From: Matthew S Lewis [mailto:mslewis@clemson.edu]
Sent: Monday, November 21, 2016 5:02 PM
To: TN.Health@tn.gov; Levine, Marissa (VDH)
Cc: Allison.Rajaratnam@tn.gov
Subject: Cooperative Agreement Application of Mountain States Health Alliance and Wellmont Health System

Dear Dr. Dreyzehner and Dr. Levine,

I am providing the attached written public comment to clarify the extent to which my research may or may not provide guidance on the likely consequences of either an approval or denial of the cooperative agreement application of Mountain State Health Alliance and Wellmont Health System. If possible I would like the letter to be posted on the Department of Health's website for public consideration. To clarify any confusion, I intend for this letter to replace one previously submitted by coauthor (Kevin Pflum) last week that he later requested to withdraw. Please let me know if I need to submit this to a different party or if you need any further information.

Best,

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November 15, 2016

John J. Dreyzehner, M.D., MPH, FACOEM
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TN.Health@tn.gov

Marissa J. Levine, M.D., MPH
State Health Commissioner
Virginia Department of Health
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Re: Cooperative Agreement Application of Mountain States Health Alliance and Wellmont Health System

Dear Dr. Drezegner and Dr. Levine:

I, Matthew S. Lewis Ph.D., Associate Professor of Economics at Clemson University, respectfully submit this public comment regarding the cooperative agreement application submitted by Mountain States Health Alliance ("Mountain States") and Wellmont Health System ("Wellmont") (collectively the "Parties"). My objective in this letter is not to comment directly on whether the cooperative agreement should be approved but to clarify the extent to which our research may or may not provide guidance on the likely consequences of either an approval or denial of the application.

The Parties have referenced my research on out-of-market hospital acquisitions to suggest that if the cooperative agreement is not approved they will be acquired by some other non-local system, which will result in a large price increase.[1] In the research paper the Parties have referenced, "Hospital Systems and Bargaining Power: Evidence from Out-of-Market Acquisitions,"[2] my coauthor (Kevin Pflum) and I do indeed find that, on average, hospitals that are acquired by an out-of-market system (a hospital system that has no presence in the local patient market) do increase prices by about 17% on average following acquisition compared to other hospitals that are not acquired. This finding does not, however, mean that the same outcome would transpire if either Mountain States or Wellmont were acquired by some third, out-of-

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1 Mountain States and Wellmont responses to questions submitted May 27, 2016 by South West Virginia Health Authority in connection with letter authorizing cooperative agreement, at 0000005 (July 13, 2016).

2 Lewis, Matthew S. and Kevin E. Pflum, (Forthcoming) "Hospital Systems and Bargaining Power: Evidence from Out-Of-Market Acquisitions," RAND Journal of Economics.

market hospital system. Moreover, there is no reason to believe based on our findings that any price increase resulting from acquisition by an out-of-market system would be larger than what might be expected if Mountain States and Wellmont were to merge with each other.

The primary implication of our findings is that acquisitions can result in price increases even when local market concentration is unchanged. However, this should in no way distract from the fact that acquisitions which do increase concentration in the local market have a strong potential to produce even greater increases in price. Illustrating the importance of local competition, we found in this same study that when hospitals within two miles of each other merge, prices increase by roughly 50% more on average than when hospitals more than five miles apart merge. A large body of literature has found that price levels often rise as a result of a system having multiple hospitals within the same local patient market.[3] When multiple, independent hospitals serve the same community, prices are kept in check by the ability of insurers to exclude a hospital that sets too high a price. Insurers can do this because there are other suitable substitute hospitals that it can include in its provider network. However, if two or more of those hospitals form a system, then insurers are unable to exclude just one, as systems generally work on an all-or-nothing basis meaning that if one hospital is excluded from the insurer's network, then all will be excluded. This outcome is untenable for the insurer if there are no remaining suitably close substitute hospitals. In consequence, insurers will accept higher prices rather than risk having an insufficient provider network.

