Family Support in Hard Times: Dynamics of Intergenerational Exchange after Adverse Events

Abstract: We use an event-study approach to examine changes in intergenerational financial transfers and informal care within families following wealth loss, job exit, widowhood, and health shocks. We find sharp reductions in parental giving to adult children following negative shocks to parents' wealth and earned income, particularly in low-wealth households. Parental giving also decreases with some health shocks and increases following spousal death. Meanwhile, children of low-wealth households increase financial transfers to their parents following adverse shocks and children in both high- and low-wealth households increase their provision of informal care to parents following a wide range of adverse shocks.

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[1]Funding for this project was provided by the W.E. Upjohn Institute for Employment Research and by the Eller College of Management at the University of Arizona. An earlier version of the paper is posted as Upjohn Institute working paper 19-313, with the title "Adverse Life Events and Intergenerational Transfers." We are grateful to Gary Solon, Steven Haider, Hilary Hoynes, Heather Antecol, Itzik Fadlon, Mariana Zerpa, and participants of UC Santa Barbara's 2019 conference on "Health and Labor Market Effects of Public Policy" for helpful comments.

1. Introduction

The consequences of adverse life events in households of retirement age are well documented in a literature spanning many decades and several disciplines. Researchers have studied the effects of wealth loss, employment transitions, health shocks, and household structure changes on finances, labor supply, consumption, and health trajectories in older households.[1] Because of their prevalence, health shocks in particular have been the subject of a substantial body of research (see Prinz et al. (2018) for a recent summary). There has also been growing interest in understanding the effects of wealth loss and job displacement among older Americans, as research has shown that the wealth and employment trajectories of older households were substantially and permanently impacted by the severe downturns in the housing, financial, and labor markets that occurred during the Great Recession of 2007–2009 (Munnell and Rutledge, 2013).[2] This area of research will likely continue to grow in the coming years given the implications of the COVID-19 pandemic and the associated economic downturn for health and financial stability in older households.

While there is broad interest in the direct effects of adverse life events on older households that experience them, little attention has been paid to the intergenerational transmission of those effects—how negative shocks in parents' households affect the outcomes of adult children. Among other potential family effects (see, for example, spillovers in health behaviors in Fadlon and Nielsen 2019), adverse events may disrupt wealth transfers from parents to their children. Disruptions in the flow of inter vivos transfers from parents to children could have large welfare effects, as transfer amounts can be economically significant[3] and are typically given at times when children's marginal utility of income is high (McGarry, 2016). The intergenerational transmission of adverse shocks may exacerbate the effects of aggregate downturns for young adults, who are already vulnerable to business cycle fluctuations (Hoynes, Miller and Schaller, 2012).

It is also possible that adult children could play an important role in helping their parents to recover from adverse events. Research has examined parents' role in helping children after negative shocks (Edwards, 2019; Kaplan, 2012; McGarry, 2016), but less attention has been paid to children's role in alleviating the impacts of negative shocks for their parents. Though upstream financial transfers from children to parents are generally smaller and less frequent than downstream transfers, they may also have significant welfare effects if they are given in response to declining income, wealth, or health in parental households. Adult children, particularly female children and children in minority households, also provide care for aging parents, and thus may also help to smooth their parents' consumption by increasing their provision of in-kind assistance, including helping with everyday activities and health care. Any increases in caregiving following adverse shocks could also have important implications for the younger generation, as caregiving has been found to be associated with reduced work productivity and increases in emotional distress (Wolff et al., 2016).

In this paper, we use panel data spanning more than 20 years from the Health and Retirement Study

[1] See Schwandt (2018) and Pool et al. (2018) on the effects of wealth shocks, Chan and Stevens (2001) and Salm (2009) on the effects of job loss, Dobkin et al. (2018) and Wu (2003) on the effects of health shocks, and Sharma (2015) and Goda, Shoven and Slavov (2013) on the effects of divorce and widowhood.

[2] For example, see Farber (2017); Christelis, Georgarakos and Jappelli (2015).

[3] The average transfer recorded in our HRS sample is $13,601.

to examine the dynamics of intergenerational transfers between parents and their adult children following adverse events occurring in parent households. Using an event-study approach, we estimate within-family changes in financial transfers and informal care following several different life events impacting the older generation: sudden wealth loss, exit from employment, fatal health shocks (widowhood), and three different morbidity shocks: hospitalization, disability, and poor health.

Though the events that we consider are not necessarily exogenous, conditional on experiencing a particular event, event timing is arguably quasi-random and, in many cases, unanticipated. Thus, we interpret sudden deviations-from-trend in our outcome variables (transfers) in the precise period in which the event occurs as causal effects of the event. This approach has precedent in recent literature—Dobkin et al. 2018 and Fadlon and Nielsen 2015 rely on similar assumptions in their recent event-studies of health shocks. Using the detailed data available in the HRS, we are also able to explore potential mechanisms by which the shocks that we consider might affect transfers, documenting the effects that each shock has on observed household wealth, bequest intentions income, out-of-pocket medical expenses, and life expectancy.

We find that financial transfers from older households to adult children are indeed sensitive to adverse shocks of all kinds, with wealth loss, job loss, and adverse health shocks all leading to significant reductions in the likelihood that parents make transfers. We separately find that around the time of a widowhood, parents' likelihood of making transfers to their children *increases*, particularly when the surviving spouse is male. Estimating the models separately for low-wealth and high-wealth households reveals that the negative effects of adverse shocks to financial status and health on parental giving are larger both in relative and absolute terms in households with low wealth.

Our results also reveal that adult children play an important insurance role for their aging parents. Most notably, we find that children are much more likely to provide in-kind assistance (informal care) for their parents following adverse shocks. Increases in informal care are especially large after the death of a spouse and after the onset of disability or poor health, but they are present and significant for every shock that we consider. While the overall incidence of upstream financial transfers is relatively low, we also find that in low-wealth households, children's likelihood of making financial transfers *to* their parents increases substantially following adverse shocks to finances and health.

Taken together, our results show that adverse events in the households of aging parents have important intergenerational effects. In particular, adult children of parents in low-wealth households receive fewer financial transfers from their parents following negative shocks to parental wealth, employment, and health. As previous research has shown that large financial transfers from parents to their adult children are given in response to adverse shocks in children's own households or as an investment in children's human capital (i.e., when the marginal utility from such transfers is particularly high), these reductions in large transfers could have important welfare effects. These reductions in transfers from parents to children are paired with increases in upstream transfers—children are also more likely to provide both money and time *to* their parents following adverse shocks. The positive response of upstream transfers to parental shocks may further exacerbate the transmission of adverse events to the younger generation. However, it also likely increases parental welfare through added consumption smoothing.

Our examination of the effect of specific events on intergenerational transfers provides new insight into the causal effects of wealth, income, family structure, and health on giving and receiving of transfers that has not previously been gained from observational studies. Thus far, life events in giver households have not received much attention in the large empirical literature on inter vivos transfers, which has primarily studied the cross-sectional determinants of transfers and has focused on identifying the associations between children's characteristics and life events and their receipt of financial transfers (see, among others, Cox and Rank 1992; Rosenzweig and Wolpin 1993, 1994; McGarry and Schoeni 1995; McGarry 2016). Our event-study results suggest that the strong correlations between transfers and parental wealth, income, household structure, and health that are seen in the cross-section are not merely reflective of spurious correlation but rather reflect causal effects of those factors on giving.

Our results also provide new insight into the ways in which families mediate the effects of recessions. Previous studies have focused on parents' roles in assisting children after adverse shocks (for example, Bitler and Hoynes 2015; Dettling and Hsu 2018; Attanasio, Meghir and Mommaerts 2018). Our study highlights the simultaneous importance of adverse shocks in parents' households, suggesting that they may exacerbate the direct effects of an economic downturn on children. Our results also underscore children's role in helping their parents smooth consumption after shocks. Both sides of the story are relevant for understanding the role of the family safety net in the Great Recession and, more recently, during the COVID-19 pandemic.

Finally, our findings have important implications for the value and effectiveness of social safety net programs that might substitute for family exchange, suggesting that public income support and medical insurance programs that aim to help households smooth their consumption following shocks to income and health may crowd out adjustments to transfers within families. For example, the extent to which family members increase informal care in response to health shocks affects the demand for private long-term care insurance and the degree of potential crowd-out from a public option (Pauly, 1990; Brown and Finkelstein, 2011). On the flip side, during the spread of the COVID pandemic, caregiving relationships within multi-household families were disrupted, with many adult children unable to provide in-person care to their aging parents. In these unusual circumstances, the public safety net for older households may be more important than ever (Stokes and Patterson, 2020).

2. Theoretical Models of Intergenerational Transfers

We begin our study by reviewing the fundamentals of theoretical economic models of intergenerational transfers and considering how their predictions relate to adverse shocks in parent households. Citing the complexity of the dynamic processes determining intergenerational transfers, economists have recently opted not to specify and estimate structural models, choosing instead to outline key assumptions with informal theoretical discussion (see, for example, Altonji and Villanueva 2007; McGarry 2016; Haider and McGarry 2018). The canonical analytical models of inter vivos transfers (e.g., in Altonji, Hayashi and Kotlikoff 1997) are a useful starting point, but are simplified and do not generate concrete predictions about the effects of shocks to income, wealth, and health on transfers. In order to have a theoretical framework to aid

in interpretation of our empirical results, we build on the discussion in Altonji and Villanueva (2007), incorporating elements of recent theoretical work on long-term care insurance, late-life spending, and family risk sharing. We also extend the discussion to include upstream transfers.

2.1. Parent-to-child transfers

Altonji and Villanueva (2007) informally outline a theoretical model of the determination of parent-to-child transfers that serves as the starting point for our discussion. In their model, parents maximize an expected lifetime utility function that depends on their own consumption, their children's utility, and (optionally) their level of giving through a "warm glow" mechanism. Parents in the model start with an initial wealth endowment and have an uncertain stream of labor earnings prior to retirement. After retirement, they receive a flow of social security income, pension income, and labor earnings, which is a deterministic function of their prior labor earnings and depends on their marital status. Life expectancy is uncertain, and the flow of post-retirement income terminates when both parents are dead. In each period of the model, parents choose how much to save from their income and wealth and how much to spend on their own consumption and on transfers to adult children. These choices, along with the flow of labor earnings, social security income, and pension income, determine parents' wealth in later periods.

