HOUSING WEALTH AND ECONOMIC SECURITY IN RETIREMENT:

DOES BORROWING FROM HOME EQUITY INCREASE ADHERENCE TO PRESCRIPTION DRUGS?

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The primary source of wealth for many older adults, particularly for those with lower incomes who rely on Social Security for their income, is equity in their home. This study investigates the use of housing wealth as a resource to increase economic security for older adults. We find that borrowing from a mortgage is associated with a significant, short-term reduction in cost-related medication non-adherence — an effect that is particularly large for those with a recent health shock.

Borrowing from Home Equity and Prescription Medication Non-Adherence

It has been well documented that older adults often treat housing wealth as precautionary savings for health shocks (Davidoff 2010; Poterba & Venti 2017; Poterba et al. 2011; Venti & Wise 2004). Yet, little is known about the extent to which housing wealth enables a household to buffer the negative financial consequences of a health shock in older age. Housing wealth can only be used to meet financial needs if steps are taken to convert it to a liquid form. This study focuses on the relationship between two actions: borrowing from home equity and taking less medication than prescribed because of cost, an indicator of severe economic insecurity. It is unlikely that homeowners borrow from home equity solely to pay for medication. However, borrowed home equity may be used to pay for larger health expenses, supplement income, or pay off higher-cost debts. This borrowing, in turn, increases cash flow and the ability to pay for expenses including medication.

To explore this relationship, we use data from the 1998-2016 waves of the U.S. Health and Retirement Study (HRS), a comprehensive panel survey of adults age 50 and older which includes information on respondents' wealth and income, housing tenure, health status, and detailed socio-demographic characteristics. The HRS includes a question about delaying taking medication or filling prescriptions because of the cost. Our approach is unique because we model the decision to borrow from housing wealth as the mechanism through which such wealth influences one's ability to pay for medications. We use geographic variation in house prices, and whether or not a person is constrained by their loan to value ratio, as indicators to help predict borrowing.

First, we estimate the relationship between housing wealth and cost-related medication non-adherence for all homeowners in the HRS. Next, we model the effects of mortgage borrowing on cost-related medication non-adherence for those who experience a health shock. Following Poterba and Venti (2017), we define a "health shock" as the first wave of a reported diagnosis of cancer, lung disease, diabetes, heart disease, stroke, or high blood pressure occurring during the period from 2006-2016. We follow respondents from the wave prior to a *health shock for up to six waves after the health shock. Finally, using the estimates from our empirical specifications, we simulate the effects of higher mortgage debt held by younger cohorts of retirees on their future ability to buffer health shocks through mortgage borrowing.*

Older Adults Experience Difficulty Paying for Medications after a Health Shock

Close to seven percent of homeowners age 50 and older in our sample report taking less medication because of cost. This probability increases following a health shock. Figure 1 charts the change in the predicted probability of cost-related medication non-adherence before and after a health shock (adjusted for age, health insurance coverage, and survey wave since the shock occurred). We find a statistically significant 2.1 percentage point increase in the probability of older homeowners' delaying taking medication or filling prescriptions in the year of a health shock. This elevated level of cost-related medication non-adherence remains positive and significant in the waves following a shock.

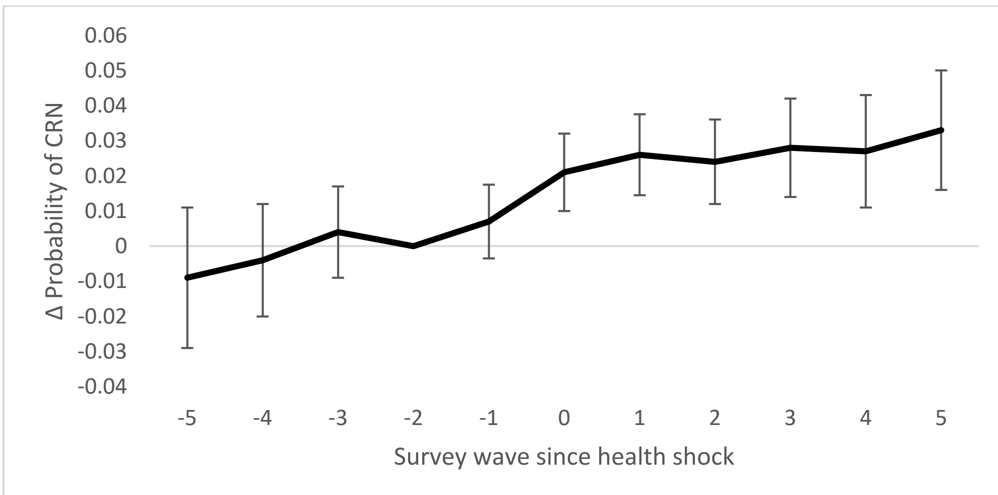

Figure 1
Notes: Cost-related medication non-adherence before and after health shock, Health and Retirement Study

Mortgage Borrowing Reduces Cost-Related Medication Non-Adherence

Mortgage borrowing has a large and statistically significant effect on cost-related medication non-adherence. Among those experiencing a health shock, each additional $10,000 borrowed using a mortgage is associated with a statistically significant 1.5 percentage point reduction in cost-related medication non-adherence. To put the size of the borrowing effect in context, a $10,000 increase in non-housing financial assets is associated with only a 0.04 percentage point decrease in cost-related medication non-adherence following a health shock — indicating that housing wealth can play an important role in reducing economic insecurity. That is, mortgage borrowing led to improved medication adherence.

Over the longer term, borrowing from home equity increases housing costs in the form of a higher monthly mortgage payment. In a subsample regression of older adults for whom Social Security comprises 90 percent or more of their income, an additional $1,000 in annual housing costs increases cost-related medication non-adherence by 0.462 percentage points.

Implications

- *Mortgage borrowing can increase cash flow in the short term by paying down debts or supplementing income, thereby increasing economic security for older adults. This is reflected in a significant, short-*

term reduction in cost-related medication non-adherence.

- *Over the longer term, borrowing from a mortgage increases housing costs in the form of a higher monthly mortgage payment. Higher monthly payments are associated with a small increase in the likelihood of reporting cost-related medication non-adherence. This finding suggests a role for policy options that provide older adults with access to home equity without substantially increasing monthly housing costs, such as affordable home equity loans or lines of credit or reverse mortgages.*

References

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