Our empirical investigation specifically focused on stand-alone hospitals (hospitals not belonging to a hospital system) and compared the growth of prices at stand-alone hospitals that had been acquired with the prices of stand-alone hospitals that had not been acquired. One could perform a similar analysis based on the acquisition of an entire system of hospitals by another system, but this was not done in our paper. Moreover, in identifying the price impact of the acquisition of a system by another system, it would be important to account for the sizable variation in the composition of systems; e.g., numbers of system members, size of system members, locations of system members, financial health of system members, etc. Because the scope of our study included only stand-alone hospitals that are acquired by systems, it would be inappropriate to directly extrapolate our findings to the acquisition of a system by another system. Mountain States currently consists of 9 general acute care hospitals while Wellmont consists of 5 general acute care hospitals. Both systems additionally possess physician offices and specialty care centers (e.g., cancer treatment, long-term care). It is certainly possible (and perhaps likely) that a stand-alone hospital may have more to gain (in pricing power) from becoming affiliated with a large system than a

[3] Examples include: Capps, C., D. Dranove, and M. Satterthwaite (2003). Competition and market power in option demand markets. RAND Journal of Economics 34(4), 737–763; Dafny, L. (2009). Estimation and identification of merger effects: An application to hospital mergers. Journal of Law and Economics 52, 523–550; Ho, K. (2009). Insurer-provider networks in the medical care market. American Economic Review 99(1), 393–430; Gowrisankaran, G., A. Nevo, and R. Town (2015). Mergers when prices are negotiated: Evidence from the hospital industry. American Economic Review 105(1), 172–203; and Lewis, M. S. and K. E. Pflum (2015). Diagnosing hospital system bargaining power. AEJ: Economic Policy 7(1), 243–271.

hospital already affiliated with a system, though the analysis in the paper referenced above does not test this assertion.

In another research paper entitled, "Diagnosing Hospital System Bargaining Power in Managed Care Networks,"[4] Kevin Pflum and I also examined the impact of system membership on hospital prices. The research design in this study was quite different from the paper discussed above as we did not examine acquisitions directly, but compared the prices of stand-alone hospitals with the prices of hospitals already in a system. An objective of this study was to identify the relative importance of what is called bargaining position compared to what is called bargaining power. Insurers and hospitals negotiate, or bargain, over what price the insurer will pay when the hospital treats one of the insurer's enrollees. The final negotiated price reflects both the relative bargaining position and bargaining power. For example, if a hospital is very important for that insurer, perhaps because it is a particularly important academic medical center that enrollees want to have access to, then it will have a particularly strong bargaining position. This follows because the insurer will have difficulty attracting members if this particular hospital is not a part of its provider network. When several hospitals in the same patient market are part of the same system, they also have a strong bargaining position for the same reason.

The negotiated reimbursement prices that the insurer agrees to pay the hospital will determine how the hospital and insurer split the surplus created by successfully contracting with each other. The surplus represents the difference between the hospital's cost of treating the patients and the additional revenues that the insurer can collect through premiums. The bargaining position of a hospital affects the size of this surplus while the relative bargaining power of a hospital determines its share of the surplus. A hospital can collect a higher share of the surplus only through a higher price. In our study, we find that system hospitals are able to extract a larger share of this surplus and that the size of the share increases with the size of the system. However, we also find that there are diminishing returns to system size. That is, although a system can extract more of the surplus as it increases in size, the additional amount that it can extract decreases with each additional hospital. In consequence, a stand-alone hospital would expect to receive a much larger increase in bargaining power if acquired by a system (even an out-of-market system) than would a system that already contains several hospitals. In contrast, the additional bargaining position created by a merger between hospitals or systems within the same market (and the size of the associated price effect) would generally increase with the size and local market share of those involved.

To summarize, our research does not support the claim by the parties that, should the cooperative agreement not be approved and one or both of the Parties are acquired by another system, their prices will increase significantly and by more than if the Parties were to merge with each other. Such predictions reflect an inappropriate use of our

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[4] Lewis, Matthew S. and Kevin E. Pflum, (2015) "Diagnosing Hospital System Bargaining Power in Managed Care Networks," AEJ:Economic Policy 7(1), 243-271.

estimates. Any impact associated with such an acquisition will depend on the specific circumstances of the acquisition and characteristics of the acquiring system.

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