Marital History and Risk of Nursing Home Admission

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Abstract: Past decades witnessed multiple demographic shifts, such as population aging and changes in family structure, which have important consequences for the long-term care of the elderly. Research shows that current marital status shapes nursing home admissions, with married older adults less likely to enter a nursing home compared with unmarried persons. This effect is stronger for elderly men than women. Most previous studies have only compared the currently married with the currently unmarried, but a life course perspective leads us to expect that risk of nursing home admission is shaped not just by current marital status, but one's entire marital biography. This study examines risk of nursing home admission through using proportional hazard model to analyze six waves of the Health and Retirement Survey (n=17,673). This study indicates that allowing marital statuses to be time-varying and multi-dimensional improves models of risk of nursing home admission.

Over the past several decades, there have been multiple demographic shifts with important consequences for the long-term care for the elderly. Population aging increases the number of older adults requiring care, which can either be provided formally through institutions like nursing homes or informally by family and friends. The formal care system is strained due to population aging which decreases the size of the work force, leading to overcrowded and understaffed nursing homes (Lakdawalla and Philipson 2002; McFalls 1998). The receipt of informal care, typically provided by the family, statistically and substantially reduces the risk of nursing home use (Charles and Sevak 2005). As then expected, research consistently identifies family structure, specifically marital status, as an important predictor of nursing home admission (Freedman 1996; Noël-Miller 2010; Pezzin and Schone 1999; Townsend 1957). Yet recent demographic changes have altered the family. American families are becoming smaller and more fluid as divorce rates increase, remarriage rates and fertility rates decrease, and migration rates increase (Cherlin 2010); thus, more adults are entering old age with fewer intact family relations who are willing to provide support in late life.

Research finds that current marital status shapes nursing home admissions, with married older adults less likely to enter a nursing home compared with unmarried persons (Freedman 1996; Noël-Miller 2010). This effect is stronger for elderly men than women (Freedman et al. 1994; Tomiak et al. 2000). Most previous studies have only compared the currently married with the currently unmarried (Bharucha et al. 2004; Coward et al. 1996; Freedman et al. 1994; Freedman 1996; Himes et al. 2000), but a life course perspective leads us to expect that risk of nursing home admission is shaped not just by current marital status, but one's entire marital biography. The marital biography includes

multiple components, including the current marital status, the number of times married, whether one is never married or just currently unmarried, and how long one has been married (both currently and in the past). The first aim of this study is to analyze different risks of nursing home admissions by marital statuses at one point in time, comparing married, remarried, partnered, never married, divorced/separated, and widowed. The second aim is to examine the importance of past marital history, by examining how the length of the longest marriage and the number of marriages influence current nursing home risk. The third aim is to look more carefully at changes in marital status, by allowing marital status to be a time-varying covariate. Throughout the analysis, I will also be paying attention to whether marital biography has different effects for men and women, as past research leads us to expect that these histories are more important for men (Freedman et al. 1994; Noël-Miller 2010; Tomiak et al. 2000).

Families in Old Age

Recent profiles of older Americans reveal that family network size and frequency of contact with family network members does decrease with age and across cohorts (Cornwell et al. 2008). Also, the likelihood of being partnered drops sharply with age (Lindau et al. 2007; Waite and Das 2010), and the probability of living alone increases (Cornwell and Waite 2009). Not only does objective isolation increase, but older adults are also more likely to say that they feel lonely and isolated (Cornwell and Waite 2009; Waite and Das 2010).

The shrinking family structures and increasing isolation of older adults should not be simply viewed as a natural consequence of aging. Rather, older adults' living

situations and family structures are best understood through a life course perspective. The life course perspective stresses the importance of viewing life events and transitions as embedded in individual trajectories which occur in specific historical contexts and are interconnected with other individuals' lives (Elder 1994). Marital status is not a single event but rather a trajectory (Barrett 2000). Thus an older adult's family situation and the consequences of that family structure cannot be understood by looking at one point in time, but only through longitudinally assessing all of the life transitions, the timing of those transitions, the other individuals linked and lost at each transition, and the historical context. As individuals age, these transitions accumulate, resulting in a complex family history trajectory with real consequences for late-life care. These transitions and their meanings vary depending on the historical context of the individual

Some of these transitions have been common among the elderly for generations, but others are due to more recent demographic changes in family structure. Common changes include adult children moving out of the home and the death of spouses, parents, and extended family members, whereas newer changes include divorce and separation, lower fertility, and lower marriage and remarriage rates (Cherlin 2010; Teachman et al. 2000). Overall, these events and factors accumulate over the life course, resulting in smaller family sizes and weaker family ties for the elderly, such that many older adults live alone as widowed or divorced individuals or in dyads with adult children who live outside of the home (Waite and Das 2010).

