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Financial Characteristics of Critical Access Hospitals (CAHs) Participating in Accountable Care Organizations (ACO)

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KEY FINDINGS

- Of the 1,299 CAHs included in the sample, 770 (59%) responded to the AHA survey question about ACO participation in 2019. Of these, 388 (50%) reported the hospital or system either leading (n=138) or participating in (n=250) an ACO. Thirty-six CAHs reported previously participating in or leading an ACO, but were no longer doing so and 346 CAHs reported never having led or participated in an ACO. Among hospitals leading an ACO, contracts with Medicare and commercial insurers were most common, followed by Medicare Advantage and lastly Medicaid.
- Forty-one CAHs reported contracts with only one of the four payers while 73 reported contracts with two, three or all four payers.
- As compared to CAHs not participating in an ACO or not responding, CAHs that were leading or participating in an ACO had greater net patient revenue and were more likely to be in the Midwest region, not-for-profit, and affiliated with a health system.
- As compared to CAHs not participating or not responding, CAHs leading or participating in an ACO had higher operating and total margins, fewer days revenue in accounts receivable, greater outpatient revenue as a proportion of total revenue, and a lower Medicare inpatient payer mix.

PURPOSE

The purpose of this study is to describe CAH participation in Medicare and non-Medicare ACOs, and to compare the organizational characteristics and financial performance of participating versus non-participating CAHs. This knowledge can be used to inform policymakers about the current state of ACO participation among CAHs. Additionally, state flex programs and hospital leaders may benefit from an understanding of the financial and operational factors that may be important to ACO participation as they benchmark performance and identify areas for improvement. Drawing on existing evidence about factors important to rural hospitals' participation in ACOs, this study analyzes three aspects of financial performance: overall financial health of the organization as measured by profitability and liquidity, the proportion of revenue provided by outpatient versus inpatient services, and the hospitals' payer mix.[1] Together, these measures provide insight into a CAH's ability to make investments in new models of care and to bear risk, to provide primary and preventive health services required to manage patients and coordinate care, and to engage with different payers in alternative payment arrangements.

BACKGROUND

According to data released by the Centers for Medicare & Medicaid Services (CMS), as of January 1, 2022, there were 483 Accountable Care Organizations (ACOs) participating in the Medicare Shared Savings Program (MSSP), covering over 11 million Medicare beneficiaries.[2] CMS defines ACOs as "groups of doctors, hospitals, and other

healthcare providers, who come together voluntarily to give coordinated high-quality care to their…patients."[3] Through shared savings arrangements or other payment models involving incentives or penalties, ACOs are also held accountable for the costs of care delivered. Although ACO participation has grown nationally, hospital participation has been greater in urban as compared to rural areas.[4] In 2016, 21 percent of metropolitan hospitals were found to be participating in MSSP ACOs as compared to 12 percent of non-metropolitan hospitals. Non-metropolitan hospitals that were participating were more likely to be CAHs, not-for-profit, affiliated with a health system, and in the Northeast.[5] Hospital-system ACO leadership has been shown to be positively associated with quality;[6] thus, as the number of ACOs continues to grow, more research is needed to understand CAHs' participation in ACOs and the factors associated with participation.

DATA AND SAMPLE

Data on ACO participation in 2019 (the most current data available at the time of the study) were drawn from the American Hospital Association (AHA) Annual Survey (Appendix Table 1). Data on hospital financial performance in 2019 came from the Medicare cost reports in the Healthcare Cost Reporting Information System (HCRIS). After excluding 13 Indian Health Services Hospitals, 14 hospitals with multiple partial cost reports covering a period fewer than 360 days or greater than 400 days (n=54 partial cost reports), and 8 hospitals with no associated AHA data, the final sample included 1,299 CAHs.

