Illness and Disability Onset as Risk Factors for Divorce: An Exploration of Mechanisms in the Health and Retirement Study

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September 26, 2014

#### **Abstract**

Chronic illness and disability affect many older Americans and has important implications for individuals, families, and society. One potential—but largely unexplored—consequence of chronic illness and disability in later life is marital dissolution via either divorce or widowhood. We use 20 years of data from the Health and Retirement Study (HRS) to examine whether and through what mechanisms chronic illness onset and onset of difficulties with activities of daily living (ADL) are associated with subsequent martial dissolution via divorce or widowhood. Preliminary results indicate that while wife's illness onset is associated with subsequent divorce, neither spouse's onset of ADL-associated disability is associated with divorce. Further, disability does not mediate the association between wife's illness onset and divorce, suggesting the possible role of gendered marriage markets at older ages that leave men with more partnership opportunities outside of the current marriage, rather than potential marital strains associated with caregiving.

\*\*\*PRELIMINARY RESULTS\*\*\*

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#### Introduction

A large literature documents the impact of marital status—and marital transitions—on health (Lillard and Waite 1995; Umberson 1992; Hughes and Waite 2009; Williams and Umberson 2004). Less work, however, has explored the impact of health on marital transitions. Research exploring divorce and health has typically focused on middle-adulthood and, so far, depicts mixed support for whether (and which dimensions of) health impacts divorce risk (e.g., Charles and Stephens 2004; Wilson and Waddoups 2002). Previous research has separately examined illness and disability as risk factors for divorce, but, to our knowledge, no research has explicitly investigated both of these dimensions of physical health.

Once rare at older ages, recent research suggests that divorce over the age of 50 is increasing (Brown and Lin 2012). At the same time, more recent cohorts of older adults are also experiencing increased rates of disability (Seeman et al, 2010) and living longer with chronic illness (Crimmins 2004). Given the documented stressors associated with disability that impact both persons with disability and their families, and the fact that younger cohorts of older adults have more permissive attitudes towards divorce (Uhlenberg and Myers, 1981) it is plausible that disability may function as a risk factor for divorce at older ages. Disability, defined as difficulty carrying out basic activities for daily living (ADL) such as eating or dressing, is associated with a loss of independence. Among married older couples, the caregiving responsibilities associated with disability are most often completed by a spouse. There is an abundance of research documenting the effects of caregiving strain for the health of the care-receiver and caregiver (see Pinquart & Sörensen, 2003). Caregiving strain is also associated with changes in relationship dynamics with both spouses often reporting lower marital satisfaction (Fang, Manne, & Pape 2001).

Given the stress associated with caregiving strain and its implications for marital satisfaction, it is possible that disability increases risk of divorce among married older couples. This research explores whether illness onset is associated with risk of divorce and whether or not disability mediates that association. Because caregiving dynamics among older couples is typically gendered and given that prior research has observed gender differences in risk of divorce following illness onset, we also investigate whether disability and divorce risk varies by gender. In addition, the availability of alternative partners to the current spouse may also impact individuals' decisions whether to remain "in sickness and in health" or to leave the current marriage. Further, prior research indicates the presence of a "gendered double standard of aging" in marriage markets at older ages (England and McClintock 2010), leaving men with more options for (re)partnership than women.

Our project uses nationally-representative data from the Health and Retirement Study (HRS) to address three research questions. First, what is the relationship between chronic illness onset and disability onset and subsequent marital dissolution via either divorce or widowhood? Second, what roles do caregiving, job loss, income loss, and gendered marriage markets play in explicating the relationship between chronic illness and disability onset and divorce? Finally, does the relationship between chronic illness and disability onset and divorce vary by gender?

