Til' Death Do Us Part: Widowhood and Healthcare Utilization

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Motivation

1.4 million people are widowed each year in the U.S.

Widows face different economic and household decisions

We often study the effect that marriage has on decision making, but as marriages begin, they also end

Research question

How does becoming a widow impact the healthcare utilization of the surviving spouse?

<u>Why it matters</u>

Population shift from pyramid to pillar

93% of widows in the US are 55+ and 97.7% of widows in the US are 45+

Age 55+ accounts for 30% of the population and 56% of healthcare spending in the US

We know little to nothing regarding the effect of becoming a widow on economic decisions

Background – Widowhood and Loneliness

In 2023 the U.S. Surgeon General released a Surgeon General Advisory concerning the public health crisis of loneliness

Strong link between loneliness and a greater likelihood of death

Widowhood effect – the abnormal increase in mortality of the surviving spouse

Background – Types of Healthcare

Healthcare utilization falls into two broad categories, preventative care and diagnostic care, which may be substitute or complements (Hennessy, 2008)

Healthcare can also be classified into formal and informal care

Spouses and children are the primary care providers of informal care (Spillman et al., 2021)

Conflicting evidence regarding whether informal care and formal care are substitutes or complements (Bolin et al., 2008; Bergeot and Tenand, 2023; Ko 2022)

Theoretical model

Assume individuals derive utility from consumption c if they live and bequests b if they die

Individuals can be married m or widowed w with $t \in m, w$

Assume $u(c, m) > 0$ and $u(c, w) > 0$

Individuals derive more utility married than widowed $u(c, m) > u(c, w)$ and $u(b, m) > u(b, w)$

Assume individuals prefer life to death, thus $u(c, t) > u(b, t)$

Theoretical model

Individuals exhibit a probability of death $p(e)$ that depends on effort level e

Death cannot be prevented, thus $\lim_{e \to \infty} p(e) > 0$ and exerting no effort is never optimal $p'(0) = -\infty$

Individuals have a utility-separable cost function $k(e)$ with $k'(e) > 0$ and $k''(e) > 0$

The cost of effort is not monetary in nature

Proposition 1 *Optimal preventative effort is higher for married individuals than it is for widowed individuals.* $e_m^* > e_w^*$.

Theoretical model

$$\max E[u] = \big(1 - p(e)\big)u(c,t) + p(e)u(b,t) - k(e)$$

$$FOC \ p'(e^*)\big(u(b,t) - u(c,t)\big) - k'(e^*) = 0$$

To see that $e_m^* > e_w^*$ we show that the FOC for married individuals is positive at the effort level of widowed individuals
$p'(e_w^*)\big(u(b,m) - u(c,m)\big) - k'(e_w^*) > 0$

FOC for widowed individuals $\underbrace{p'(e_w^*)(u(b,w) - u(c,w))}_{k'(e_w^*)}) - k'(e_w^*) = 0$

Rearrange and substitute the FOC for widowed individuals $\underbrace{p'(e_w^*)}_{<0} \underbrace{((u(b,m) - u(c,m) - u(b,w) + u(c,w)\,)}_{<0}) > 0$

Thus $u(b,w) - u(c,w) > u(b,m) - u(c,m)$ which follows from the assumption $u(c,m) - u(c,w) > u(b,m) - u(b,w)$

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Theoretical Model & Empirical Model

- If the optimal level of preventative effort is lower for widows than for married individuals, becoming a widow will result in a decrease in preventative effort

- Difference-in-differences approach to examine to impact of becoming a widow on preventative healthcare, preventative health behaviors, and formal healthcare

What we find

After an individual is widowed

- Their use of preventative healthcare declines

- Their use of formal healthcare increases

- Total out-of-pocket (OOP) medical expenditure increases

Data

Health and Retirement Study

- Longitudinal survey focusing on individuals 50 years of age and older

- The survey is conducted biennially, and each survey is referred to as a wave

- Participants are surveyed regarding a wide range of financial information, demographic characteristics, lifestyle choices, and health

- Participants are followed until death

- Drop widowed individuals who remarry

Summary Statistics

- 39,159 unique individuals

- Skewed female

- 19% of sample is widowed

- Average age of 67

Table 2: Descriptive Statistics

	Observations	Mean	Median	SD	Min	Max
Widowed	249,446	0.19	0.00	0.39	0	1
Married	249,446	0.65	1.00	0.48	0	1
Divorced	249,446	0.12	0.00	0.32	0	1
Female	249,446	0.58	1.00	0.49	0	1
Age at Interview	249,446	66.93	65.00	10.77	50	109
African American	249,446	0.17	0.00	0.37	0	1
Caucasian	249,446	0.77	1.00	0.42	0	1
Other Race	249,446	0.06	0.00	0.24	0	1
Hispanic	249,446	0.11	0.00	0.31	0	1
Medicare	247,663	0.55	1.00	0.50	0	1
Health Insurance	249,073	0.93	1.00	0.25	0	1
# of days/week drinks	215,216	1.09	0.00	1.99	0	7
# of drinks/day when drinks	215,116	0.73	0.00	1.39	0	15
Smokes Now	248,081	0.15	0.00	0.36	0	1
Vigorous Physical Activity	194,470	0.41	0.50	0.42	0	1
Regularly Takes RX	238,593	0.79	1.00	0.41	0	1
Home Care	246,450	0.08	0.00	0.26	0	1
Nursing Home Stay	248,525	0.04	0.00	0.19	0	1
# of Nursing Home Stays	248,028	0.05	0.00	0.97	0	100
# of Nights in Nursing Home	247,980	8.41	0.00	71.89	0	1,068
# of Nights in Hospital	247,088	1.93	0.00	7.72	0	175
# of Hospital Stays	247,836	0.49	0.00	1.56	0	150
Dental Visit	228,250	0.62	1.00	0.49	0	1
Outpatient Surgery	228,267	0.19	0.00	0.39	0	1
Special Health Facility	227,312	0.12	0.00	0.32	0	1
# Doctor Visits	247,497	10.43	6.00	16.36	0	300
OOP Medical Expenditure	229,424	3103.13	1080.00	8473.15	0	204,736