A key feature of this model (and most theoretical models of transfers) is the altruism motive—parents care about their children and make transfers in order to increase their children's utility. Under altruism, other things being equal, increases in parental lifetime income and wealth should lead to increases in transfers. Altruistic motives lead parents to want to transfer money earlier, when children's own income and wealth levels are low, the value of investments in human capital is high, and children are likely to be liquidity-constrained (Cox, 1990). Another key ingredient of the model—uncertainty—has the opposite effect. In the presence of uncertainty about their own future income, future consumption needs, and life expectancy, as well as uncertainty about their children's future incomes, parents are incentivized to *delay* transfers as long as possible in order to gain more information and avoid accidentally overspending (Altonji, Hayashi and Kotlikoff, 1997). Precautionary motives, particularly those associated with own-income risk and late-in-life health risk, are emphasized in recent work on post-retirement consumption and the demand for long-term care insurance (see, e.g., Ameriks et al. 2018; Laitner, Silverman and Stolyarov 2018).

Considering the effects of adverse life events in parental households on transfers in light of this model, it is clear that the effects of a particular shock, whether it be to wealth, income, household structure, or health, on parental giving may operate through a variety of mechanisms. First, the shock may affect parents' expected lifetime wealth and income stream. The size of changes in lifetime wealth and income will depend on many factors including the nature, size, and permanence of the shock, the existing accumulation of wealth, and the availability of private and social insurance. Second, a shock may change parents' own expected future consumption needs. As highlighted in recent research, preferences may be state dependent. Health status in particular, is often assumed to cause changes in the marginal utility of consumption (Ameriks et al., 2018; Brown, Goda and McGarry, 2016; Finkelstein, Luttmer and Notowidigdo, 2013; Laitner, Silverman and Stolyarov, 2018). Changes in perceived future consumption needs could also result from changes in

time use, expected health costs, household size, or life expectancy. Third, a shock may reduce the incentive for parents to delay inter vivos giving if it reduces the level of uncertainty about future income or health. Additionally, preferences for own consumption and for child utility, the degree of liquidity constraint, and household discounting and risk aversion likely play important roles in mediating the effects of shocks on transfers.

2.2. Child-to-parent transfers

Absent from Altonji and Villanueva's model, and from many analytical models of inter vivos transfers, is a framework for simultaneously considering upstream (child-to-parent) and downstream (parent-to-child) transfers. In a summary article, Laferrère and Wolff (2006) outline several different models that allow for bilateral transfers. One approach is to assume two-sided altruism. In this model, either the parent transfers to the child (if parent income is sufficiently high or child's income is sufficiently low), or the child transfers to the parent (if child income is sufficiently high, or parent income is sufficiently low), or neither makes a transfer. Under mutual altruism, children transfer money to parents who may be unable to borrow against a fixed income stream or may encounter shocks so large that they are unable to insure against them. Thus, adverse shocks to parents' expected income and wealth should lead to increases in upstream transfers (Sloan, Zhang and Wang, 2002) and the expected effects of changes in parental consumption needs and life expectancy should mirror the effects in one-sided altruistic models.

Another approach to thinking about upstream transfers is to assume that parents make transfers in exchange for services or financial transfers that their children are providing or will provide to them in the future (Cox, 1987). In an exchange model, the receipt of transfers from children might be viewed as reciprocity for transfers given in another form (e.g., services exchanged for money), for transfers given previously, or for an expected bequest. The exchange arrangement might be ongoing payment for informal care or an insurance arrangement in which children receive transfers and in return provide a safety net in case of catastrophic health expenses or unexpectedly long life. Exchange motives add another layer of complexity in considering the effects of life events, as events might not only alter parents' ability to pay and their marginal utility of consumption, but might separately alter the marginal utility derived from services. Moreover, there may be a lag between payment for and receipt of services. Generally, with an exchange model, the provision of downstream financial transfers should increase with parents' income and wealth, and upstream financial transfers should increase when parents' income and wealth falls. Meanwhile, downstream transfers and the (upstream) provision of services should both increase when the marginal utility from services increases. The response of informal care to changes in the parents' financial situation is difficult to predict. On one hand, decreases in income and wealth reduce ability to pay for child services. On the other hand, if income and wealth fall enough, recipients might be unable to afford market services, which could increase the marginal utility derived from child-provided services.

A final alternative is to treat extended families as multilateral insurance networks, assuming that parents and children help each other to smooth consumption. For example, Attanasio, Meghir and Mommaerts (2018) apply a model of small group risk-sharing to extended families, arguing that the barriers to infor-

mation and risk sharing are lower within families than between households more generally. This kind of model treats parents and children equally and would allow for transfers running in both directions at any frequency, with transfers adjusting as the ratio of marginal utilities between parents and children fluctuates. Like the other models described above, this model also generates the prediction that adverse shocks to parental household circumstances should lead to increases in upstream transfers.

Taken together, these models provide a useful framework for examining the effect of adverse shocks to parental households on transfers from children to their parents. First, all three models imply that reductions in parents' future wealth or income may lead to more transfers from their children. Second, they predict that parents with lower wealth at the time of the event will be more likely to receive transfers. This effect may be due to the parents' inability to absorb large shocks themselves, as in risk-sharing or 2-sided altruism, or due to a rising marginal utility of child provided services, as in exchange models. Third, the models' implications for the effects of health shocks on transfers from children to parents are ambiguous. On the one hand, health shocks could lead to lower expected resources in the future, due to higher medical expenses or lower income, increasing child to parent giving. On the other hand, if the health shock substantially resolves uncertainty around future income and expenses, then they may need less help. Finally, the models do not provide guidance on when transfers from children to their parents will be financial or in the form of services. The mixture of support is an important empirical question as different forms of transfers may vary in their effectiveness and cost.

3. Data

In light of the many theoretical mechanisms listed in the previous section, and as discussed in the appendix, both the qualitative and quantitative effects of adverse shocks in parental households on transfers are difficult to predict from theoretical models alone. Thus, we turn to empirical analysis in order to better understand these effects. In this section, we begin with a description of the data that we use for our analysis. In the following section, we conduct descriptive analyses of downstream transfers with an emphasis on parental circumstances and an expanded focus that includes upstream transfers. Then, for our main analysis we use event-study methods that highlight discrete changes in transfers that occur around the time of each specific adverse event.

3.1. Data Source

For our empirical analysis, we use eleven survey waves spanning 1993 to 2014 from the Health and Retirement Study (HRS) RAND public-use data files.[4] The HRS is a panel survey that comprises a series of national probability samples of Americans over the age of 50. To keep the panel representative of its target population, the HRS has recruited cohorts of participants every few years. To date, there are six cohorts,

[4]The HRS (Health and Retirement Study) is sponsored by the National Institute on Aging (grant number NIA U01AG009740) and is conducted by the University of Michigan. The data files we use were produced by RAND with funding from the National Institute on Aging and the Social Security Administration.

born between 1921 and 1959. We combine data from the core HRS survey, which focuses on the main respondents, and the family survey, which provides detailed information about respondents' children and transfers between family members. Our data set includes households with members between 50 and 85 years old with at least one child over the age of 18 (we exclude children under 18 from our analysis). In order to minimize within-household changes in reporting, we use the reports of household and individual-level variables from the longest-lived respondent. We adjust all measures that are reported in nominal dollars to 2017 dollars using the Consumer Price Index. Throughout our analysis, we weight observations using HRS household weights. In our main estimation sample, we have 19,384 unique households and 113,781 household-wave observations.

3.2. Intergenerational Transfers

The HRS gathers detailed information on the health, employment, and finances of respondents and their children. Importantly, we observe large financial transfers that each child received from, or gave to, their parents in each wave of the survey. Specifically, the survey asks respondents whether they had provided financial assistance totaling at least $500 to any child since the last interview. Financial assistance is defined as giving money directly, helping to pay bills, or covering specific costs (e.g., nursing home care, rent) and can be considered support, a gift, or a loan.[5] We focus on the extensive margin of giving for our analysis. In particular, we create an indicator for whether the household made a large transfer to at least one child during the survey wave and another indicator for whether the household received a large transfer from at least one adult child.[6] Starting in Wave 3, the HRS also collects data on whether children help their parents with activities of daily living (ADLs) and instrumental activities of daily living (IADLs). ADLs are basic self-care tasks such as walking, dressing, or bathing. IADLs are more advanced self-care tasks that include house cleaning, shopping, and managing transportation. HRS respondents also report whether their children help them with any money management tasks, such as balancing a checkbook or filing taxes.

3.3. Other Variables

We use a comprehensive household income measure that includes all income for the respondent and his or her spouse during the past calendar year. This measure includes regular earnings as well as unemployment and workers' compensation, Social Security and other retirement income, interest and dividends, alimony/child support, capital income (e.g., businesses, gross rent), and all cash assistance from outside the household. It does not include capital gains or in-kind transfers (e.g., SNAP benefits). Our primary measure of household wealth is the net value of all household assets asked about by the HRS. These include the reported value of the household's primary residence, nonresidential real estate, all transportation vehicles,

[5] In the HRS, financial assistance excludes shared housing and food as well as inheritances.

[6] Transfer amounts are also reported, but they are noisy and often imputed in the data. Additionally, given the long recall period and the lack of verification, it is likely that even reported transfer amounts contain substantially more measurement error than whether any transfers were made.

the value of any businesses, IRA and Keough accounts, non-IRA stock holdings, checking accounts, certificates of deposit, bonds, and other reported assets.[7] For all income and wealth variables, we use RAND's imputations when necessary.

In our descriptive analysis, we use information on the age and race (white/nonwhite) of the HRS respondent and his/her spouse, household structure (couple, single male, single female), an indicator for respondent or spouse being disabled, an indicator for either respondent or spouse being in poor health, an indicator for hospitalization during the survey wave, employment status, home ownership, supplemental security income (SSI) receipt, and number and proximity of adult children.

