

## The Center for Financial Security Health and Finances Research Workshop: A Robert Wood Johnson Foundation Health and Society Scholars Event

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### Introduction

Disentangling the relationship between health and financial security is a difficult endeavor. Some key obstacles that arise when studying health and finances are the relationship is not uni-directional: health affects finances and finances affect health, the relationship varies across populations— consider the income-health gradient, establishing causality requires rigorous research design, and current measurement tools lack validity and reliability. Despite these issues, there is a rich literature that has emerged at this important intersection. Key topic areas included in this review are 1) medical shocks are a key source of financial insecurity and bankruptcy, 2) health impacts labor market outcomes, 3) health insurance reduces financial stress, 4) health insurance improves health outcomes, 5) financial stress is damaging to health, and 6) there are reasons to be wary of moves that put more “cost-sharing” on patients.

The goal of this review is to provide researchers interested in pursuing research at the intersection of health and household finance with an introduction to the literature. Key topics that have emerged in the investigation of the relationship between health and household financial security are discussed. The review was created to accompany proceedings from The Center for Financial Security Health and Finances Research Workshop: A Robert Wood Johnson Foundation Health and Society Scholars Event. Building on the existing literature that establishes important associations and causal links between health and financial security is essential to inform future policy and move research forward.

### **Health on finance**

**Medical shocks are a key source of personal bankruptcy and financial insecurity.** Many studies show that health shocks are a key source of consumer bankruptcy. Himmelstein, Thorne, Warren & Woolander (2009) find that the odds of bankruptcy with a medical cause have increased over time. The increase in bankruptcy is not isolated to low SES and/or uninsured

### **Key Themes:**

- **Medical shocks are a key source of financial insecurity and bankruptcy**
- **Health impacts labor market outcomes**
- **Health insurance reduces financial stress**
- **Health insurance improves health outcomes**
- **Financial stress is damaging to health**
- **Moves toward more insurance cost-sharing may harm the consumer**

individuals. In a follow-up study using data from before and after the Massachusetts health reform, the authors find that the insurance expansion did not lead to a decrease in medical bankruptcy filings. Dranove and Millenson (2006) argue that medical cause is only part of 17% of bankruptcy. Another study found that medical shocks account for 26% of bankruptcy (Gross and Notowidigdo, 2011). In developing countries, there is evidence that public disability insurance and medical subsidies insure household consumption against economic shocks due to illness (Gertler and Gruber, 2002). Insuring households against medical shocks is important for household financial security as demonstrated by Mohanan (2013) who showed that when faced with a negative health shock, households smooth consumption for food and housing by decreasing educational expenses and increasing debt.

**Health impacts labor market outcomes.** A large body of existing research shows that income is positively related with health. A few studies have analyzed the impact of health on income and other labor market outcomes. Weight loss improves labor market outcomes

for women not men (Reichert, 2015). A study using Dutch hospital and tax records establishes a causal relationship between health and employment and income. Illness leads to lower likelihood of employment and lower income in the short and long term and negative spillovers to the household (García-Gómez, et. al., 2013). Disability leads to lower earnings, income, and consumption (Meyer, Mok, 2009). Men treated for iron-deficiency were more likely to be working and earn more than those who were not treated (Thomas et. al., 2006). Improvements in health positively influence labor market outcomes like labor force participation and earnings. Poor health has a negative association with labor market outcomes that can extend into the long-term and from the individual to the household.

### **Finance on health**

**Health insurance reduces financial stress.** Finkelstein et al (2011) find that after the Oregon public health insurance expansion medical costs and debt decreased among low-income adults. Mazumder and Miller (2014) use the 2006 Massachusetts health care reform to show that health care reform has positive effects that extend beyond health to finances. They find that after the reform there is a reduction in total debt overdue, improvement in credit score, reduction in personal bankruptcy, and a decrease in third-party collections, particularly for those with less credit access. Expansion of health insurance reduces financial distress particularly through reduced indebtedness and bankruptcy.