APPROACH

CAHs in the study sample were categorized as either participating or non-participating based on AHA survey data (see question #D.15.a in Appendix Table 1). Differences in CAH organizational characteristics and financial indicators obtained from the Critical Access Hospital Measurement and Performance Assessment System (CAHMPAS)[7] between participating and non-participating CAHs were analyzed using descriptive statistics. For comparison, we also examined non-respondents to the AHA survey question asking about ACO participation. Hospital characteristics included size (measured by net patient services revenue), ownership, system affiliation, geographic region, and whether the hospital operated a rural health clinic or a distinct part skilled nursing facility. We also examined hospitals' performance on ten CAHMPAS financial indicators measuring profitability, liquidity, outpatient care, and payer mix.[8] Statistical significance was measured using either Pearson's chi-square or Kruskal-Wallis tests.

RESULTS

CAHs' ACO Participation in 2019

Of the 1,299 CAHs included in the sample, 770 (59%) responded to the AHA survey question about ACO participation. Of these, 388 (50%) reported the hospital or system either leading (n=138) or participating in (n=250) an ACO in 2019 (Table 1). Thirty-six CAHs reported previously participating in or leading an ACO, but were no longer doing so and 346 CAHs reported never having led or participated in an ACO. In sum, 424 of 1,299 (33%) of CAHs reported experience participating in an ACO arrangement. Five hundred twenty-nine CAHs (41%) did not respond to the survey question and therefore information was not available to identify participation status.

TABLE 1: Reported ACO participation by CAHs, 2019

AHA Survey Question	Number of Hospitals
Hospital / system currently leads an ACO	138
Hospital / system currently participates in an ACO (but is not its leader)	250
Hospital / system previously led or participated in an ACO but is no longer doing so	36
Hospital / system has never participated or led an ACO	346
No response	529
Total	1,299

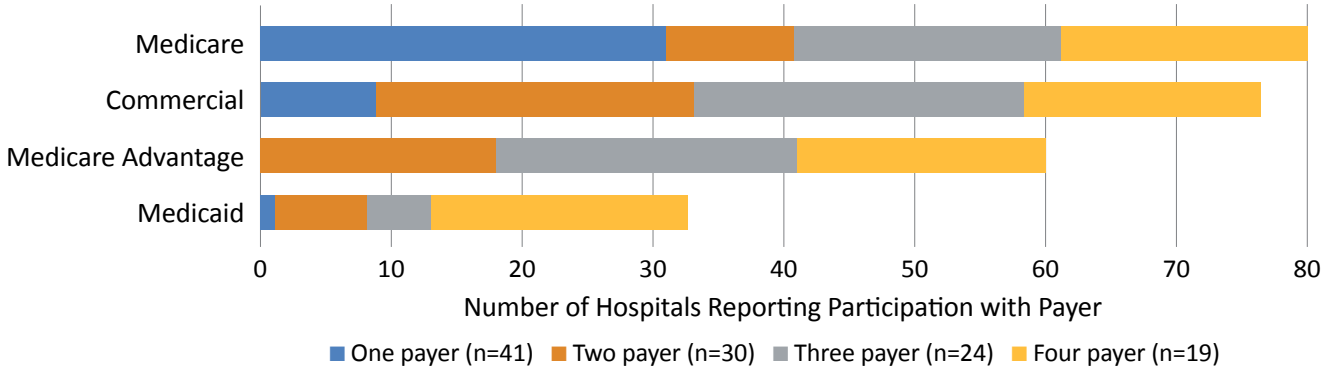
Note(s): Authors' analysis of 2019 AHA survey data

The hospitals that reported leading an ACO were also asked to report the payers with which they were participating (options included Medicare, Medicare Advantage, Commercial and Medicaid). Twenty-four of the 138 hospitals did not provide payer data. Of the remaining 114 CAHs, 41 reported contracting with one payer, 30 reported contracting with two payers, 24 reported contracting with three payers and 19 reported contracting with all four payers (Figure 1). Among the four payers, Medicare was the most common (n=80), followed closely by commercial payers (n=76), then Medicare Advantage (n=60) and Medicaid (n=33). Hospitals contracting with only one payer were more likely to report that the payer was Medicare or commercial as compared to Medicare Advantage or Medicaid. Virtually all CAHs reporting multiple contract types were affiliated with a health system.

Characteristics of CAHs by ACO Participation

Table 2 shows organizational characteristics and location of CAHs among those participating with an ACO, not participating with an ACO, and those who did not respond to the survey question.

