Online Appendix for

S*ea*TE: Subjective *ex ante* Treatment Effect of Health on Retirement

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Appendix A1. VRI Sample: Additional Figures and Tables for Sections III & V

Figure A1. Partition of the Health States for Survey Questions

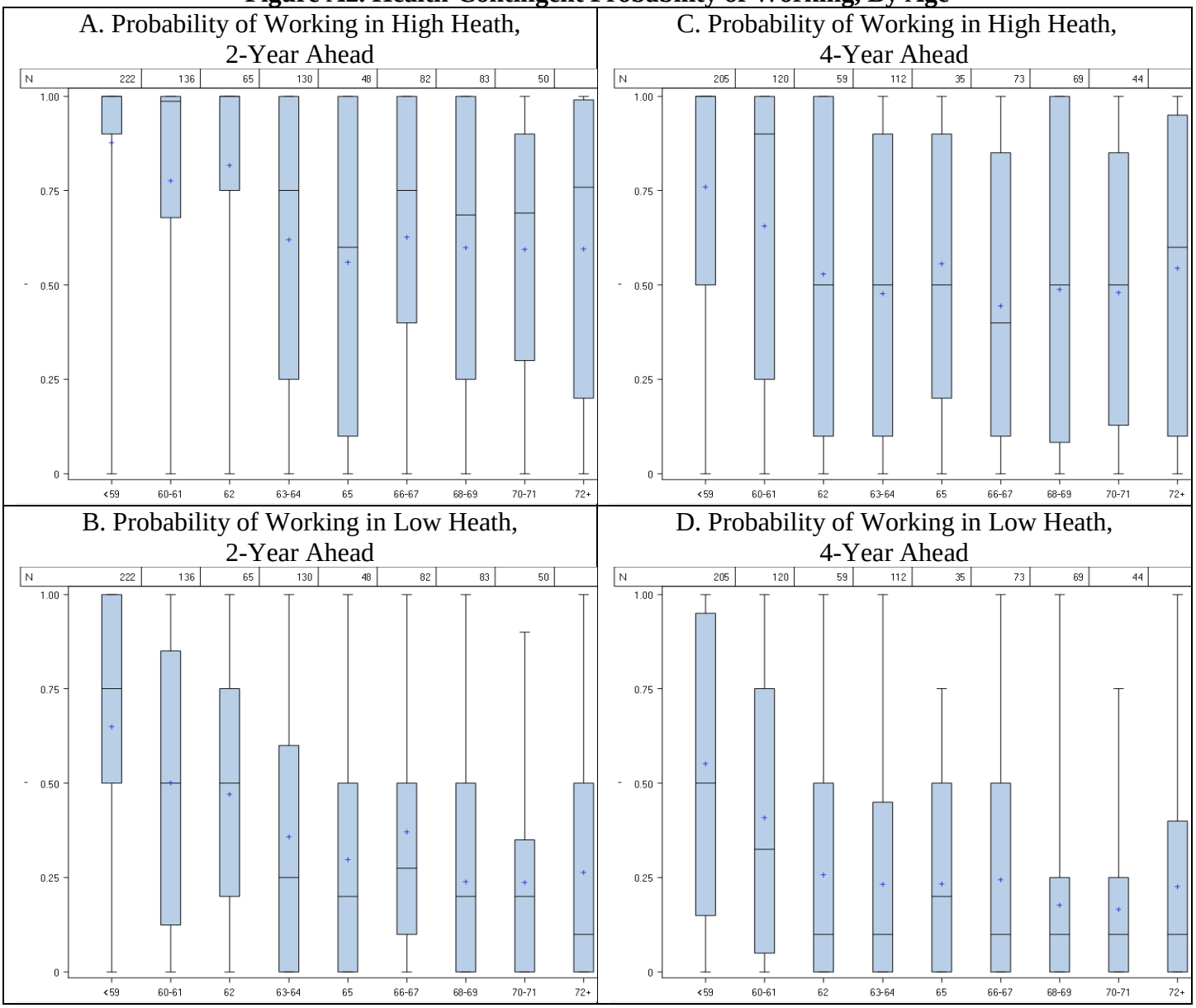
Note: This table shows the partition of the future health states for the expectations questions. The expectations sequence partitions future health states conditional on the respondent's current health. See Online Appendix C for sequence of questions.

Results by age group. In Figure A2, we show box-and-whisker plots of the health-contingent working probabilities by age of the respondent at the time of the survey. The two top plots refer to the probability of working in high health, whereas the two bottom plots refer to the probability of working in low health. The plots to the left refer to the 2-year horizon, while the plots to the right refer to the 4-year horizon. Age bins 60-61, 63-64, and 65 in the two left plots are of particular interest, as a 2-year horizon from those ages implies the crossing of the early, normal, and full SS retirement ages (i.e., 62, 65, and 67), where actual labor supply displays well-known peaks. There are similar peaks for age ≤ 59, 60-61, 62, and 63-64 with the 4-years horizon. Figure A3 displays analogous box and whisker plots for the unconditional working and health probabilities.

In the left plots of Figure A2, the mean and median working expectations at 2 years feature sharp declines among the 60-61 years old (corresponding to the 62 peak), among the 63-64 years old (corresponding to the 65 peak), and among the 65 years old (corresponding to the 67 peak). Notice, however, that the mean and median working expectations do not decrease monotonically across groups of increasing age. This is consistent with increasing selectivity of the working and (high) health requirements applying to older respondents.