Older adults are less likely to be partnered than younger adults (Waite and Das 2010). This pattern is consistent across cohorts, as aging is associated with spousal loss, but it is increasingly true with higher proportions not partnered in recent cohorts. This is

due to several factors. First, recent cohorts are composed of more never-married older adults than earlier cohorts, even taking into account that some of the never-married are heterosexual cohabitors or gay and lesbian adults (Tamborini 2007). Second, older adults are increasingly likely to experience marital dissolution, not only through widowhood as has always been the case, but also through divorce and separation (Amato 2010). In the past, many of these adults would remarry, but recently, rates of remarriage have decreased, meaning that many older adults remain single in the oldest ages (Kreider 2005). These remarriage rates are lowest for women and those in poor health (Lee et al. 1998; Schneider et al. 1996). Third, as average life expectancy has increased, the amount of time adults spend unmarried in late life has increased (McFalls 1998).

These factors which help explain why there are more unmarried older adults now than in the past also demonstrate the heterogeneity of this group of unmarried older adults. This group of unmarried older adults includes multiple marital biographies, defined by Hughes and Waite (2009) as "composed of transitions into and out of marriage and durations in particular marital statuses" (346). Unmarried older adults include not only the never married, but also the widowed, divorced, separated, and straight, gay, and lesbian cohabitors. Some unmarried older adults have experienced multiple marriages; others have been married only once but to the same partner for fifty years who only recently died. These marital biographies differ quantitatively, in the number of marriages and duration of these marriages, and qualitatively, in the type of marriage loss and its relationship quality. Researchers have increasingly begun to think more carefully about marital status categories, expanding beyond current status to marital biography.

These marital biographies are not randomly distributed in the population but vary by race, education, and gender, leaving some groups in more vulnerable positions than others. Some studies show that Whites have more family members in their networks than Blacks (Pugliesi and Shook 1998; Waite and Das 2010). Older Blacks are also more likely to be unmarried, due to lower rates of marriage and higher rates of divorce and widowhood (McLanahan and Percheski 2008). Widowhood affects a higher proportion of Blacks earlier than it does the other races, such that in ages 65-74, 24.3% of Blacks are widowed, compared to only 14.8% of Whites (U.S. Census 2009).

Marital biography and gender is a more complicated story. More women are widowed than men at every age. For ages 65 and over, 12.9% of men are widowed, compared to 41.3% of women (U.S. Census 2009). However, those men who are unmarried at older ages may be at more risk than unmarried women, as older women may be protected by their other family and network ties. Women report more contact and closer ties with those within their networks than men (Waite and Das 2010). Divorced men also have poorer relationships with their adult children than divorced women (Cooney and Uhlenberg 1990; Pezzin and Schone 1999). These differences show how important it is to not view all older adults as homogeneous, but rather to see family structure as variable based on historical context and sociodemographic characteristics.

Risk of Nursing Home Admission

These changes in the family occur concurrently with health problems, which both impede social interactions and increase the need for support, and in the context of overall population aging, such that there is great strain on formal long-term care services. These

family changes leave older adults in structurally vulnerable positions, which is most apparent when older adults face serious chronic health problems and long-term care decisions. Numerous studies have analyzed risk of nursing home admission and concluded that, controlling for health, family resources are one of the most important predictors (Freedman 1996; Pezzin and Schone 1999; Townsend 1957). This is because families provide informal care which can serve as a substitute for formal care provided at nursing homes (Charles and Sevak 2005). This is consistent across several indicators of family resources.

Marriage is the most protective component of family resources, and married older adults have about half the risk of nursing home admission of unmarried adults (Freedman 1996). This pattern holds even when looking at length of stay rather than risk of admission. One study finds that being currently married reduces the average length of stay by four months for men and three months for women (Freedman 1993). The effect of marital status depends on gender (Freedman et al. 1994; Freedman 1996; Noël-Miller 2010). Noël-Miller (2010), in a recent paper, finds that widowhood is a powerful predictor of nursing home admission for men, as the risk of nursing home entry doubles following spousal death, but for women, widowhood does not increase risk compared to currently married. This study does not analyze whether this risk increases for the never-married, divorced, or separated, but the author calls for future research to examine whether the effect of spousal death is similar to the effect of being never married or separated, as no studies have addressed this.