FIGURE 1: CAHs' ACO contracts with payers, 2019



Note(s): Authors' analysis of 2019 AHA survey data

TABLE 2: Characteristics of CAHs by ACO participation, 2019

Variable	Participant (n=388)	Non-Participant (n=382)	Non-Respondent (n=529)	P-value
Net patient service revenue (median, in thousands)	$25,999.6	$19,162.8	$19,008.9	<0.001
Ownership				
Not-for-profit	67.8%	45.0%	54.3%	
For-profit	1.3%	5.2%	4.9%	<0.001
Government-owned	30.9%	49.7%	40.8%	
System-affiliated	58.8%	28.3%	29.1%	<0.001
Operates a rural health clinic	62.9%	66.8%	69.6%	0.106
Operates a skilled nursing facility	19.1%	14.9%	27.4%	<0.001
Region				
West	15.2%	20.9%	26.7%	
Midwest	60.8%	41.4%	43.1%	<0.001
South	17.8%	32.7%	25.1%	
Northeast	6.2%	5.0%	5.1%	

Note(s): Authors' analysis of 2019 Medicare cost reports. A Kruskal-Wallis test was performed to determine whether median net patient service revenue differed among participants, non-participants and non-respondents. Pearson chi-squared tests were performed to determine whether ownership, system affiliation, operation of a rural health clinic, operation of a skilled nursing facility, and region differed among participants, non-participants and non-respondents.

As compared to hospitals not participating or not responding, CAHs participating in or leading an ACO had greater net patient service revenue ($26 million versus approximately $19 million, p<0.001). A greater proportion of CAHs in an ACO were not-for-profit (versus for-profit or government-owned), system-affiliated, and in the Midwest region (Figure 2).

Financial Performance of CAHs by ACO Participation

Table 3 shows CAHs' 2019 performance on five measures of profitability and liquidity.