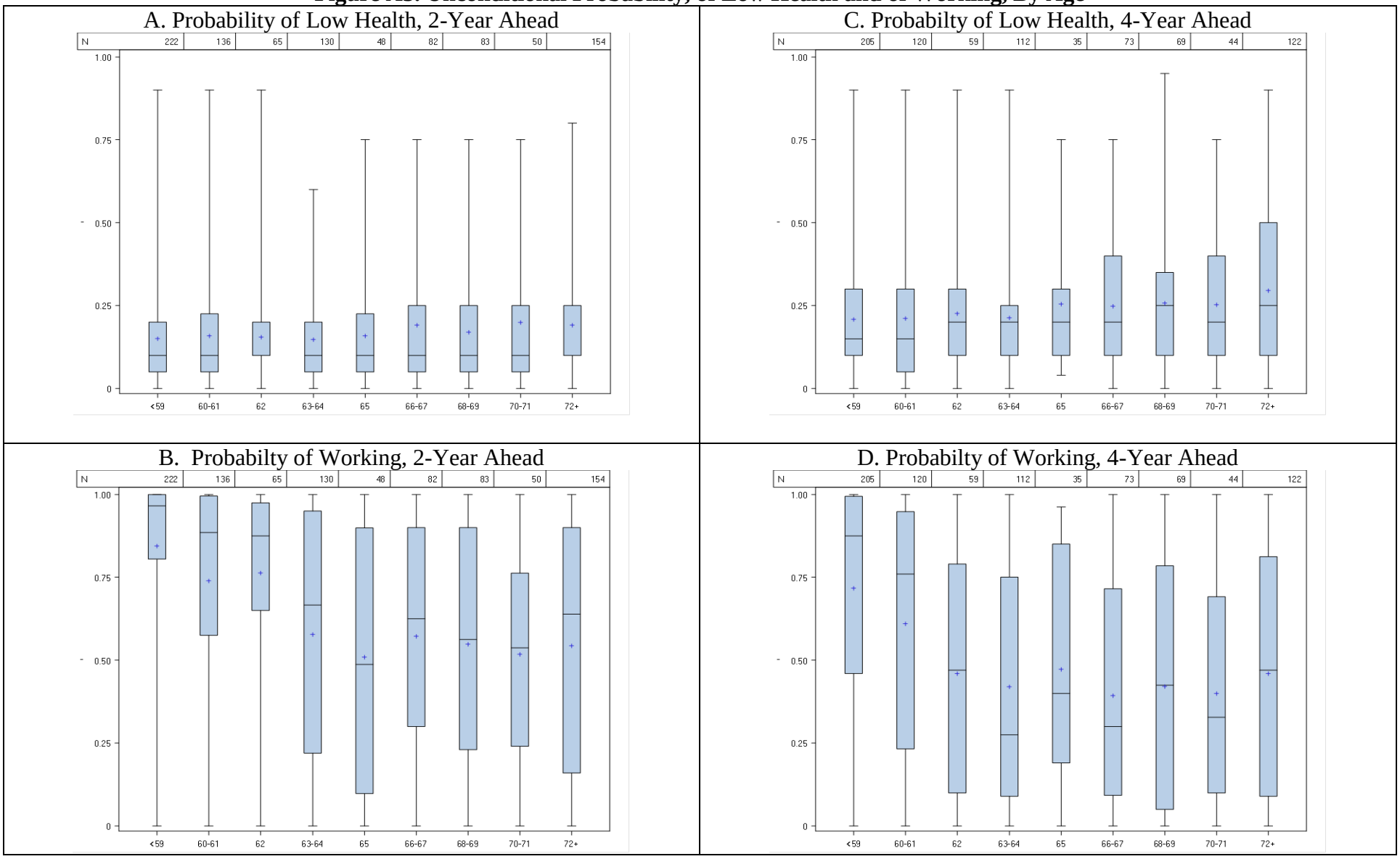
Moving to the 4-year ahead horizon, Figure A2 reveals that the age-specific mean and median decrease sharply and steadily from the ≤ 59 and the 63-64 groups and level off (or tend to increase slightly) thereafter, again consistent with increasing selectivity of older sub-groups. The cross-sectional variance of working expectations is now fairly high in all age groups and appears higher than the cross-sectional variance of the 2-year working probabilities. This is consistent with a bigger role of heterogeneity as the forecasting horizon increases. A comparison of the top and bottom plots by horizon reveals that the effect of a negative health transition on work is negative on average for all age groups.

Figure A2. Health-Contingent Probability of Working, By Age



Note: Box-and-whiskers plots of the distribution of probability of working given health 2-year and 4-year ahead. The "+" is the mean, the mid-line is the median, and the box shows inter-quartile range. Age as of time of the survey.

Figure A3. Unconditional Probability, of Low Health and of Working, By Age



Note: Box-and-whiskers plots of the distribution of unconditional probability of low health and work 2-year and 4-year ahead. The "+" is the mean, the mid-line is the median, and the box shows inter-quartile range. Age is as of time of the survey.

Table A1. Sample Selection

Selection Stages	Sample Size
Total sample in Survey 4	3314
Not eligible for the 2 years expectations battery	2249
Career salary reported as 0 USD	9
Not in high health	29
Inconsistent answer to 2 years expectations questions	57
2-Year Ahead Sample	**970**
Not eligible for the 4 years expectations battery	87
Inconsistent answer to 4 years expectations questions	44
4-Year Ahead Sample	**839**

Table A2. Sample Characteristics

	2-Year Ahead Sample	4-Year Ahead Sample
Characteristic	**Percent**	**Percent**
Age (at VRI Survey 4)		
≤ 59	22.89	24.43
60-61	14.02	14.30
62	6.70	7.03
63-64	13.40	13.35
65	4.95	4.17
66-67	8.45	8.70
68-69	8.56	8.22
70-71	5.15	5.24
≥ 72	15.88	14.54
Gender		
Female	37.01	36.83
Male	62.99	63.17
Race/ethnicity		
Non-Hispanic white	94.74	94.87
Asian	2.68	2.86
Other	2.58	2.26
Marital status (at VRI S4)		
Partnered (married or share financial future)	65.46	64.84
Not partnered	34.54	35.16
Educational attainment		
High school or less	5.77	5.96
Some college	14.95	13.83
College graduate	38.97	38.38
Other advanced degree	19.59	20.50
MBA	7.94	8.46
JD, PhD, MD	12.78	12.87
Health status (at VRI S4)		
High (excellent, very good, or good)	100	100
Employment status (at VRI S4)		
Working (full-time or part-time)	100	100
Job type (at VRI S4)		
Career	60.62	61.50
Bridge	39.38	38.50
Occupation (at VRI S4)		
Management and professional	71.75	71.99
Other services	17.32	17.04
Operative	10.93	10.97
Observations	970	839

Table A2 (Continued). Sample Characteristics

Characteristic	2-Year Ahead Sample Percent	4-Year Ahead Sample Percent
Total household wealth in USD (at VRI S4)		
First quintile	0 – 258,475	0 – 255,584
Second quintile	258,475 – 533,739	255,584 – 537,700
Third quintile	533,739 – 874,860	537,700 – 877,000
Fourth quintile	874,860 – 1,583,538	877,000 – 1,559,059
Fifth quintile	≥ 1,583,538	≥ 1,559,059
Replacement rate (Expected pension & SS; replacement rate, career job wage, at VRI S4)		
First quintile	0 – 24	0 – 24
Second quintile	24 – 39	24 – 39
Third quintile	39 – 58	39 – 58
Fourth quintile	58 – 87	58 – 88
Fifth quintile	87 +	88 +
Annual salary in USD (at VRI S4)		
First quintile	0 – 12,000	0 – 13,000
Second quintile	12,000 – 45,714	13,000 – 47,000
Third quintile	45,714 – 77,534	47,000 – 80,000
Fourth quintile	77,534 – 117,000	80,000 – 120,000
Fifth quintile	≥ 117,000	≥ 120,000
Work status at VRI Survey 1		
Completely retired	9.48	7.99
Not completely retired	90.52	92.01
Spouse's employment status (at VRI S4)		
Working (full-time or part-time)	48.82	50.92
Not working	51.18	49.08
Sample size	635	544
Observations	970	839

Appendix A2. VRI Panel Sample: Additional Tables and Analysis for Section IV

This appendix provides detailed information about the health, work, and contingent probabilities for the panel analysis of Section IV.