Noël-Miller also finds that the gender difference in nursing home risk is due to the different protective effect of adult children. Adult children buffer women's risk of

admission but have less of an effect for men's risk. Freedman and colleagues (1994) similarly finds that for women, simply having contact with any relative, spouse, children, or siblings reduces risk of admission. They also find that having contact with an adult child reduces the length of nursing home stay by three months for women, but not at all for men. Thus while marriage is more important for men than women, adult children are more important for women. The unimportance of adult children for men may have to do with the fact that men have lower relationship quality with their children than women, and this is exacerbated in the case of marital dissolution (Kaufman and Uhlenberg 1998; Pezzin and Schone 1999). Remarriage by fathers further reduces the likelihood of support by adult children (Pezzin and Schone 1999).

In most of these previous studies, family structure has been measured at one time and measured as unchanging, rather than conceptualizing it as a trajectory of family change over time. Timing of marriage and marital dissolution, type of dissolution, and number of marriages and marital dissolutions have important implications for social support and health (Hughes and Waite 2009; Barrett 2000; Bierman et al. 2006; Whitbeck et al. 1994), which are both important factors for risk of nursing home admission. Yet complete marital biography has not been considered in research on nursing home risk. Additionally, while recent research has begun to view marital biography as a trajectory with various health implications (Hughes and Waite 2009), this is not a common approach in studies of nursing home risk. Rather, most studies compare married to unmarried, without consideration of the variation within these categories.

In this current study, I examine how risk of nursing home admission is shaped by marital status at baseline, marital status conceptualized as dynamic with time, and past

marital characteristics. I consider multiple categories of marital status. I also examine how this relationship may differ for women and men.

Data

I analyze data from the Health and Retirement Survey (HRS), a nationally representative sample of persons aged 51-61 years in 1992, who have been re-interviewed approximately every 2 years since 1992 (Juster and Suzman 1995). This study's goal is to investigate health changes in older ages and how they affect, and are affected by, economic well-being, family dynamics, and formal and informal social supports. Spouses and partners of these respondents were also interviewed regardless of age. The baseline HRS survey included 12,654 respondents in 7,705 households, for a response rate of 82%. A representative sample of additional subjects aged 51-61 was added at each subsequent data collection point; with these additions over the years, the HRS now includes a total of 21,155 people who are between the ages of 23 and 109. The HRS oversampled African Americans, Latino Americans, and married couples. For this project, the analytic sample will be limited to the population age 65 and older. This includes all those who were 65 or older at any point between 1998 and 2008; however, respondents do not enter the study period until they are 65 or older. I will use data from six waves of data over a ten year period (1998-2008). Respondents who resided in a nursing home prior to age 65 are excluded, as well as those who were missing marital status information for all waves. The sample size is 17,673.

Measurements

Nursing home admission. The primary dependent variable is whether the respondent moved into a nursing home at any point after age 65, and, if so, the age of admission subtracted from 65. This age was constructed through subtracting the year of admission from the year born and then subtracting 65 years. This is restricted to first nursing home admission, as previous research has done since the timing of first nursing home admission is particularly important in marking the start of an individual's reliance on a formal long-term care system (Freedman 1996). Those with prior nursing home use before age 65 were deleted from the sample. 2,775 of the respondents entered a nursing home at some point during the study period.

Marital biography. The primary explanatory variable is the marital biography. Three analyses will be conducted. All will be performed separately by gender. In the first, the explanatory variable is a dichotomous construction of marital status, where married at baseline=1 and not married at baseline=0. In the second analysis, the explanatory variable is ca categorical construction of marital status, including married (currently in 1st marriage), remarried, partnered, divorced/separated, widowed, and never married. All are measured at baseline. In the second model in this analysis, length of longest marriage and number of marriages is included. The never married have a length of longest marriage and never married as 0. In the third analysis, each of these marital variables are allowed to be time-varying covariates. Marital status, length of longest marriage, and number of marriages are constructed as time-varying in order to reflect both the passage of time through the waves as well as to allow for respondents to enter into the different marital statuses.