To aid in interpretation of our main results, we use information on life expectancy, expected bequests, and out-of-pocket medical expenses. For life expectancy, the HRS asks respondents to report the probability that they will live until 75, 85, or for 10 more years, depending on the age of the respondent. We combine these three variables based on data availability.[8] For expected bequests, respondents and their spouses are asked to report the probability that they will leave a bequest of at least $100,000. Finally, the HRS collects detailed information on medical expenditures in the last two years or since the last interview. Medical expenditures cover a broad range of payments, including hospital and nursing home costs, doctor, dentist and outpatient surgery costs, prescription drug costs, and home health care and special facilities or services costs.

3.4. Defining Adverse Events

We define life events by identifying changes between waves, which is similar to the approach used in Dobkin et al. (2018) and McGarry (2016). We define a negative wealth shock as the loss of at least 25 percent of household net wealth from the previous wave. In order to avoid including changes that represent very small dollar values, we construct this shock only for households with at least $20,000 of total reported wealth. Forty-four percent of HRS households in our sample experience an adverse wealth shock under this definition.[9] We code a respondent as experiencing a job exit if they report working for pay last wave and report not working for pay in the current wave. This definition excludes any unemployment spells that are shorter than the time between waves and includes transitions out of the labor force due to retirement or a shift to volunteer work. Forty-one percent of households in our sample experience a job exit by this definition.

A respondent experiences widowhood if they are married in the prior wave and report that their partner

[7] The wealth measure is net of any reported debt and does not include secondary residences.

[8] To elicit these probabilities, the respondent is asked "(What is the percent chance) that you will live to be (age XX) or more?" Respondents are asked to report probabilities as a number between 0 and 100, with 0 indicating "absolutely no chance" and 100 indicating "absolutely certain." These questions seem to elicit valid probabilities, as their averages are similar to average life expectancy at the population level and are correlated with variables that affect life expectancy, such as socioeconomic status, in the same way that actual survival probabilities do (Hurd and McGarry, 1995).

[9] The wealth measure is somewhat noisy, bouncing around from wave to wave within households. In order to avoid picking up wealth shocks that resulted from measurement error (unusual positive values), we ignore negative wealth shocks for which there was a *positive* wealth shock of at least 50 percent in either of the two previous waves.

is no longer alive in the current wave. This occurs at some point in 15 percent of households in our sample. Following Fadlon and Nielsen (2015), we separately examine male widowhood (female death) and female widowhood (male death). We additionally examine three morbidity shocks. First, we use an indicator for whether the respondent or spouse was hospitalized during the survey wave. Hospitalization has previously been found to be associated with substantial increases in health expenditures, reductions in labor supply, and increases in household debt (Dobkin et al., 2018). This is the most common health shock in our data, occurring at some point in 70 percent of HRS households. We also create an indicator for the onset of disability, given its importance to future earning potential and expected future medical costs. We define disability onset to be the first wave in which the respondent or spouse reports difficulty with any ADL or IADL. By separating out disability onset, we can pick up changes in patient health that influence future income and medical expenses but may not be perceived as a large decline in general self-reported health. Disability onset occurs at some point in 51 percent of households. We additionally use self-reported health to capture a broad range of severe and sudden health shocks. In each wave, both the respondent and spouse are asked to report their general health status on a scale from 1 (Excellent) to 5 (Poor). We define a health shock as a wave in which respondents who previously reported being in good health or better (a 3 or lower) report being in poor health (a 5). This shock occurs at least once in ten percent of HRS households. In order to avoid the influence of households who are experiencing declining health trends, we focus on health shocks that are occurring for the first time following two waves without a similar shock.

4. Correlates of Intergenerational Transfers in Older Households

We begin our empirical analysis with a set of descriptive findings. These results serve three purposes in our paper. First, they establish the baseline propensities to give and receive in HRS households and the frequencies of upstream and downstream transfers, providing important insight into the nature of intergenerational transfers in older households. Second, they reveal cross-sectional heterogeneity across households in the propensities to give and receive along dimensions that are associated with the shocks that we consider—wealth, income, household structure, and health. Finally, panel fixed effects regressions provide preliminary evidence that those variables are causally associated with the giving and consistent with the predictions of the theoretical models presented in Section 2.

Table 1 shows summary statistics for our full sample and for household waves in which parents make or receive transfers. We observe large financial transfers to adult children in around 35 percent of household-wave observations. Households that transfer money to their children are younger and more educated than the average HRS household. Giving households are also in better health, have higher per-capita income and assets, and report a higher probability of leaving a bequest for their children. Upstream transfers are less common; we observe transfers from children to parents in only six percent of household-wave observations. Compared with the full sample, households receiving financial transfers from their children are older, more likely to have a non-white head or spouse, and have substantially lower income and wealth than the average HRS household. The rate of receipt of help from children is also relatively low in our sample, and we find

that recipients of help are even more disadvantaged, particularly in terms of health.[10]

In Table 2, we examine rates of giving and receiving, along with average transfer amounts separately by age, wealth percentile, employment status, household structure, reported health, and disability status. Among households that transfer money to their children, the average amount given across an HRS wave is around $13,561. Giving is more common among younger households—45 percent of households between the ages of 50 and 60 made large transfers to their children, while only 27 percent of households between 75 and 85 did. Not surprisingly, giving is also far more common in wealthy families, with almost half of all households in the top wealth quintile reporting large transfers. Meanwhile, rates of giving are lower in households with at least one member disabled or in poor health and in single female households.

Rates of receipt of transfers also vary substantially across groups, with upstream financial transfers most common in the lowest wealth quintile, households with poor health or disability and single female households. Among recipient households, the average amount received from children during a wave is just over $5000. Receipt of ADL/IADL assistance also varies widely, particularly along the health dimension, ranging from 1 percent in households with excellent health to a full 24 percent in households who report having poor health. Notably, single females, households in the bottom wealth quintile, and households in the oldest age group, receive substantially more help from their children than the average household, at a rate of 11 or 12 percent. These statistics suggest that, despite their relatively low rate of overall occurrence, child-to-parent transfers may play an important safety-net role.

While summary statistics provide suggestive evidence that household wealth, income, structure, and health status are important determinants of the giving and receiving of intergenerational transfers, it is difficult to discern the relative importance of each variable as a predictor of transfer behavior from sample means because the variables are correlated with one another. Cross-sectional and fixed-effects regressions, which have been widely used in the literature on inter vivos transfers (for example, in Cox 1990 and McGarry 2016), allow us to determine whether variation in each factor is associated with variation in transfers, even after the other factors (and even time-invariant family characteristics) are accounted for.

A few notable patterns emerge from our regression results, which are presented in Table 3. First, parental giving remains positively correlated with household wealth and income, both across and within households, even when controlling for a wide range of other household characteristics and household fixed-effects. The probability of receiving a financial transfer is negatively correlated with income and the probability of receiving help from your children is negatively correlated with wealth. This pattern suggests that baseline levels of wealth and income will likely influence both the degree to which transfers respond to adverse shocks and the form that these transfers will take.

Second, giving does *not* appear to be associated with household health status or disability once other variables have been included in the model. By contrast, the *receipt* of both transfers and help in older

[10]The high incidence of reported disability is mechanical, in some sense, because respondents must report that they "need assistance" with an activity in order to report receiving any help. However, respondents who need assistance do not necessarily receive assistance, and assistance does not necessarily need to come from children.

households is clearly associated with disability and poor health. Models of parental giving suggest that the small association between parental transfers and health may be due to the offsetting effects of health shocks. Variation in health may both reduce giving by directly impacting parental resources and increase it by resolving uncertainty around life expectancy.

Finally, both giving and receiving transfers is correlated with household structure, even in household fixed-effect models. Relative to two-person households single-male households are more likely to give financial transfers and receive help and single-female households are more likely to receive financial transfers and help. These patterns are consistent with an exchange model, which suggests that a transition from a two-person household to a single-person household increases the marginal utility of services from children. This increase leads to children being more likely to help with tasks and parents more likely to give transfers to their children in return.

5. Effects of Adverse Life Events in Parental Households

In order to gain insight into the dynamics of intergenerational transfers within households and how transfers respond to changes in household circumstances, we conduct a series of event-studies for a set of adverse events affecting wealth, income, household structure, and health. Thus far, event-study analysis has not been used to study intergenerational transfers. One reason for this is that household events such as job loss and health shocks cannot be considered purely exogenous, and thus are unlikely to satisfy a "no pre-trends" assumption. Here, we show that careful examination of changes in intergenerational transfers surrounding household events reveals important information about the dynamics of transfers within households that cannot be obtained from fixed effects models, which confound slow evolutionary changes in outcomes with discrete changes.

5.1. Event-Study Results

We begin by considering our two financial shocks—wealth loss and job exit. To provide support for our "shocks" identification strategy, we first examine time patterns in intergenerational transfers during a period in which a large number of households experienced these two types of shocks—the Great Recession. In Figure 1, we examine the raw changes in both downstream and upstream financial transfers surrounding each shock. In particular, we focus on 1,376 cases of wealth loss and 1,083 cases of employment exit reported during wave 10 of the survey, which was conducted in 2010 and referred to the 2008-2010 period, and examine the trajectories of giving across HRS waves 7 through 12 (relative to wave 8 levels) for those households compared with households who were present for the Wave 10 survey but did not experience a shock at that time. This is essentially a simple difference in differences approach. We find that the trajectories in both giving and receipt of transfers were almost indistinguishable between the two groups leading up to wave 10 and then diverge. Figure 1 reveals that households that did *not* experiences wealth and employment shocks during the Great Recession were actually *more* likely to make transfers to their adult children during wave 10, while the rate of giving for households that experienced shocks decreases

starting in wave 10. The figure also shows small increases in child-to-parent transfers in the wave of the shock, particularly following wealth loss.

