015]	[0.015]	[0.015]	[0.015]	
Blue-collar high skilled	0.078	0.075	0.065	0.066	
	[0.020]***	[0.020]***	[0.020]***	[0.020]***	
Blue-collar low skilled	0.078	0.078	0.069	0.067	
	[0.017]***	[0.017]***	[0.017]***	[0.017]***	
Never worked	0.074	0.073	0.059	0.047	
	[0.037]**	[0.037]**	[0.035]*	[0.035]	
DK/RF	0.034	0.032	0.021	0.017	
	[0.025]	[0.025]	[0.024]	[0.024]	
Decades worked	-0.027	-0.028	-0.020	-0.019	
	[0.005]***	[0.005]***	[0.005]***	[0.005]***	
BMI<=25		ref.	ref.	ref.	
25<BMI<=30		0.022	0.004	0.004	
		[0.013]*	[0.013]	[0.013]	
30<BMI<=35		0.032	-0.009	-0.003	
		[0.016]**	[0.016]	[0.016]	
35<BMI		0.140	0.062	0.065	
		[0.023]***	[0.022]***	[0.023]***	
Hospital nights			0.002	0.002	
			[0.001]*	[0.001]**	
Nursing home nights			0.006	0.009	
			[0.004]	[0.004]**	
Health excellent			ref.	ref.	
Very good			0.018	0.018	
			[0.016]	[0.016]	
Good			0.085	0.083	
			[0.017]***	[0.017]***	
Fair			0.184	0.179	
			[0.023]***	[0.023]***	
Poor			0.263	0.231	
			[0.031]***	[0.033]***	
DK/RF			0.135	0.150	
			[0.218]	[0.232]	

Has hypertension	0.021 [0.011]*	0.019 [0.011]*
Diabetes	0.083 [0.019]***	0.081 [0.019]***
Cancer	-0.015 [0.023]	-0.007 [0.023]
Lung disease	0.019 [0.028]	0.012 [0.028]
Heart disease	0.009 [0.018]	0.012 [0.018]
Stroke	0.089 [0.037]**	0.089 [0.037]**
Psychiatric problems	0.090 [0.022]***	0.077 [0.022]***
Arthritis	0.008 [0.012]	0.009 [0.011]
Has work-limiting health problems	0.021 [0.016]	0.014 [0.017]
DK/RF	0.140 [0.170]	0.095 [0.171]
Experiences no pain	ref.	ref.
Mild pain	-0.002 [0.019]	0.001 [0.018]
Moderate pain	0.007 [0.017]	0.008 [0.017]
Severe pain	0.022 [0.027]	0.014 [0.028]
DK/RF	-0.153 [0.098]	-0.150 [0.099]
Received home care	-0.016 [0.038]	-0.027 [0.038]
CESD depression score	0.007 [0.004]**	0.005 [0.004]
Has restless sleep	0.016 [0.013]	0.015 [0.013]
DK/RF	0.324 [0.216]	0.361 [0.213]*
Has difficulty walking across room		0.046 [0.035]
Don't do		0.140 [0.075]*
DK/RF		-0.028 [0.047]
Has difficulty dressing		-0.060 [0.030]**
DK/RF		0.118 [0.058]**
Has difficulty bathing		-0.022 [0.036]
DK/RF		0.254

Non-Hispanic Black	-0.013 [0.017]	-0.012 [0.018]	-0.013 [0.018]	-0.012 [0.018]	-0.083 [0.018]***	0.001 [0.021]	0.006 [0.021]
Non-Hispanic other	-0.029 [0.035]	-0.018 [0.037]	-0.025 [0.037]	-0.036 [0.036]	-0.078 [0.033]**	-	-
Hispanic	-0.098 [0.023]***	-0.091 [0.024]***	-0.093 [0.024]***	-0.095 [0.024]***	-0.114 [0.022]***	-	-
Married	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Separated/divorced	0.006 [0.017]	-0.001 [0.017]	0.000 [0.017]	0.000 [0.017]	0.002 [0.016]	0.002 [0.020]	0.004 [0.020]
Widowed	0.023 [0.019]	0.015 [0.019]	0.014 [0.019]	0.017 [0.019]	0.020 [0.018]	0.042 [0.023]*	0.042 [0.023]*