FIGURE 2: CAH ACO Participation by Region, 2019

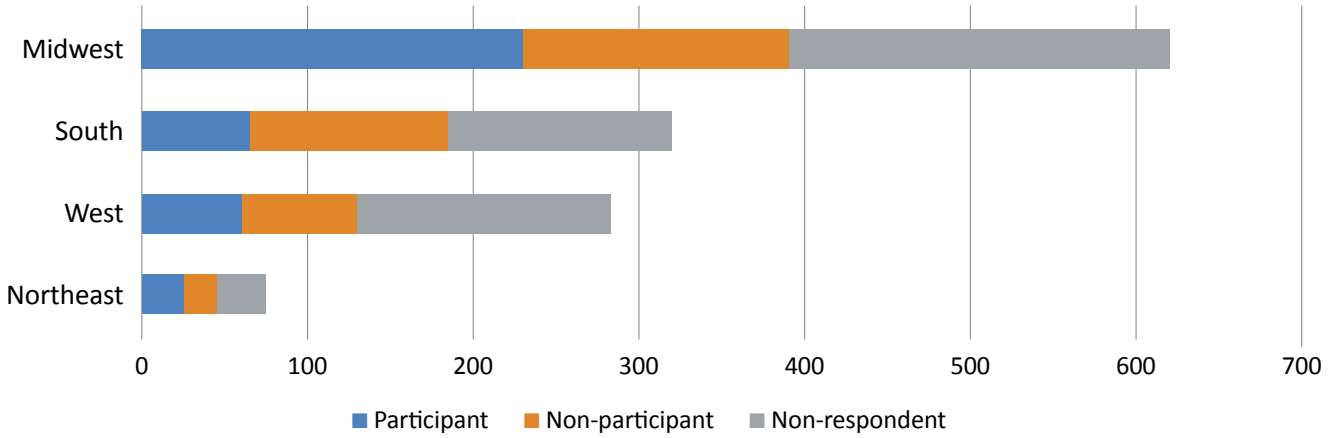


TABLE 3: CAHs profitability and liquidity by ACO participation, 2019

Variable	Participant	Non-Participant	Non-Respondent	P-value
Profitability				
Operating margin (median)	1.8%	0.4%	0.0%	0.001
Range	[-47.6% - 53.2%]	[-70.5% - 84.0%]	[-65.7% - 59.9%]	
Total margin (median)	3.3%	2.1%	2.1%	0.035
Range	[-42.4% - 53.2%]	[-56.8% - 58.9%]	[-54.8% - 42.2%]	
Liquidity				
Days cash on hand (median)	70.4	74.2	71.5	0.138
Range	[0.0 - 735.7]	[0.0 - 993.6]	[0.0 - 945.8]	
Current ratio (median)	2.3	2.6	2.6	0.584
Range	[0.0 - 29.8]	[0.2 - 42.4]	[0.0 - 97.8]	
Days revenue in accounts receivable (median)	49.0	51.9	50.6	0.009
Range	[3.4 - 263.3]	[6.2 - 239.3]	[11.3 - 278.9]	

Note(s): Authors' analysis of Medicare cost reports. Kruskal-Wallis tests were performed to determine if the median values were the same across participants, non-participants and non-respondents. Sample sizes varied by financial indicator: Participants (n=364 to 388); Non-participants (n=363 to 380); Non-respondents (n=501 to 528). Operating margin is defined as [(operating revenue – operating expenses)/operating revenue]; total margin is defined as [(total revenue – total expenses)/total revenue)]; days cash on hand is defined [(cash + marketable securities)/(operating expenses – depreciation)/365]; current ratio is defined as (current assets/current liabilities); days revenue in accounts receivable is defined as [(net accounts receivable)/(net patient service revenue/365)].

TABLE 4: Outpatient revenue and Medicare payer mix by ACO participation, 2019

Variable	Participant	Non-Participant	Non-Respondent	P-value
Outpatient to total revenue (median)	82.9%	80.9%	77.9%	<0.001
Range	[50.8% - 99.2%]	[16.9% - 98.3%]	[5.2% - 99.5%]	
Medicare inpatient payer mix (median)	67.1%	73.3%	71.8%	<0.001
Range	[5.7% - 100%]	[12.1% - 99.3%]	[4.7% - 100%]	
Medicare outpatient payer mix (median)	36.1%	37.2%	36.8%	0.548
Range	[8.8% - 66.5%]	[11.4% - 69.0%]	[2.2% - 78.9%]	
Uncompensated care to total operating expenses (median)	3.8%	4.1%	3.5%	0.011
Range	[0.0% - 50.4%]	[0.0% - 40.0%]	[0.2% - 78.3%]	
Medicaid to total charges (median)	13.9%	12.5%	13.4%	0.069
Range	[0.5% - 40.8%]	[0.0% - 51.8%]	[0.4% - 77.1%]	

Note(s): Authors' analysis of Medicare cost reports. Kruskal-Wallis tests were performed to determine if the median values were the same across participants, non-participants and non-respondents. Sample sizes varied across indicators: Participants (n=381 to 388); Non-participants (n=376 to 382); Non-respondents (n=517 to 529).

CAHs reporting participation with an ACO were more profitable than non-participants or non-respondents as measured by operating and total margin. A statistically significant difference was also observed for the number of days revenue in accounts receivable with participating CAHs reporting fewer days. There were no statistically significant differences in the number of days cash on hand or the current ratio of total current assets to total current liabilities.

Table 4 shows outpatient revenue and Medicare payer mix by ACO participation. As compared to non-participants and non-respondents, CAHs participating in an ACO had more outpatient revenue relative to inpatient (83% versus 81% and 78%, p<0.001) and were less reliant on Medicare for inpatient care (67% versus 73% and 72%, p<0.001). CAHs in an ACO had less uncompensated care than non-participating CAHs, but more than non-respondents. There were no statistically significant differences in outpatient payer mix or Medicaid as a percent of total charges.