For our full graphical event-study results, we estimate the following model for events occurring across all HRS waves:

$$T_{ht} = \alpha_h + \gamma_t + \sum_{s=-2}^{3+} 1(t = t_h^* + s)\beta_s + A\psi + \epsilon_{ht} \tag{1}$$

where T_{ht} is a dummy for whether household h made (or received) a transfer at time (wave) t, α_h is a household fixed effect, γ_t is a wave fixed effect, A is (quadratic) age, t_h^* is the event time for household h, and s is the number of waves since the event. Recall that HRS waves are generally two years apart, which means that the event in question occurs sometime in the two years prior to the period-zero interview, the period-one interview occurs 2–4 years later, the period-two interview occurs 4–6 years later, and so on. We omit indicators for three or more waves prior to treatment so that β represents average outcomes in each wave relative to the average for the period more than six years prior to treatment. We assume that any dynamic effects of treatment are no longer relevant after six years and combine three or more waves after the event into a single indicator.

It is likely the case that families which experience a given event are different in important and unobservable ways from families that do not. Throughout our event-study analysis, we restrict our sample only to households who ever experience a given event to avoid confounding the effect of an event with the effects of these differences. In this approach, the effects of an adverse event are identified if their timing is quasi-random. In particular, households that experience the event must be on similar trends before the event occurs, and the event must be unanticipated. The specification in Equation 1 provides a natural test of this assumption. If any of the coefficients on the pre-waves are different from 0, then the event timing is likely to be endogenous or families can anticipate the event and adjust.

Following Dobkin et al. (2018), we also estimate a parametric event-study in which we restrict pre-event effects to follow a linear trend and flexibly estimate post-treatment deviations from that trend. This allows us to summarize the event-study estimates in fewer coefficients, which is helpful for examining mechanisms and conducting heterogeneity analysis, and allows us to estimate deviations from any pre-event trends that may exist. In our results tables, we focus on periods 0 and/or 1 after each shock, which represent the two-year period in which the shock occurs and the period 2–4 years following the shock, respectively.

$$T_{ht} = \alpha_h + \gamma_t + (t - t_h^*)\phi + \sum_{s=0}^{9} 1(t = t_h^* + s)\beta_s + \epsilon_{ht} \tag{2}$$

Figure 2 shows event-study estimates, generated with Equation 1, of the effects of shocks to parental wealth and employment on upstream and downstream financial transfers. Coefficients on β_1 from estimating Equation 2 are presented in the first two columns of Table 4. Recall that in Section 2.1 we predicted that the loss of wealth and earned income would lead to decreases in downstream transfers and increases in upstream transfers. In fact, we do find that both wealth loss (in Panel A) and job exit (in Panel B) significantly reduce the likelihood that parents make large financial transfers to their children. In Table 4, we find that two

waves after wealth loss, the likelihood of giving a transfer is reduced by more than 5 percentage points. This represents a twelve percent reduction in the likelihood of transfer following wealth loss relative to the pre-event mean for that estimation sample. The estimated treatment effect from Equation 2 is -0.036, a nine percent reduction during the period 2-4 years after the shock. For job exit, we find a slightly smaller, 3.5 percentage point (eight percent) reduction in the likelihood of giving.

Looking at upstream financial transfers, we see evidence in Figure 2 of small increases in the likelihood of receiving a large financial transfer from a child following wealth loss and job exit. The regression coeffients in Table 4, which account for pre-shock trends, show an increase of one percentage point (25 percent) following a negative wealth shock but are not statistically significant for employment exit. Together, the results in Table 4 and Figures 1 and 2 suggest that events that alter the financial situation in aging households directly impact the adult children of those households, reducing the likelihood that they receive large financial transfers from their parents and causing them to increase financial transfers to their parents.

Next, we repeat our event-study exercise, now estimating the effects of fatal and non-fatal health shocks. Figure 3 shows event-study estimates of the effects on intergenerational transfers of widowhood, while Figure 4 shows the effects of three morbidity shocks— 1) hospitalization, 2) disability onset, and 3) the transition to "poor" self reported health. When considering health shocks, we additionally show graphical evidence of the effects of these shocks on the likelihood that children provide in-kind assistance (help) to their parents, presented in the third column of graphs.

Because the regression results in Table 3 suggest that single male households and single female households have different patterns of giving and receiving, and because Fadlon and Nielsen (2015) demonstrate differing effects of fatal shocks to males and females, we separately examine male and female widowhood. In Figure 3, we find that the patterns are similar between the two panels, but there is a much larger increase in giving following male widowhood (female death) and a more-sustained increase in helping following female widowhood (male death). These results are echoed in the regression results in Table 4, which show that male widowhood is associated with a full 12.6 percentage-point increase in the likelihood of a large financial transfer in the period of the event—a 37 percent increase—and an 8.1 percentage-point increase in the period after the event. Turning to upstream transfers, we see significant increases of around 2 percentage points (increases of more than 50 percent) in upstream financial transfers during the event periods for both male and female widowhood, which are not sustained in the next period. We also see very large and sustained increases in in-kind assistance (helping) after widowhood for both sexes.

Event-study estimates of the effects of morbidity shocks are shown in Figure 4. Across the four panels, we do not see clear evidence that health shocks cause reductions in parent-to-child transfers. While there appear to be some reductions in giving in each post-event period, it is difficult to discern the magnitude of any drop in giving that can be attributed to the event visually because the pre-trends are not flat,. The parametric estimation results in Table 4 show a statistically significant trend-deviation of around 2 percentage points (5 percent) in both the period of hospitalization and in the 2-4 years following hospitalization. However, there are no significant changes in giving following disability onset or poor health.

Looking at upstream transfers, we find the opposite pattern–hospitalization has no effect on upstream

financial transfers and very little effect on helping, while both disability onset and the onset of poor health lead to statistically significant increases in child-to-parent financial transfers and to very large increases in the likelihood that children provide assistance with ADLs. In fact, the onset of poor health is associated with a 37 percent increase in the probability of receiving financial assistance from one's children (a 1.7 percentage point increase) and a full 231 percent increase in the likelihood of receiving in-kind assistance (8.1 percentage points). These findings suggest that children's aid to their parents is closely tied with their parents' health status, and is consistent with the exchange and informal insurance models discussed in Section 2.2.

Taken together, the results in Figures 2, 3, and 4 and in Table 4 show that parental giving and receipt of transfers is sensitive to adverse shocks to household circumstances. We see reductions in parental giving following adverse shocks to household wealth and income, including wealth loss, job exit, and hospitalization, and we see large increases in giving following the death of a parent, particularly if the surviving parent is male. Meanwhile, adult children increase financial transfers to their parents in response to all kinds of adverse shocks, but those increases in transfers are transitory, occurring only in the periods in which the shocks occur. Finally, we see that children increases their provision of help to their parents following every shock that we consider, with the largest increases occurring in response to widowhood, disability onset, and poor health.

Thus far, our analysis has intentionally focused on the effects of non-specific health events—death, hospitalization, disability onset, and self-reported "poor" health—on intergenerational transfers. This focus increases the precision of the analysis since a larger number of households experience the more general events. In Table 5, we present the effects of a new onset of four specific health conditions—cardiac events, stroke, memory conditions, and cancer—on intergenerational exchange as a check for whether the less specific health events are not covering up significant heterogeneity across conditions. Across these four events, the results are qualitatively similar to the other health shocks we consider in the rest of the paper: health shocks have small effects on parental giving but they induce financial transfers and help from children. However, there are two main differences. First, cancer diagnosis results in much larger reductions in parental giving to adult children. Cancer diagnosis reduces the likelihood of giving by 3.8 percentage points, or 9.6 percent of the baseline mean, in the 2–4 years after diagnosis. Second, memory conditions and cancer diagnosis lead to significant increases in child-to-parent financial transfers but cardiac events and stroke do not.

5.2. Possible First Stage Mechanisms

We examine the mechanisms underlying the effect of adverse shocks on transfers by estimating their "first-stage" effects on mechanisms suggested by the theoretical models presented in Section 2. We generate these results by estimating the event-study model in Equation 2 with summary measures of the key theoretical mechanisms on the left-hand side. In particular, we explore mechanisms related to current and future parental resources using detailed measures of household per-capita wealth and income. We also examine the effects of adverse events on out-of-pocket medical spending which often spikes in the wave of

the event and may lead to liquidity issues for respondents. Additionally, adverse events, particularly health shocks, may influence current giving by altering expectations about future needs. We capture this pathway by looking at effects on self-reported probability of leaving a bequest, and self-reported probability of surviving past the next major age milestone (75, 85, or 10 years, depending on respondent's age).

We generate these results by estimating Equation 2 with a set of household characteristics on the left-hand side: real household per-capita wealth, bequest plans, real household per-capita income, household out-of-pocket medical expenses, and a variable summarizing life expectancy based on the respondent's reported probability of surviving past the next major milestone (75, 85, or 10 years, depending on respondent age). These results, presented in Table 6 provide us with important insight into the nature of the events that we consider and how they alter households' perceived financial status and planning window.

The wealth shocks that we consider are associated with large reductions in per-capita wealth (by construction) and also with around a five percentage-point reduction in the expected probability of leaving a bequest of more than $100,000. Perhaps surprisingly, Table 6 reveals that wealth shocks are not associated with significant reductions in household income per capita. By contrast, job exit is associated with large reductions in household income and with small increases in out-of-pocket medical expenditures (possibly from loss of employer-sponsored insurance), but is not associated with significant changes in wealth or bequest plans.

Turning to health shocks, Table 6 confirm that widowhood is associated with increases in both per capita wealth and per capita income. Male widowhood, but not female widowhood, is also associated with an increase in the reported likelihood of leaving a bequest and both are associated with large reductions in household medical expenses (likely reflecting high medical costs prior to death for the spouse who passed away). None of the three health shocks are associated with changes in the likelihood of leaving a bequest, but all three are associated with increases in out-of-pocket health expenditures and reductions in life expectancy. Hospitalization is associated with the largest increase in out-of-pocket health expenditures and is also associated with reductions in reported wealth and earned income, which is consistent with the findings of Dobkin et al. (2018).

The results in Table 6 support our interpretation of several adverse events—wealth shocks, job exit, widowhood, and hospitalization—as significant financial shocks. Wealth loss and male widowhood in particular lead not only to changes in household per-capita wealth and income, but also changes in households' bequest plans, which suggests they have altered households' perceptions of future financial security, while job exit and hospitalization lead to reductions in income and increases in health expenditures. The other two morbidity shocks—disability and poor health onset—do not have large immediate effects on households' broader financial situations (wealth and income) and instead are associated only with small (in absolute terms) increases in out-of-pocket medical expenditures and reductions in life expectancy.