Table A3 investigates selectivity of our panel sample. We find no selective non-response to Survey 6 conditional on age, probability of working, and probability of low health.

Table A4 compares predictions and realizations for health and work at the 2-year horizons. Table A5 shows the results for the 4-year horizon. The columns correspond to future health state partitioned in the Survey 4 probability questions. Recall that these partitions differ by health state at the time of the survey, so the groupings vary across the rows because of survey design (see Figure A1). We use the finer, three-way partition of health embodied in the survey design and reflected in the layout of the table. This approach, which we also use in the prediction analysis of the main text, makes more direct use of the health-contingent work probabilities. It does not require aggregating the two elicited health-contingent working probabilities within the high-health state (E and VG/G for those initially in excellent health or E/VG and G for the others).

Panel A shows mean health probabilities elicited in Survey 4 and Panel B shows mean health realizations in Survey 6. Each row conditions on the respondents' health state in Survey 4. Recall that respondents with Fair or Poor health are excluded from the analysis, so there are no rows for these health states (see Table A1). Comparison of the health probabilities in Panel A and the health realizations in Panel B reveals some deviations from rational expectations for health. For all baseline levels of health, respondent over-estimate the odds of going from high health (excellent/very/good) to low health (fair/poor). There are also some subtler differences by baseline health that do not have particular patterns. This failure of rational expectations could arise in principle from a correlated shock. Empirically, the responses overpredict changes in health, which corresponds to fewer being in low health than expected since these respondents started in high health. While important to note, this over-prediction of health transitions is a separate issue for whether health-contingent probabilities are a good predictor of outcomes investigated in the main text.

We now turn to the predictions about work. Panels C and D of Table A4 report the mean conditional working probabilities respectively by *ex ante* health as posed in Survey 4. Panel C (averages across all respondents in the row) is useful as background for the analysis that collapses contingent health into high (H) and low (L) in Sections III and V. Panel D (averages for

respondents in the row who realize health in the column) is useful for the prediction exercise in Section IV. Panel E reports mean unconditional working probabilities. Finally, Panel F reports means for realized work by the corresponding partition of realized health. Comparison of Panel D and Panel F reveals that the 2-year ahead health-contingent working probabilities given by the respondents in Survey 4 match up well with the labor supply realizations for high health (excellent/very good/good). This comparison is analogous to column (1) in the Table 6. Comparing Panel E and F is analogous to the regression in column (2) to Table 6.

In Table A5, we show the same results for the 4-year ahead results from Survey 7. These results should be interpreted with caution because of the timing and measurement issues as well as the COVID-19 shock. See discussion in the text and footnote 26. In the 4-year ahead results respondents continue to over-predict bad health. See discussion in text for the difference in predictive power of the health-contingent probabilities at 2-year and 4-year ahead horizons.

Table A3. Selectivity in Panel Sample

	2 Years	4 Years
Constant	0.626	0.507
	(0.095)	(0.082)
Age (≤ 59 excluded)		
60-61	-0.011	0.003
	(0.053)	(0.058)
62	-0.030	-0.100
	(0.069)	(0.075)
63-64	-0.003	-0.079
	(0.055)	(0.060)
65	-0.016	-0.119
	(0.079)	(0.092)
66-67	0.064	-0.080
	(0.065)	(0.070)
68-69	0.011	-0.013
	(0.065)	(0.071)
70-71	0.177	0.145
	(0.078)	(0.084)
$\geq$ 72	0.055	0.042
	(0.053)	(0.059)
Probability of working in 2 years	0.024	
	(0.047)	
Probability of high health in 2 years	-0.073	
	(0.096)	
Probability of working in 4 years		-0.008
		(0.050)
Probability of high health in 4 years		-0.017
		(0.091)
Observations	970	839
R^2	0.0098	0.0153

Note: Linear probability model for whether respondents remained in the panel 2 years ahead (Survey 6) and 4 years ahead (Survey 7).

Table A4. Panel Results 2-Year Ahead: Expectations versus Realizations (means)

A. Unconditional Health Probability, By *ex ante* Health

	E	VG	G	F	P
E	0.792	0.107		0.101	
VG	0.728		0.114	0.158	
G	0.322		0.350	0.328	

Row-wise averages. Observations: 183 for the E row, 297 for the VG row, and 104 for the G row.

B. Realized Health

	E	VG	G	F	P
E	0.689	0.311		0	
VG	0.818		0.175	0.007	
G	0.269		0.644	0.087	

Row-wise averages. Observations: See panel A.

C. Health-Contingent Working Probability, By *ex ante* Health

	E	VG	G	F	P
E	0.730	0.707		0.390	
VG	0.708		0.691	0.411	
G	0.693		0.675	0.451	

Row-wise averages. Observations: See panel A.

D. Health-Contingent Working Probability, By Realized Health

	E	VG	G	F	P
E	0.735	0.694		No obs.	
VG	0.702		0.705	Suppressed	
G	0.726		0.651	0.456	

Note: This variable is the health-contingent work probability regressor in Tables 6-8.
Cell-wise averages. Observations: In the E row are (left to right): 126, 57, 0. In the VG row are (left to right): 243, 52, suppressed (< 4). In the G row are (left to right): 28, 67, 9.

E. Unconditional Working Probability, By Realized Health

	E	VG	G	F	P
E	0.694	0.685		No obs.	
VG	0.656		0.661	Suppressed	
G	0.653		0.574	0.630	

Note: This variable is the unconditional work probability regressor in Tables 6-8.
Cell-wise averages. Observations: See panel D.

F. Realized Working Status, By Realized Health

	E	VG	G	F	P
E	0.738	0.719		No obs.	
VG	0.712		0.692	Suppressed	
G	0.679		0.701	0.667	

Note: This variable is the realized work regressand in Tables 6-8.
Cell-wise averages. Observations: See panel D.
(Notes shown on next page.)

Notes for all panels of Table A4:

The rows correspond to heath at the time of Survey 4, where E = Excellent, VG = Very Good, and G = Good. Recall that there are very few respondents with fair (F) or poor (P) initial health (see Table A1), so they are excluded from the analysis throughout the paper and therefore there are not rows for F and P.

The columns correspond to future health state as partitioned in the Survey 4 probability questions:

- Panels A, C, D, and E tabulate elicited probabilities from Survey 4. The columns partition the probabilities given in the survey. Recall that these partitions differ by health state at the time of the survey, so the groupings vary across the rows because of survey design (see Figure A1).
- Panel B and F tabulate realizations from Survey 6, which was fielded approximately two years after Survey 4, so the timing matches the probabilities.

Compare Panels A to B for unconditional probability and realizations of health.

