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Reviewer Comments

The paper entitled "Participation in Delivery System Reform Programs and U.S. Acute Care Hospital Integration into Behavioral Health" is aimed to examine the relationship between hospital participation in Accountable Care Organizations (ACO) and Patient-centered Medical Homes (PCMH) and behavioral health integration in the U.S. acute care hospitals. The study uses AHA, AHRF, and community ranking data over 2017-2019 period and a pooled, cross-sectional design with hospitals as the unit of analyses. Multivariate regressions were used to assess the studied between relationships (hospitals participating in ACO only, PCMH only, and both ACO and PCMH vs. non-participating hospitals) and the breadth of behavioral health integration in specific areas of the hospital (acute inpatient, emergency department (ED), primary care, and extended services (e.g., nursing homes and SNFs). The study finds that hospital participation in ACO only, PCMH only, and in both ACO and PCMH were associated with greater integration in more behavioral areas relative to non-participating hospitals. The study concludes that these delivery and payment reforms may provide opportunities to improve behavioral and physical health integration by the U.S. hospitals. The study uses comprehensive data sets with sufficient statistical controls. The findings are interesting; however, several key concerns about the validity and reliability of key measures used and other concerns (listed below) dampen enthusiasm about the results of the study.

Main Concerns:

1. Dependent variables are constructed from the AHA Annual Survey data. A specific question asked whether a hospital routinely integrate behavioral services in these areas: ED, primary care, acute inpatient, and extended care. Integration is defined as co-located medical and behavioral health providers, treatment and screening planning, fully integrated care whether behavioral and medical providers function as a team. However, it is possible to imagine that respondents would provide answers based on whether any behavioral services provided in the settings. For example, if a psychiatric evaluation is requested for a ED patient, would it be considered and coded as an integration of behavioral services? It is likely recorded as integration in the survey, but, in my opinion, that it is a provision of behavioral health services.

We agree with the reviewer that our measures of behavioral health integration have some limitations, including some potential issues of measurement error. Unfortunately, given the secondary nature of these data and the items included in the original survey, it is not possible for us to separate physical co-location between medical and behavioral health providers from other situations, such as scenarios where behavioral services are simply provided in medical areas. We have noted these limitations on pp. 16-17:

"A second potential limitation of the analysis pertains to our measures of behavioral health integration. Accurate responses to these questions require knowledge across the entire enterprise, which may be more difficult in certain types of hospitals (e.g., large, complex systems). The responses also assume respondents from different hospitals have similar definitions of integration, which may not be the case given different degrees of integration (e.g., co-location vs. team-based care with shared decision making). Furthermore, it is possible the responses reflect a level of social desirability, with respondents wanting their hospitals to appear more progressive in terms of their integration activities. However, we are not aware of other data sources that are currently available that would provide population level estimates of these integration activities as well detailed information about behavioral health integration that could tease out these nuances. Future research may be able to address these issues and validate the degree of behavioral health integration but will likely require primary data collection given the data currently available."

In addition, one of the key findings is that most prevalent areas for integration were emergency services, followed by inpatient, primary care, and extended care services. This is a counterintuitive finding as ACOs and PCMH try to decrease expansive hospital admissions, ED visits, and rehospitalizations. One would think that providing integrated medical and behavior services in primary care and extended care settings would help ACOs and PCMH to decrease utilization of behavioral services in ED and acute care settings. This finding may be related to respondents of the survey being unsure how to answer the question correctly or answering the question quickly without putting much thought/effort into answering the question correctly. I would encourage researchers to check the validity and reliability of the dependent variable. Has this measure been used in prior research? Is there way to cross-tabulate hospitals' responses with other questions on behavioral and medical services?