5.3. Heterogeneity by Wealth

The results from our event-study analysis suggest that parental wealth and income are closely tied with the level of parental giving. There is also evidence that parental need (disability and poor health status in

particular) drives parental receipt of transfers and time from children. An important open question is whether the full-sample effects are masking differing effects that depend on the level of accumulated household wealth. There are two reasons for considering wealth heterogeneity. First, recall from Section 2.2 that it is natural to think of high-wealth parent households as being givers of transfers (or at the margin of giving) to their children and lower-wealth parent households as being recipients of transfers from their children. Thus, it is possible that only some households are in a range of either giving or receiving money. Second, wealthier households may be less liquidity-constrained, and thus are better able to smooth their own consumption (and giving) across periods even in the presence of shocks.

In order to examine wealth heterogeneity, we average per-capita wealth across waves for each household and stratify our sample by average real per-capita wealth, separately examining the effects of events on giving for households above and below the median wealth level. These results are presented in Table 7. In order to aid interpretation, we show effects on first stage mechanisms separately by wealth in Appendix Tables A2 and A3.

Consistent with the theoretical models, we find that the effects of adverse household events on intergenerational financial transfers are concentrated in low-wealth households, and most of the estimated effects are larger, both in absolute and relative terms, than those from the full sample. In the low-wealth sample, the estimated effect of wealth loss on the probability of giving a transfer is -6.1 percentage points, or 18.7 percent of the baseline mean for that sample. The estimated reduction in the likelihood of giving after job exit is 12.7 percent of the baseline mean, and the increase associated with male widowhood is 39 percent. In this group, hospitalization is found to reduce giving in period of the event and the onset of poor health is associated with reduced giving in the following period. In the high-wealth sample, we still see substantial increases in giving following parental death, and male widowhood in particular (an increase of 14.8 percentage points, or 37 percent), and also see smaller reductions following hospitalization and job exit.

Considering upstream transfers, stratifying by wealth reveals large and significant increases in child-to-parent transfers following wealth loss, job exit, male and female widowhood, disability onset, and poor health in low-wealth families. Following a negative wealth shock, the likelihood of receiving a large financial transfer increases by 2.1 percentage points, or 33.9 percent. Parental death, disability onset, and poor health lead to even larger increases in transfer receipt, with the largest increase of 4.4 percentage points (70 percent) found in response to female widowhood. We find no evidence at all of changes in upstream financial transfers in high-wealth households. We do, however, find large adjustments in children's provision of assistance to their parents in both high- and low-wealth households following adverse events, with low-wealth households showing larger absolute adjustments and high-wealth households showing larger adjustments relative to their (lower) baseline mean rates of receipt of help.

6. Discussion and Conclusion

Intergenerational transfers are an important economic phenomenon. Gale and Scholz (1994) estimate that intended inter vivos transfers account for at least 20 percent of U.S. wealth. In the Health and Retire-

ment Study, 62 percent of households make a large financial transfer to their adult children at some point, and 34 percent receive either financial or in-kind assistance from their children. These transfers between family members potentially play an important role in intertemporal consumption smoothing within households. However, research has only just begun to explore the dynamics of transfers and how they respond to changes in circumstances within households. In this study, we use panel data to examine the association between parental household circumstances and the likelihood that parents give money to or receive money or help from their children. In addition to standard descriptive statistics and regression analyses, we conduct an event-study analysis, examining change in transfers following adverse events in parent households. Our analysis adds to the new literature on the dynamics of transfer behavior within households (McGarry, 2016; Haider and McGarry, 2018) and also reveals potentially important intergenerational effects of adverse events.

Our results reveal that in households with low wealth holdings, the likelihood that parents make large financial transfers to their adult children is very sensitive to household wealth and income, falling substantially after wealth loss and job exit and increasing after widowhood. Parental giving in low-wealth households also falls after a hospitalization and the onset of poor health. Taken together, these results suggest that the adult children of low-wealth parents are likely to experience negative effects of adverse financial and health events in their parents' households. The implication of this is that any direct effects of aggregate economic downturns, such as the Great Recession and the recession associated with the COVID-19 pandemic, that children experience may be enhanced by the negative spillover effects from events in their parents' households. Given that children are known to receive transfers during times when their marginal utility of consumption is high (McGarry, 2016), the welfare costs of the reductions in transfers that we estimate may be large. In high-wealth households, we find some significant adjustments in giving following adverse shocks, though those adjustments are smaller in both absolute and relative terms, and we do not find that health shocks alter giving behavior.

Considering upstream transfers, we find that low-wealth households receive financial assistance from their children following a wide range of adverse shocks, though these increases in upstream transfers appear to be transitory. Importantly, we find that children also respond to adverse events in their parents' households by substantially increasing their in-kind assistance to their parents—we see sudden and large increases in the likelihood that children help with activities of daily living following adverse events, particularly after widowhood and adverse health shocks. Given that the timing of adverse shocks in parental households may be unpredictable, parents' sudden increased need for help following adverse shocks also place an additional welfare burden on the children who provide them with in-kind assistance. The increase in assistance that we observe is consistent with exchange and insurance models of intergenerational transfers—these upstream in-kind transfers may be given in exchange for financial transfers that were given previously. Increases in family assistance following adverse shocks have important implications for our understanding of demand for long-term care insurance, and for potential crowdout from a publicly provided long-term-care option. To our knowledge, we are the first to document these sharp increases in helping following adverse events using an event-study framework.

The findings in this paper are especially relevant in the post-COVID era, as the pandemic has broadly generated adverse shocks to wealth, employment, and health. Our results suggest that adult children of low wealth households may experience a double-whammy effect of the pandemic, as any wealth, employment, and health shocks experienced by their parents are transmitted to them in the form of reduced financial assistance during a time in which they too may be experiencing wealth loss, job loss, and health hazards. Meanwhile, the capacity that children have to help to cushion shocks for their parents, particularly with increases in in-kind assistance, may be limited during the pandemic as interpersonal contact is drastically limited due to the risk of disease transmission (Stokes and Patterson, 2020). Thus, policymakers will need to take into account that older households may be left without the same informal safety net that they traditionally have following shocks to health and finances. Further research on changes in the nature of intergenerational exchange during the pandemic era will be important when data become available.

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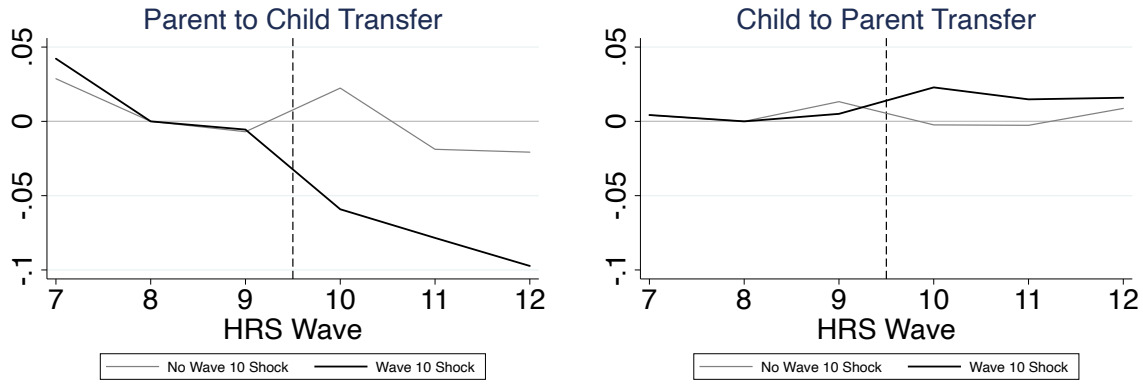
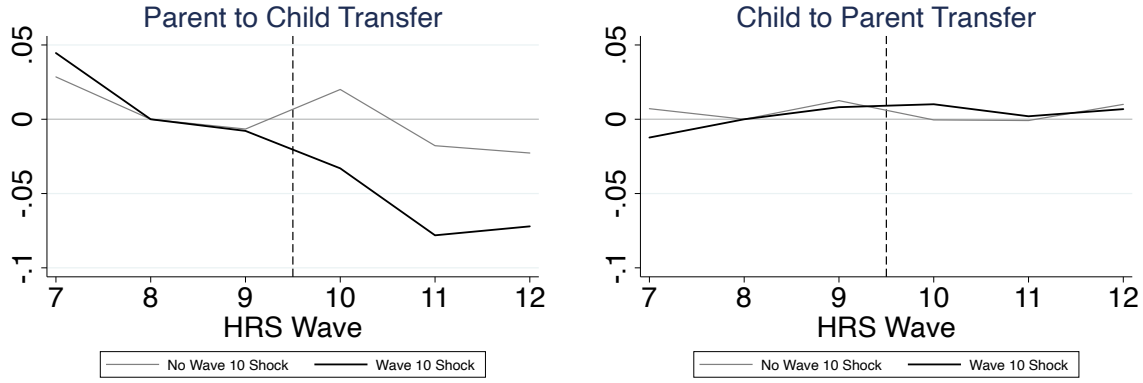
Figure 1: Financial Shocks in the 2010 HRS and Intergenerational Financial Transfers

