Examining the Impacts of Health Insurance and Health Spending
by Combining Data, Theory, and Econometrics

Research Statement under 1000 Words
Amanda Kowalski
August 2016

Maintaining a consistent focus across a large portfolio of related projects, I bring together cutting edge data, theory, and econometrics to examine the impacts of health insurance and health spending. Rather than simply describing policy impacts, my research incorporates welfare analysis to inform optimal policy. As US health spending approaches one fifth of GDP and US health insurance coverage expands to unprecedented levels under the Affordable Care Act (ACA), my findings are increasingly relevant. Furthermore, my methodological advances have wide application beyond health economics.

Impacts of Health Insurance

A large body of my research examines the health insurance expansion induced by the Massachusetts health reform of 2006, considered to be a model for the ACA, and finds that it increased welfare on several margins. The reform improved the functioning of the individual health insurance market (Hackmann, Kolstad, and Kowalski, 2015, *American Economic Review*) by attracting individuals with lower health spending to gain insurance (Hackmann, Kolstad, and Kowalski, 2012, *AER Papers and Proceedings*). It also decreased hospital admissions from the emergency room and hospital length of stay (Kolstad and Kowalski, 2012, *Journal of Public Economics*), while resulting in minimal distortion to the labor market because workers valued expanded coverage (Kolstad and Kowalski, *Journal of Health Economics*). The methods that my coauthors and I develop to examine the Massachusetts reform improve the ability of future research to quantify welfare in insurance and labor markets.

Applying these methods to examine the early impact of the ACA, I find that state-level decisions such as whether to set up an exchange or whether to leave all enforcement to the federal government have economically significant impacts on welfare because they affect selection of high-cost individuals into the market (Kowalski, 2014, *Brookings Papers on Economic Activity*). This finding is consistent with my early work showing a relationship between state regulation and health insurance prices (Kowalski, Congdon, and Showalter, 2008, *Forum for Health Economics and Policy*). The large short-term policy impacts that I find nationally and in Massachusetts underscore the need for research that expands techniques and data available to examine the long-term impact of health insurance expansions.

Using administrative tax data, coauthors from the Treasury and I find that adults who were eligible for Medicaid in childhood have higher net tax payments as adults, suggesting that the government reaps a long-term return on its investment in health insurance for poor children (Brown, Kowalski, and Lurie, *revise & resubmit*, *American Economic Review*). In current work, we examine even longer-term impacts of the inception of Medicaid in 1965 (Brown, Kowalski, Lurie, and McKibbin, in progress) by assembling a novel historical dataset. Employing the same dataset in another project that directly examines the impact of health insurance on health spending, I find considerable heterogeneity across states and time (Golosov, Kowalski, McKibbin, in progress).

Another strand of my research revisits the impact of health insurance on the classic tradeoff between health spending and risk protection, and it shows that both impacts are larger than previous research would suggest. Using a censored quantile instrumental variable estimator that coauthors and I develop (Chernozhukov, Kowalski, and Fernandez-Val, 2015, *Journal of Econometrics; Stata command*), I find that health insurance induces even greater health spending than results from the classic Rand Health Insurance Experiment would suggest (Kowalski 2016, *Journal of Business and Economic Statistics*). Using a large longitudinal dataset, I find that the long-term welfare gains from risk protection are greater than previous short-term estimates would suggest (Kowalski, 2015, *NBER Working Paper*). I also develop a structural model to examine both sides of the tradeoff simultaneously (Kowalski 2015, *International Journal of Industrial Organization*).

Impacts of Health Spending

Another body of my research develops methods to measure the returns to health spending and identifies types of spending that deliver a high return. In my early work, coauthors and I develop a new methodology to measure the returns to health spending using variation in diagnostic thresholds. We compare very low birth weight newborns weighing just less than 1500 grams to similar newborns weighing just greater than 1500 grams. We find that the return to spending on very low birth weight newborns is high (Almond, Doyle, Kowalski, Williams, 2010 and 2011 comment, *Quarterly Journal of Economics*). Other teams have applied our methodology to data from Chile, Japan, and Norway, publishing their results in top general interest journals. We are currently developing another methodology to measure the returns to health spending using variation across physicians. Our preliminary results show that the return to spending on cardiac catheterization is high (Doyle, Kowalski, Williams, in progress). Other coauthors and I are examining the relationship between health spending and politics, finding that windfall hospital payments spur multiplier effects throughout the local economy (Cooper, Kowalski, Powell, and Wu, in progress).

Heterogeneity in the Impacts of Health Insurance and Health Spending

In my recent research, I advance the frontier for credible evidence by bringing structural methods to experiments (summary in Kowalski, 2016, prepared for *JEP*), and I find substantial heterogeneity in the impact of health insurance on emergency room (ER) utilization (Kowalski, 2016, *NBER Working Paper*). Examining data from a recent randomized experiment that expanded health insurance in Oregon, I find that individuals who use the ER most when uninsured select into coverage first and increase their utilization the most upon gaining coverage. My findings potentially reconcile results from Oregon with results from the natural experiment induced by the Massachusetts reform.

In an era of increased willingness to run experiments and an increased desire to personalize medicine, my methods have the potential for widespread application. I am currently applying them to examine treatment effect heterogeneity in clinical trials (Kowalski, in progress) and the external validity of seven microfinance experiments (Brune, Karlan, Kowalski, in progress). I am also working with health care providers to design experiments to maximize their ability to inform treatment effect heterogeneity and external validity. My long-term goal is to use existing and future evidence to inform how to target health spending and health insurance to generate the largest return.