We understand and appreciate the reviewer pointing out what may seem like a counterintuitive finding with respect to the pattern of integration across these service areas. While it is possible this pattern reflects measurement error, which we have noted as a limitation on pp. 16-17, we also think the pattern may have other explanations. First, it is true that the most prevalent areas for integration was emergency services, followed by inpatient, primary care, and extended care services. It is important to note, however, that these descriptive patterns are unadjusted for other characteristics, including ACO and PCMH participation. We attribute this unadjusted pattern to how the U.S. hospital industry has evolved over time, explained on pp. 14-15:

"One explanation for this pattern is the historical focus of acute care hospitals on acute care, such as inpatient and emergency services. Vertical expansion into "upstream" (i.e., primary care) and "downstream" (i.e., extended care) service areas, in comparison, is a more recent strategy by acute care hospitals that has waxed and waned over the past 30-40 years.(1, 2) Acute care hospitals may simply have more experience with inpatient and emergency services, and thus, may focus their efforts on integrating behavioral health into these areas. Similarly, because inpatient and emergency services are often physically co-located, efforts to integrate behavioral health in these areas may occur in tandem and even leverage the same resources (e.g., professional staff, physical space). In contrast, primary care and extended care service areas are likely more numerous, geographically distributed,

and varied in their capacity (e.g., limited staff, higher levels of turnover) to integrate behavioral health services."

Given this history, we did not find it surprising or necessarily counterintuitive that hospitals were more likely to report integration in emergency and inpatient services. Moreover, consistent with the reviewer's comment, our analysis revealed that hospitals with a PCMH or both a PCMH and ACO had the highest odds ratios (OR = 1.83 and 2.51, respectively) with respect to behavioral health integration in primary care. In other words, despite a greater general likelihood of reporting integration in emergency and inpatient services, hospitals with a PCMH or both PCMH and ACO were more likely to have integrated in primary care.

We agree with the reviewer, however, that the fact that ACO participation by itself was not a significant correlate of primary care or extended service integration is an interesting finding. As noted on pp. 15-16, we think there may be a reasonable explanation beyond measurement error:

"Notably, our findings related to having an established medical home program were more robust than those related to participation in an ACO. This pattern is somewhat surprising given the emphasis that ACO reimbursement mechanisms place on broad population health management across the continuum of care compared to medical home programs that often focus on primary care. One potential explanation for these differences is that ACOs are part delivery system reform and part financial reimbursement reform. If a hospital's primary motivation for pursuing ACO participation is financial (e.g., access to contracts, upside incentives), behavioral health integration may not provide a strong enough return-on-investment to significantly alter its service mix. Medical home programs, by contrast, put more direct emphasis on transforming how care is delivered. A related explanation for this pattern is the difference in what these programs entail and how they are implemented. There is considerable variation in how ACOs can be configured, governed (e.g., hospital-led, physician-led, hybrid), and the degree to which they are horizontally and vertically integrated."

Also, the authors also do not provide information on missingness in answers to the question. How many hospitals do not report on the behavioral integration question?

We have revised Table 2 to include missingness with respect to the behavioral health integration items.

Table 2. Sample characteristics

Behavioral Health Integration Activities[1]	**2017**	**2019**	**Difference b/t 2017 and 2019[2]**
Acute inpatient care, N (%)	1,531 (48.5%)	1,680 (54.5%)	**X^2 = 22.0, p<.001**
Primary care, N (%)	1,311 (41.5%)	1,488 (48.3%)	**X^2 = 28.9, p<.001**
Emergency room, N (%)	1,836 (58.2%)	2,007 (65.0%)	**X^2 = 31.0, p<.001**
Extended care, N (%)	514 (16.5%)	540 (17.6%)	X^2 = 1.3, p=.26