Compare Panels C or D to F for health-contingent probability and realizations of work. Panel C (averages across all respondents in the row) is useful as background for the analysis that collapses contingent health into high (H) and low (L) in Sections III and V. Panel D (averages for respondents in the row who realize health in the column) is useful for the prediction exercise in Section IV.

Compare Panels E to F for unconditional probability and realizations of work.

Table A5. Panel Results 4-Year Ahead: Expectations versus Realizations (means)

A. Unconditional Health Probability, By *ex ante* Health

	E	VG	G	F	P
E	0.736	0.114		0.150	
VG	0.644		0.100	0.256	
G	0.240		0.415	0.345	

Row-wise averages. Observations: 128 for the E row, 197 for the VG row, and 72 for the G row.

B. Realized Health

	E	VG	G	F	P
E	0.703	0.289		0.008	
VG	0.777		0.203	0.020	
G	0.306		0.569	0.125	

Row-wise averages. Observations: See Panel A.

C. Health-Contingent Working Probability, By *ex ante* Health

	E	VG	G	F	P
E	0.625	0.609		0.337	
VG	0.575		0.561	0.292	
G	0.602		0.589	0.344	

Row-wise averages. Observations: See Panel A.

D. Health-Contingent Working Probability, By Realized Health

	E	VG	G	F	P
E	0.612	0.643		Suppressed	
VG	0.597		0.506	0.313	
G	0.580		0.581	0.428	

Note: This variable is the health-contingent work probability regressor in Tables A6-A8.
Cell-wise averages. Observations: In the E row are (left to right): 90, 37, suppressed (< 4). In the VG row are (left to right): 153, 40, 4. In the G row are (left to right): 22, 41, 9.

E. Unconditional Working Probability, By Realized Health

	E	VG	G	F	P
E	0.570	0.603		Suppressed	
VG	0.522		0.431	0.472	
G	0.502		0.483	0.599	

Note: This variable is the unconditional work probability regressor in Tables A6-A8.
Cell-wise averages. Observations: See panel D.

F. Realized Working Status, By Realized Health

	E	VG	G	F	P
E	0.467	0.703		Suppressed	
VG	0.529		0.400	0.500	
G	0.500		0.537	0.667	

Note: This variable is the unconditional work probability regressor in Tables A6-A8.
Cell-wise averages. Observations: See panel D.
(Notes shown on next page.)

Notes for all panels of Table A5:

See notes for Table A4. The realizations are from Survey 7, which was fielded about four years and a half after Survey 4. Note also that the field period of Survey 7 is summer 2020, so health outcomes reflect the macro shock of the COVID-19 pandemic. On the other hand, the work realizations refer to January of 2020 (pre-COVID) based on a retrospective question in Survey 7. (See discussion in footnote 26 of the paper.)

Table A6. Predicting Work 4-Year Ahead: Health-Contingent versus Unconditional Probabilities

	(1)	(2)	(3)
Constant	0.214	0.218	0.212
	(0.042)	(0.040)	(0.041)
Health-contingent work probability	0.525		0.111
	(0.059)		(0.190)
Unconditional work probability		0.576	0.463
		(0.063)	(0.203)
Observations	397	397	397
R^2	0.166	0.176	0.177
Test of no additional explanatory power of:			
Unconditional work probability (3 vs. 1), χ^2 [p-value]			25.32 [0.00]
Health-contingent probability (3 vs. 2), χ^2 [p-value]			20.26 [0.00]

Note: The table shows how well health-contingent and unconditional probabilities of working predict realized work 4-year ahead. The dependent variable is 1 if the person actually works 4-year ahead and zero otherwise. Specification (1) uses as predictor the health-contingent probability of working for the health state that was actually realized 4-year ahead. Specification (2) uses as predictor the unconditional probability of working constructed from the health-contingent probabilities of working and the health probabilities according the law of total probability. Specification (3) uses both predictors. Standard errors in parenthesis. Last rows report tests for no incremental predictive power.

Table A7. Predicting Work 4-Year Ahead: Health-Contingent versus Unconditional Probabilities, with Age Interactions

	(1)	(2)	(3)
Constant	0.103	0.098	0.095
	(0.099)	(0.098)	(0.100)
Health-contingent work probability			
≤ 59	0.788		-0.071
	(0.125)		(0.461)
60-61	0.274		-0.217
	(0.153)		(0.458)
62	0.499		0.863
	(0.243)		(0.898)
63-64	0.333		0.388
	(0.172)		(0.396)
65	0.534		0.614
	(0.365)		(0.771)
66-67	0.511		1.354
	(0.256)		(0.916)
68-69	0.322		0.736
	(0.198)		(1.348)
70-71	0.188		-0.305
	(0.244)		(0.734)
≥ 72	0.525		0.079
	(0.145)		(0.465)
Unconditional work probability			
≤ 59		0.868	0.940
		(0.131)	(0.485)
60-61		0.343	0.565
		(0.165)	(0.497)
62		0.483	-0.404
		(0.258)	(0.959)
63-64		0.316	-0.067
		(0.187)	(0.433)
65		0.450	-0.090
		(0.364)	(0.770)
66-67		0.475	-0.989
		(0.288)	(1.032)
68-69		0.335	-0.452
		(0.214)	(1.458)
70-71		0.244	0.543
		(0.253)	(0.763)
≥ 72		0.625	0.538
		(0.166)	(0.534)
Observations	397	397	397
R^2	0.227	0.232	0.243
Test for no incremental predictive power of:			
Unconditional work probability (3 vs. 1), $\chi^2(9)$ [p-value]			26.28 [0.00]
Health-contingent probability (3 vs. 2), $\chi^2(9)$ [p-value]			23.55 [0.01]

Note: Regressor interacted with age dummies. Regressions include age dummies (not reported). See also Table A6 note.

Table A8. Predicting Work 4-Year Ahead: Health-Contingent versus Unconditional Probabilities, with Initial Health Interactions

	(1)	(2)	(3)
Constant	0.084	0.084	0.084
	(0.095)	(0.094)	(0.095)
Health-contingent work probability			
Good	0.360		-0.012
	(0.138)		(0.341)
Very Good	0.511		0.412
	(0.086)		(0.276)
Excellent	0.516		-0.088
	(0.107)		(0.436)
Unconditional work probability			
Good		0.446	0.453
		(0.152)	(0.376)
Very Good		0.539	0.117
		(0.092)	(0.297)
Excellent		0.574	0.661
		(0.112)	(0.459)
Observations	397	397	397
R^2	0.208	0.211	0.216
Test for no incremental predictive power of:			
Unconditional work probability (3 vs. 1), $\chi^2(3)$ [p-value]			21.12 [0.00]
Health-contingent probability (3 vs. 2), $\chi^2(3)$ [p-value]			19.53 [0.00]

Note: Regressor interacted with initial health dummies. Regressions include age and initial health dummies (not reported). See also note to Table A6.