Note: Descriptive statistics are shown for all individuals in the sample period. There are 39,159 unique individuals included in the sample. The panel includes individuals starting at age 50 and follows them through death. The reference period for all healthcare utilization measures is one survey wave which is equivalent to two years. Smokes Now, Regularly Takes RX, Home Care, Nursing Home Stay, Dental Visit, Outpatient Surgery, and Special Health Facility are indicator variables. The number of doctor visits, number of nights in the hospital, number of nights in a nursing home, number of drinks per day when the individual drinks, and total OOP medical expenditure are winsorized at the 99.9% level.

Analysis

Difference-in-differences

- Utilize the Callaway and Sant'Anna (2021) difference-in-differences estimator to examine how becoming a widow effects healthcare utilization

- Robust to heterogeneity in treatment effects across time and individuals

- Relies on two assumptions: parallel trends and no anticipation

- Aggregated pre and post treatment periods

- "Event Study" estimator

$$ATT(g, t) = E[Y_{i,t} - Y_{i,g-1}|G_i = g] - E[Y_{i,t} - Y_{i,g-1}|G_i = \infty]$$

$$ATT_l^w = \sum_g w_g ATT(g, g + l)$$

Table 3: Effect of Becoming a Widow on Healthcare Consumption - Aggregated

	Formal Healthcare						Preventative Healthcare				
	(1) Home Care	(2) Nights in the Hospital	(3) Number of Hospital Stays	(4) Nursing Home Utilization	(5) Number of Nursing Home Stays	(6) Length of Nursing Home Stay	(7) Regularly takes RX	(8) Currently Smokes	(9) Vigorous Physical Activity	(10) Drinking Number of Days/Week	(11) Number of Drinks/Day
ATT	0.054***	1.103***	0.113***	0.073***	0.138***	25.374***	−0.036***	0.014***	−0.037***	−0.098***	0.065***
	(0.005)	(0.108)	(0.019)	(0.004)	(0.016)	(1.538)	(0.006)	(0.004)	(0.008)	(0.026)	(0.016)
Observations	239,432	240,164	240,938	241,654	241,169	241,111	230,920	241,090	178,579	204,759	204,615

Note: Columns (1) - (6) report the effect of becoming a widow on formal healthcare utilization, and Columns (7) - (11) report the effect of becoming a widow on preventative healthcare. *, **, and *** denote statistical significance at the 10, 5, and 1 percent levels, respectively. Standard errors are shown in parentheses. Each survey wave is equal to two years. Home care is an indicator variable that takes the value of 1 if the individual reports using home care during the last survey wave. Nursing home utilization is an indicator variable that takes the value of 1 if the individual utilized nursing home care. Regularly takes RX is an indicator variable that takes the value of 1 if the individual regularly takes their prescribed medication and 0 if they do not regularly take their prescribed medication. Currently, smoking is an indicator variable where 0 indicates the individual does not smoke and 1 indicates they do. Vigorous Physical Activity is on a scale from 0 to 1, where 0 indicates the lowest frequency of physical activity and 1 the highest. Drinking Number of Days/Week indicates how many days of the week the individual drinks alcohol. Number of Drinks/Day indicates how many drinks the individual has per day that they drink. Nights in the hospital, length of nursing home stay, and number of drinks/day is winsorized at the 99.9% level.
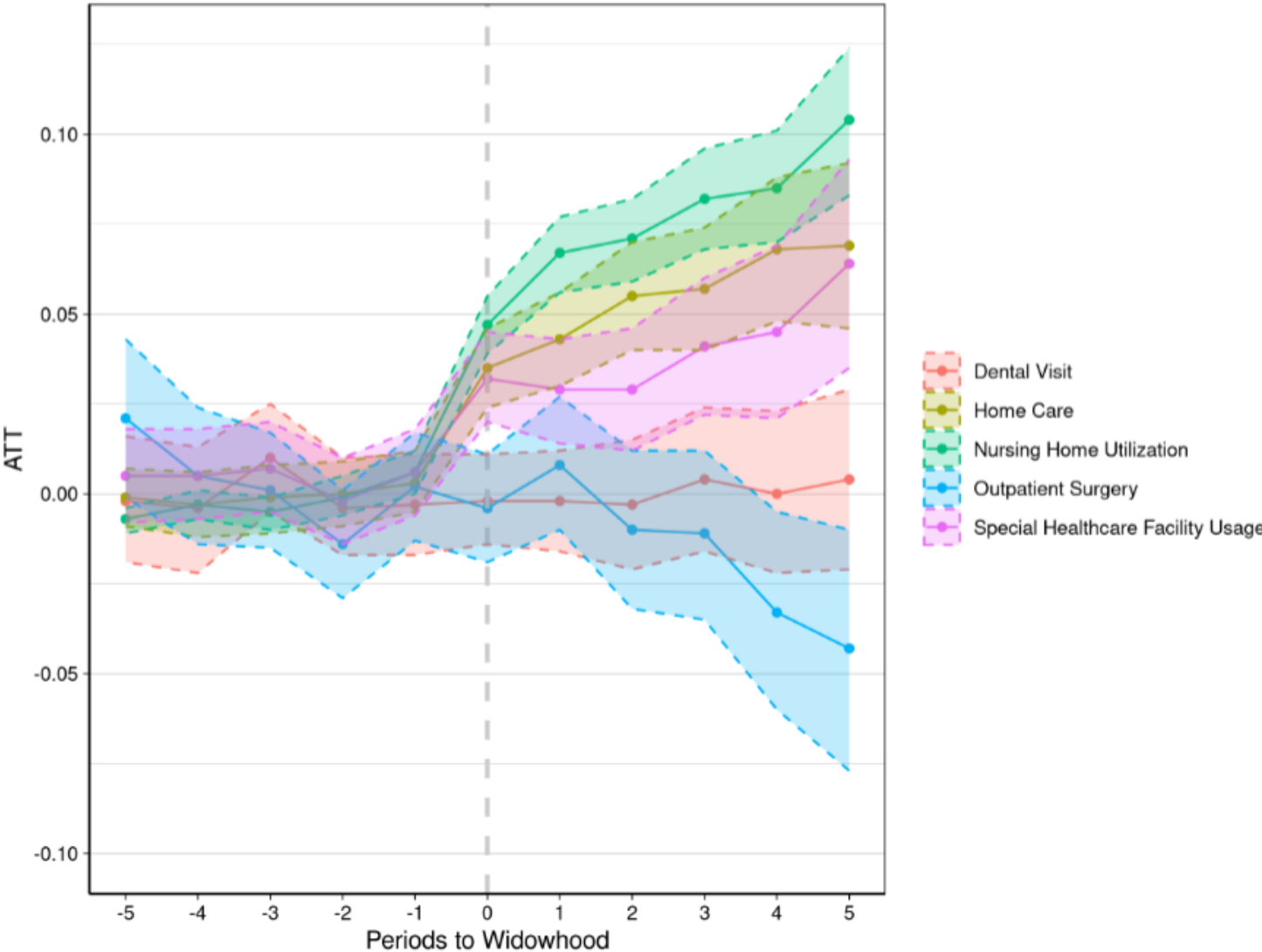
Table 4: Effect of Becoming a Widow on Healthcare Utilization - Aggregated