Total number, Mean (SD)	1.6 (1.5)	1.8 (1.5)	***t* = 5.8, p<.001**
Delivery System Reform Participation			**X^2 = 174.9, p<.001**
None, N (%)	2,503 (56.1%)	2,659 (60.9%)	
ACO only, N (%)	555 (12.4%)	263 (6.0%)	
PCMH only, N (%)	519 (11.6%)	753 (17.3%)	
Both ACO & PCMH participating, N (%)	885 (19.8%)	691 (15.8%)	
Organizational controls			
Ownership			X^2 = 1.9, p=.38
Private, not-for-profit, N (%)	975 (21.8%)	957 (21.9%)	
Public, not-for-profit, N (%)	2,761 (61.9%)	2,745 (62.9%)	
For-profit, N (%)	726 (16.3%)	664 (15.2%)	
System affiliation			X^2 = 1.2, p=.28
Member of system, N (%)	2,880 (64.6%)	2,866 (65.6%)	
Independent, N (%)	1,582 (35.4%)	1,500 (36.4%)	
Teaching status			**X^2 = 23.0, p<.001**
Teaching hospital, N (%)	1,745 (39.1%)	1,927 (44.1%)	
Non-teaching hospital, N (%)	2,717 (60.9%)	2,439 (55.9%)	
Contract management			X^2 = 2.7, p=.10
Contract managed, N (%)	374 (8.4%)	325 (7.4%)	
Not contract managed, N (%)	4,088 (91.6%)	4,041 (92.6%)	
Clinically Integrated Network			X^2 = 3.4, p=.06
Clinically Integrated Network, N (%)	1,467 (32.9%)	1,517 (34.8%)	
Not a Clinically Integrated Network, N (%)	2,995 (67.1%)	2,849 (65.2%)	
# of beds			**X^2 = 22.0, p<.001**
6-99, N (%)	2,247 (50.4%)	2,216 (50.8%)	
100-299, N (%)	1,451 (32.5%)	1,399 (32.0%)	
300-499, N (%)	480 (10.8%)	462 (10.6%)	
500 or more, N (%)	284 (6.3%)	289 (6.6%)	
Sole Community Provider, N (%)	305 (6.8%)	302 (6.9%)	X^2 = 0.5, p=.92
% of revenue from capitation, Mean (SD)	0.75 (4.1)	1.7 (8.9)	***t* = 5.1, p<.001**
Community controls			
Geographic location			X^2 = 0.02, p=.99
Rural hospital, N (%)	815 (18.3%)	801 (18.3%)	

Suburban, N (%)	1,039 (23.3%)	1,011 (23.2%)	
Urban hospital, N (%)	2,608 (58.5%)	2,554 (58.5%)	
Medicare managed care penetration, Mean (SD)	28.9 (15.6)	30.0 (14.6)	***t* = 3.4, p<.001**
Percent minority, Mean (SD)	18.7 (15.7)	18.9 (15.8)	*t* = 0.4, p=.65
Percent over 65, Mean (SD)	17.3 (4.4)	17.8 (4.5)	***t* = 4.6, p<.001**
Percent below federal poverty level, Mean (SD)	14.4 (5.4)	14.2 (5.3)	***t* = 2.2, p=.02**
Herfindahl-Hirschman Index, Mean (SD)	0.62 (0.4)	0.63 (0.3)	*t* = 1.2, p=.22
Mental Health Professional Shortage Area			**X^2 = 16.1, p<.001**
County not MH HPSA, N (%)	293 (6.6%)	237 (5.4%)	
Partial county is MH HPSA, N (%)	2,037 (45.7%)	1,867 (42.8%)	
Whole county is HPSA hospital, N (%)	2,130 (47.8%)	2,260 (51.8%)	
Health status of community	0.002 (0.5)	-0.002 (0.5)	*t* = 0.42, p=.67
N	4,460	4,364	

[1] Number of hospitals not reporting (i.e., missing values): Acute inpatient care (1,282); Primary care (1,286); Emergency room (1,279); Extended care (1,300).
[2] Bolded values indicate a statistically significant difference at p<.05 between 2017 and 2019.

2. Key independent variable: similar concerns about validity and reliability about hospital responses regarding their ACO and PCMH participation. Is there a way to validate their responses? PCMH is a primary care-based initiative, so how much knowledge do hospitals have about PCMH and integration of behavioral services. It is recommended to provide evidence that these measures are valid and reliable.