Never married	0.025 [0.029]	0.021 [0.030]	0.020 [0.030]	0.026 [0.030]	0.037 [0.029]	0.048 [0.036]	0.045 [0.036]
Birthplace in New England	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Mid atlantic	-0.025 [0.028]	-0.039 [0.029]	-0.041 [0.029]	-0.036 [0.029]	-0.019 [0.028]	-0.026 [0.030]	-0.029 [0.030]
East north central	-0.032 [0.027]	-0.035 [0.028]	-0.040 [0.028]	-0.030 [0.028]	-0.019 [0.027]	-0.040 [0.029]	-0.038 [0.029]
West north central	-0.027 [0.028]	-0.031 [0.029]	-0.036 [0.029]	-0.026 [0.029]	-0.023 [0.028]	-0.027 [0.031]	-0.023 [0.031]
South atlantic	0.048 [0.028]*	0.043 [0.029]	0.036 [0.029]	0.049 [0.029]*	0.036 [0.028]	0.039 [0.031]	0.038 [0.031]
East south central	0.030 [0.030]	0.019 [0.031]	0.012 [0.031]	0.022 [0.031]	0.023 [0.030]	0.016 [0.032]	0.014 [0.032]
West south central	0.046 [0.029]	0.038 [0.031]	0.030 [0.031]	0.046 [0.031]	0.053 [0.030]*	0.045 [0.034]	0.043 [0.034]
Mountain	0.028 [0.036]	-0.003 [0.036]	-0.006 [0.036]	0.005 [0.036]	0.001 [0.035]	0.026 [0.043]	0.029 [0.043]
Pacific	0.028 [0.035]	0.041 [0.037]	0.039 [0.037]	0.045 [0.037]	0.046 [0.036]	0.054 [0.041]	0.053 [0.041]
Not US	0.023 [0.031]	0.013 [0.032]	0.012 [0.032]	0.020 [0.032]	0.034 [0.031]	0.032 [0.038]	0.032 [0.038]
Years of education	-0.007 [0.002]***	-0.006 [0.002]**	-0.005 [0.002]**	-0.006 [0.002]**	0.008 [0.002]***	-0.004 [0.003]	-0.004 [0.003]
Has private health insurance	-0.017 [0.017]	-0.020 [0.017]	-0.020 [0.017]	-0.019 [0.017]	-0.004 [0.016]	-0.017 [0.021]	-0.016 [0.021]
On Medicaid	0.022 [0.028]	0.027 [0.029]	0.026 [0.029]	0.031 [0.029]	0.001 [0.028]	0.017 [0.040]	0.013 [0.040]
DK/RF	0.000 [0.086]	0.033 [0.112]	0.034 [0.112]	0.035 [0.112]	-0.010 [0.103]	-0.065 [0.125]	-0.065 [0.124]
White-collar high skilled	ref.	ref.	ref.	ref.	ref.	ref.	ref.
White-collar low skilled	-0.021 [0.015]	-0.030 [0.015]*	-0.030 [0.015]*	-0.031 [0.015]**	-0.028 [0.015]*	-0.018 [0.017]	-0.017 [0.017]
Blue-collar high skilled	0.066 [0.020]***	0.074 [0.021]***	0.074 [0.021]***	0.070 [0.021]***	0.044 [0.020]**	0.069 [0.024]***	0.068 [0.024]***
Blue-collar low skilled	0.067 [0.017]***	0.065 [0.017]***	0.064 [0.017]***	0.063 [0.017]***	0.024 [0.017]	0.072 [0.019]***	0.070 [0.019]***
Never worked	0.047 [0.035]	0.050 [0.036]	0.049 [0.036]	0.047 [0.036]	0.002 [0.034]	-0.006 [0.043]	-0.001 [0.043]
DK/RF	0.017	0.007	0.005	0.001	-0.016	0.014	0.017

	[0.024]	[0.025]	[0.025]	[0.025]	[0.023]	[0.029]	[0.029]
Decades worked	-0.019	-0.019	-0.019	-0.020	-0.015	-0.020	-0.020
	[0.005]***	[0.005]***	[0.005]***	[0.005]***	[0.005]***	[0.006]***	[0.006]***
BMI<=25	ref.	ref.	ref.	ref.	ref.	ref.	ref.