Panel A: Wealth Loss

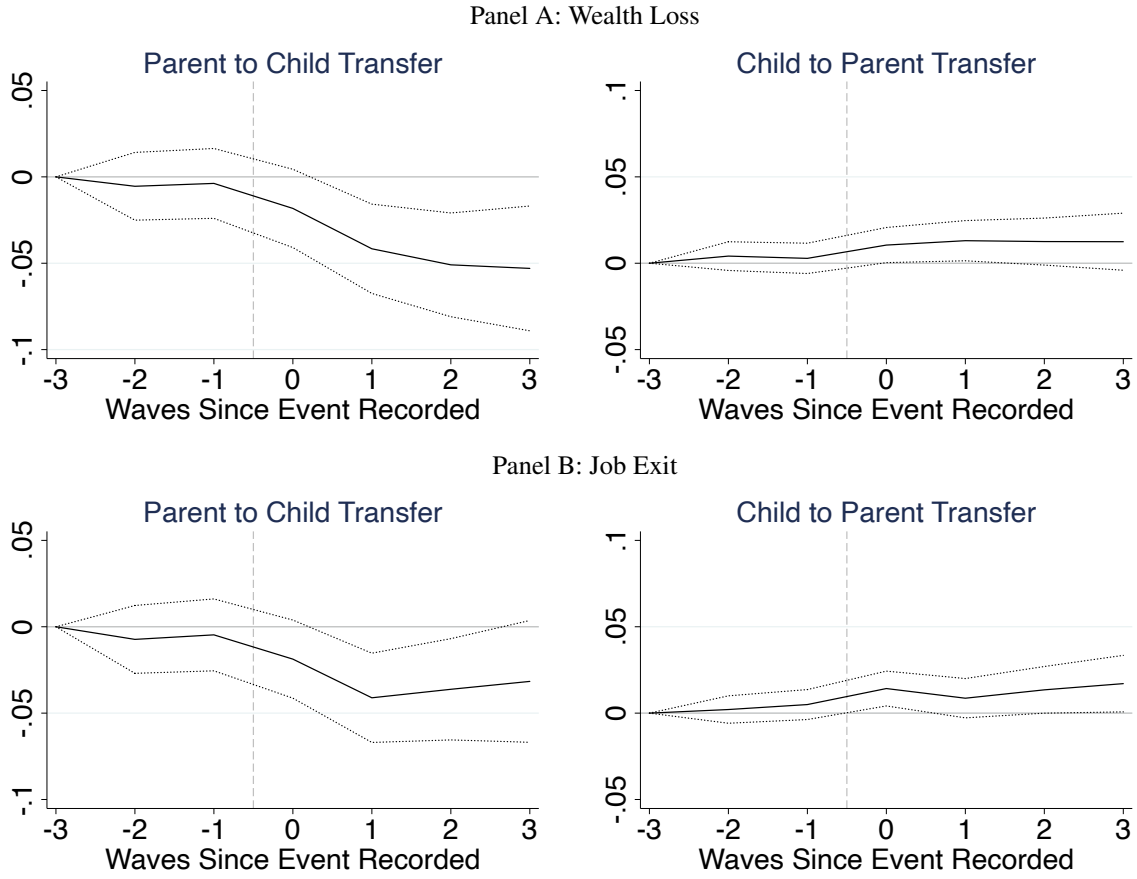


Panel B: Job Exit



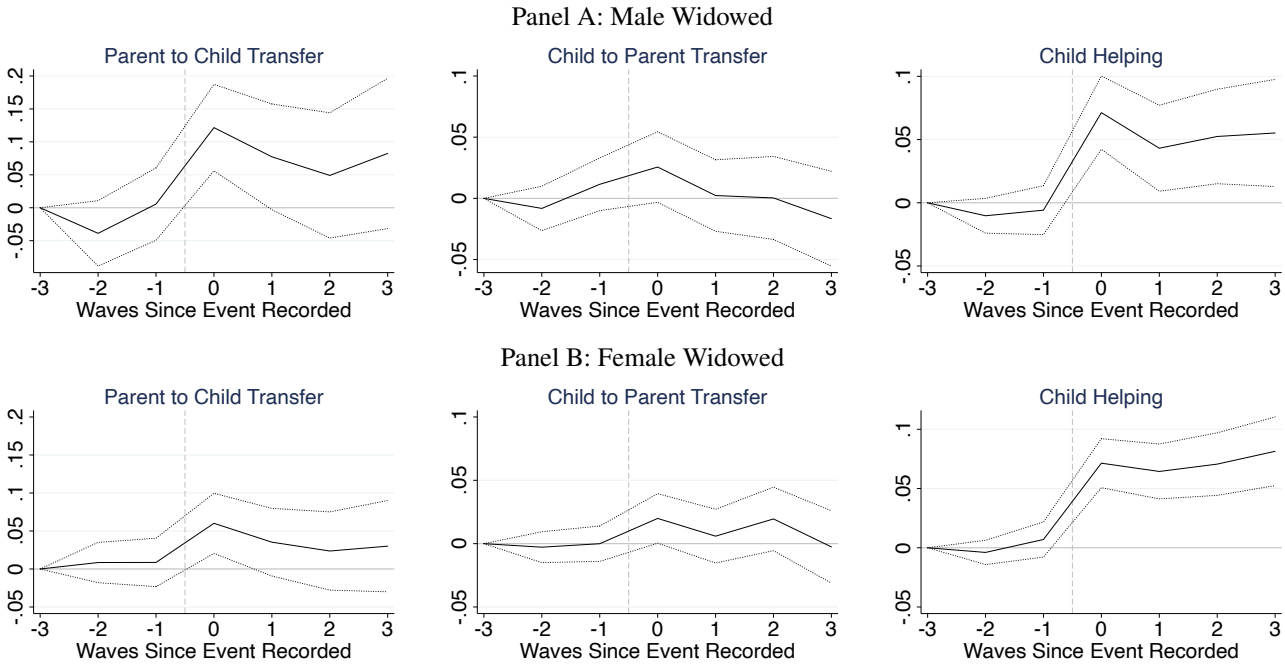
Notes: This figure compares average (unadjusted) transfer rates in each HRS wave among households that experienced wealth loss or job exit during wave 10 of the HRS to average transfer rates among households that were present for wave 10 but did not experience a shock. In order to compare trends, each line is normalized to show changes from wave 8 values. The sample is restricted to households with members aged 50-85. Observations are weighted using HRS sample weights.

Figure 2: Event-Studies: Financial Shocks and Intergenerational Financial Transfers



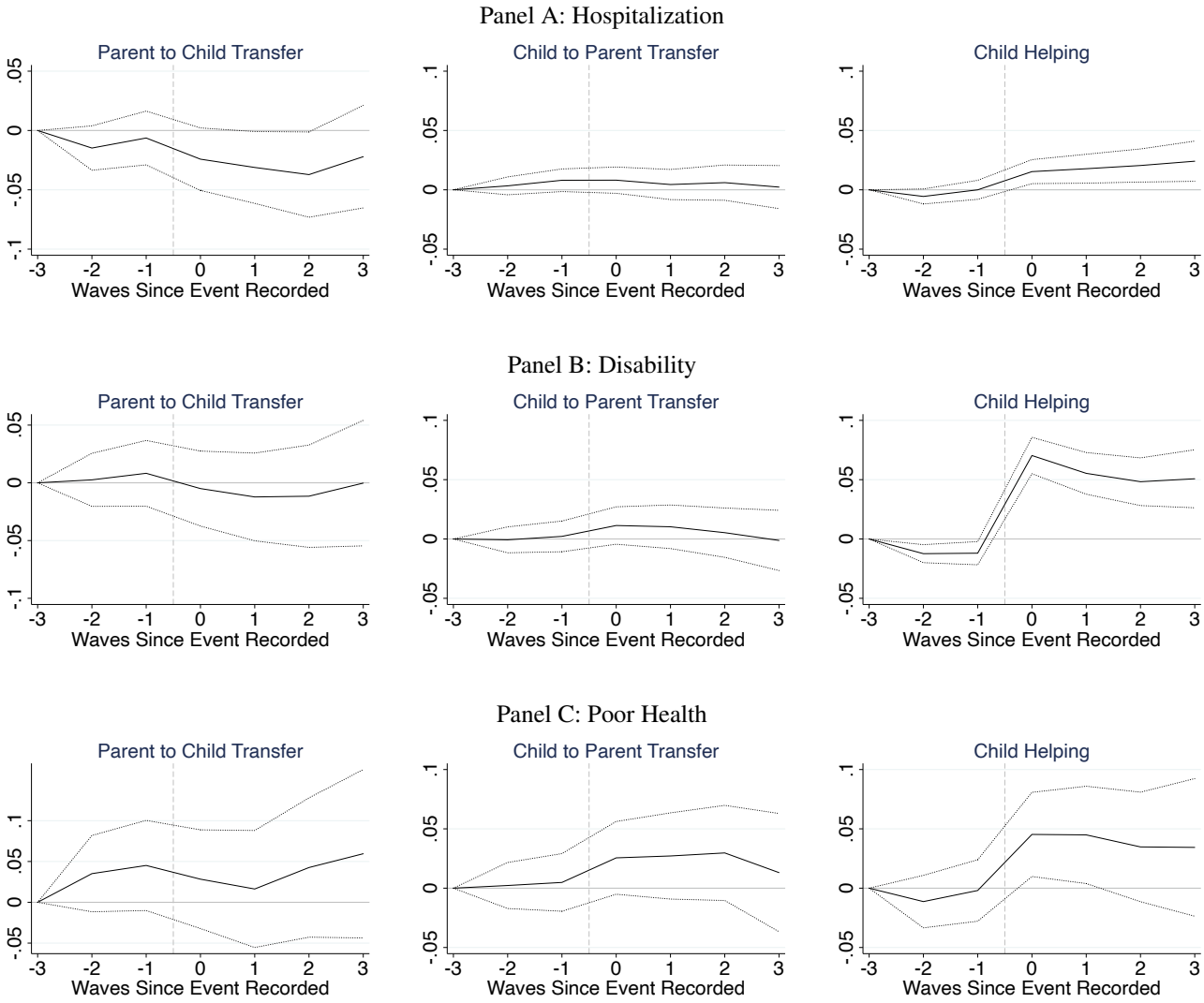
Notes: This figure shows event-study coefficients and confidence intervals from estimation of Equation 1. Each panel presents a different shock, and each figure presents a different outcome variable. The sample is restricted to households with members aged 50-85. Standard errors are clustered by household. Observations are weighted using HRS sample weights.

Figure 3: Event-Studies: Fatal Health Shocks and Intergenerational Financial Transfers



Notes: This figure shows event-study coefficients and confidence intervals from estimation of Equation 1. Each panel presents a different shock, and each figure presents a different outcome variable. The sample is restricted to households with members aged 50-85. Standard errors are clustered by household. Observations are weighted using HRS sample weights.