Our estimates for ACO participation by U.S. hospitals are in line with those of other studies (3), which we take as validation that our data are reflective of actual participation. Unfortunately, for PCMH participation, there is no way to validate hospital responses as the data used in the analysis do not provide the names of owned/affiliated physician practices. Moreover, our searches of the literature did not reveal any studies that provide estimates of hospital participation in PCMH. In fact, we believe this is one the contributions of our study, to provide some initial estimates of how much hospitals may be associated with PCMHs. We believe this is important given reports that have highlighted the potential importance of these relationships (4). Regardless, we recognize the inability to validate hospital' responses as a limitation in our study, which we now highlight on p. 17:

> *"Third, our measures of ACO and medical home participation were dichotomous indicators and did not reflect some of the nuances of participation. Moreover, given the secondary nature of our data, we were not able to validate responses as to whether hospitals were, in fact, participating in ACOs and PCMHs. While our estimates of ACO participation are consistent with other studies (3), we are not aware of any sources that*

would enable us to make similar assessments for hospital participation in PCMHs. Given the absence of such information, we consider our estimates an important contribution by providing initial estimates of how much hospitals may be associated with PCMHs. Nevertheless, future research could build on our results, for example, by validating these responses and examining whether integration, overall or for specific service areas, differs for certain types of ACOs (e.g., physician-led vs. hospital-led)."

3. Conceptual framework needs strengthening. It describes ACOs and PCMH in general terms. However, a conceptual framework needs to focus specifically on hospitals participating in ACO and PCMH and integration in key behavioral service areas (inpatient, ED, primary care, and extended care).

We appreciate the reviewer encouraging us to link ACO and PCMH participation more explicitly to behavioral health integration. We agree that doing so is important for making these relationships more compelling. We have made several revisions to the manuscript to make these relationships more explicit. First, we have extended our arguments related to the first hypothesis on p. 7:

"More effectively and efficiently managing these high-cost patients through the integration of medical and behavioral health services would ostensibly be a high priority for hospitals that participate in an ACO because doing so could create cost savings to be shared by a hospital. Likewise, integration into more service areas would likely increase the number of opportunities to take create these cost savings."

Likewise, for hypothesis 2, we have expanded our arguments with the following revisions:

"A number of experts have argued that these principles overlap considerably with models of integrated behavioral health and have suggested that medical homes may be one approach to integrating medical and behavioral health.(5, 6) That is, hospitals may use the medical home as a vehicle to integrate medical and behavioral health. Likewise, hospitals may learn from and leverage their experience with the medical home to integrate medical and behavioral health in other service areas."

Finally, for our discussion of hypothesis 3 on p. 9, we have added the following text:

"Thus, participation in an ACO and a medical home may provide complementary, even synergistic, incentives to integrate into more service areas. That is, ACO participation may provide cost savings incentives to integrate behavioral health into more service areas, while participation in a medical home program may provide the means of accomplishing these cost savings."

4. Descriptive statistics: the differences in organizational, community/environmental, and market characteristics for hospitals participating in ACO/PCMH/both ACO/PCMH, non-participating hospitals, and hospitals non-reporting on integration variable would be interesting to assess.

We appreciate the suggestion to provide additional descriptive statistics for the organizational and market characteristics across behavioral health integration areas and delivery system reform programs. Given the quantity of results already provided in the manuscript, we have added these as appendices rather than incorporating them into the main text. We have added a sentence on p. 11 that refers readers to these tables:

> *"Additional sample characteristics, organized by behavioral health integration areas and delivery system reform programs, are provided in Appendices A and B."*

The tables, for the reviewer's reference, are below.