			Other Healthcare		
	(1) Dental Visit	(2) Doctor's Visits	(3) Outpatient Surgery	(4) Special Healthcare Facility	(5) OOP Medical Expenditure
ATT	-0.001	0.125	-0.013^*	0.040^{***}	1690.001^{***}
	(0.007)	(0.222)	(0.008)	(0.006)	(166.279)
Observations	219,973	240,389	219,999	218,817	221,141

Note: Columns (1) - (5) report the effect of becoming a widow on healthcare utilization. *, **, and *** denote statistical significance at the 10, 5, and 1 percent levels, respectively. Standard errors are shown in parentheses. Each survey wave is equal to two years. Dental visits are an indicator variable that takes the value of 1 if the individuals report going to the dentist during the last survey wave. Doctor's visits report the number of doctor's visits during the last survey wave. Outpatient surgery is an indicator variable that takes the value of 1 if the individual reports any outpatient surgeries during the last survey wave. Special healthcare facility is an indicator variable that takes the value of 1 if the individual reports using any special healthcare facilities during the last survey wave. OOP Medical Expenditure measures the nominal dollar amount the individual paid out of pocket for medical services during the last survey wave. The number of doctor visits and OOP medical expenditures is winsorized at the 99.9% level.
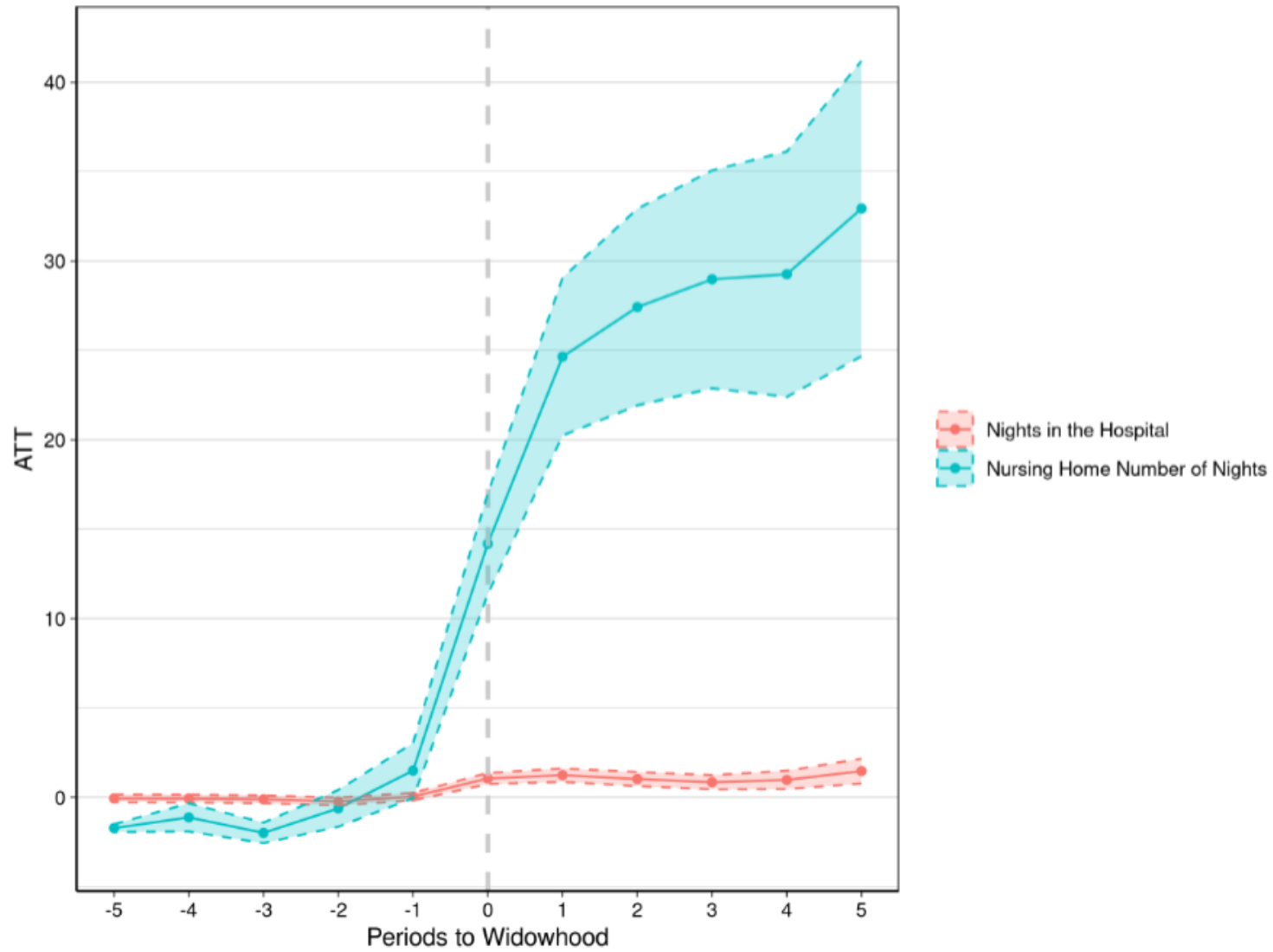
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Figure 3: Effect of Becoming a Widow on Formal Healthcare Utilization Over Time
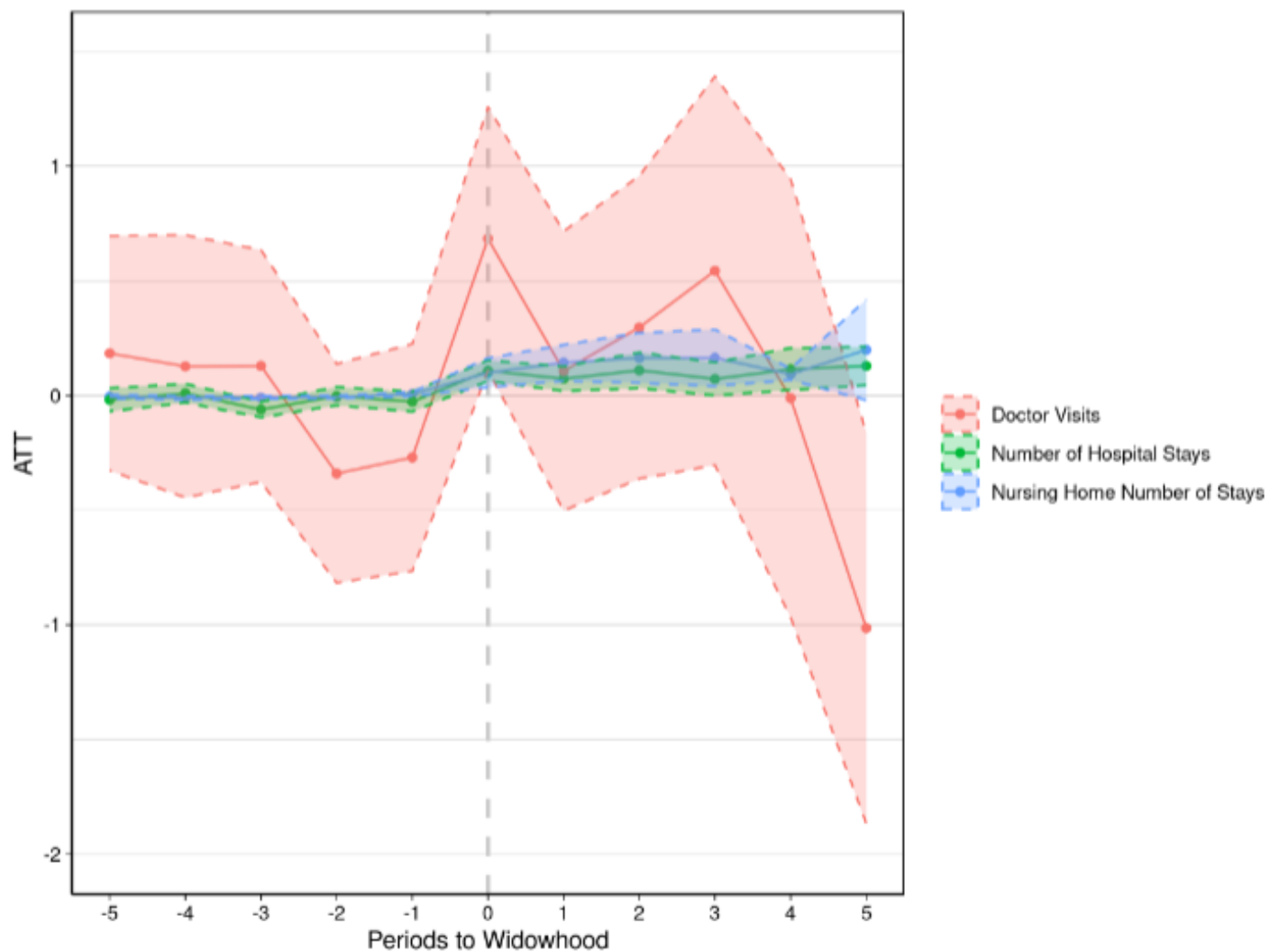
Each period is equal to two years, with period 0 being the survey wave in which the individual became a widow. Each measure of formal healthcare utilization depicted above is an indicator variable that takes the value of 1 if the individual reports using that form of healthcare during the last survey wave. Estimates for each healthcare utilization measure and time period are reported in Table 15. Confidence intervals are reported in Table 18.