Figure 4: Event-Studies: Health Shocks and Intergenerational Transfers



Notes: This figure shows event-study coefficients and confidence intervals from estimation of Equation 1. Each panel presents a different shock, and each figure presents a different outcome variable. The sample is restricted to households with members aged 50-85. Standard errors are clustered by household. Observations are weighted using HRS sample weights.

Table 1: Weighted Sample Means by Transfer Status

	Full Sample	Giving $	Receiving $	Receiving Help
Oldest age	65.99	64.01	67.67	71.79
Any non-white	0.17	0.14	0.31	0.29
Highest education	13.11	14.09	12.20	10.87
Real per capita income	48031.29	67060.95	27561.61	23512.25
Real per capita assets	297960.50	418722.11	139093.32	135165.11
Probability of bequest	43.26	55.92	25.53	18.60
Any employed	0.52	0.64	0.41	0.10
Home owner	0.78	0.85	0.65	0.53
SSI receipt	0.02	0.01	0.04	0.09
Hospitalization	0.33	0.31	0.39	0.55
Any disability	0.24	0.19	0.36	0.90
Any bad health	0.35	0.28	0.47	0.76
Out-of-pocket medical expenses	5534.91	6110.61	5501.18	8513.55
Life expectancy	58.80	62.95	53.97	38.26
Single male	0.10	0.11	0.06	0.11
Single female	0.31	0.23	0.58	0.69
Number of children	3.36	3.15	3.81	4.12
Any child within 10 miles	0.47	0.46	0.48	0.57
Observations	113781	36079	6594	7082

Notes: The data are from waves 2 through 12 of the Health and Retirement Study (HRS). Columns 2–4 show average outcomes for household-wave observations that report giving or receiving transfers. Real income, wealth, and medical expenses are reported in 2017 dollars. The sample is restricted to households with members aged 50–85. Observations are weighted using HRS sample weights.

Table 2: Intergenerational Transfers in HRS Households

Panel A: Full Sample and by Age, Wealth, and Employment						
		Oldest Age		Wealth Percentile		
	Full Sample	75 to 85	50 to 60	Bottom 20	Top 20	Employed
Parent-to-child transfer	0.35	0.27	0.45	0.19	0.48	0.43
Parent-to-child amt, nonzero	13560.82	16388.27	13147.54	6118.65	24165.18	13478.14
Child-to-parent transfer	0.05	0.06	0.04	0.09	0.02	0.04
Child-to-parent amt, nonzero	5013.49	5757.52	4466.33	4046.39	9258.50	4710.66
Probability of bequest	43.26	40.16	44.63	8.67	79.32	48.79
ADL/IADL help	0.05	0.11	0.03	0.12	0.02	0.01
Observations	113781	31689	30790	22789	22756	51550
Panel B: By Household Structure and Health Status						
		Household Structure			Health Status	
	Female	Male	Couple	Poor	Excellent	Disabled
Parent-to-child transfer	0.27	0.36	0.40	0.21	0.45	0.27
Parent-to-child amt, nonzero	10873.83	15229.47	14241.02	10988.73	18885.14	10939.57
Child-to-parent transfer	0.09	0.03	0.03	0.08	0.03	0.07
Child-to-parent amt, nonzero	4726.00	4637.44	5540.76	4719.74	6425.52	5005.15
Probability of bequest	29.78	39.92	50.76	18.37	61.06	29.41
ADL/IADL help	0.11	0.06	0.02	0.24	0.01	0.19
Observations	40010	10850	62921	9794	12944	30538

Notes: Real transfer amounts are reported in 2017 dollars. The sample is restricted to households with members aged 50–85. Observations are weighted using HRS sample weights.

Table 3: Cross-Sectional and Fixed Effects Regressions

Event:	Giving $		Receiving $		Receiving help	
	CS	FE	CS	FE	CS	FE
Wealth Q2	0.052	0.039	-0.005	-0.004	-0.021	-0.019
	(0.006)	(0.007)	(0.004)	(0.004)	(0.004)	(0.004)
Wealth Q3	0.080	0.039	-0.014	-0.007	-0.016	-0.027
	(0.007)	(0.008)	(0.004)	(0.005)	(0.004)	(0.004)
Wealth Q4	0.116	0.058	-0.024	-0.007	-0.017	-0.031
	(0.008)	(0.009)	(0.004)	(0.005)	(0.004)	(0.004)
Wealth Q5	0.149	0.070	-0.031	-0.004	-0.019	-0.037
	(0.009)	(0.011)	(0.004)	(0.005)	(0.004)	(0.005)
Income Q2	0.047	0.007	0.000	0.001	-0.010	0.001
	(0.005)	(0.006)	(0.004)	(0.003)	(0.004)	(0.003)
Income Q3	0.108	0.040	-0.017	-0.010	-0.019	-0.005
	(0.006)	(0.006)	(0.003)	(0.004)	(0.004)	(0.003)
Income Q4	0.152	0.047	-0.025	-0.013	-0.010	0.003
	(0.007)	(0.007)	(0.004)	(0.004)	(0.003)	(0.003)
Income Q5	0.241	0.093	-0.030	-0.016	0.001	0.008
	(0.008)	(0.008)	(0.004)	(0.004)	(0.003)	(0.003)
Any employed	0.004	0.002	0.012	0.002	-0.017	-0.003
	(0.006)	(0.006)	(0.002)	(0.003)	(0.002)	(0.002)
Single male	0.024	0.071	-0.003	0.005	0.022	0.056
	(0.010)	(0.014)	(0.003)	(0.005)	(0.003)	(0.005)
Single female	-0.023	0.003	0.054	0.038	0.071	0.071
	(0.006)	(0.010)	(0.003)	(0.005)	(0.003)	(0.005)
Hospitalization	0.011	0.003	0.006	0.007	0.014	0.010
	(0.004)	(0.004)	(0.002)	(0.002)	(0.002)	(0.002)
Any disability	-0.000	-0.001	0.015	0.014	0.149	0.115
	(0.005)	(0.005)	(0.002)	(0.002)	(0.003)	(0.003)
Any bad health	0.006	0.002	0.004	0.002	0.017	0.010
	(0.005)	(0.005)	(0.002)	(0.002)	(0.002)	(0.002)
Mean	0.317	0.317	0.058	0.058	0.062	0.062

Notes: All regressions include a quadratic in age, an indicator for nonwhite respondent or spouse, indicators for highest educational attainment (high school graduate, college graduate), number of children, and a full set of HRS cohort-by-wave dummies.

Table 4: Event-Study: Parental Household Events and Intergenerational Transfers

Event:	Wealth loss	Job exit	Male widowed	Female widowed	Any hosp	Disability onset	Poor health
			Panel A: Any Parent-to-Child Transfer				
Event Wave	-0.012	-0.013	0.126	0.050	-0.019	-0.011	-0.009
	(0.007)	(0.007)	(0.020)	(0.014)	(0.008)	(0.009)	(0.015)
One Wave After	-0.034	-0.034	0.081	0.023	-0.021	-0.010	-0.024
	(0.009)	(0.008)	(0.026)	(0.016)	(0.009)	(0.011)	(0.019)
Mean	0.411	0.439	0.337	0.363	0.393	0.369	0.353
			Panel B: Any Child-to-Parent Transfer				
Event Wave	0.008	0.008	0.022	0.021	0.003	0.013	0.017
	(0.003)	(0.003)	(0.012)	(0.007)	(0.003)	(0.004)	(0.007)
One Wave After	0.011	0.002	-0.002	0.007	-0.002	0.016	0.016
	(0.004)	(0.004)	(0.012)	(0.008)	(0.004)	(0.006)	(0.009)
Mean	0.040	0.040	0.038	0.041	0.044	0.050	0.046
			Panel C: Any Child Helps with ADLs				
Event Wave	0.020	0.008	0.082	0.069	0.024	0.106	0.081
	(0.003)	(0.003)	(0.012)	(0.008)	(0.003)	(0.005)	(0.009)
One Wave After	0.023	0.011	0.055	0.061	0.021	0.082	0.057
	(0.003)	(0.003)	(0.012)	(0.008)	(0.004)	(0.006)	(0.011)
Mean	0.023	0.009	0.012	0.021	0.024	0.016	0.035
Observations	68217	64269	6676	22147	61535	42476	13524
Households	9253	7949	894	2722	7372	5149	1672

Notes: This table presents event-study coefficients and confidence intervals from estimation of Equation 2. Each panel presents a different shock, and each column presents a different outcome variable. The sample is restricted to households with members aged 50-85. Standard errors are clustered by household. Observations are weighted using HRS sample weights.

Table 5: Event-Study: Specific Health Diagnoses and Intergenerational Transfers

Event:	Cardiac	Stroke	Memory	Cancer
Panel A: Any Parent-to-Child Transfer				
Event Wave	-0.003	-0.017	0.011	-0.023
	(0.012)	(0.018)	(0.019)	(0.016)
One Wave After	-0.019	-0.029	-0.020	-0.051
	(0.014)	(0.021)	(0.023)	(0.019)
Mean	0.392	0.363	0.296	0.409
Panel B: Any Child-to-Parent Transfer				
Event Wave	0.001	-0.002	0.011	0.001
	(0.006)	(0.009)	(0.012)	(0.007)
One Wave After	0.003	0.016	0.004	-0.006
	(0.007)	(0.011)	(0.014)	(0.007)
Mean	0.045	0.045	0.062	0.038
Panel C: Any Child Helps with ADLs				
Event Wave	0.024	0.061	0.080	0.018
	(0.005)	(0.011)	(0.014)	(0.006)
One Wave After	0.025	0.055	0.086	0.019
	(0.007)	(0.012)	(0.017)	(0.006)
Mean	0.027	0.037	0.067	0.018
Observations	24498	9753	7428	15321
Households	2701	1087	859	1656

Notes: This table presents event-study coefficients and confidence intervals from estimation of Equation 2. Each panel presents a different shock, and each column presents a different outcome variable. The sample is restricted to households with members aged 50-85. Standard errors are clustered by household. Observations are weighted using HRS sample weights.

