Research Statement

I study economically interesting questions in the intersection of industrial organization and health economics. I find the healthcare sector dynamic and complex and research in this field is often immediately applicable. Every type of market failure is present in the healthcare system. The incentives are complex and the interplay between the many different players often leads to ambiguous situations and unanswered questions. The tools of industrial organization help to disentangle that complexity. The healthcare sector has a uniquely high level of government involvement. Spending by the federal and state governments account for over 30 percent of expenditures, and the private sector is highly regulated. Consequently, research plays a large role in shaping policies.

I am presently focused on working to understand how providers work together, competitively or cooperatively, to produce healthcare. My research includes investigating how integration impacts efficiency, how the push towards accountable care organizations has influenced provider behavior, and examining the extent to which physicians with different specialties compete. I detail these areas of research below.

In my job market paper, titled “Cooperation or Collusion? The Efficiency Implications of Physician Integration”, I define two components of integration, administrative and behavioral, and develop metrics to study their impact on efficiency. This impact is not clear theoretically, and has not been well studied empirically. Meanwhile, the healthcare landscape has been changing rapidly with large, multi-specialty practices becoming increasingly prevalent and integration in general being promoted as a cure-all, making this ambiguity more pertinent and policy relevant. My paper seeks to close this knowledge gap.

Past work attempting to quantity potential gains from integration has suffered from two main weaknesses. First, what is used to capture integration in the literature differs from the colloquial definition of integration. I commonly see integration identified in one of two ways: A physician is called integrated if they practice with physicians of a different specialty or if the physician is owned by a hospital or health system. This differs from the colloquial definition which typically refers to physicians working together and coordinating care. With this definition integration is a behavior and not just a status. Second, current studies have attempted to investigate the efficiency impact of integration by comparing particular physician practices or groups of practices. The issue with this approach is that it ignores potential selection issues in that doctors select the doctors with which they practice, and patients choose practices to receive care based on their needs and their perception of the efficacy.

My work addresses both of these weaknesses. First, to clear up definitional confusion I differentiate between administrative integration (being in a multi-specialty practice, or being owned by a hospital) and behavioral integration (working together). I then develop a new metric for behavioral integration using Medicare data on provider patient sharing patterns. This is a continuous measure which reflects the extent to which a particular provider works with other providers in the same practice. Second, because I can calculate this metric for each physician I can see aggregate differences across areas as well as changes over time. Aggregating across areas and looking across time allows me to avoid the selection issues present when directly comparing practices. I find that behavioral integration increases efficiency. Higher behavioral integration leads to lower cost and better health outcomes. I also find weak evidence that administrative integration may increase cost. A potential mechanism for this is physician induced demand.
I have also done research on Medicare Accountable Care Organizations (ACOs). ACOs are groups of physicians, hospitals, and other health centers that voluntarily take responsibility for a patient population. The goal is for the providers to come together and better coordinate care. The thought is that better sharing information and by avoiding unnecessary services these organizations can decrease costs. However, the formation of these organizations could potentially raise anticompetitive concerns. I, along with coauthors Samuel A. Kleiner and William D. White, used the framework developed by antitrust authorities to analyze provider concentration in order to examine the share of providers that could be potentially subject to scrutiny. We published our analysis in Medical Care Research and Review (“Antitrust and Accountable Care Organizations: Observations for the Physician Market”). We found that while the market shares for most physician practices fell below the level that would raise antitrust concerns, in most markets there was at least some providers that were potentially at risk for antitrust review.

In ongoing work, made possible through a grant from Cornell University’s Institute of Social Sciences, Professor Kleiner and I are studying how the formation of ACOs impacts physicians’ patient sharing patterns. There are competing incentives involved. If physicians were motivated by cost-sharing incentives, then we should see physicians who join ACOs referring more patients to low-utilization doctors. If, however, physicians join ACOs in order to secure streams of patients from other members, then we would expect to see referrals become more concentrated among ACO members.

As part of my interest in how the different parts of the healthcare production function interact, I am working to quantify the degree to which doctors of different specialties compete. We intuitively know that a doctor with the specialty “general practice” has more in common with “internal medicine” than “hand surgery”, and thus competes more closely for patients. However, there is currently no study that empirically establishes the degree of overlap. Furthermore, different geographical areas contain different mixes of specialties. This variation can be used to estimate the degree to which specialist are substitutes vs compliments. This ongoing work addresses the theory of the firm in the healthcare setting.

Finally, I am interested in exploring how different factors impact a physician’s decision to join a practice, and the size of that practice. Preliminary work shows that practice size varies more across geography than across specialty, which indicates market specific factors may drive a lot of the variation in practice size and integration. The current literature does not adequately address what those factors are.

If desired, links to these papers and others are available on my website www.DLudwinski.com. Over the next few years, I will execute this research plan I have developed, while building on my foundation. I desire to be an active part of a scholarly community that will help me to continue to develop my research, and grow as a researcher. I am looking for a collaborative environment where my skills can be paired with the skills of others in a mutually beneficial way.