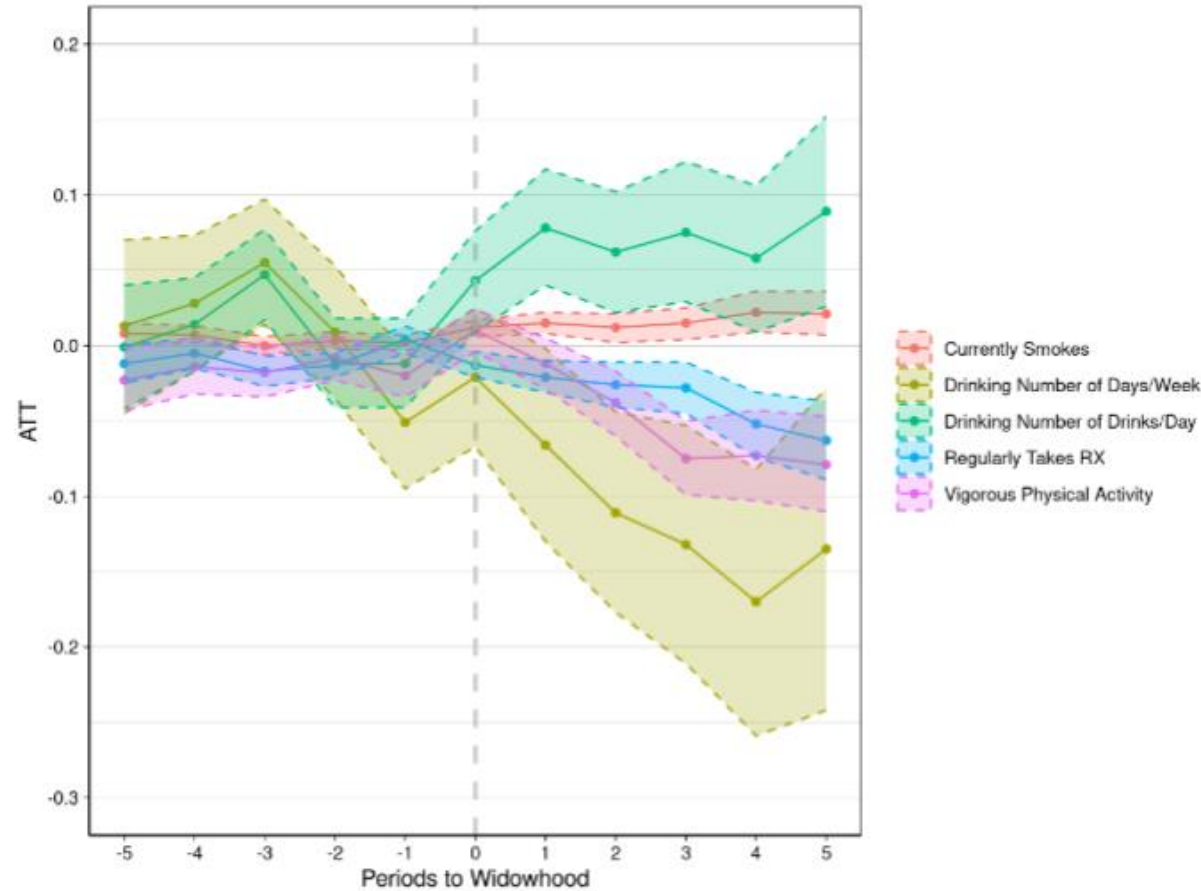Figure 4: Effect of Becoming a Widow on Healthcare Utilization Over Time - Formal Healthcare

Each period is equal to two years, with period 0 being the survey wave in which the individual became a widow. Nights in the hospital and nursing home number of nights are winsorized at the 99.9% level. Estimates for each healthcare utilization measure and time period are reported in Table 14. Confidence intervals are reported in Table 18.

Figure 5: Effect of Becoming a Widow on Healthcare Utilization Over Time - Number of Visits

Each period is equal to two years with t=0 being the wave in which an individual is widowed. Confidence intervals are reported in Table 18. Doctor's visits report the number of doctor's visits during the last survey wave. The number of doctor visits is winsorized at the 99.9% level.

