WEB APPENDIX

Variables and Measures

Mortality Measure: The HRS information on year and month of death is obtained both from the National Death Index and from interviews with other family members.

Chronic Disease Measures: Affirmative response to the survey questions (1):

Arthritis: "Have you ever had, or has a doctor ever told you that you have arthritis or rheumatism?"

Cancer: "Has a doctor ever told you that you have cancer or a malignant tumor, excluding minor skin cancer?"

Cardiovascular (heart) disease: "Has a doctor ever told you that you a heart attack, coronary heart disease, angina, congestive heart failure, or other heart problems?" or "Has a doctor told you that you have congestive heart?"

COPD: "Has a doctor ever told you that you have chronic lung disease such as chronic bronchitis or emphysema? (Do not include asthma)"

Diabetes: "Has a doctor ever told you that you have diabetes or high blood sugar?"

Hypertension: "Has a doctor ever told you that you have high blood pressure or hypertension?"

Stroke: "Has a doctor ever told you that you had a stroke?"

Peak Expiratory Flow (PEF): Performed using a Mini-Wright Peak Flow Meter (Clement Clarke International Ltd., Harlow, United Kingdom) with a disposable mouthpiece (3 measurements 30 seconds apart, maximum measurement used) (2)

Percent of Predicted PEF: Actual PEF test measure as percentage of predicted value for PEF for individual's age, gender, height and race/ethnicity (3)

BMI Measure: Calculated based on height and weight measured at time of survey when available; otherwise self-reported values.

Dyspnea Symptoms: "Have you had any of the following persistent or troublesome problems? Persistent wheezing, cough, or bringing up phlegm? Shortness of breath while awake?"

Mobility, Strength, Gross and Fine Motor Skills: Difficulty with walking 1 block; lifting or carrying over 10 pounds (4.5 kg); reaching or extending arms (4)

Depression Measure (Center for Epidemiologic Studies (CES) Depression 8-Item Scale): Count of existence of eight symptoms in the week prior to the survey–depression, everything an effort, restless sleep, unhappiness, loneliness, sadness, lack of energy, lack of enjoyment. Score range is 0 to 8; a score $\geq$ 3 is evidence of current depression (5)

Smoking History: Survey participants were asked "Have you ever smoked cigarettes?" Positive responses generated questions on when the individual started smoking, whether the individuals was currently smoking, and if so, asked to estimate the number of cigarettes or packs smoked in a day (using a standard of 20 cigarettes in a pack). If not a current smoker, the individual was questioned on the age at which he ceased smoking and on the number of cigarettes or packs smoked per day when the individual smoked the most. Mean values for the study population were: starting age, 18 years; stopping age, 47 years; average number of packs/day, 0.8; highest number of packs/day, 1.0. Among current smokers, there was information about the number of packs/day for 93% and 52% provided information on first smoked age. Among individuals who had smoked in the past, but were not current smokers, there was information on starting and stopping age and packs/day for 43%, another 18% had stopping age and packs/day, another 18% had stopping age but not packs/day, and 11% had packs/day but no stopping age information. In analyses using smoking history, missing information on starting or stopping age and packs/day was imputed using the mean population value.

Web References

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3. Nunn AJ, Gregg I. New regression equations for predicting peak expiratory flow in adults. *Br Med J.* 1989;298(6680):1068-1070.

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Web Table 1. Adjusted Odds Ratio (95% Confidence Interval), Multiple Models For Risk of Mortality Within Two Years Post-Survey, HRS National Surveys, United States, 2006 and 2008, All Respondents Over Age 50 (N=12,501), Respondents with COPD (N=1,328) and without COPD (N=11,173)

