

Thomas Yu
Research Statement

I am an economist working at the intersection of health economics and industrial organization. My research agenda is to study the design of public payments for health care. Governments spend enormous sums in health care markets, on everything from hospital care to physician training to prescription drugs. These payments rarely reach patients directly; they pass through intermediaries with various incentives, altering the effects of policies in equilibrium. I apply economic theory and methods to understand this problem with the goal of making health care markets more effective, equitable, and efficient.

Current work. My job market paper studies hospital obstetric units, which are closing across the country and especially in rural areas, and the public payments meant to keep them open. Using data on births and medical claims, I estimate a model of the obstetric care market in Arkansas. I find that the average obstetric unit generates a positive externality worth \$104 per birth, mostly through access to care. A Medicaid price hike preserves that access, but it pays more to large hospitals that would have operated OB units anyway. A flat subsidy to all OB hospitals achieves the same goal more cost-effectively.

My second paper studies Medicare's graduate medical education (GME) payments, which incentivize hospitals to train residents. About half of teaching hospitals exceed their caps on subsidized residents. I find that over-cap hospitals do not respond to payments, so redirecting payments from over-cap to under-cap hospitals would lead to 3,700 more residents without any change in government spending. My third paper, with classmate Genna Liu, studies the terms under which public programs like Medicare pay for prescription drugs. We find that caps on what patients pay out of pocket reach drug users directly, and may reduce total spending, while ceilings on the prices insurers pay do not always reach consumers.

A common theme in these papers is that public payments change behavior in equilibrium, and understanding when behavior changes, and when it does not, leads to better policy design. My works in progress extend this agenda in three broad research areas:

Access to care. Health care can only provide value if it is accessible: a hospital that delivers babies, an emergency room that is open, or a specialist who can be reached. Public payments allow care to exist in places where it otherwise would not, but they are not always well-targeted. I want to understand how policies should be designed to promote access, including which services are worth sustaining, in which places, and through which policy instruments. My job market paper is one example of this research area. An ongoing project extends it to study rural hospitals' full sets of service lines; a hospital decides which services to keep as a bundle, and the payments for one affect whether it keeps the rest. Another project studies the adoption of technology such as artificial intelligence, which can expand the reach of high-quality care. I examine whether incentives for adoption simply reward providers that already see many patients, or whether they spread the technology to where it is needed.

The health care workforce. Who delivers care is itself a product of public payments. Governments subsidize training, pay different rates for different types of providers, and decide

what each type may do. Provider shortages are concentrated in primary care and in rural areas, but existing payments are often blind to specialty, place, and provider type. I consider what kinds of policies produce the providers a health care system is short of. One project builds on my paper on GME payments by studying how these payments affect which specialties hospitals choose to train and where their residents end up practicing. Another project studies nurse practitioners, who are paid less than physicians and restricted in many states, together with telehealth, which lets providers treat patients from far away. I evaluate whether raising payments or easing restrictions for these lesser-used providers can improve access to care, and whether there are long-run effects on competition, insurance networks, or bargained prices.

The incidence of health policy. Many public payments and policies do not directly affect providers, but rather upstream firms such as insurers and drug manufacturers. Their equilibrium effects can be hard to predict, and the share of benefits that reaches patients is decided by market structure and complex relationships between firms. I want to map how each tool a government has, from price regulation to subsidies, divides its benefits between firms and patients, so that policies can be aimed at the people they are meant for. My paper on drug price regulations shows that regulating what insurers pay does not always help consumers. A related ongoing project studies the public negotiation of drug prices, and how negotiation terms can be structured to prioritize consumers' benefit through lower premiums or out-of-pocket costs. Another project studies insurance premium subsidies, which are meant to help enrollees but may have indirect effects on the prices insurers pay providers through bargaining.

Around the world, health care systems are funded with public payments to hospitals, physicians, insurers, and drug manufacturers with interests of their own. Often, there is a gap between what governments pay for and what patients receive. The goal of my research is to close that gap, ensuring that public money buys the care people need.