Appendix A. Sample characteristics by Behavioral Health Integration Areas, 2019

	Acute Inpatient	**Primary Care**	**Emergency Room**	**Extended Care**	**Difference b/t Areas[1]**
Organizational controls					
Ownership					**X^2 = 44.4, p<.001**
Private, not-for-profit, N (%)	1 (0.26)	40 (10.6)	247 (65.2)	91 (24.0)	
Public, not-for-profit, N (%)	22 (1.4)	85 (5.3)	1,089 (67.3)	423 (26.1)	
For-profit, N (%)	6 (3.4)	2 (1.1)	143 (80.8)	26 (24.8)	
System affiliation					**X^2 = 20.6, p<.001**
Member of system, N (%)	22 (1.4)	73 (4.5)	1,120 (69.6)	394 (24.5)	
Independent, N (%)	7 (1.2)	54 (9.5)	359 (63.4)	146 (25.8)	
Teaching status					**X^2 = 19.6, p<.001**
Teaching hospital, N (%)	14 (1.2)	51 (4.2)	819 (67.5)	330 (27.2)	
Non-teaching hospital, N (%)	15 (1.6)	76 (7.9)	660 (68.7)	210 (21.9)	
Contract management					X^2 = 2.7, p=.10
Contract managed, N (%)	0 (0)	9 (5.0)	117 (64.6)	55 (30.4)	
Not contract managed, N (%)	29 (1.5)	118 (5.9)	1,362 (68.3)	485 (24.3)	
Clinically Integrated Network					**X^2 = 18.0, p<.001**
Clinically Integrated Network, N (%)	15 (1.2)	54 (4.5)	803 (66.6)	333 (27.6)	
Not a Clinically Integrated Network, N (%)	14 (1.4)	73 (7.5)	676 (69.7)	207 (21.3)	
# of beds					**X^2 = 69.4, p<.001**
6-99, N (%)	10 (1.2)	82 (9.7)	570 (67.6)	181 (21.5)	
100-299, N (%)	13 (1.7)	33 (4.3)	546 (70.4)	184 (23.7)	

300-499, N (%)	6 (1.9)	8 (2.5)	220 (69.6)	82 (26.0)	
500 or more, N (%)	0 (0)	4 (1.7)	143 (59.6)	93 (38.8)	
Sole Community Provider Status					X^2 = 1.6, p=.67
Sole Community Provider, N (%)	2 (1.3)	7 (4.7)	108 (72.5)	32 (21.5)	
Not Sole Community Provider, N (%)	27 (1.3)	120 (5.9)	1,371 (67.7)	508 (25.1)	
% of revenue from capitation, Mean (SD)	0 (0)	2.5 (9.4)	1.8 (8.5)	3.3 (14.8)	**F = 2.8, p=.04**
Community controls					
Geographic location					**X^2 = 28.9, p<.001**
Rural hospital, N (%)	2 (0.7)	27 (9.9)	176 (64.5)	68 (24.9)	
Suburban, N (%)	9 (2.1)	39 (9.2)	286 (67.1)	92 (21.6)	
Urban hospital, N (%)	18 (1.2)	61 (4.1)	1,017 (68.9)	380 (25.8)	
Medicare managed care penetration, Mean (SD)	34.9 (16.4)	28.1 (14.3)	30.6 (13.6)	31.5 (14.9)	**F = 2.9, p=.04**
Percent minority, Mean (SD)	18.4 (14.4)	14.4 (14.3)	19.7 (15.2)	18.9 (14.6)	**F = 4.9, p=.002**
Percent over 65, Mean (SD)	17.8 (3.7)	18.6 (4.5)	17.1 (4.1)	17.2 (4.0)	**F = 5.8, p<.001**
Percent below federal poverty level, Mean (SD)	14.8 (5.5)	13.1 (4.8)	13.5 (5.0)	13.0 (4.4)	**F = 2.7, p=.05**
Herfindahl-Hirschman Index, Mean (SD)	0.55 (0.34)	0.70 (0.31)	0.58 (0.35)	0.58 (0.35)	**F = 4.6, p=.003**
Mental Health Professional Shortage Area					X^2 = 12.5, p=.051
County not MH HPSA, N (%)	3 (2.1)	9 (6.2)	101 (69.7)	32 (22.1)	
Partial county is MH HPSA, N (%)	12 (1.6)	56 (7.6)	503 (68.5)	163 (22.2)	
Whole county is HPSA hospital, N (%)	14 (1.1)	62 (4.8)	875 (67.5)	345 (26.6)	
Health status of community	0.01 (0.43)	-0.13 (0.45)	-0.05 (0.44)	-0.09 (0.42)	F = 2.5, p=.06
N	4,460			4,364	

[1] Bolded values indicate a statistically significant difference at p<.05 between areas of integration.