Effect	Model 1 OR	Model 1 95% CI	Model 2 OR	Model 2 95% CI	Model 3 OR	Model 3 95% CI	Model 4 OR	Model 4 95% CI	Final Model OR	Final Model 95% CI
Male vs Female			1.44	1.23, 1.69	1.38	1.17, 1.63	1.74	1.47, 2.05	1.61	1.36, 1.90
Age 65-74 vs Age 51-64			2.82	2.12, 3.76	2.38	1.78, 3.17	2.52	1.89, 3.37	2.25	1.68, 3.01
Age 75-84 vs Age 51-64			5.79	4.37, 7.68	4.63	3.47, 6.17	4.49	3.37, 5.98	4.00	2.99, 5.35
Age 85+ vs Age 51-64			17.13	12.74, 23.03	13.66	10.06, 18.56	11.71	8.65, 15.86	10.73	7.87, 14.64
Cancer					1.56	1.30, 1.88			1.57	1.30, 1.90
COPD					2.16	1.76, 2.66			1.31	1.05, 1.63
Diabetes					1.86	1.56, 2.21			1.78	1.49, 2.14
Heart Disease					1.64	1.39, 1.95			1.43	1.21, 1.71
Stroke					1.55	1.22, 1.97			1.25	0.98, 1.60
Depression					1.72	1.40, 2.10			1.23	1.00, 1.52
Quasi-BODE	1.73	1.64, 1.81					1.64	1.55, 1.72	1.52	1.44, 1.61
C-Statistic	0.72		0.73		0.79		0.80		0.82	

CI, confidence interval; OR, odds ratio

Web Table 2. Adjusted Odds Ratio (95% Confidence Interval), Multiple Models For Risk of Mortality Within Two Years Post-Survey, HRS National Surveys, United States, 2006 and 2008, Respondents with COPD (N=1,328)

Effect	Model 1 OR	95% CI	Model 2 OR	95% CI	Model 3 OR	95% CI	Model 4 OR	95% CI	Final Model OR	95% CI
Male vs Female			1.55	1.10, 2.20	1.55	1.09, 2.22	1.61	1.13, 2.31	1.58	1.10, 2.28
Age 65-74 vs Age 51-64			2.03	1.18, 3.51	1.78	1.02, 3.11	1.96	1.12, 3.42	1.71	0.97, 3.00
Age 75-84 vs Age 51-64			3.06	1.73, 5.40	2.83	1.59, 5.06	2.68	1.50, 4.80	2.48	1.38, 4.47
Age 85+ vs Age 51-64			5.74	2.96, 11.14	4.66	2.34, 9.26	5.21	2.64, 10.26	4.12	2.04, 8.31
Cancer					1.71	1.17, 2.51			1.66	1.12, 2.47
Diabetes					1.55	1.05, 2.27			1.46	0.98, 2.17
Heart Disease					1.62	1.12, 2.35			1.59	1.09, 2.33
Stroke					1.24	0.74, 2.09			1.05	0.61, 1.78
Depression					1.31	0.88, 1.96			0.93	0.62, 1.41
Quasi-BODE	1.57	1.40, 1.75					1.55	1.39, 1.74	1.54	1.37, 1.73
C-Statistic	0.70		0.65		0.70		0.74		0.76	

CI, confidence interval; OR, odds ratio

Web Table 3. Adjusted Odds Ratio (95% Confidence Interval), Multiple Models For Risk of Mortality Within Two Years Post-Survey, HRS National Surveys, United States, 2006 and 2008, Respondents without COPD (N=11,173)

Effect	Model 1 OR	Model 1 95% CI	Model 2 OR	Model 2 95% CI	Model 3 OR	Model 3 95% CI	Model 4 OR	Model 4 95% CI	Final Model OR	Final Model 95% CI
Male vs Female			1.44	1.20, 1.73	1.34	1.12, 1.62	1.76	1.46, 2.13	1.61	1.33, 1.95
Age 65-74 vs Age 51-64			2.85	2.03, 3.99	2.55	1.82, 3.59	2.65	1.89, 3.72	2.43	1.73, 3.43
Age 75-84 vs Age 51-64			6.56	4.72, 9.11	5.25	3.76, 7.35	5.24	3.76, 7.30	4.61	3.29, 6.46
Age 85+ vs Age 51-64			21.39	15.23, 30.04	17.03	12.01, 24.15	14.47	10.23, 20.47	13.28	9.32, 18.92
Cancer					1.52	1.23, 1.88			1.54	1.24, 1.91
Diabetes					1.95	1.60, 2.38			1.88	1.54, 2.30
Heart Disease					1.65	1.36, 2.00			1.40	1.15, 1.71
Stroke					1.63	1.25, 2.13			1.32	1.00, 1.74
Depression					1.86	1.47, 2.34			1.35	1.06, 1.72
Quasi-BODE	1.73	1.64, 1.84					1.59	1.49, 1.69	1.50	1.41, 1.61
C-Statistic	0.70		0.75		0.80		0.79		0.82	

CI, confidence interval; OR, odds ratio