Covariates. Covariates, measured at baseline, include birth year, race/ethnicity (dummy variables with non-Hispanic White, Hispanic White, Black, and other), education (years completed), home ownership (owns home=1, does not own home=0), insurance (has government, employer, spousal, or long-term care insurance=1, no insurance=0), number of living siblings, and number of living children. I also control for health by including self-rated health (0= excellent, very good, good; 1=fair, poor) and number of diagnosed conditions. All covariate values are measured in 1998, the first wave used in this analysis. If the respondent entered after 1998, or was missing in 1998 but present in later years, the covariates are measured at the first wave in which they entered the survey. Number of living children, number of living siblings, self-rated health, and number of diagnosed conditions were all ran as time-varying covariates, but the changes to the models were non-significant so for these analyses they are held at baseline levels. The descriptive statistics for each variable by gender is shown in table 1.

{Table 1 about here}

Analysis

I begin the analysis with descriptive statistics by gender. I used a chi-square difference test to compare men and women for each variable. Next, I use a proportional hazard model in which the dependent variable is the years survived since 65 without nursing home admission. These models are used to estimate the effects of marital biography on the risk of first nursing home admission, controlling for covariates. Failure is defined as first nursing home admission. If the survey ended or death occurred before nursing home admission, then that respondent was censored (failure=0). The duration of

exposure to risk in the model is estimated using the number of years older than 65. Each respondent enters the risk period when they turn 65. If they are 65 or older in 1998, then they enter the risk period in 1998.

In the first group of analyses, a dichotomous construction of marital status at baseline is the primary predictor. In the second group of analyses, a categorical construction of marital status at baseline is the primary predictor. Length of longest marriage and number of marriages is included in a second model. In the third group of analyses, marital status is allowed to be a time-varying covariates. This allows marital status to change over the study period, reflecting the actual marital status changes that multiple respondents experienced. This approach interacts marital status with time. For this analysis, the time period is each wave (every two years). Length of longest marriage and number of marriages as time-varying covariates is included in a second model. I ran all analyses separately by gender. Observations were censored if death or the end of the study period (2008) occurred before nursing home admission was observed.

Results

Descriptive Statistics

Women were significantly more likely to enter a nursing home than men after the age of 65. Additionally, men and women significantly differed for every marital status (dichotomous and categorical) except for never married. The majority of men (57.25%) were currently in their first marriage, whereas the majority of women (44.21%) were widowed. Additionally, a significantly larger percentage of men than women were remarried (19.49% men, 9.80% women), and a significantly larger percentage of women

than men were divorced/separated (2.54% men, 7.76% women). The men in this sample were also younger than the women, more likely to be White, more educated, more likely to own a home, more likely to have insurance, had more children living, and had less diagnosed conditions. These descriptive statistics reveal important compositional differences between men and women in the sample. This confirms the value of running the proportional hazard models separately by gender.

Cox Proportional Hazard Model for Marital Status

Proportional hazard models were estimated using marital status as a dichotomous variable, with married at baseline=1 and not married at baseline=2. The hazard ratios and significance levels are shown in table 2. Controlling for birth year, race, years of education, home ownership, insurance status, number of living children and siblings, number of health conditions, and self-rated health, marriage significantly decreases the hazard of nursing home admission for both men and women. The protective effect of marriage is larger for men (hazard ratio=0.617) than women (hazard ratio=0.824).

Among the covariates, Hispanic White women, Black women, and women of other racial/ethnic groups had significantly lower hazards of nursing home use than non-Hispanic White women. For men, race/ethnicity was not a significant predictor, with the exception of Hispanic White men who had a slightly lower hazard ($p<0.05$) of entering a nursing home than non-Hispanic White men. Additionally, the number of living children was more significant for reducing women's hazard of nursing admission ($p<0.001$) than men's ($p<0.05$). Each additional child reduces women' risk of nursing home use by 4.8%. Home ownership decreased the hazard of nursing home admission for men and women,

whereas poor self-rated health and having a higher number of health conditions increased the hazard. Years of education, insurance status, and number of living siblings did not change the hazard for either men and women.