**Financial stress is damaging to health, especially depression and anxiety.** Berger, Collins and Cuesta (2013) find that there is a significant, positive association between short term debt and depression. A randomized trial in Malawi lead to evidence that positive income shocks improve adolescent girls' mental health (Baird, DeHoop, and Ozler, 2013). The work in this area demonstrates evidence that financial security can improve mental health and financial insecurity can have adverse impacts in the short-run. Stress from poverty is associated with a higher risk of child maltreatment (Cancian, Yang, Slack, 2013). Women's bargaining position in the household is related to health. Decreases in male-female wage gap reduce violence against women. Reduction in violence against pregnant women improves health of their child (Aizer, 2007). Another study shows that there are lasting effects on health of childhood exposure to poverty and economic insecurity even after controlling for adult income status of (Braveman, Barclay, 2009; Turrell et. al., 2007). Overall debt and debt ratio measures positively associated with forgoing medical or dental care services. This association is driven by credit card and medical debt

(Kalousova, Burgard, 2013). Starkey, et. al. (2013) find that, among African American women, perceived financial distress is associated with depressive symptoms. Adverse health outcomes resulting from financial stress extend beyond the individual to other household members.

**Health insurance improves health outcomes.** Finkelstein et al (2011) finds that expanding insurance leads to better health for low-income adults. Among severely ill patients below and above the Medicare eligibility age threshold, there is evidence that those eligible have a 20 percent reduction in death rate relative to those just below the cut off (Card, Dobkin and Maestas, 2009). Another study exploits auto accidents as an exogenous health shock requiring hospitalization, and finds that those who are uninsured have worse health outcomes than the insured. Those who are uninsured receive 20% less care and have higher mortality than those who are insured (Doyle, 2005). Another issue for expanding insurance coverage is solving enrollment problems. Aizer (2007) finds that eliminating barriers to Medicaid enrollment can improve child health. Others have found that early exposure to health insurance leads to long-term improvement in social standing evidenced by higher probability of upward mobility for children of low-income parents exposed to Medicaid expansion (O'Brien, 2015).

**There are reasons to be wary of moves that put more "cost sharing" on patients.** A study employees in a large firm before and after a switch from free health care to a high-deductible plan found that high deductible plans lead people to cut useful care (Brot-Goldberg et al, 2015). Another study of employer-provided health insurance found that employees cannot effectively pick plans — a majority choose a health insurance plan that leads to excess spending (Bhargava, Loewenstein and Sydnor, 2015).

### **Conclusion**

#### **Methodological issues**

Establishing definitions of health and financial security is essential to furthering research in this area. Financial security extends beyond traditional economic outcomes to stress of managing money that can impact mental and/or physical health. Many studies in the past have relied on income as the key measure of economic well-being. These studies ignore the nuanced definition of economic well-being that may be better reflected by other financial outcomes like, household debt, savings, credit score, bankruptcy, or creating a reliable and valid financial well-being scale. Using one measurement tool may reveal

relationships that another does not. For example, not all debt has the same effects on health and well-being. Mortgage debt has no correlation with depression, but consumer debt does, reflecting that mortgage debt may be more strategic and financially secure to hold. Health outcomes versus inputs to health need to be better differentiated in the literature. Should health outcomes include social and mental development or child maltreatment? Many existing health measures, like overall health rating, are subjective, which may bias findings.

Research at this intersection requires exploration of long-term measures of health and financial security. Most measures that are used in this study are observed in the short-term making it impossible to show persistence of effects or long-run outcomes, which are important since health and finances are temporally dependent.

Despite considerable research efforts at this intersection, there remain many unanswered questions and findings to be replicated. The relationship between health and financial security is difficult to parse out because of inherent endogeneity. Many studies are able to point to important associations, but they are unable to establish causal relationships. Many researchers have exploited the expansion of insurance coverage before and after state and federal health care reform to identify the causal effect of health insurance on health and financial outcomes. research on public insurance expansion exploiting the changes in eligibility as an exogenous variable that allows for identification of causal effect of medical insurance coverage expansion on health outcomes and financial security of newly eligible households versus no health care coverage pre-expansion. Future research should exploit exogenous variation from policy changes, natural random processes, like automobile accidents or natural disasters, to build on existing, and randomized control trials to expand the limited work establishing causality. Employing experimental and quasi-experimental research design in future research will allow causal relationships between health and finances to be identified and estimated.