Appendix B. Sample characteristics by Delivery System Reform Program, 2019

	None	**ACO only**	**PCMH only**	**Both ACO & PCMH**	**Difference b/t Programs[1]**
Organizational controls					
Ownership					**X^2 = 627.0, p<.001**
Private, not-for-profit, N (%)	751 (78.5)	26 (2.7)	126 (13.2)	54 (5.6)	
Public, not-for-profit, N (%)	1,300 (47.4)	213 (7.8)	603 (22.0)	629 (22.9)	
For-profit, N (%)	608 (91.6)	24 (3.6)	24 (3.6)	8 (1.2)	
System affiliation					**X^2 = 437.4, p<.001**
Member of system, N (%)	1,449 (50.6)	231 (8.1)	549 (19.2)	637 (22.2)	
Independent, N (%)	1,210 (80.7)	32 (2.1)	204 (13.6)	54 (3.6)	
Teaching status					**X^2 = 256.9, p<.001**
Teaching hospital, N (%)	933 (48.4)	148 (7.7)	389 (20.2)	457 (23.7)	
Non-teaching hospital, N (%)	1,726 (70.8)	115 (4.7)	364 (14.9)	234 (9.6)	
Contract management					X^2 = 3.8, p=.28
Contract managed, N (%)	205 (63.1)	18 (5.5)	62 (19.1)	40 (12.3)	
Not contract managed, N (%)	2,454 (60.7)	245 (6.1)	691 (17.1)	651 (16.1)	
Clinically Integrated Network					**X^2 = 983.24, p<.001**
Clinically Integrated Network, N (%)	289 (19.1)	152 (10.0)	543 (35.8)	533 (35.1)	
Not a Clinically Integrated Network, N (%)	2,370 (83.2)	111 (3.9)	210 (7.4)	158 (5.6)	
# of beds					**X^2 = 338.6, p<.001**
6-99, N (%)	1,564 (70.6)	106 (4.8)	337 (15.2)	209 (9.4)	
100-299, N (%)	808 (57.8)	74 (5.3)	253 (18.1)	264 (18.9)	
300-499, N (%)	208 (45.0)	49 (10.6)	99 (21.4)	106 (22.9)	
500 or more, N (%)	79 (27.3)	34 (11.8)	64 (22.2)	112 (38.8)	
Sole Community Provider Status					
Sole Community Provider, N (%)	208 (68.9)	12 (4.0)	58 (19.2)	24 (8.0)	**X^2 = 19.1, p<.001**