Figure 7: Effect of Becoming a Widow on Healthcare Utilization Over Time - Preventative Healthcare

Each period is equal to two years with t=0 being the wave in which an individual is widowed. Confidence intervals are reported in Table 18. Regularly takes RX is an indicator variable that takes the value of 1 if the individual regularly takes their prescribed medication and 0 if they do not regularly take their prescribed medication. Currently, smoking is an indicator variable where 0 indicates the individual does not smoke and 1 indicates they do. Vigorous Physical Activity is on a scale from 0 to 1, where 0 indicates the lowest frequency of physical activity and 1 the highest. Drinking Number of Days/Week indicates how many days of the week the individual drinks alcohol. Number of Drinks/Day indicates how many drinks the individual has per day that they drink. The number of drinks/day is winsorized at the 99.9% level.

Economic Significance

1.4 million individuals become widows each year (US Census Bureau, 2022)

	Avg. cost per day	Treatment effect	Total
Hospital night	$10,000	+0.5515	$7.7 billion
Nursing home care	$224	+12.687	$3.97 billion

Takeaways

Conclusions

- After becoming a widow
    - Formal healthcare utilization increase
    - Preventative healthcare utilization decreases
    - Out-of-pocket expenditure increases

The economic impact of the increases in formal healthcare utilization after becoming a widow are over $10 billion per year

The cost of forgone preventative healthcare is unknown, but economically significant

<u>Future Research</u>

- Examine Medicare claims data

- Examine the moderating impact of social connection on the healthcare utilization of widows

- Examine the effect of becoming a widow on household decision making

Discussion and Questions

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Table 7: Effect of Becoming a Widow on Healthcare Utilization using Regression Adjusted Matching

	Formal Healthcare						Preventative Healthcare				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Home Care	Nights in the Hospital	Number of Hospital Stays	Nursing Home Utilization	Number of Nursing Home Stays	Length of Nursing Home Stay	Regularly takes RX	Currently Smokes	Vigorous Physical Activity	Drinking Number of Days/Week	Number of Drinks/Day
ATET Yes vs. No	0.040***	0.541***	0.100***	0.058***	0.104***	22.742***	−0.040***	0.023***	−0.020***	−0.180***	0.055***
	(0.002)	(0.055)	(0.011)	(0.002)	(0.009)	(0.740)	(0.002)	(0.002)	(0.003)	(0.012)	(0.007)
Observations	235,634	236,236	236,943	237,573	237,100	237,061	227,733	237,206	189,943	210,835	210,760

Note: Columns (1) - (6) report the average treatment effect on the treated of becoming a widow on formal healthcare utilization, and Columns (7) - (11) report the average treatment effect on the treated of becoming a widow on preventative healthcare and preventative health behaviors. *, **, and *** denote statistical significance at the 10, 5, and 1 percent levels, respectively. Standard errors are shown in parentheses. Each survey wave is equal to two years. Home care is an indicator variable that takes the value of 1 if the individual reports using homecare during the last survey wave. Nursing home utilization is an indicator variable that takes the value of 1 if the individual utilized nursing home care. Regularly takes RX is an indicator variable that takes the value of 1 if the individual regularly takes their prescribed medication and 0 if they do not regularly take their prescribed medication. Current smokes is an indicator variable where 0 indicates the individual does not smoke and 1 indicates they do. Vigorous Physical Activity is on a scale from 0 to 1, where 0 indicates the lowest frequency of physical activity and 1 the highest. Drinking Number of Days/Week indicates how many days of the week the individual drinks alcohol. Number of Drinks/Day indicates how many drinks the individual has per day that they drink. Nights in the hospital, length of nursing home stay, and number of drinks/day is winsorized at the 99.9% level. Individuals are matched based an gender, race, ethnicity, age, education, wealth, and health conditions.

Table 8: Effect of Becoming a Widow on Healthcare Utilization using Regression Adjusted Matching

| | (1) Dental Visit | (2) Doctor's Visits | Other Healthcare | | |
			(3) Outpatient Surgery	(4) Special Healthcare Facility	(5) OOP Medical Expenditure
ATET Yes vs. No	-0.054***	−0.025	−0.022***	0.018***	1128.593***
	(0.003)	(0.105)	(0.002)	(0.002)	(71.118)
Observations	223,555	236,705	223,545	222,657	224,635

Note: Columns (1) - (5) report the average treatment effect on the treated of becoming a widow on healthcare utilization. *, **, and *** denote statistical significance at the 10, 5, and 1 percent levels, respectively. Standard errors are shown in parentheses. Each survey wave is equal to two years. Dental visits are an indicator variable that takes the value of 1 if the individuals report going to the dentist during the last survey wave. Doctor's visits report the number of doctor's visits during the last survey wave. Outpatient surgery is an indicator variable that takes the value of 1 if the individual reports any outpatient surgeries during the last survey wave. Special healthcare facility is an indicator variable that takes the value of 1 if the individual reports using any special healthcare facilities during the last survey wave. OOP Medical Expenditure measures the nominal dollar amount the individual paid out of pocket for medical services during the last survey wave. The number of doctor visits and OOP medical expenditures is winsorized at the 99.9% level. Individuals are matched based an gender, race, ethnicity, age, education, wealth, and health conditions.