Another issue to address is the data that is used to study health and finances. Longitudinal surveys like the Wisconsin Longitudinal Survey and Health and Retirement Survey include information on health and financial well-being. The outcomes of interest at this intersection are often long-term like impact of a health shock on future income, savings, and debt levels. Panel methods can be used with these data to address some of the omitted variable bias problem that results in work using only cross-sectional data. Administrative data like

### Opportunities for Future Research

- Examine potential heterogeneous impacts on health and financial outcomes for disadvantaged individuals
- Study impact of barriers to eligibility and enrollment for health insurance and public programs on health and financial security
- Explore how decisions are made to care for self and family members in poor health
- Research on the impact of matching consumption volatility and income flows for at-risk families
- Understanding how households adjust consumption, savings, and debt behavior to finance medical expenses
- Examine the role that insurance plays for medical shocks and chronic illness or disability
- Analyze how changing information disclosure may improve attention and comparison of the costs and benefits for health insurance and medical care
- Investigate inter- and intra-household spillovers to health and economic well-being

credit reports should also be considered by researchers to address the issues of subjective measures and measurement error. The data available in credit reports, for example, identifies health-related versus other types of debt.

### Identifying gaps for future research

At this intersection there are heterogeneous effects of health and financial security across populations, particularly low-income families and children. Economic instability has a negative effect on health and well-being, and there is a lot of evidence that low-income groups deal with substantial amounts of stress. They also undergo shocks to economic well-being as they navigate complex and hostile benefit systems. Institutional barriers to benefit eligibility and enrollment are important issues to explore. Some areas that require more attention from researchers are the decision to care for self, claim Social Security or disability benefits, utilize Medicare and care

for self, and care for spouse, parent, or child in poor health.

It will be important to analyze how valuable investments in helping people match their consumption volatility and their income flows is once we consider spillovers to health and wellbeing. It is possible to buy substantial amounts of prevention in health and economic wellbeing by focusing financial support from public programs on at-risk families.

Insuring households emerges in this review as an important pathway to financial stability. Insurance reduces financial distress by improving credit outcomes, reducing debt and bankruptcy with medical causes. Research on consumption and debt after a negative health shock points to reductions in educational expenses and increases in debt to smooth food and housing consumption to accommodate increased medical expenses. Understanding how households adjust consumption, savings, and debt behavior to finance medical expenses, and the role of insurance for medical shocks is an important area for future research.

Other areas to explore are the rules of thumb that are used to make decisions like choosing an insurance plan. Health and economic well-being are closely related because they both require active management. Making the costs and benefits easier to understand and improving attention could promote better decision-making. Financial and economic regulation should also be considered as these policies often serve as “well-being policies”. For example, policies that require uniform disclosure of loan terms can reduce problems of limited attention and difficulty comparing costs and benefits in financial decision-making.

There remains research to be done that explores inter- and intra-household spillovers. Relationships and household structure are correlated with income, assets, and health. Future research could explore how household members respond to a health shock. For example, does an individual join the workforce to supplement lost income or leave to care for an ill or injured individual affected by a medical shock? Research in this review shows that financial stress and health shocks have spillover effects to other household members. Health shocks result in increases in debt, reduction in some expenditures to smooth consumption for other goods, which impact the entire household. Caregiving for others, due to illness, injury, or disability, affects a wider network of people than we may recognize and has broad-based effects on the lives and productivity of those caregivers.

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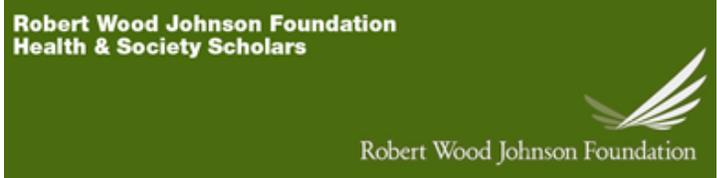
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### Acknowledgements:

This literature review and workshop would not have been possible without the generous support and dedication of the Robert Wood Johnson Foundation Health & Society Scholars program at the University of Wisconsin-Madison. We are appreciative of the participation of all of the presenters and attendees. The success of this event was due to the thoughtful and informative discussion generated by this engaged group of individuals.

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