#### **Background**

Disability and Caregiving Dynamics among Older Adults

Recent evidence suggests that Baby Boomers and more recent cohorts of older Americans are facing increased rates of disability (Seeman et al., 2010). Compared with Americans ages 60-69 years in 1988-1994, similar aged Americans in 1999-2004 had

significantly greater levels of Activities of Daily Living (ADL), Instrumental Activities of Daily Living (IADL), and mobility disability. Over a ten-year period, prevalence rates for disability increased 40-70% (depending on disability indicator) for Americans 60-69 years of age—these findings were robust against sociodemographic and health risk factors including health behaviors (Seeman et al., 2010, p. 102). With potentially increasing disability among late midlife adults as well as the growing numbers of Americans over the age of 65, it is expected that the need for informal and formal caregiving will also rise. Within the United States (US), informal caregiving among independent older adults living with disability is the most utilized form of help with 90% of surveyed older adults reporting receiving some help from family or friends (Houser et al., 2010). As these trends continue in the US, it is important to understand how caregiving may shape family dynamics among older adults.

Among married older adults, an individual's spouse is the person most likely to provide care for those living with disability (Barrett & Lynch, 1999; Lima et al., 2008). Because disability—particularly ADL disability—is related to increased caregiving need, family members providing care for persons with disability often experience caregiver strain. The majority of the research examining spousal caregiving among older adults has focused on the health implications for the caregiver, care-receiver, or both. However, less attention has been paid to whether caregiving dynamics serve as a mechanism for marital dissolution among older couples.

While disability prevalence among late midlife adults is still relatively low with conservative estimates of ADL disability being less than 5% of Americans ages 45-65 (U.S. Census Bureau, 2009), the burden of disability among late midlife adults appears to be growing and is not uniformly distributed. Important socioeconomic and racial/ethnic disparities exist in relation to disability incidence and prevalence in mid- and late midlife. In general, socioeconomic disadvantaged older adults as well as older racial/ethnic minorities are more likely to develop disability onset earlier and experience a steeper decline compared with their more privileged peers (Dunlop et al., 2007; Fuller-Thomson et al., 2009; Warner & Brown, 2011). Given that disability disproportionately impacts disadvantaged families, those providing care such as spouses or adult children may be doubly vulnerable to the negative effects of caregiver strain because they have fewer resources to cope. Furthermore, disability onset in midand late midlife may be more disruptive to employment and income sources than in later life; therefore, those most at-risk of disability in late midlife are also those most sensitive to job and income loss.

As Americans continue to age and live longer with chronic conditions and disability, it is vital to gain a better understanding of how disability may shape family interactions including patterns of spousal caregiving and whether disability-related changes to relationship dynamics are linked to subsequent marital dissolution. Older individuals living with disability may find themselves without a source of informal care after marital dissolution. It is important for researchers and policymakers to understand these patterns in hopes of improving the health and wellbeing of non-married older adults and possibly reduce inequalities in later life.

# Mechanisms Linking Disability-Onset and Marital Dissolution

Spouses who provide care for individuals with disability often report substantial caregiving burden. For example, op Reimer et al. (1998) documented high levels of caregiving burden, measured as feelings of heavy responsibility, constant worries, and restraints in social life, among caregiving partners of stroke survivors. Additionally, there is a wealth of data illustrating the impact of caregiving strain on the health of the caregiver. Caregivers of

individuals with chronic illness or disability have higher rates of mortality (Schulz & Beach, 1999), more psychological distress (e.g., more depressive symptoms and lower scores of subjective well-being) and poorer physical health (Pinquart & Sörensen, 2003) as well as increased participation in health risk behaviors (Burton et al., 1997). It should be noted that a meta-analysis conducted by Pinquart and Sörensen (2003) documented significant differences in mental and physical health among caregivers, relative to non-caregivers; however, it was mental health indicators that had the largest reported differences—physical health differences were relatively small among the two groups.

Previous research suggests that spouses report more depressive symptomology than the partner with disabilities (Weitzenkamp et al., 1997). Additionally, compared with spouses who were not the primary caregiver to the partner with disabilities, caregiving spouses reported more physical stress, emotional stress, burnout, anger and resentment, and more depressive symptomology (Weitzenkamp et al., 1997). This research suggests that the act of caregiving may be more a salient determinant for the health and well-being of the spouse without disabilities.