Widows who Remarry

Table 9: Effect of Becoming a Widow on Healthcare Consumption - Aggregated for Individuals who Remarry

	Formal Healthcare						Preventative Healthcare				
	(1) Home Care	(2) Nights in the Hospital	(3) Number of Hospital Stays	(4) Nursing Home Utilization	(5) Number of Nursing Home Stays	(6) Length of Nursing Home Stay	(7) Regularly takes RX	(8) Currently Smokes	(9) Vigorous Physical Activity	(10) Drinking Number of Days/Week	(11) Number of Drinks/Day
ATT	0.032***	0.261	0.062	0.011*	0.019	3.106*	−0.008	−0.001	−0.023	0.130	0.116**
	(0.008)	(0.239)	(0.054)	(0.007)	(0.017)	(1.677)	(0.022)	(0.017)	(0.023)	(0.096)	(0.048)
Observations	203322	202988	203459	203899	203713	203669	193984	203478	160717	176193	176076

Note: Columns (1) - (6) report the effect of becoming a widow on formal healthcare utilization, and Columns (7) - (11) report the effect of becoming a widow on preventative healthcare. *, **, and *** denote statistical significance at the 10, 5, and 1 percent levels, respectively. Standard errors are shown in parentheses. Each survey wave is equal to two years. Home care is an indicator variable that takes the value of 1 if the individual reports using home care during the last survey wave. Nursing home utilization is an indicator variable that takes the value of 1 if the individual utilized nursing home care. Regularly takes RX is an indicator variable that takes the value of 1 if the individual regularly takes their prescribed medication and 0 if they do not regularly take their prescribed medication. Currently, smoking is an indicator variable where 0 indicates the individual does not smoke and 1 indicates they do. Vigorous Physical Activity is on a scale from 0 to 1, where 0 indicates the lowest frequency of physical activity and 1 the highest. Drinking Number of Days/Week indicates how many days of the week the individual drinks alcohol. Number of Drinks/Day indicates how many drinks the individual has per day that they drink. Nights in the hospital, length of nursing home stay, and number of drinks/day is winsorized at the 99.9% level.

Table 10: Effect of Becoming a Widow on Healthcare Utilization - Aggregated for Individuals who Remarry

			Other Healthcare		
	(1) Dental Visit	(2) Doctor's Visits	(3) Outpatient Surgery	(4) Special Healthcare Facility	(5) OOP Medical Expenditure
ATT	-0.009 (0.025)	−0.119 (0.881)	0.043* (0.022)	−0.013 (0.016)	436.357 (281.097)
Observations	183888	203220	183866	183615	184803

Note: Columns (1) - (5) report the effect of becoming a widow on healthcare utilization. *, **, and *** denote statistical significance at the 10, 5, and 1 percent levels, respectively. Standard errors are shown in parentheses. Each survey wave is equal to two years. Dental visits are an indicator variable that takes the value of 1 if the individuals report going to the dentist during the last survey wave. Doctor's visits report the number of doctor's visits during the last survey wave. Outpatient surgery is an indicator variable that takes the value of 1 if the individual reports any outpatient surgeries during the last survey wave. Special healthcare facility is an indicator variable that takes the value of 1 if the individual reports using any special healthcare facilities during the last survey wave. OOP Medical Expenditure measures the nominal dollar amount the individual paid out of pocket for medical services during the last survey wave. The number of doctor visits and OOP medical expenditures is winsorized at the 99.9% level.

Table 9: Effect of Becoming a Widow on Healthcare Consumption for Women - Aggregated

	Formal Healthcare						Preventative Healthcare				
	(1) Home Care	(2) Nights in the Hospital	(3) Number of Hospital Stays	(4) Nursing Home Utilization	(5) Number of Nursing Home Stays	(6) Length of Nursing Home Stay	(7) Regularly takes RX	(8) Currently Smokes	(9) Vigorous Physical Activity	(10) Drinking Number of Days/Week	(11) Number of Drinks/Day
ATT	0.058*** (0.006)	1.215*** (0.136)	0.142*** (0.026)	0.075*** (0.005)	0.130*** (0.018)	25.748*** (1.890)	−0.005 (0.008)	0.013** (0.005)	−0.047*** (0.010)	−0.174*** (0.030)	0.002 (0.018)
Observations	137,424	138,137	138,657	139,139	138,796	138,753	133,563	138,842	98,870	117,323	117,341

Table 10: Effect of Becoming a Widow on Healthcare Consumption for Men - Aggregated

	Formal Healthcare						Preventative Healthcare				
	(1) Home Care	(2) Nights in the Hospital	(3) Number of Hospital Stays	(4) Nursing Home Utilization	(5) Number of Nursing Home Stays	(6) Length of Nursing Home Stay	(7) Regularly takes RX	(8) Currently Smokes	(9) Vigorous Physical Activity	(10) Drinking Number of Days/Week	(11) Number of Drinks/Day
ATT	0.053*** (0.009)	1.293*** (0.263)	0.082* (0.047)	0.075*** (0.007)	0.183*** (0.057)	27.746*** (2.985)	−0.022* (0.013)	0.011 (0.007)	−0.015 (0.015)	−0.019 (0.062)	0.103*** (0.040)
Observations	102,008	101,977	102,281	102,515	102,373	102,358	97,357	102,248	79,709	87,436	87,274

Note: Columns (1) - (6) report the effect of becoming a widow on formal healthcare utilization for men, and Columns (7) - (11) report the effect of becoming a widow on preventative healthcare for men. *, **, and *** denote statistical significance at the 10, 5, and 1 percent levels, respectively. Standard errors are shown in parentheses. Each survey wave is equal to two years. Home care is an indicator variable that takes the value of 1 if the individual reports using home care during the last survey wave. Nursing home utilization is an indicator variable that takes the value of 1 if the individual utilized nursing home care. Regularly takes RX is an indicator variable that takes the value of 1 if the individual regularly takes their prescribed medication and 0 if they do not regularly take their prescribed medication. Currently, smoking is an indicator variable where 0 indicates the individual does not smoke and 1 indicates they do. Vigorous Physical Activity is on a scale from 0 to 1, where 0 indicates the lowest frequency of physical activity and 1 the highest. Drinking Number of Days/Week indicates how many days of the week the individual drinks alcohol. Number of Drinks/Day indicates how many drinks the individual has per day that they drink. Nights in the hospital, length of nursing home stay, and number of drinks/day is winsorized at the 99.9% level.