{Table 2 about here}

In the next analysis, proportional hazard models were estimated using marital status as a categorical variable. The marital status variables were married (in 1st marriage), which was the reference category, remarried, partnered, divorced/separated, widowed, and never married. Hazard ratios and significance levels are shown in table 3. Remarried and partnered were not significantly different from currently in first marriage for men or women. Additionally, for women, divorced/separated and never married were not significantly different from currently in first marriage. However, both of these categories significantly increased the hazard of nursing home admission for men as compared to currently in first marriage. For men, the divorced had a 64.1% higher hazard of nursing home admission and the never married a 91.5% higher hazard compared to those currently in first marriage. Widowed had a significantly higher hazard of nursing home admission for both men and women. For women, being widowed increased the hazard of nursing home admission by 26.5% compared to currently in first marriage. For men, being widowed increased the hazard of nursing home admission by 62.5% compared to currently in first marriage, indicating that widowhood has a more negative effect for men than women compared to the protection of marriage.

Among the covariates, similar results were found as in the first analysis with a dichotomous measure of marital status. Again, race was only a significant predictor of hazard of nursing home entry for women, as was the number of living children. Number

of living children became non-significant for men. Home ownership, poor self-rated health and having a higher number of health conditions remained significant for men and women, and years of education, number of living siblings, and insurance status remained insignificant.

Next, years of longest marriage and number of marriages was added to the model. However, this did not change the model, and, for the most part, there two variables were not significant. The exception was, in the model for women, that years of longest marriage was slightly significant ($p<0.05$). This model is not shown.

{Table 3 about here}

In the final analysis, proportional hazard models were estimated using marital status as a categorical variable, with the same categories as the previous model, and marital status was allowed to be a time-varying covariate. As in the previous model, the hazard of nursing home admission for remarried and partnered were not significantly different from currently in first marriage for women or men. However, the hazard for divorced, widowed, and never married were all significantly increased compared to currently in first marriage for both women and men. The difference in hazard was slightly higher for men than women, though this difference was not large.

Among the covariates, similar results were found as in the other analyses. Race was only a significant predictor of hazard of nursing home entry for women, as was the number of living children. Number of living children was more significant in reducing hazard for women than men. The number of living siblings gains some significance for women ($p<0.10$), though the significance level is small. Home ownership, poor self-rated

health and having a higher number of health conditions remained significant for men and women, and years of education and insurance status remained insignificant.

Next, years of longest marriage and number of marriages was added to the model. Again, this did not change the model, so these results are not shown.

Discussion

This analysis demonstrates the importance of carefully conceptualizing marital status when estimating nursing home admission risk. These results indicate that using multiple categories of marital status, rather than just a dichotomous measure, is important in order to understand risk of nursing home admission and the gender differences in how marital status influences that risk. This is particularly important for categories of not married. We found no significant difference between the hazard of nursing home admission for those in first marriages and those remarried. This indicates that collapsing these into one category, currently married, would be adequate. However, there was large difference in hazard of nursing home admission among the non-married categories, especially for men. Future research should carefully consider different categories of non-married. Interestingly, partnered and currently in first marriage had similar risks of nursing home admission. This may be due to a small sample size for the partnered. This is an interesting trend to watch in the future.

In congruence with previous research, we find important gender differences. First, marriage does seem to be more protective against risk of nursing home admission for men than for women. Divorced, widowed, and never married men do not have this protection, and thus they experience much higher risks of nursing home admission than

those currently in first marriages. Widowed women also experience these higher hazards, but divorced and never married women do not, at least in the time-constant model. We also find, as do many other studies, that adult children are protective for women against nursing home admission but not for men. This analysis also reveals interesting race and gender interactions. Race is an important covariate in estimating women's hazards of nursing admission, but not in estimating men's.

Future studies should move away from using marital status as a predictor, particularly marital status which is dichotomized into currently married and currently unmarried and only measured at one point in time, towards using concepts of marital biography. As family structures continue to change, with more adults entering and exiting marriages multiple times over the life course as well as entering and exiting alternatives to marriage, it will become increasingly important to use multiple indicators of marital biography and to place these indicators carefully in the life course. Additionally, future studies should run models separately by race and gender in order to test differing effects of marital status categories by race and gender.

This study had several limitations. Importantly, this analysis did not deal carefully enough with the issue of selection. The population that survived to age 65 is obviously healthier than the population who did not make it into this group. Additionally, though this analysis did use multiple categories of marital status and other marital indicators, there are many other dimensions of marital biography that were ignored. Notably, the timing of each marital transition and the length of time spent in each status were not included.