Severity of impairment is a strong predictor of caregiver burden and more caregiver burden is related to lower levels of marital satisfaction (Fang, Manne, & Pape 2001), yet the characteristics of the marriage itself that may also influence for whether a spouse reports high levels of caregiving strain. To illustrate, the act of caregiving for a spouse does not necessarily lead to poorer health among all caregivers. Schultz and colleagues (1997) noted that only half of spousal caregivers reported mental and physical health distress associated with caregiving; the authors also observed that the largest negative impact on health was among spousal caregivers who self-reported high caregiving strain. This research highlights that the relationship dynamics shape the experiences of the care-receiver and caregiver and potentially satisfaction with the marriage. Couples that experience high levels of distress associated with caregiving may elect to leave the relationship—especially if the spouse living with disability has a prognosis that would lead to long-term caregiving need.

Gender Differences in the Relationship between Disability-Onset and Marital Dissolution
Caregiving in the form of maintaining the home or health of the family is typically gendered, where women are more likely to be primary caregivers (Michelson & Tepperman, 2003; Sayer, 2005). Similarly patterns of gendered caregiving have been observed for older adults with disability (Miller & Cafasso, 1992). Among married older couples, when husbands fall ill their wives overwhelming take on the role of the primary caregiver; however, when wives fall ill they are less likely to elect their husband as their primary caregiver and often have a diverse caregiving networks (Allen et al., 1999).

When men and women transition into the caregiver role, both experience drops in well-being including lower levels of reported happiness and increased levels of depression; however, it was only caregiving wives who report less personal mastery, self-acceptance, autonomy, positive relationships, and purpose in life as well as greater hostility (Marks et al., 2004). Surprisingly, Marks and colleagues (2004) found positive effects of caregiving among husbands, where husbands reported greater autonomy and purpose in life after taking on the caregiver role for their wives. Larson et al. (2008) provide further evidence of gender differences in spousal caregiving experiences; the authors found that caregiving wives of stoke survivors reported lower quality of life and well-being relative to husband caregivers, yet husband caregivers reported fewer emotional contacts.

Wives are more likely to take on the primary caregiver role following onset of disability or chronic illness. Moreover, it appears that spousal caregiving may be more detrimental for wives' health and well-being. It is important to note the previous research explores the health and well-being of spouses in intact marriages following the onset of disability; thus, these marriages may be more robust because martial dissolution may have occurred prior to observation. It is possible that women are more likely to remain as a primary caregiver due to traditional gender roles; therefore, husbands who stay with their wives following disability onset may be selected from less fragile marriages with more egalitarian attitudes. Additionally, women who serve as the primary caregiver often do not receive help from other family members or friends, yet women with disability or chronic illness often rely on a larger support network that typically includes spouses and others, so husband caregivers may have more resources to help cope with ongoing caregiver strain.

#### **Data and Methods**

Data

We use data from Waves 1-10 of the RAND HRS data file, a user-friendly, harmonized data set generated from the original HRS files. The Health and Retirement Study (HRS) is an ongoing, representative, prospective panel study of Americans over the age of 50 years. Detailed health and sociodemographic information has been collected from respondents and their spouses (regardless of the spouse's age) every two years since 1992. While divorces are increasing at older ages, prior research shows divorces are concentrated among those aged 50 to 64 (Brown and Lin 2012), so we restrict our analysis to the original HRS cohort in which at least one spouse was aged 51 to 61 years old in 1992.

Key Measures

Dependent Variable: Marital Dissolution

Our key dependent variable is whether Wave 1 marriage ends in divorce or widowhood in a subsequent wave. A marriage was defined to dissolve due to widowhood if either spouse died between consecutive waves and the marriage was intact in the penultimate wave. A marriage was defined to dissolve in divorce if either spouse reported being divorced since the prior wave, or in the rare case that either spouse divorced and remarried between consecutive waves and thus never reported being divorced, if either spouse's total marriage count increased.

Key Independent Variables: Illness Onset and Disability Onset

We focus on chronic illness onset and disability onset as our key independent variables of interest. We examine the onset of four major life-threatening illnesses: cancer, heart problems, lung disease, and stroke, and which together comprise a substantial portion of chronic disease burden in the United States (Murphy, Xu, and Kochanek 2013) and pose a risk for marital dissolution via the death of an individual spouse as well as potentially via divorce. Disability onset is measured using six common ADL tasks (i.e., difficulty eating, bathing, dressing, get/in out of bed, walking across the room, and toileting including getting up or down). ADL disability represents difficulty completing tasks essential for daily living. Compared with other indicators of functional health, ADL disability is often viewed as a loss of independence, which has important implications for both the individual with disability as well as the spouse. ADL disability is closely tied to caregiving need and related to personal, often intimate, activities; therefore, it is a valuable measure for these analyses.