Appendix B. Health and Retirement Study: Parallel Results for Section III

We replicate the main analysis reported in the Section III using data from an experimental module of the 2016 administration of the Health and Retirement Study (HRS), where we fielded the same battery of expectations questions as in the VRI.[1] We analyze a sample of 483 HRS respondents who, in addition to taking the module, met the following criteria: (i) who were 50 or older;[2] (ii) who were in the labor force at the time of the survey; (iii) who gave complete and consistent (or close to consistent) responses to the expectations battery;[3] and (iv) who reported being in high health.[4] Note that there are large differences in the characteristics of the VRI and HRS samples (see Table A2 and Table B2 in this online appendix). The VRI respondents are older, healthier at the same age, more educated, and more affluent. Hence, the results are not meant to be directly comparable, but rather demonstrate the applicability of the approach in different populations.

Tables B3-B6 report HRS results parallel to the VRI results in Tables 1-4. In Table B3, on average, HRS respondents have higher probabilities of working than VRI respondents at both horizons as well as both unconditionally and conditional on either health state. (Recall that the respondents to the HRS module are younger than those in the VRI.) They also have higher average subjective probability of entering low health, although the difference is not large, especially at 4 years.

In Table B4, the HRS sample has more zero and positive S*ea*TE respondents than the VRI sample and fewer negative S*ea*TE respondents, although the differences are quite small (3 percent more zero S*ea*TE at 2 years, 0.4 percent more positive SeaTE at 2 years, 1.6 percent more positive S*ea*TE at 4 years).

In Table B5, even though the proportion of zero SeaTE respondents is only marginally higher in the HRS than in the VRI, their composition in terms of the underlying health-contingent probabilities looks quite different. In particular, the relative size of never-work group is much

[1] An experimental module is a short battery of questions, taking approximately 3 minutes to complete, that a random subset of HRS respondents are invited to answer after completing the core questionnaire. In this module, respondents were selected only if they were below 65 years old, so the age range is lower than that of the VRI.

[2] The HRS is a representative study of the U.S. population 50 and older. However, the age requirement is only applied to household heads. So a small fraction of HRS respondents, typically female spouses of the household head, may be under 50. We exclude these respondents.

[3] We exclude respondents whose inconsistency (e.g., summing of probabilities to one) exceed 10 percentage points. For the marginally-inconsistent responses, we renormalized the responses.

[4] 296 of the 1082 HRS respondents who took our module reported being in fair or poor health.

smaller in the HRS than in the VRI, whereas the relative size of the always-work and maybe-work groups larger.

Among negative S*ea*TE respondents, the distribution of S*ea*TE is remarkably similar in the VRI and HRS samples. See Table B6. Hence, the estimated effect of health on work is quite similar despite the difference in the samples and in responses reflected in Table B5. This appendix reports additional results for the HRS (see Table B7 and Figures B1-B3). Note that in HRS responses relative to those in the VRI, the law of total probability does not hold nearly as well (see Figure B3) and there are more inconsistent answers (see Table B1).

Table B1. HRS Sample Selection

Selection Stages	Sample Size
Total sample in 2016 HRS Experimental Module	1082
Age < 50	55
Not in labor force	326
Not in high health	102
Inconsistent or missing answer to 2 years expectations questions	119
2 Years Sample	**480**
Not eligible for the 4 years expectations battery	37
Probability of high health in 4 years is 0	1
Missing answer to 4 years health expectations questions	14
4 Years Sample	**428**

Table B2. HRS Sample Characteristics

	2-Year Ahead Sample	4-Year Ahead Sample
	Percent	**Percent**
Age (at HRS 2016)		
≤ 54	8.75	9.35
55-59	44.17	46.03
60-61	22.29	20.79
62	10.21	9.81
63-64	14.58	14.02
Gender		
Female	53.96	52.10
Male	46.04	47.90
Race/ethnicity		
Non-Hispanic white	61.04	63.55
Black or African American	17.92	16.36
Hispanic	15.63	15.19
Other	5.42	4.91
Marital status (at HRS 2016)		
Married	70.00	71.50
Not married	29.58	28.04
Other/Unknown	0.42	0.47
Educational attainment		
Less than high school (no degree and GED)	12.71	10.05
High school diploma	37.71	38.08
Some college	12.50	11.92
College graduate	22.50	24.07
Post college (Master, PhD, MD, JD)	14.58	15.89
Health status (at HRS 2016)		
High (excellent, very good, or good)	100	100
Employment status (at HRS 2016)		
In the labor force	100	100
Observations	480	428

Table B2 (Continued). HRS Sample Characteristics

	2-Year Ahead Sample	4-Year Ahead Sample
	Percent	**Percent**
Total household wealth in USD (at HRS 2016)		
First quintile	-699,500 – 0	-699,500 – 0
Second quintile	0 – 1,050	0 – 2,200
Third quintile	1,050 – 30,000	2,200 – 34,000
Fourth quintile	30,000 – 213,000	34,000 – 247,000
Fifth quintile	≥ 213,000	≥ 247,000
Annual salary in USD (at HRS 2016)		
First quintile	0 – 15,000	0 – 16,958
Second quintile	15,000 – 30,160	16,958 – 33,000
Third quintile	30,160 – 49,560	33,000 – 50,770
Fourth quintile	49,560 – 75,200	50,770 – 80,000
Fifth quintile	≥ 75,200	≥ 80,000
Spouse's age (at HRS 2016)		
≤ 54	15.74	16.40
55-59	36.15	36.33
60-61	13.12	13.18
62	8.16	8.36
63-64	13.12	11.90
65	4.08	3.86
66-67	3.50	3.86
68-69	2.04	2.25
70-71	0.87	0.64
72+	3.21	3.22
Sample size	343	311
Spouse's health status (at HRS 2016)		
Excellent	11.37	11.25
Very good	31.20	31.83
Good	30.32	30.23
Fair	13.41	13.23
Poor	5.54	5.14
Missing	8.16	8.36
Sample size	343	311
Spouse's employment status (at HRS 2016)		
Working (full-time or part-time)	63.56	64.31
Not working	28.28	27.33
Missing	8.16	8.36
Sample size	343	311
Observations	480	428

Table B3. Percent Chance of Working, Health, and Health-Contingent Working: HRS

	Working	Low Health	Working in Low Health	Working in High Health	S*ea*TE
			2-Year Ahead		
Mean	76.2	22.5	54.9	81.5	-26.8
Std. Dev.	29.2	20	33.6	28.7	27.2
Q25	65	5	25	78	-50
Median	88.8	20	50	100	-20
Q75	100	35	80	100	0
			4-Year Ahead		
Mean	67.4	26.7	46.8	73.7	-26.9
Std. Dev.	32.1	20.3	33.7	32.5	27.4
Q25	46	10	15	50	-50
Median	77	20	50	90	-20
Q75	95.5	40	75	100	0

Note: Sample size is 480 for the 2-year ahead sub-sample and 428 for the 4-year ahead sub-sample. Table shows mean, standard deviation, first quartile (Q25), median, and third quartile (Q75) across respondents for each reported probability. Probability of working is calculated from the law of total probability using elicited probabilities of health and of work fixing health (see text for discussion). S*ea*TE is the different between the probability or working in low versus high health.