25<BMI<=30	0.004	-0.003	-0.005	-0.005	-0.010	-0.010	-0.009
	[0.013]	[0.013]	[0.013]	[0.013]	[0.013]	[0.015]	[0.015]
30<BMI<=35	-0.003	0.000	-0.003	-0.003	-0.001	-0.024	-0.022
	[0.016]	[0.016]	[0.016]	[0.016]	[0.015]	[0.018]	[0.018]
35<BMI	0.065	0.055	0.050	0.053	0.056	0.036	0.039
	[0.023]***	[0.023]**	[0.023]**	[0.023]**	[0.022]**	[0.027]	[0.027]
Hospital nights	0.002	0.002	0.002	0.002	0.002	0.002	0.002
	[0.001]**	[0.001]**	[0.001]**	[0.001]**	[0.001]***	[0.001]	[0.001]
Nursing home nights	0.009	0.008	0.008	0.008	0.003	0.011	0.011
	[0.004]**	[0.003]**	[0.004]**	[0.003]**	[0.005]	[0.005]**	[0.005]**
Health excellent	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Very good	0.018	0.014	0.014	0.016	0.016	0.045	0.045
	[0.016]	[0.016]	[0.016]	[0.016]	[0.016]	[0.017]**	[0.017]***
Good	0.083	0.077	0.075	0.079	0.075	0.111	0.111
	[0.017]***	[0.018]***	[0.018]***	[0.018]***	[0.017]***	[0.020]***	[0.020]***
Fair	0.179	0.177	0.175	0.178	0.145	0.209	0.209
	[0.023]***	[0.024]***	[0.024]***	[0.024]***	[0.023]***	[0.028]***	[0.028]***
Poor	0.231	0.208	0.205	0.211	0.150	0.277	0.274
	[0.033]***	[0.034]***	[0.034]***	[0.034]***	[0.032]***	[0.043]***	[0.043]***
DK/RF	0.150	0.152	0.158	0.156	0.027		
	[0.232]	[0.237]	[0.248]	[0.236]	[0.156]		
Has hypertension	0.019	0.026	0.026	0.026	0.022	0.018	0.017
	[0.011]*	[0.012]**	[0.012]**	[0.012]**	[0.011]*	[0.014]	[0.014]
Diabetes	0.081	0.075	0.071	0.076	0.081	0.056	0.054
	[0.019]***	[0.020]***	[0.020]***	[0.020]***	[0.019]***	[0.024]**	[0.024]**
Cancer	-0.007	0.001	0.002	-0.002	0.005	-0.013	-0.015
	[0.023]	[0.023]	[0.023]	[0.023]	[0.022]	[0.026]	[0.026]
Lung disease	0.012	0.016	0.015	0.018	0.013	-0.015	-0.013
	[0.028]	[0.030]	[0.030]	[0.030]	[0.028]	[0.034]	[0.034]
Heart disease	0.012	0.017	0.017	0.016	0.030	0.007	0.005
	[0.018]	[0.019]	[0.019]	[0.019]	[0.018]*	[0.021]	[0.021]
Stroke	0.089	0.085	0.085	0.083	0.061	0.075	0.077
	[0.037]**	[0.039]**	[0.039]**	[0.039]**	[0.036]*	[0.044]*	[0.043]*
Psychiatric problems	0.077	0.072	0.070	0.072	0.059	0.067	0.067
	[0.022]***	[0.022]***	[0.022]***	[0.022]***	[0.021]***	[0.027]**	[0.027]**
Arthritis	0.009	0.006	0.007	0.005	-0.002	0.008	0.008
	[0.011]	[0.012]	[0.012]	[0.012]	[0.011]	[0.014]	[0.014]
Has work-limiting health problems	0.014	0.017	0.016	0.017	0.029	0.031	0.035