In order to ensure that illness and disability onset preceded (potential) marital dissolution, we lag illness onset and disability onset by one period. To further establish illness and disability onset, only couples that were free of any of the four illnesses and ADL impairments were selected into the risk group. If either spouse reported difficulty completing any of ADL tasks in subsequent waves, then they (i.e., the wife or husband) were classified as having experienced disability onset. While recovery from ADL disability does occur among older adults, it tends to be very short-lived and still relatively rare; therefore, we only assessed initial onset of ADL disability. While this strategy facilitates identification of the causal effect of illness/disability onset on marital dissolution, it restricts our sample to those marriages in which individuals are physically healthiest.

## Controls

We also employ a variety of additional variables. These include: age (in years), college education (1=yes, 0=no), race/ethnicity (1=nonwhite and/or Hispanic, 0=White, non-Hispanic), marital duration (1=less than 10 years, 0=more than 10 years), and initial marital satisfaction. Due to concerns of collinearity associated with assortative mating along education and race/ethnicity, we only include husband's education and race/ethnicity. Marital satisfaction was ascertained with the following question: "Are you very satisfied, somewhat satisfied, about evenly satisfied and dissatisfied, somewhat dissatisfied, or very dissatisfied with your marriage?" Again because of concerns of collinearity between husbands' and wives' reports of marital satisfaction, we use wife's report of marital satisfaction, as there is more variation in wives' reports (i.e. more negative reports) than husbands'. Marriages were coded as remarriages if the Wave 1 marriage was a remarriage for either spouse. We also include a measure of husband and wife age differences at baseline; the age difference categories include: wife older by 11 or more years, wife older by five to ten years, wife older by three or four years, husband and wife within two years' age of one another (reference category), husband older by three or four years, husband older by five to ten years, and husband older by 11 or more years. We also include two variables of socioeconomic status at baseline: total household income (in quintiles) and total household non-housing assets. Non-housing assets are coded into five categories: negative wealth (i.e. debt); \$0-\$50,000 (reference category); \$50,000-\$100,000; \$100,000-\$250,000; and \$250,000 or more. We also include dichotomous indicators for health insurance for both husband and wife.

## Statistical Analysis

After constructing a marriage-period dataset which contains rich information on the variables listed above, we use a discrete-time event history framework to explore the role of illness and disability onset as risk factor for marital dissolution at older ages. Marital dissolution due to divorce and due to widowhood are modeled as competing-risks relative to the reference category of remaining married. We use a closed cohort design in which Wave 1 marriages are followed until marital dissolution (due to either divorce or widowhood) or censorship. Censorship is defined as either the original marriage remains intact until Wave 10, the most-recent wave of available data, or the marriage attrits from the survey. Marriages contribute marriage-periods until marital dissolution or the marriage is censored.

## **Preliminary Results**

Table 1 presents results from a multinomial logistic regression of illness onset on subsequent marital dissolution. Results for divorce compared with remaining married indicate that wife's—but not husband's—illness onset is associated with elevated risk of subsequent divorce. An F-test (not shown) confirms that the relationship between wife's illness onset and subsequent divorce is statistically significantly different from the relationship between husband's illness and subsequent divorce. Husband racial/ethnic minority status and poor initial quality are also associated with elevated divorce risk. Table 2 presents results from a multinomial logistic regression of disability onset on subsequent marital dissolution. Neither husband nor wife disability onset are associated with subsequent marital dissolution via divorce, though both husband's and wife's disability onset are associated with subsequent marital dissolution via widowhood. Table 3 presents results from a multinomial logistic regression of booth illness onset and disability onset on subsequent martial dissolution. The association between wife's illness onset is unchanged by the inclusion of disability onset, which itself is not associated with divorce (similar to Table 2). We also tested for variation in the relationship between illness and disability onset and education, race/ethnicity, and initial marital satisfaction by including an interaction between onset variables and education, race/ethnicity, and initial marital satisfaction. None of the illness/disability onset-interactions were statistically significant (results not shown). We also repeated our disability analysis with a measure of IADLs, with similar results. In the interest of space and because our primary interest is in marital dissolution via divorce, we do not describe detailed results for widowhood versus remaining continuously married. In general, results for widowhood are consistent with prior literature, with illness and ADL disability onset both associated with elevated risk of subsequent widowhood.