Table B4. S*ea*TE: Negative, Zero, or Positive (fraction of responses, percent): HRS

	2-Year Ahead	4-Year Ahead
Negative S*ea*TE	66.67	69.63
Zero S*ea*TE	31.67	27.80
Positive S*ea*TE	1.66	2.57
Observations	480	428

Note: Tables shows the fraction of respondents with negative S*ea*TE (lower chance of working in low health than in high health), zero S*ea*TE (same chance of working across low and high health), and positive S*ea*TE (higher chance of working in low health than in high health).

Table B5. Unpacking Zero S*ea*TE (fraction of responses, percent): HRS

	2-Year Ahead	4-Year Ahead
Never work	10.53	15.13
Always work	59.21	47.06
Maybe work	30.26	37.82
Observations	152	119

Note: Table shows distribution of responses among respondents who give the same probability of working in high and low health. In both health states, never-work respondents have zero probability of working, always-work respondents have probability one of working, and maybe-work respondents have interior probability of working.

Table B6. Unpacking Negative S*ea*TE: HRS

	2-Year Ahead	4-Year Ahead
Mean	-40.7	-39.1
Std. Dev.	22.6	24
Q25	-50	-50
Median	-40	-40
Q75	-20	-20
Observations	320	298

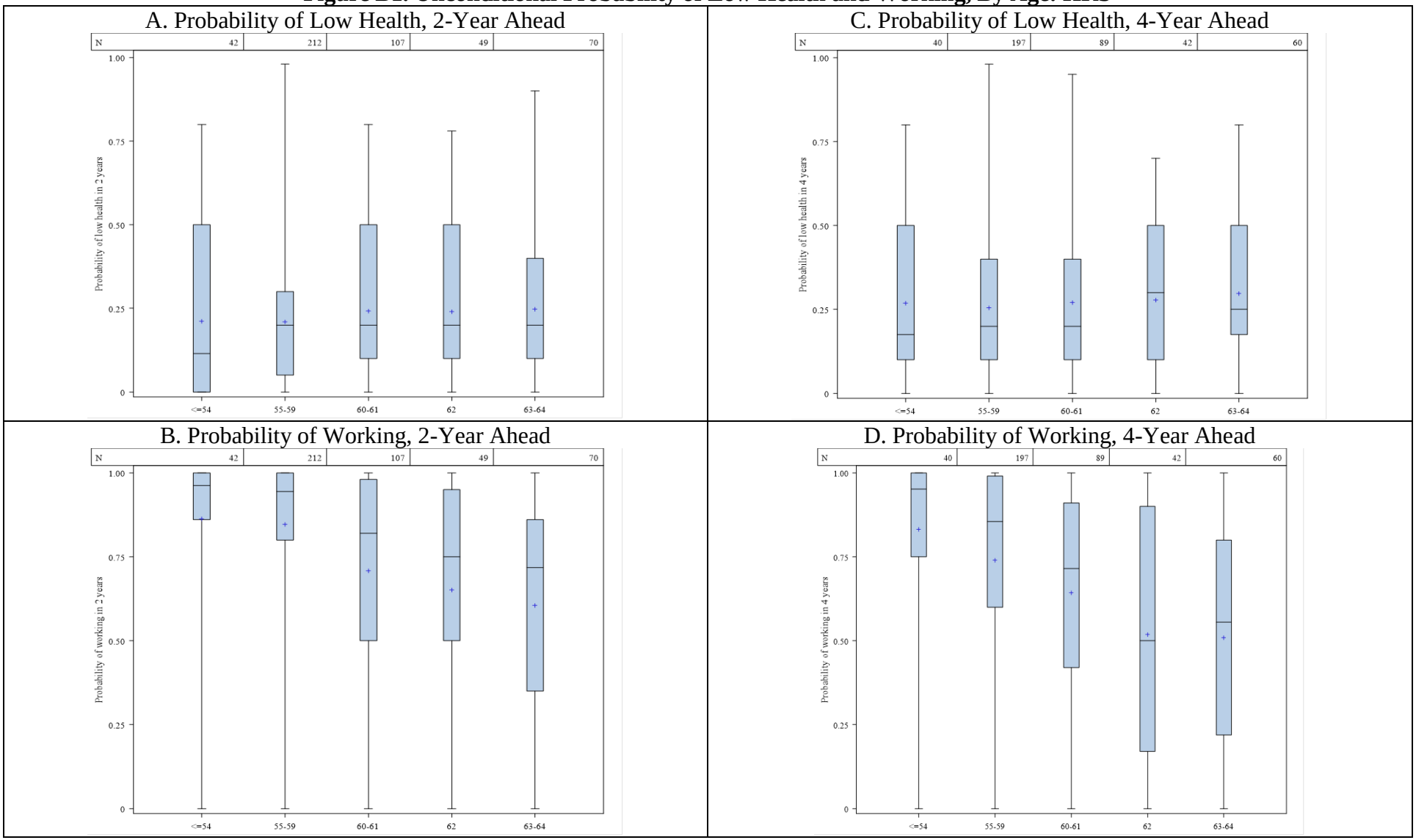
Note: Table reports same statistics as Table B3 for the subset of respondents who have low probability of working in low health than in high health.

Table B7. Indicators of 2-Year and 4-Year Ahead S*ea*TE: HRS

	2-Year Ahead S*ea*TE	4-Year Ahead S*ea*TE
Constant	-0.184	-0.214
	(0.056)	(0.060)
Age (≤ 59 excluded)		
60-61	-0.005	-0.036
	(0.033)	(0.037)
62	0.037	0.054
	(0.044)	(0.049)
63-64	-0.106	-0.071
	(0.039)	(0.043)
Gender		
Female	-0.045	-0.017
	(0.028)	(0.030)
Education ($\leq$ HS excluded)		
Some college	-0.029	-0.081
	(0.041)	(0.047)
College grad	-0.033	-0.076
	(0.036)	(0.040)
Other adv. degree	-0.086	-0.080
	(0.043)	(0.046)
Marital status		
Partnered	-0.046	-0.050
	(0.036)	(0.039)
Spouse's work status		
Working	-0.014	0.026
	(0.033)	(0.036)
Total HH wealth		
First quintile	0.077	0.086
	(0.045)	(0.050)
Second quintile	-0.008	0.0009
	(0.045)	(0.050)
Third quintile	-0.010	0.027
	(0.044)	(0.048)
Fourth quintile	0.021	0.064
	(0.042)	(0.045)
Current salary		
First quintile	0.007	0.028
	(0.047)	(0.052)
Second quintile	-0.069	-0.034
	(0.044)	(0.048)
Third quintile	0.023	-0.007
	(0.044)	(0.047)
Fourth quintile	-0.002	-0.023
	(0.042)	(0.045)
Observations	438	391
R^2	0.0717	0.0566

Note: OLS estimates of mean linear regressions of 2-year and 4-year ahead S*ea*TE on covariates. Standard errors reported in parenthesis under the corresponding point estimate.