Table 11: Effect of Becoming a Widow on Healthcare Utilization of Women - Aggregated

	(1) Dental Visit	(2) Doctor's Visits	Other Healthcare		(5) OOP Medical Expenditure
			(3) Outpatient Surgery	(4) Special Healthcare Facility	
ATT	-0.005	0.522*	−0.006	0.039***	1927.727***
	(0.009)	(0.271)	(0.010)	(0.008)	(212.544)
Observations	127,682	138,198	127,682	126,777	128,332

Table 12: Effect of Becoming a Widow on Healthcare Utilization of Men - Aggregated

	(1) Dental Visit	(2) Doctor's Visits	Other Healthcare		(5) OOP Medical Expenditure
			(3) Outpatient Surgery	(4) Special Healthcare Facility	
ATT	-0.003	0.157	−0.013	0.026***	1504.967***
	(0.015)	(0.412)	(0.016)	(0.009)	(285.498)
Observations	92,291	102,191	92,317	92,040	92,809

Note: Columns (1) - (5) report the effect of becoming a widow on healthcare utilization for men. *, **, and *** denote statistical significance at the 10, 5, and 1 percent levels, respectively. Standard errors are shown in parentheses. Each survey wave is equal to two years. Dental visits are an indicator variable that takes the value of 1 if the individuals report going to the dentist during the last survey wave. Doctor's visits report the number of doctor's visits during the last survey wave. Outpatient surgery is an indicator variable that takes the value of 1 if the individual reports any outpatient surgeries during the last survey wave. Special healthcare facility is an indicator variable that takes the value of 1 if the individual reports using any special healthcare facilities during the last survey wave. OOP Medical Expenditure measures the nominal dollar amount the individual paid out of pocket for medical services during the last survey wave. The number of doctor visits and OOP medical expenditures is winsorized at the 99.9% level.

Table 34: Effect of Becoming a Widow on Healthcare Utilization by Age at Which Widowed - Aggregated

	Formal Healthcare						Preventative Healthcare				
	(1) Home Care (Indicator)	(2) Nights in the Hospital	(3) Number of Hospital Stays	(4) Nursing Home Utilization (Indicator)	(5) Number of Nursing Home Stays	(6) Length of Nursing Home Stay	(7) Regularly takes RX (Indicator)	(8) Currently Smokes (Indicator)	(9) Vigorous Physical Activity	(10) Drinking Number of Days/Week	(11) Drinking Days Number of Drinks/Day
ATT Becoming a Widow between 50-60	0.011 (0.010)	0.658** (0.296)	0.004 (0.060)	0.010* (0.006)	0.041 (0.048)	1.833 (2.400)	−0.092*** (0.020)	−0.006 (0.014)	0.051** (0.024)	−0.006 (0.068)	0.080 (0.074)
Observations	187,675	188,166	188,711	189,214	188,952	188,874	180,961	188,944	147,844	163,567	163,440
ATT of Becoming a Widow between 61-70	0.025*** (0.008)	0.779*** (0.168)	0.115*** (0.033)	0.028*** (0.005)	0.042* (0.022)	7.981*** (1.953)	−0.007 (0.013)	−0.005 (0.010)	−0.016 (0.015)	−0.029 (0.048)	0.105*** (0.035)
Observations	196,538	197,004	197,589	198,130	197,849	197,771	189,448	197,776	152,984	171,041	170,916
ATT of Becoming a Widow at 71+	0.081*** (0.007)	1.364*** (0.159)	0.137*** (0.028)	0.112*** (0.005)	0.212*** (0.026)	40.237*** (2.450)	−0.038*** (0.008)	0.029*** (0.003)	−0.069*** (0.010)	−0.157*** (0.032)	0.037** (0.015)
Observations	220,005	220,730	221,436	222,065	221,626	221,571	213,151	221,762	166,972	189,420	189,281

Note: Columns (1) - (6) report the effect of divorce on formal healthcare utilization, and Columns (7) - (11) report the effect of divorce on preventative healthcare. *, **, and *** denote statistical significance at the 10, 5, and 1 percent levels, respectively. Standard errors are shown in parentheses. Each survey wave is equal to two years. Home care is an indicator variable that takes the value of 1 if the individual reports using home care during the last survey wave. Nursing home utilization is an indicator variable that takes the value of 1 if the individual utilized nursing home care. Regularly takes RX is an indicator variable that takes the value of 1 if the individual regularly takes their prescribed medication and 0 if they do not regularly take their prescribed medication. Currently, smoking is an indicator variable where 0 indicates the individual does not smoke and 1 indicates they do. Vigorous Physical Activity is on a scale from 0 to 1, where 0 indicates the lowest frequency of physical activity and 1 the highest. Drinking Number of Days/Week indicates how many days of the week the individual drinks alcohol. Number of Drinks/Day indicates how many drinks the individual has per day that they drink. Nights in the hospital, length of nursing home stay, and number of drinks/day is winsorized at the 99.9% level.