Not Sole Community Provider, N (%)	2,451 (60.3)	251 (6.2)	695 (17.1)	667 (16.4)	
% of revenue from capitation, Mean (SD)	0.5 (3.5)	2.7 (6.8)	3.9 (15.7)	1.1 (5.3)	***F* = 24.5, p<.001**
Community controls					
Geographic location					***X*^{2} = 222.9, p<.001**
Rural hospital, N (%)	618 (77.2)	27 (3.4)	112 (14.0)	44 (5.5)	
Suburban, N (%)	688 (68.1)	46 (4.6)	176 (17.4)	101 (10.0)	
Urban hospital, N (%)	1,353 (53.0)	190 (7.4)	465 (18.2)	546 (21.4)	
Medicare managed care penetration, Mean (SD)	28.7 (15.6)	32.8 (12.3)	31.3 (14.2)	32.4 (11.4)	***F* = 18.7, p<.001**
Percent minority, Mean (SD)	18.6 (16.3)	18.2 (14.3)	17.5 (14.5)	21.5 (15.3)	***F* = 8.5, p<.001**
Percent over 65, Mean (SD)	18.2 (4.7)	17.0 (3.8)	18.0 (4.2)	16.4 (3.9)	***F* = 31.7, p<.001**
Percent below federal poverty level, Mean (SD)	14.9 (5.6)	13.7 (4.9)	13.7 (4.8)	12.3 (4.4)	***F* = 48.1, p<.001**
Herfindahl-Hirschman Index, Mean (SD)	0.67 (0.34)	0.57 (0.34)	0.62 (0.35)	0.52 (0.33)	***F* = 35.6, p<.001**
Mental Health Professional Shortage Area					***X*^{2} = 200.1, p<.001**
County not MH HPSA, N (%)	115 (48.5)	15 (6.3)	50 (21.1)	57 (24.1)	
Partial county is MH HPSA, N (%)	1,342 (71.9)	81 (4.3)	284 (15.2)	160 (8.6)	
Whole county is HPSA hospital, N (%)	1,200 (53.1)	167 (7.4)	419 (18.5)	474 (21.0)	
Health status of community	0.05 (0.48)	-0.002 (0.42)	-0.05 (0.43)	-0.13 (0.42)	***F* = 30.9, p<.001**
N	4,460			4,364	

[1] Bolded values indicate a statistically significant difference at p<.05 between types of delivery system reforms.

5. Practice implications need to clearly linked to the findings.

We appreciate the reviewer encouraging us to ensure that our practice implications are clearly linked to the study findings. We have made several revisions to this section of the manuscript to make these connections more explicit. On p. 18, we have expanded our discussion of ways that policy makers and payers may support behavioral health integration in extended care areas such as nursing homes:

> *"Thus, policy makers, regulators, and even third-party payers may need to develop more targeted efforts (e.g., enhanced reimbursement, incentives/disincentives) to support integration in these areas. For example, in the United States the largest payer of nursing home services is the Centers for*

Medicare and Medicaid Services (CMS). CMS has developed Nursing Home Compare, a consumer-oriented public reporting website that allows consumers to locate and compare nursing homes on key performance metrics like staffing levels and quality of care. Adding metrics like behavioral health integration to this website could incentivize hospitals (and even standalone nursing homes) to integration these services with existing medical services."

Likewise, on p. 19, when discussing how policy makers may utilize our findings pertaining to the relationship between delivery system reform programs and behavioral health integration, we have noted the importance of emphasizing medical home participation given its (more) robust relationship with integration:

"Findings from our analysis suggest that policy makers in particular may want to identify ways to support hospital participation in medical homes as it exhibited more robust relationships with behavioral health integration. Even so, the mixed findings with respect to whether these programs are associated behavioral health integration in different clinical areas suggest these programs are incomplete solutions, and thus, revisions to these programs may be needed or even new programs altogether that focus on behavioral health integration."

1. Snail TS, Robinson JC. Organizational diversification in the American hospital. Annual review of public health. 1998;19(1):417-53.
2. Starkweather DB, Carman JM. Horizontal and vertical concentrations in the evolution of hospital competition. Advances in health economics and health services research. 1987;7:179.
3. Colla CH, Lewis VA, Tierney E, Muhlestein DB. Hospitals participating in ACOs tend to be large and urban, allowing access to capital and data. Health affairs. 2016;35(3):431-9.
4. Townley C, Mooney K. The Role of Hospitals in Medical Home Initiatives and Strategies to Secure Their Support and Participation. 2014.
5. Baird M, Blount A, Brungardt S, Dickinson P, Dietrich A, Epperly T, et al. Joint principles: integrating behavioral health care into the patient-centered medical home. Annals Family Med; 2014.
6. Croghan TW, Brown JD. Integrating mental health treatment into the patient centered medical home: Agency for Healthcare Research and Quality Rockville, MD; 2010.