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Brian Tabor President Indiana Hospital Association 500 N. Meridian, Suite 250 Indianapolis, IN 46204

RE: Indiana Hospital Market Concentration Study

Dear Brian,

You asked us to provide an independent evaluation of a recent brief written by Dr. Michael J. Hicks at the Center for Business and Economic Research ("CBER") at Ball State University titled "Indiana has a Monopoly Problem in Healthcare; Preliminary evidence and recommendations" (September 25, 2019). In particular, you asked us – as experts in industrial organization and healthcare competition – to review and comment on the analysis of hospital market concentration provided in that brief and the allegation that Indiana hospitals "exhibit broad signs of monopolization."

Please find a report attached to this letter that details our analysis and findings. Some of the main highlights of our report:

The measure of hospital concentration used in the CBER brief provides a misleading and incorrect overview of Indiana hospitals. ... As a prominent example, the CBER measure depicts the Indianapolis area (i.e., Indiana's largest urban center) as being among the most concentrated, when a conventional measure of concentration – Herfindahl-Hirschman Index ("HHI") – shows the exact opposite. (Page 3)

The CBER brief explains that this measure is "one of a number of measures of concentration, which is useful in comparing markets with different population sizes, and uncertain market shares." As both a theoretical and practical matter, we are puzzled by this reasoning. If one is hoping to study competition among hospitals generally, a measure that excludes all system-affiliated hospitals will ignore the vast majority of competition. The CBER brief acknowledges that "insurers or patients facing multiple choices of local healthcare providers enjoy some level of competition," and yet the proposed measure excludes most of these

choices. Furthermore, even if system-affiliated hospitals have higher pricing and are somehow inferior choices for consumers – a set of assumptions that we question – it is still incorrect theoretically and practically to ignore these hospitals and assume they are irrelevant to a study of competition. Thus, the measure has – at best – a severely flawed and limited economic meaning when it comes to analyzing hospital competition. Finally, as a matter of basic arithmetic, the ability of this measure to accurately summarize hospital concentration is limited – unaffiliated hospitals are often smaller than system-affiliated hospitals, and a simple count of unaffiliated hospitals will inevitably miss instances in which most patient volume (i.e., market share) is concentrated in a small number of hospitals. (Page 6)

As an alternative, we compute the HHI as a measure of hospital concentration. This is by far the most common measure of concentration that is used throughout the economic literature and by antitrust agencies around the world. (Page 6)

We find little to support the idea of a "monopoly problem" or that hospital "monopolies" are prevalent in Indiana. ... Indiana's levels of concentration compare similarly to the United States overall. (Page 11)

The CBER brief's recommendations for additional taxation and new regulation seem to us far in excess of what the hospital concentration results show. ... For example, severing smaller hospitals from their larger systems could hinder their access to lower cost inputs (e.g., more favorable purchasing prices for medical devices and drugs) and important shared services (e.g., common IT platforms). Likewise, further taxing smaller rural hospitals with low or negligible operating margins might jeopardize the financial sustainability of these hospitals and spur exit, which would increase rather than decrease concentration. (Page 12)

In sum, our results do not demonstrate "broad signs of monopolization," contrary to the conclusions drawn in the CBER brief.

Please contact us if you have additional questions regarding our analysis and report.

Sincerely,

Paul Wong, Ph.D.

Yun Ling, Ph.D.