Table 6: Mechanisms

Event:	Wealth loss	Job exit	Male widowed	Female widowed	Any hosp	Disability onset	Poor health
Panel A: Wealth per Capita ($1000s)							
One Wave After	-181.95	13.63	164.14	168.02	-19.30	-7.53	26.58
	(11.36)	(10.42)	(25.16)	(21.13)	(10.64)	(13.21)	(25.35)
Mean	361.69	292.13	261.27	259.45	303.58	273.06	248.49
Panel B: Probability of Leaving a Bequest of at Least $100,000							
One Wave After	-4.95	0.06	7.16	1.60	-0.96	-0.55	0.68
	(0.63)	(0.58)	(2.06)	(1.13)	(0.66)	(0.80)	(1.54)
Mean	45.71	45.05	45.27	40.71	44.31	40.07	36.18
Panel C: Income per Capita ($1000s)							
One Wave After	-2.32	-13.39	10.15	11.01	-5.39	1.06	2.06
	(1.73)	(1.42)	(6.41)	(3.10)	(1.53)	(2.22)	(1.99)
Mean	53.68	61.43	41.21	37.96	51.41	45.15	38.70
Panel D: Out-of-Pocket Medical Expenses ($1000s)							
One Wave After	-0.58	0.51	-7.49	-5.24	1.58	2.12	1.20
	(0.26)	(0.31)	(0.83)	(0.63)	(0.26)	(0.43)	(0.65)
Mean	5.56	5.27	8.25	7.69	4.75	5.49	6.36
Panel E: Life Expectancy (probability)							
One Wave After	-1.44	0.13	1.48	-1.75	-1.66	-2.36	-3.73
	(0.50)	(0.43)	(1.73)	(0.97)	(0.52)	(0.66)	(1.22)
Mean	62.91	65.90	53.74	60.36	63.73	60.33	58.24

Notes: This table presents event-study coefficients and confidence intervals from estimation of Equation 2. Each panel presents a different outcome variable, and each column presents a different shock. The sample is restricted to households with members aged 50-85. Standard errors are clustered by household. Observations are weighted using HRS sample weights.

Table 7: Parental Household Events and Intergenerational Transfers, by Wealth

Event:	Wealth loss	Job exit	Male widowed	Female widowed	Any hosp	Disability onset	Poor health
Panel A: Any Parent-to-Child Transfer							
Low Wealth							
Event Wave	-0.019	-0.013	0.100	0.063	-0.022	-0.011	-0.031
	(0.011)	(0.010)	(0.027)	(0.020)	(0.011)	(0.011)	(0.020)
One Wave After	-0.061	-0.044	0.049	0.045	-0.022	-0.013	-0.052
	(0.013)	(0.012)	(0.039)	(0.023)	(0.014)	(0.015)	(0.024)
Mean	0.326	0.347	0.256	0.268	0.292	0.275	0.277
High Wealth							
Event Wave	-0.010	-0.013	0.148	0.040	-0.018	-0.012	0.017
	(0.010)	(0.010)	(0.030)	(0.019)	(0.010)	(0.013)	(0.022)
One Wave After	-0.016	-0.027	0.106	0.008	-0.020	-0.008	0.005
	(0.013)	(0.011)	(0.035)	(0.023)	(0.013)	(0.016)	(0.029)
Mean	0.473	0.510	0.405	0.428	0.467	0.450	0.438
Panel B: Any Child-to-Parent Transfer							
Low Wealth							
Event Wave	0.021	0.017	0.036	0.044	0.010	0.018	0.025
	(0.006)	(0.006)	(0.021)	(0.014)	(0.007)	(0.007)	(0.012)
One Wave After	0.022	0.003	-0.009	0.014	-0.001	0.026	0.023
	(0.007)	(0.007)	(0.019)	(0.016)	(0.008)	(0.010)	(0.016)
Mean	0.062	0.062	0.061	0.063	0.069	0.076	0.066
High Wealth							
Event Wave	-0.003	0.001	0.008	0.006	-0.002	0.008	0.007
	(0.003)	(0.003)	(0.012)	(0.008)	(0.003)	(0.005)	(0.008)
One Wave After	0.001	0.000	-0.000	0.004	-0.002	0.006	0.006
	(0.004)	(0.004)	(0.014)	(0.008)	(0.004)	(0.006)	(0.010)
Mean	0.024	0.022	0.019	0.026	0.025	0.028	0.023
Panel C: Any Child Helps with ADLs							
Low Wealth							
Event Wave	0.025	0.018	0.106	0.106	0.033	0.128	0.076
	(0.005)	(0.005)	(0.020)	(0.014)	(0.006)	(0.008)	(0.013)
One Wave After	0.031	0.020	0.076	0.093	0.032	0.102	0.064
	(0.006)	(0.006)	(0.021)	(0.015)	(0.007)	(0.009)	(0.015)
Mean	0.035	0.015	0.021	0.035	0.044	0.024	0.047
High Wealth							
Event Wave	0.013	0.001	0.064	0.045	0.018	0.084	0.086
	(0.003)	(0.003)	(0.013)	(0.008)	(0.003)	(0.007)	(0.012)
One Wave After	0.014	0.003	0.042	0.042	0.012	0.063	0.048
	(0.004)	(0.004)	(0.014)	(0.009)	(0.004)	(0.007)	(0.014)
Mean	0.014	0.004	0.004	0.012	0.010	0.009	0.021

Notes: See Table 4 notes.

Table A1: Specific Non-Fatal Health Diagnoses: Mechanisms

Event:	Cardiac	Stroke	Memory	Cancer
Panel A: Wealth per Capita ($1000s)				
One Wave After	-8.28	19.58	56.92	33.93
	(15.52)	(32.52)	(39.56)	(27.42)
Mean	295.82	265.89	232.92	319.81
Panel B: Probability of Leaving a Bequest of at Least $100,000				
One Wave After	-1.09	1.33	2.23	-0.57
	(1.09)	(1.70)	(1.83)	(1.34)
Mean	44.19	38.48	33.63	47.54
Panel C: Income per Capita ($1000s)				
One Wave After	1.32	-0.38	-0.52	-1.55
	(2.33)	(2.43)	(3.01)	(1.91)
Mean	48.87	45.03	37.45	52.17
Panel D: Out-of-Pocket Medical Expenses ($1000s)				
One Wave After	2.08	2.94	1.92	1.65
	(0.40)	(0.82)	(1.38)	(0.50)
Mean	5.13	5.90	7.09	5.54
Panel E: Life Expectancy (probability)				
One Wave After	-2.54	-2.36	-0.74	-2.02
	(0.82)	(1.42)	(1.78)	(0.98)
Mean	63.76	60.43	57.83	64.31

Notes: See Table 6 notes.

Table A2: Mechanisms - Low Wealth Households

Event:	Wealth loss	Job exit	Male widowed	Female widowed	Any hosp	Disability onset	Poor health
Panel A: Wealth per Capita ($1000s)							
One Wave After	-49.63	-0.87	25.32	23.29	-5.52	-3.52	-1.05
	(2.00)	(1.87)	(5.95)	(3.77)	(1.89)	(2.28)	(3.19)
Mean	64.00	46.79	37.05	45.75	46.72	45.12	46.71
Panel B: Probability of Leaving a Bequest of at Least $100,000							
One Wave After	-5.46	-1.31	1.38	-3.58	-1.29	0.06	-0.70
	(0.95)	(0.86)	(2.94)	(1.45)	(0.97)	(1.08)	(1.98)
Mean	21.08	20.55	17.45	14.47	17.65	15.33	15.15
Panel C: Income per Capita ($1000s)							
One Wave After	-3.71	-11.23	8.30	3.62	-2.80	-3.59	2.85
	(1.94)	(2.33)	(1.62)	(1.12)	(0.78)	(2.90)	(1.94)
Mean	33.89	38.15	23.35	23.52	30.19	28.58	24.97
Panel D: Out-of-Pocket Medical Expenses ($1000s)							
One Wave After	-0.91	0.10	-6.96	-5.38	1.49	1.72	0.91
	(0.43)	(0.38)	(1.35)	(1.06)	(0.47)	(0.55)	(0.88)
Mean	5.28	5.26	8.53	7.22	4.27	4.72	5.88
Panel E: Life Expectancy (probability)							
One Wave After	-0.53	-1.19	2.13	0.46	-1.38	-3.60	-3.89
	(0.83)	(0.72)	(2.81)	(1.73)	(0.91)	(1.01)	(1.79)
Mean	58.31	60.87	51.55	55.41	58.95	57.59	56.05

Notes: See Table 6 notes.

Table A3: Mechanisms - High Wealth Households

Event:	Wealth loss	Job exit	Male widowed	Female widowed	Any hosp	Disability onset	Poor health
Panel A: Wealth per Capita ($1000s)							
One Wave After	-275.69	23.61	266.92	256.52	-25.41	-5.04	62.07
	(19.99)	(17.83)	(42.92)	(34.31)	(18.10)	(24.50)	(52.95)
Mean	576.97	479.70	452.14	404.01	491.06	470.12	473.71
Panel B: Probability of Leaving a Bequest of at Least $100,000							
One Wave After	-3.90	1.02	11.03	4.62	-0.60	-0.83	2.23
	(0.87)	(0.79)	(2.78)	(1.60)	(0.90)	(1.15)	(2.40)
Mean	63.28	63.68	66.77	58.25	63.41	61.15	58.91
Panel C: Income per Capita ($1000s)							
One Wave After	-2.68	-15.09	11.68	15.66	-7.45	4.42	1.13
	(2.57)	(1.84)	(11.59)	(5.06)	(2.59)	(3.26)	(3.61)
Mean	67.99	79.23	56.41	47.73	66.89	59.48	54.03
Panel D: Out-of-Pocket Medical Expenses ($1000s)							
One Wave After	-0.21	0.82	-7.99	-5.19	1.67	2.57	1.66
	(0.32)	(0.45)	(1.03)	(0.78)	(0.31)	(0.63)	(0.95)
Mean	5.76	5.27	8.02	8.01	5.09	6.15	6.90
Panel E: Life Expectancy (probability)							
One Wave After	-2.00	1.03	1.33	-2.92	-1.82	-1.28	-3.96
	(0.63)	(0.54)	(2.19)	(1.15)	(0.61)	(0.86)	(1.66)
Mean	66.12	69.62	55.44	63.57	67.03	62.57	60.54

Notes: See Table 6 notes.