RESEARCH AGENDA

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Most health care markets severely violate the conditions under which markets generally result in efficient outcomes, and some government intervention in these markets is justified. However, since the sources of market failure in health care are so diverse and complicated, it is often difficult for policymakers to foresee the full range of consequences of interventions. My current and future research projects address unintended policy consequences, using sophisticated econometric techniques and applying insights from microeconomic theory, industrial organization, and public finance. Through my research, I seek to better understand when and how the government should intervene in health care markets.

My dissertation addresses one popular intervention: quality-based payment to health care providers. Because health care quality is typically poorly observed by consumers, there is a case to be made for supply-side incentives to increase quality. However, I argue that current thinking about how to implement pay-for-performance misses a key point: pay-for-performance contracts should aim not to simply improve quality, but to improve those aspects of quality that are under-rewarded by existing payment mechanisms. In this context, multitasking associated with pay-for-performance is not necessarily a problem. Pay-for-performance allows us to reverse multitasking problems that already exist in traditional payment contracts.

The two empirical papers in my dissertation use a large dataset extracted from electronic medical records to investigate both intended and unintended consequences of the most ambitious pay-for-performance program ever implemented. The U.K. National Health Service's Quality and Outcomes Framework (QOF), which came into effect in 2004, rewards primary care practices on a wide range of processes and health outcomes. The first paper estimates the effect of the QOF on both rewarded and unrewarded aspects of health care quality. The second paper estimates the effects of incentives that encourage practices to game the system in various ways: by responding to discrete thresholds for payment and to end-of-fiscal-year incentives, by dumping unprofitable patients, or by altering their patterns of diagnosis to increase payment.

Two projects I plan to tackle in the near future illustrate my interest in the study of neglected ramifications of health policies:

1) In 2004, California implemented a minimum nurse staffing law for hospitals, and existing work has assumed the only effect of this law to be increased nurse staffing in previously non-compliant hospitals. In fact, one economics working paper uses the staffing law as a natural experiment to estimate the effect of nurse staffing on patient outcomes.[1] However, we should expect non-compliant hospitals to respond in ways beyond hiring more nurses: they may reduce the number of other allied health personnel, decrease patient lengths of stay, and provide more services on an outpatient basis. Furthermore, there should be general equilibrium effects: nursing wages should increase, causing previously compliant hospitals to reduce nurse staffing; and some demand should shift from previously non-compliant to compliant hospitals. Overall effects on health care outcomes are ambiguous.

   In this paper, I will specify a general equilibrium model of markets for hospital care and relevant labor markets (markets for nurses, as well as for less-skilled health care labor). I will then use data from California's Office of Statewide Health Planning and Development, along with Bureau of Labor Statistics data, to estimate parameters of the model, and provide policy recommendations.

2) As part of the Patient Protection and Affordable Care Act, the Food and Drug Administration will soon issue guidelines requiring restaurant chains to post calorie counts on their menus. A paper by Bollinger, Leslie, and Sorensen analyzes consumer responses to calorie count posting at Starbucks, finding a modest reduction in the number of calories consumed.[2] However, it is quite possible that firms will respond to calorie posting regulations by altering pricing or availability of menu items.

   In this paper, I will use the data from the Bollinger, Leslie, and Sorensen paper (or other receipt-level data) to estimate a discrete-choice model of consumer behavior. I will then use the estimated parameters to solve for the firm's optimal response to calorie posting regulations, and consumer purchasing behavior following the firm's response. The firm responses very well could either reinforce the direct effect of changes in consumer behavior, or attenuate the direct effect.

The overarching goal of my research is to help policymakers design more sophisticated regulation, resulting in a more efficient health care system.

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[1] Andrew Cook, Martin Gaynor, Melvin Stephens, Jr., and Lowell Taylor. "The effect of hospital nurse staffing on patient health outcomes: Evidence from California's minimum staffing regulation." NBER working paper 16077. June 2010.

[2] Brian Bollinger, Philip Leslie, and Alan Sorensen. "Calorie posting in chain restaurants." NBER working paper 15648. August 2010.