	[0.017]	[0.017]	[0.017]	[0.017]	[0.016]*	[0.020]	[0.020]*
DK/RF	0.095	0.125	0.120	0.124	0.189	0.051	0.064
	[0.171]	[0.229]	[0.233]	[0.230]	[0.217]	[0.312]	[0.321]
Experiences no pain	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Mild pain	0.001	0.007	0.006	0.010	0.009	-0.024	-0.023
	[0.018]	[0.019]	[0.019]	[0.019]	[0.018]	[0.022]	[0.022]
Moderate pain	0.008	0.011	0.010	0.016	0.025	0.007	0.005

	[0.017]	[0.017]	[0.017]	[0.018]	[0.017]	[0.020]	[0.020]
Severe pain	0.014	0.021	0.020	0.027	0.036	-0.004	-0.006
	[0.028]	[0.028]	[0.028]	[0.028]	[0.028]	[0.036]	[0.036]
DK/RF	-0.150	-0.148	-0.146	-0.145	-0.129	-0.186	-0.198
	[0.099]	[0.100]	[0.099]	[0.099]	[0.085]	[0.161]	[0.150]
Received home care	-0.027	-0.012	-0.013	-0.014	-0.020	-0.050	-0.047
	[0.038]	[0.039]	[0.039]	[0.039]	[0.036]	[0.047]	[0.046]
CESD depression score	0.005	0.008	0.008	0.009	0.005	0.004	0.004
	[0.004]	[0.004]**	[0.004]**	[0.004]**	[0.004]	[0.005]	[0.005]
Has restless sleep	0.015	0.006	0.007	0.004	0.004	0.013	0.013
	[0.013]	[0.014]	[0.014]	[0.014]	[0.014]	[0.016]	[0.016]
DK/RF	0.361	0.360	0.348	0.628	0.638	0.677	0.700
	[0.213]*	[0.209]*	[0.209]*	[0.041]***	[0.040]***	[0.079]***	[0.079]***
Has difficulty walking across room	0.046	0.041	0.039	0.031	0.027	0.061	0.055
	[0.035]	[0.037]	[0.037]	[0.037]	[0.037]	[0.046]	[0.047]
Don't do	0.140	0.133	0.125	0.129	0.135		
	[0.075]*	[0.077]*	[0.077]	[0.077]*	[0.074]*		
DK/RF	-0.028	0.010	0.006	0.013	0.029	-0.043	-0.045
	[0.047]	[0.056]	[0.056]	[0.057]	[0.052]	[0.057]	[0.055]
Has difficulty dressing	-0.060	-0.059	-0.058	-0.068	-0.046	-0.101	-0.104
	[0.030]**	[0.030]**	[0.030]*	[0.030]**	[0.028]*	[0.039]**	[0.039]***
DK/RF	0.118	0.145	0.129	0.151	0.293	0.115	0.112
	[0.058]**	[0.061]**	[0.061]**	[0.061]**	[0.062]***	[0.074]	[0.074]
Has difficulty bathing	-0.022	-0.023	-0.020	-0.015	-0.013	-0.003	-0.008
	[0.036]	[0.038]	[0.038]	[0.038]	[0.036]	[0.054]	[0.055]
DK/RF	0.254	0.266	0.261	0.269	0.344		
	[0.165]	[0.163]	[0.162]	[0.167]	[0.104]***		
Has difficulty eating	0.057	0.076	0.076	0.079	0.069	0.034	0.049
	[0.052]	[0.054]	[0.054]	[0.054]	[0.053]	[0.087]	[0.087]
DK/RF	0.561	0.572	0.564	0.566	0.591	0.637	0.585
	[0.054]***	[0.056]***	[0.056]***	[0.056]***	[0.058]***	[0.070]***	[0.071]***
Has difficulty getting out of bed	0.022	0.015	0.015	0.013	0.009	0.036	0.042