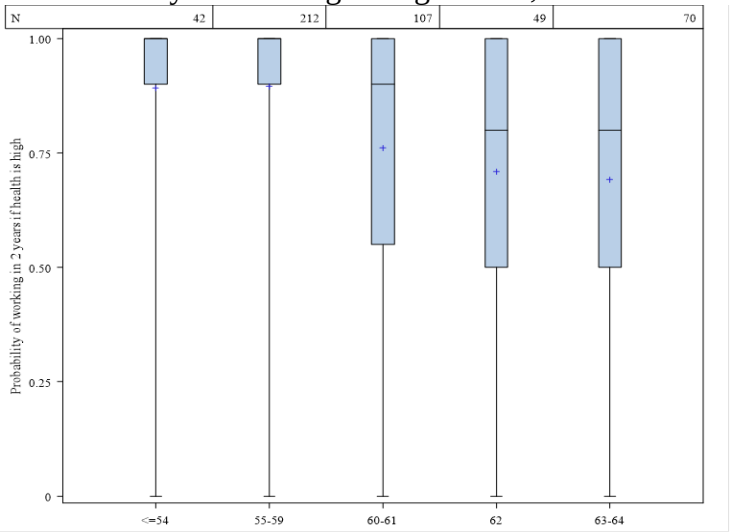
Figure B1. Unconditional Probability of Low Health and Working, By Age: HRS



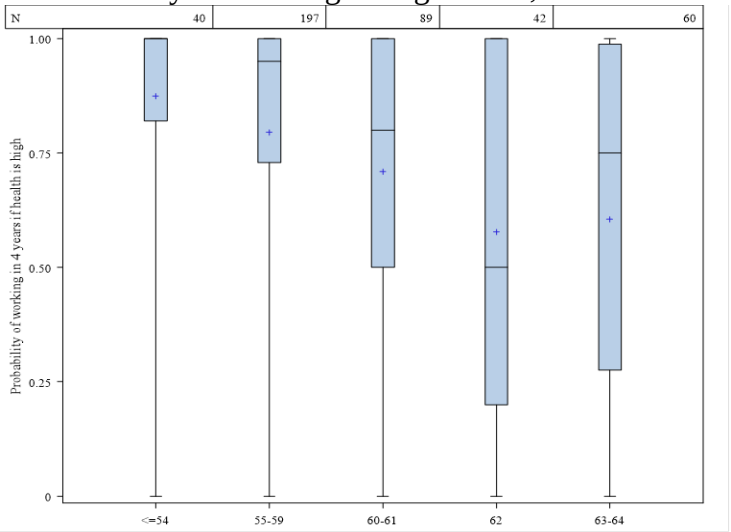
Note: Box-and-whiskers plots of the distribution of unconditional probability of low health and work 2-year and 4-year ahead. The "+" is the mean, the mid-line is the median, and the box shows inter-quartile range. Age is as of time of the survey.

Figure B2. Health-Contingent Probability of Working, By Age: HRS

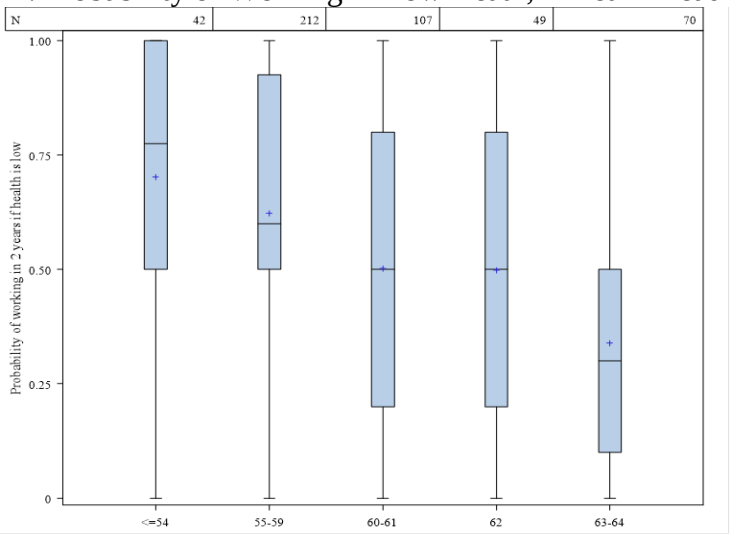
A. Probability of Working in High Heath, 2-Year Ahead



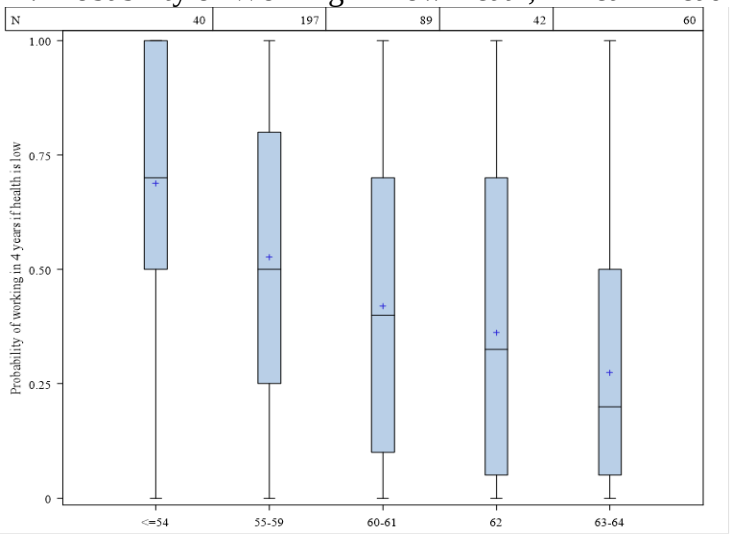
C. Probability of Working in High Heath, 4-Year Ahead