# **Discussion and Planned Future Analysis**

Our preliminary results indicate that wife's—but not husband's—illness onset is associated with an elevated risk of subsequent divorce, but this relationship is not explained by the disability that sometimes accompanies illness onset. These findings suggest that while disability—and potentially associated caregiving—may be stressful as prior research suggests, these stresses do not necessarily result in divorce. One explanation for the differences in the relationship between illness and disability onset and divorce may hinge on the extent to which onset is a "shock." Illness onset such as cancer diagnosis or stroke may come with little forewarning, while disability onset may represent the culmination of gradual functional decline. Previous caregiving research has stated that the most stressful time for caregivers is the initial transition into this new role (Aneshensel et al., 1995), and it may be that fragile marriages do not survive long past the initial diagnosis and/or illness onset because this represents a period of great upheaval in the relationship. The gradual nature of disability onset may give spouses thinking about divorce a "heads-up" to potential caregiving burdens ahead, so that by the time ADL onset has occurred, only the robust and committed marriages remain. Indeed, supplementary analysis (not shown) reveals that most divorces occur within one or two survey waves of illness onset. We will further explore the timing of divorce following illness onset in future analyses.

While our findings do not suggest that the disability and accompanying caregiving responsibilities explain the gendered nature of the relationship between illness onset and divorce, other possibilities remain, namely gendered marriage markets at older ages that favor men (England and McClintock 2010). In order to explore this possibility, we will examine whether

marriages in which husbands have more attractive characteristics (such as better health and more financial resources independent of wives) are more likely dissolve following wife's illness onset. We will also discuss other ways in which the gendered relationship between illness onset has important for individuals, marriages, and society related to the costs of paid—and unpaid—caregiving, the role of health insurance as a potential buffer to health shocks, and other factors.

We have several additional planned analysis. First, as briefly described above, we will examine whether marriages with healthier and independently wealthier husbands are more likely to end in divorce. In addition, given that specific illnesses vary in the extent to which they are associated with disability, we will repeat our analysis for specific conditions included in the illness onset measure (cancer, heart problems, lung disease, and stroke), as well as other illnesses such as diabetes, arthritis, and mental illness. Finally, in order to address unobserved heterogeneity, we will employ fixed effects and conditional logistic regression models to assess the robustness of our findings to unobserved time-invariant variables.

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# **ANALYSES**

**Table 1.** Multinomial Logistic Regression Results: Log Odds of Marriage Ending Via Divorce or Widowhood Compared to Remaining Married By Illness Onset (cancer, heart problems, lung disease, and/or stroke) and Other Covariates, Health and Retirement Study (1992-2010) (n=2,701 marriages, 19,658 marriage-periods)