	[0.029]	[0.030]	[0.030]	[0.030]	[0.029]	[0.040]	[0.040]
Don't do	0.244	0.246	0.243	0.256	0.431		
	[0.056]***	[0.058]***	[0.058]***	[0.058]***	[0.055]***		
Has difficulty using the map	0.081	0.091	0.090	0.090	0.049	0.073	0.071
	[0.017]***	[0.018]***	[0.018]***	[0.018]***	[0.017]***	[0.021]***	[0.021]***
Don't do	0.061	0.062	0.061	0.064	0.048	0.097	0.096
	[0.021]***	[0.021]***	[0.021]***	[0.021]***	[0.020]**	[0.028]***	[0.028]***
DK/RF	0.256	0.267	0.274	0.271	0.283	0.194	0.172
	[0.152]*	[0.198]	[0.193]	[0.198]	[0.211]	[0.163]	[0.172]
Has difficulty using the phone	0.064	0.050	0.052	0.041	0.024	0.090	0.088
	[0.041]	[0.042]	[0.042]	[0.041]	[0.037]	[0.060]	[0.059]
Don't do	-0.067	-0.075	-0.082	-0.071	-0.087	-0.191	-0.141
	[0.100]	[0.091]	[0.092]	[0.090]	[0.101]	[0.056]***	[0.057]**
Has difficulty with money	0.088	0.080	0.079	0.082	0.059	0.060	0.058
	[0.032]***	[0.034]**	[0.033]**	[0.034]**	[0.031]*	[0.046]	[0.047]
Don't do	0.167	0.175	0.178	0.171	0.117	0.226	0.230
	[0.042]***	[0.042]***	[0.042]***	[0.042]***	[0.040]***	[0.050]***	[0.050]***

DK/RF	0.382 [0.094]***	0.375 [0.122]***	0.383 [0.126]***	0.374 [0.122]***	0.308 [0.124]**	0.430 [0.312]	0.435 [0.321]
Has difficulty with medications	0.051 [0.040]	0.067 [0.041]	0.066 [0.041]	0.071 [0.041]*	0.045 [0.040]	0.053 [0.057]	0.054 [0.056]
Don't do	0.086 [0.036]**	0.093 [0.037]**	0.092 [0.037]**	0.095 [0.037]**	0.086 [0.034]**	0.006 [0.043]	0.008 [0.043]
DK/RF	-0.042 [0.026]	-0.036 [0.026]	-0.037 [0.026]	-0.035 [0.026]	-0.034 [0.023]	-0.034 [0.031]	-0.033 [0.031]
Never drinks	ref.						
1 drink per occasion	-0.040 [0.016]***						
2 drinks per occasion	-0.032 [0.017]*						
3 drinks per occasion	-0.018 [0.026]						
4 drinks per occasion	-0.032 [0.038]						
5+ drinks per occasion	-0.030 [0.042]						
Memory excellent	ref.						
Very good	-0.014 [0.022]						
Good	0.006 [0.022]						
Fair	0.060 [0.023]**						
Poor	0.082 [0.032]**						
Immediate word recall	-0.025 [0.005]***						
Delayed word recall	-0.021 [0.004]***						
Serial 7s	-0.056 [0.004]***						
Alzheimer's polygenic score	0.028 [0.006]***						
Constant	0.455 [0.050]***	0.449 [0.051]***	0.464 [0.052]***	0.444 [0.051]***	0.740 [0.055]***	0.407 [0.062]***	0.401 [0.062]***
R squared	0.180	0.192	0.193	0.194	0.274	0.167	0.172
N	5,346	4,829	4,829	4,799	4,799	3,742	3,742