B. Probability of Working in Low Heath, 2-Year Ahead

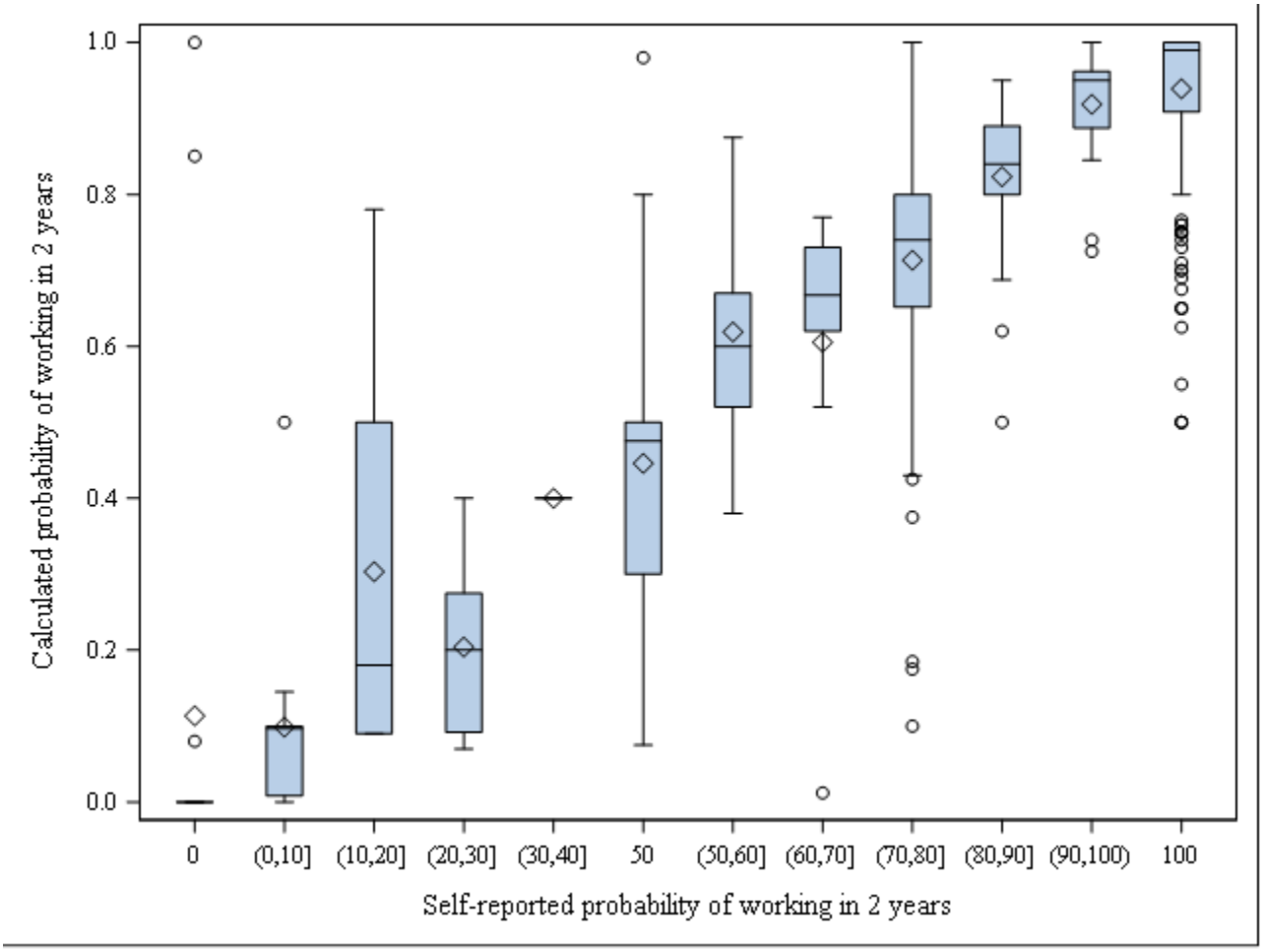


D. Probability of Working in Low Heath, 4-Year Ahead



Note: Box-and-whiskers plots of the distribution of probability of work given health 2-year and 4-year ahead. The "+" is the mean, the mid-line is the median, and the box shows inter-quartile range. Age is as of time of the survey.

Figure B3. Are Respondents' Answers Consistent with the Law of Total Probability? HRS



Note: Figure shows the distribution of responses for the unconditional probability of working in 2 years computed by combining the health-contingent working probabilities and health probabilities using the law of total probability (on the vertical axis) versus the self-reported reported unconditional probability of working in 2 years (on the horizontal axis). The correlation between the two measures is 0.873.

Appendix C. Survey Instrument

The following questions are from the Vanguard Research Initiative Survey 4. For the complete survey instrument, see http://ebp-projects.isr.umich.edu/VRI/survey_overview.html. The values of the "health fill" variables are given in the table below.

Next we would like to ask your opinion about how likely you think various events might be. Please give a number from 0 to 100 percent, where 0 means that you think there is absolutely no chance, and 100 means that you think the event is absolutely sure to happen.

Q110 Please think about work in general and not just any work you may be doing now. What are the chances that you will be working for pay two years from now?
[fill in box]% [Allow 0-100]

Q111 Would you say your health is excellent, very good, good, fair, or poor?

Excellent
Very good
Good
Fair
Poor

Q112 What are the chances that your health will be {*Health fill 1*} two years from now?
[fill in box]% [Allow 0-100]

Q113 And what are the chances that your health will be {*Health fill 2*} two years from now?
[fill in box]% [Allow 0-100]

Q114 If your health is {*Health fill 3*} two years from now, what are the chances that you will be working for pay?
[fill in box]% [Allow 0-100]

Q115 And if your health is {*Health fill 4*} two years from now, what are the chances that you will be working for pay?
[fill in box]% [Allow 0-100]

Q116 And if your health is {*Health fill 5*} two years from now, what are the chances that you will be working for pay?
[fill in box]% [Allow 0-100]

[If no answer given in all of Q114, Q115 and Q116, skip to logic immediately before Q122.
If Q**114**=0, Q**115**=0 and Q**116**=0, skip to logic immediately before Q**122**.]

Q117 Now please think about four years from now. What are the chances that your health will be {*Health fill 1*} four years from now?
[fill in box]% [Allow 0-100]

Q118 And what are the chances that your health will be {*Health fill 2*} four years from now?
[fill in box]% [Allow 0-100]

Q119 If your health is {*Health fill 3*} four years from now, what are the chances that you will be working for pay?
[fill in box]% [Allow 0-100]

Q120 And if your health is {*Health fill 4*} four years from now, what are the chances that you will be working for pay?
[fill in box]% [Allow 0-100]

Q121 And if your health is {*Health fill 5*} four years from now, what are the chances that you will be working for pay?
[fill in box]% [Allow 0-100]

[TABLES OF "FILL" VARIABLES]

Self-rated health, Q111	Health fill 1	Health fill 2	Health fill 3	Health fill 4	Health fill 5
Excellent	Worse	fair or poor	Excellent	very good or good	fair or poor
Very good	Worse	fair or poor	very good or excellent	good	fair or poor
Good, DK, RF	fair or poor	very good or excellent	very good or excellent	good	fair or poor
Fair	about the same or worse	very good or excellent	very good or excellent	good	fair or poor
Poor	about the same or worse	very good or excellent	very good or excellent	fair or good	poor