| 19,036 marriage-perious)                | Divorced |      | Widowed  |        |     |
|---|----------|------|----------|--------|-----|
|   | Log Odds | SE   | Log Odd  | ls SE  |     |
| Period (linear)                         | 0.02     | 0.02 | 0.2      |        | *** |
| Period (quadratic)                      | -0.04    | 0.00 | *** -0.0 | 5 0.00 | *** |
| Husband Illness Onset (lagged)          | -0.07    | 0.14 | 0.4      | 0.12   | **  |
| Wife Illness Onset (lagged)             | 0.49     | 0.17 | ** 0.4   | 2 0.16 | *   |
| Husband Age                             | -0.03    | 0.04 | 0.0      | 9 0.03 | **  |
| Wife Age                                | 0.05     | 0.03 | 0.0      | 0.03   |     |
| Husband College-Educated                | -0.19    | 0.14 | -0.1     | 5 0.15 |     |
| Husband Non-White and/or Hispanic       | 0.33     | 0.14 | * 0.0    | 6 0.15 |     |
| Wife's Report of Marital Satisfaction   |          |      |          |        |     |
| Very Dissatisfied                       | 1.48     | 0.55 | ** 0.3   | 2 0.77 |     |
| Somewhat Dissatisfied                   | 1.38     | 0.57 |          | 0.60   |     |
| About Evenly Satisfied and Dissatisfied | 0.21     | 0.40 | 0.3      | 5 0.34 |     |
| Somewhat Satisfied                      | -0.11    | 0.16 | -0.0     | 1 0.17 |     |
| Very Satisfied (ref.)                   |          |      | _        |        |     |
| Remarriage                              | 0.07     | 0.14 | 0.0      | 9 0.14 |     |
| Marital Duration <10 years              | -0.14    | 0.19 | -0.3     |        |     |
| Husband Has Health Insurance            | -0.34    | 0.24 | -0.3     |        |     |
| Wife Has Health Insurance               | 0.36     | 0.24 | 0.2      | 8 0.27 |     |
| Household Income Quintile               |          |      |          |        |     |
| 1 (ref.)                                |          |      | -        |        |     |
| 2                                       | 0.21     | 0.19 | 0.0      | 5 0.19 |     |
| 3                                       | 0.07     | 0.20 | -0.0     | 5 0.19 |     |
| 4                                       | -0.18    | 0.20 | -0.3     | 0.20   |     |
| 5                                       | 0.05     | 0.21 | -0.2     | 5 0.22 |     |
| Household Non-Housing Assets            |          |      |          |        |     |
| In Debt                                 | 0.30     | 0.30 | 0.4      | 0 0.31 |     |
| \$0-\$50,000 (ref.)                     |          |      | -        |        |     |
| \$50,000-\$100,000                      | -0.13    | 0.16 | -0.1     | 8 0.16 |     |
| \$100,000-\$250,000                     | -0.31    | 0.16 | † -0.3   | 6 0.16 | *   |
| More than \$250,000                     | -0.28    | 0.16 |          |        |     |
| Age Difference between Spouses          |          |      |          |        |     |
| Wife 11 years Older or More             | -1.24    | 1.00 | 0.1      | 4 0.96 |     |
| Wife 5-10 Years Older                   | -0.02    | 0.41 | 1.0      | 2 0.43 | *   |
| Wife 3-4 Years Older                    | -0.80    | 0.43 | † 0.0    |        |     |
| Husband and Wife within 2 Years (ref.)  |          |      | -        |        |     |
| Husband 3-4 Years Older                 | 0.22     | 0.18 | 0.0      | 7 0.18 |     |
| Husband 5-10 Years Older                | 0.18     | 0.25 | -0.1     |        |     |
| Husband 11 Years Older or More          | 0.74     | 0.51 | 0.0      |        |     |
| Constant                                | -0.95    | 0.74 | -5.8     |        |     |

Note: p<0.10; \*p< .05; \*\*p< .01; \*\*\*p<0.001. Analysis weighted using Wave 1 household weights.

**Table 2.** Multinomial Logistic Regression Results: Log Odds of Marriage Ending Via Divorce or Widowhood Compared to Remaining Married By Onset of Any Difficulty with Activities of Daily Living and Other Covariates, Health and Retirement Study (1992-2010) (n=2,938 marriages, 22,740 marriage-periods)