DISCUSSION

Results from this study identified 388 CAHs or their systems participating in or leading an ACO in 2019. CAHs leading an ACO most commonly reported contracting with Medicare or commercial payers. Fewer contracted with Medicare Advantage or Medicaid, and when they did, it was more likely to be a CAH that contracted with multiple payers (versus only one). Consistent with previous research,[4,5] CAHs in an ACO in 2019 were more likely to have greater net patient service revenue, and to be not-for-profit and system-affiliated. Drawing on findings from urban hospitals,[4] these results suggest that system-affiliated CAHs serving larger patient populations may be more likely than lower-volume, non-system-affiliated CAHs to have access to resources such as electronic health record data and capital to support investments and changes to care delivery that are required in an ACO model of care.[9] The finding that CAHs participating in ACOs on average had higher margins (profitability) than CAHs not participating or not responding further suggests that resources are required for CAHs to be able to engage in the transformation necessary to participate in an ACO; however, it was not possible to

discern from this study whether the stronger financial results were precursors to entering an ACO or an outcome of being in an ACO.

Notably, CAHs participating in an ACO had higher median outpatient revenue as a proportion of total revenue, were less reliant on Medicare as a payer for inpatient care (although Medicare was still a primary payer), and had lower median days in accounts receivable compared to CAHs not participating in ACOs or not responding to the survey. As state flex coordinators seek to support CAHs considering ACO participation, these results suggest that interventions and activities focused on growing outpatient business, diversifying payer mix, and improving the revenue cycle may be important. Together, the results also suggest that operating and total margin, days in accounts receivable, outpatient to total revenue, and Medicare inpatient payer mix - indicators in CAHMPAS - may be useful outcome measures or benchmarks for hospitals and/or states to monitor as they consider or engage in ACO participation.

More research is needed to understand the relationship between system affiliation and ACO participation. Access to resources and data is an obvious way that systems may support CAH engagement with ACOs; however, there may be other important factors such as care coordination or other strategies to retain patient patients and minimize bypassing the CAH to receive services elsewhere.[10,11] The overwhelmingly greater proportion of system-affiliated hospitals among the survey participants suggests this may be a fruitful avenue for further inquiry.

This study has several limitations that need to be considered when interpreting the results, the most notable of which is the extent of missing data. Forty-one percent of CAHs did not respond to the question about ACO participation in the AHA Annual Survey. It is not possible to determine how many of these hospitals did not respond because they were not participating versus how many responses were truly missing. As ACO participation expands beyond the Medicare Shared Savings Program, more complete data are needed to understand the ACO landscape among CAHs. In addition, this study was cross-sectional and therefore not able to discern the nature of the association between ACO participation and financial performance. Longitudinal studies would contribute to a more nuanced understanding of the potential facilitators and outcomes for CAHs participating in ACO arrangements, and factors associated with drop-out.

In summary, findings from this study combined with previous research demonstrating the success of the ACO Investment Model (AIM) that provided up-front investment and ongoing payments to rural hospitals for infrastructure development, suggest there may be a need for policymakers to consider additional supports (financial and other) to aid CAHs interested in ACO participation.[12] Proposed changes to the Medicare Shared Savings Program incorporate elements of the AIM such as advanced payments and greater flexibility that may help support rural providers.[13] Findings that CAHs leading an ACO were often participating with two or more payers suggest that alignment across payers may be one additional avenue for further exploration as a facilitator of ACO participation among CAHs.

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APPENDIX TABLE 1: AHA survey questions used to determine ACO participation and contract types

Item No.	Field Name	Field Description	Survey Question	Notes
168	ACOORG	Has your hospital or health care system established an accountable care organization?	D.15.a	1 = hospital/system current leads an ACO 2 = hospital/system currently participates in an ACO (but is not its leader) 3 = hospital/system previously led or participated in an ACO but is no longer doing so 4 = hospital/system has never participated or led an ACO
Item No.	**Field Name**	**Field Description**	**Survey Question**	**Notes**
169	ACOTYPT	Accountable care contract - traditional **Medicare**	D.15.b.1.	1=yes, 0=no
170	ACOTYPAD	Accountable care contract - **Medicare Advantage plan**	D.15.b.2.	1=yes, 0=no
171	ACOTYPCI	Accountable care contract - **commercial insurance plan**	D.15.b.3.	1=yes, 0=no
172	ACOTYPMD	Accountable care contract - **Medicaid**	D.15.b.4.	1=yes, 0=no

For more information on this report, please contact Kristin Reiter, reiter@email.unc.edu.

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