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Table 1: Descriptive Statistics at Baseline by Gender

Variable	Men	Women
Entered nursing home after age 65	11.43***	18.13
Married (dichotomous)	77.39***	63.57
Married (1st marriage)	57.25***	34.47
Remarried	19.49***	9.80
Partnered	2.00***	0.89
Divorced/Separated	2.65***	7.76
Widowed	2.54***	44.21
Never married	2.65	2.86
Length of longest marriage (years)	34.96* (15.43)	34.36 (16.23)
Number of marriages	1.36*** (0.74)	1.30 (0.67)
Birth year	1930.00*** (9.02)	1928.95 (9.96)
Non-Hispanic White	77.33**	75.26
Hispanic White	6.19	6.09
Black	13.06***	15.30
Other race	3.42	3.35
Years of education	11.92*** (3.64)	11.66 (3.25)
Home ownership	80.95***	73.78
Insurance	86.78***	80.64
Number of children living	3.34*** (2.26)	3.22 (2.26)
Number of siblings living	2.46 (2.30)	2.53 (2.34)
Poor or fair self-rated health	32.25	33.33
Number of diagnosed conditions	1.66*** (1.33)	1.77 (1.35)

*** p<.001, ** p<.01, * p<.05, †p<.10

Source: Health and Retirement Study 1998-2008

Percentages shown for dummy variables, means (and standard deviations in parentheses) shown for continuous variables

Table 2: Hazard Ratios for Nursing Home Admission
Marital status (dichotomous) at baseline

	Women		Men	
Married	0.824	***	0.617	***
Birth year	1.175	***	1.168	***
Race				
Hispanic White	0.712	***	1.005	
Black	0.549	***	0.640	*
Other	0.524	***	0.814	
Years of education	1.008		1.012	
Home ownership	0.676	***	0.679	***
Insurance	0.870		0.891	
Number of living children	0.952	***	0.962	*
Number of living siblings	0.982		0.991	
Number of health conditions	1.236	***	1.219	***
Poor self-rated health	1.496	***	1.618	***
N	10023		7650	
Degrees of freedom	12		12	
Likelihood Ratio Chi-Square	1276.7	***	613.5	***

*** p<.001, ** p<.01, * p<.05, †p<.10

Source: HRS 1998-2008

Table 3: Hazard Ratios for Nursing Home Admission

Marital status (categorical) at baseline

	Women		Men	
Marital Status				
Remarried	1.136		1.007	
Partnered	1.082		1.029	
Divorced	0.208	†	1.607	**
Widowed	1.265	***	1.625	***
Never married	1.174		2.135	***
Birth year	1.174	***	1.168	***
Race				
Hispanic White	0.555	***	0.616	*
Black	0.705	***	1.009	
Other	0.596	**	0.806	
Years of education	1.006		1.017	
Home ownership	0.669	***	0.667	***
Insurance	0.875		0.898	
Number of living children	0.947	***	0.983	
Number of living siblings	0.984		0.989	
Number of health conditions	1.228	***	1.231	***
Poor self-rated health	1.488	***	1.586	***
N	9496		7113	
Degrees of freedom	16		16	
Likelihood Ratio Chi-Square	1208.14	***	584.74	***

*** p<.001, ** p<.01, * p<.05, †p<.10

Source: HRS 1998-2008

Table 4: Hazard Ratios for Nursing Home Admission
Marital Status (categorical)- Time-varying covariate

	Women		Men	
Marital Status				
Remarried	1.003		0.998	
Partnered	1.010		0.983	
Divorced	1.015	*	1.030	**
Widowed	1.013	**	1.017	***
Never married	1.019	**	1.035	**
Birth year	1.174	***	1.167	***
Race				
Hispanic White	0.729	***	1.022	
Black	0.527	***	0.693	*
Other	0.548	**	0.906	
Years of education	1.003		1.013	
Home ownership	0.646	***	0.625	*
Insurance	0.857		0.897	
Number of living children	0.942	***	0.955	*
Number of living siblings	0.979	†	0.989	
Number of health conditions	1.234	***	1.245	***
Poor self-rated health	1.544	***	1.658	***
N	10245		7724	
Degrees of freedom	16		16	
Likelihood Ratio Chi-Square	1460.12	***	680.8	***

*** p<.001, ** p<.01, * p<.05, †p<.10

Source: HRS 1998-2008