| marriage-periods)                       |          |      |         |        |      | I   |
|---|----------|------|---------|--------|------|-----|
|   | Divorced |      | Widowed |        |      |     |
|   | Log Odds | SE   |         | g Odds |      |     |
| Period (linear)                         | 0.16     | 0.01 | ***     | 0.24   |      |     |
| Period (quadratic)                      | -0.04    | 0.00 | ***     | -0.05  |      |     |
| Husband ADL Onset (Lagged)              | -0.02    | 0.18 |         | 0.46   | 0.14 | **  |
| Wife ADL Onset (Lagged                  | -0.01    | 0.18 |         | 0.37   | 0.15 | *   |
| Husband Age                             | -0.03    | 0.03 |         | 0.06   | 0.03 | *   |
| Wife Age                                | 0.04     | 0.03 |         | 0.04   | 0.03 |     |
| Husband College-Educated                | -0.19    | 0.13 |         | -0.19  | 0.13 |     |
| Husband Non-White and/or Hispanic       | 0.24     | 0.15 | †       | -0.05  | 0.15 |     |
| Wife's Report of Marital Satisfaction   |          |      |         |        |      |     |
| Very Dissatisfied                       | 2.37     | 0.68 | ***     | 1.03   | 0.76 |     |
| Somewhat Dissatisfied                   | 1.67     | 0.62 | **      | 1.12   | 0.62 | †   |
| About Evenly Satisfied and Dissatisfied | 0.56     | 0.39 |         | 0.40   | 0.36 |     |
| Somewhat Satisfied                      | -0.17    | 0.16 |         | 0.01   | 0.15 |     |
| Very Satisfied (ref.)                   |          |      |         |        |      |     |
| Remarriage                              | 0.17     | 0.14 |         | 0.27   | 0.13 | *   |
| Marital Duration <10 years              | -0.21    | 0.19 |         | -0.21  | 0.20 |     |
| Husband Has Health Insurance            | -0.42    | 0.24 | †       | -0.39  | 0.24 |     |
| Wife Has Health Insurance               | 0.35     | 0.25 |         | 0.41   | 0.25 | †   |
| Household Income Quintile               |          |      |         |        |      |     |
| 1 (ref.)                                |          |      |         |        |      |     |
| 2                                       | 0.15     | 0.19 |         | -0.27  | 0.17 |     |
| 3                                       | -0.02    | 0.20 |         | -0.19  | 0.17 |     |
| 4                                       | -0.22    | 0.20 |         | -0.45  | 0.18 | *   |
| 5                                       | -0.11    | 0.21 |         | -0.62  | 0.19 | **  |
| Household Non-Housing Assets            |          |      |         |        |      |     |
| In Debt                                 | 0.60     | 0.31 | †       | 0.58   | 0.29 | *   |
| \$0-\$50,000 (ref.)                     |          |      |         |        |      |     |
| \$50,000-\$100,000                      | -0.14    | 0.16 |         | -0.27  | 0.15 | †   |
| \$100,000-\$250,000                     | -0.37    | 0.15 | *       | -0.35  |      |     |
| More than \$250,000                     | -0.15    | 0.16 |         | -0.76  |      |     |
| Age Difference between Spouses          |          |      |         |        |      |     |
| Wife 11 years Older or More             | -0.72    | 0.93 |         | 0.19   | 0.84 |     |
| Wife 5-10 Years Older                   | 0.14     | 0.40 |         | 0.60   |      |     |
| Wife 3-4 Years Older                    | -1.18    | 0.50 | *       | 0.04   |      |     |
| Husband and Wife within 2 Years (ref.)  |          |      |         |        |      |     |
| Husband 3-4 Years Older                 | 0.13     | 0.17 |         | 0.15   | 0.16 |     |
| Husband 5-10 Years Older                | 0.10     | 0.25 |         | 0.02   |      |     |
| Husband 11 Years Older or More          | 0.48     | 0.51 |         | 0.47   |      |     |
| Constant                                | -1.40    | 0.71 | *       | -5.92  |      | *** |

Note:  $\dagger p < 0.10$ ; \*p< .05; \*\*p< .01; \*\*\*p<0.001. Analysis weighted using Wave 1 household weights.

**Table 3.** Multinomial Logistic Regression Results: Log Odds of Marriage Ending Via Divorce or Widowhood Compared to Remaining Married By Illness Onset (cancer, heart problems, lung disease, and/or stroke), Onset of Any Difficulty with Activities of Daily Living and Other Covariates, Health and Retirement Study (1992-2010) (n=2,701 marriages, 19,658 marriage-periods)

| 2010) (n=2,701 marriages, 17,030 marriage-pe. | Divorced |      | Widowhood |          |      |     |
|---|----------|------|-----------|----------|------|-----|
|   | Log Odds | SE   |           | Log Odds | SE   |     |
| Period (linear)                               | 0.02     | 0.02 |           | 0.19     | 0.02 | *** |
| Period (quadratic)                            | -0.04    | 0.00 | ***       | -0.05    | 0.00 | *** |
| Husband Illness Onset (lagged)                | -0.07    | 0.14 |           | 0.37     | 0.13 | **  |
| Wife Illness Onset (lagged)                   | 0.49     | 0.17 | **        | 0.39     | 0.16 | *   |
| Husband ADL Onset (Lagged)                    | 0.02     | 0.12 |           | 0.35     | 0.11 | **  |
| Wife ADL Onset (Lagged                        | -0.03    | 0.13 |           | 0.11     | 0.13 |     |
| Husband Age                                   | -0.03    | 0.04 |           | 0.09     | 0.03 | **  |
| Wife Age                                      | 0.05     | 0.03 |           | 0.00     | 0.03 |     |
| Husband College-Educated                      | -0.19    | 0.14 |           | -0.14    | 0.15 |     |
| Husband Non-White and/or Hispanic             | 0.33     | 0.14 | *         | 0.03     | 0.15 |     |
| Wife's Report of Marital Satisfaction         |          |      |           |          |      |     |
| Very Dissatisfied                             | 1.47     | 0.55 | **        | 0.31     | 0.78 |     |
| Somewhat Dissatisfied                         | 1.37     | 0.57 | *         | 0.88     | 0.60 |     |
| About Evenly Satisfied and Dissatisfied       | 0.21     | 0.40 |           | 0.31     | 0.34 |     |
| Somewhat Satisfied                            | -0.11    | 0.16 |           | -0.03    | 0.17 |     |
| Very Satisfied (ref.)                         |          |      |           |          |      |     |
| Remarriage                                    | 0.07     | 0.14 |           | 0.10     | 0.15 |     |
| Marital Duration <10 years                    | -0.14    | 0.19 |           | -0.35    | 0.23 |     |
| Husband Has Health Insurance                  | -0.34    | 0.24 |           | -0.39    | 0.27 |     |
| Wife Has Health Insurance                     | 0.36     | 0.24 |           | 0.30     | 0.27 |     |
| Household Income Quintile                     |          |      |           |          |      |     |
| 1 (ref.)                                      |          |      |           |          |      |     |
| 2   | 0.22     | 0.19 |           | 0.08     | 0.19 |     |
| 3   | 0.07     | 0.20 |           | -0.01    | 0.20 |     |
| 4   | -0.18    | 0.20 |           | -0.25    | 0.20 |     |
| 5   | 0.05     | 0.21 |           | -0.20    | 0.22 |     |
| Household Non-Housing Assets                  |          |      |           |          |      |     |
| In Debt                                       | 0.29     | 0.30 |           | 0.34     | 0.31 |     |
| \$0-\$50,000 (ref.)                           |          |      |           |          |      |     |
| \$50,000-\$100,000                            | -0.13    | 0.16 |           | -0.16    | 0.16 |     |
| \$100,000-\$250,000                           | -0.31    | 0.16 | †         | -0.36    | 0.16 | *   |
| More than \$250,000                           | -0.28    | 0.16 | †         | -0.96    | 0.19 | *** |
| Age Difference between Spouses                |          |      |           |          |      |     |
| Wife 11 years Older or More                   | -1.24    | 1.00 |           | 0.17     | 0.97 |     |
| Wife 5-10 Years Older                         | -0.02    | 0.41 |           | 1.04     | 0.43 | *   |
| Wife 3-4 Years Older                          | -0.80    | 0.43 | †         | 0.05     | 0.38 |     |
| Husband and Wife within 2 Years (ref.)        |          |      |           |          |      |     |
| Husband 3-4 Years Older                       | 0.22     | 0.18 |           | 0.08     | 0.18 |     |
| Husband 5-10 Years Older                      | 0.18     | 0.25 |           | -0.16    | 0.26 |     |
| Husband 11 Years Older or More                | 0.74     | 0.51 |           | 0.07     | 0.49 |     |
| Constant                                      | -0.95    | 0.74 |           | -5.90    | 0.76 | *** |

Note: p<0.10; \*p< .05; \*\*p< .01; \*\*\*p<0.001. Analysis weighted using Wave 1 household weights.