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The Impact of COVID-19 on CAH Financial Indicators

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KEY FINDINGS

- CAHs experienced statistically significant improvements in profitability, most measures of liquidity, and ability to cover debt service requirements during the COVID-19 pandemic, most likely as a result of the PHE funding that they received.[1]
- Outpatient care increased and inpatient care decreased during the pandemic, and the percentages of both outpatient and inpatient services covered by Medicare declined. Uncompensated care also declined.
- Average salary per FTE, all full-time employees on payroll, increased significantly during the COVID-19 pandemic.

PURPOSE

Using data from the Centers for Medicare & Medicaid Services (CMS) Hospital Cost Reporting Information System (HCRIS), the Flex Monitoring Team (FMT) produces and reports financial indicators that can be used by CAH stakeholders to benchmark and assess CAH financial performance. These indicators are reported in both the Critical Access Hospital Measurement and Performance Assessment System (CAHMPAS), a free online tool available to CAH executives, State Flex Coordinators, and Federal staff, and also in the annual State Medians Report (a report available to anyone through the FMT website). During the COVID-19 pandemic, CAHs experienced disruptions in services, and faced increased costs and an influx of COVID-19 patients. Starting in April 2020, hospitals also received federal Public Health Emergency (PHE) funding. These simultaneous changes not only impacted financial performance, but also influenced the interpretation of financial measures and trends. The purpose of this brief is to describe the impact of COVID-19, including federal relief funding (PHE funding), on CAH financial indicators.

BACKGROUND

The COVID-19 pandemic has impacted health care through numerous mechanisms, most notably, higher staffing expenses and supply costs, canceled elective procedures, increased patient load, and provider shortages.[2–4] CAHs may have been particularly vulnerable to the effects of the pandemic given their status as small rural hospitals that serve a large proportion of public health insurance beneficiaries,[5] have low financial liquidity, and rely heavily on revenue from outpatient

services.[6] However, in response to these losses and financial strains, the federal government instituted the Coronavirus Aid, Relief, and Economic Security (CARES) Act in March of 2020 to help relieve the financial pressures hospitals were facing.[6] The CARES Act included the Provider Relief Fund (PRF) which distributed a total of $178 billion to rural and urban providers, the American Rescue Plan (ARP) which supplied rural hospitals with an additional $8.5 billion to maintain access to services for rural residents, and the Paycheck Protection Program (PPP) which has allocated $100 billion in PPP loans to health care providers.[7] In this study, the funds described above are collectively referred to as "PHE funding."

The COVID-19 pandemic effects in conjunction with PHE funding have implications for the financial performance and condition of CAHs from 2020 to 2022 and beyond. To aid key stakeholders in interpreting the financial data included in CAHMPAS and the State Medians Report during this period, we outline some of the impacts on key financial indicators below.

DATA AND METHODS

Data on CAH financial performance was drawn from the June 2022 release of the Centers for Medicare & Medicaid Services' Healthcare Cost Reporting Information System (HCRIS), appended with additional hospital-years from the December 2022 release which occurred during the study period. The initial sample contained 1,367 unique non-Indian Health Service CAHs with Medicare cost reports covering at least 360 days and ending between April 2015-March 2022, amounting to 9,179 hospital-years. Hospitals were further excluded if they closed between April 2015-February 2020 or reported negative PHE funding (n=49) or zero funding in both their 2020 and 2021 cost reports (n=204). Additionally, hospitals were excluded if they did not submit cost reports in at least two years pre-pandemic (April 2015-March 2020) and two years during-pandemic (April 2020-March 2022). The final sample included 1,039 unique CAHs and 7,178 hospital-years.

We define the start of the COVID-19 period in this study as April 1, 2020, because PHE funding was first distributed in April 2020 (Table 1).

TABLE 1: Definition of Pre-Covid-19 and Covid-19 Periods

	Cost reports ending between	
Pre-COVID-19 period	Apr 1, 2015	Mar 31, 2020
COVID-19 period	Apr 1, 2020	Mar 31, 2022

Data on the amount of PHE funding received by hospitals was drawn from HCRIS. Variable definitions and sources are displayed in Table 2.

TABLE 2: Definition of COVID-19 Related Variables

Variable	Definition	Source
PHE Funding	COVID-19 Public Health Emergency Funding	HCRIS, Worksheet G-3, Line 24.50[a]

Note(s): [a] The reporting instructions for Line 24.50, COVID-19 PHE Funding, indicate to "aggregate revenue received for COVID-19 public health emergency (PHE) funding including both provider relief fund (PRF) and Small Business Association Loan Forgiveness amounts."[8] This analysis assumes hospitals are reporting ARP, PRF, and PPP funding in this line item, but there may be COVID funds errantly reported elsewhere or funding from other sources (e.g., Medicaid, private payers, state governments) that are not reflected.

RESULTS

Table 3 presents summary statistics for the pre-COVID-19 and COVID-19 periods for select financial indicators included in CAHMPAS[9] and the State Medians Report.[10] Overall, CAH profitability increased during the COVID-19 pandemic. Median total margin was 9.4% during the COVID-19 period compared to 2.4% in the pre-COVID-19 period, p-value<0.001; median operating margin increased to 7.3% from 0.6% pre-COVID-19, p-value<0.001; return on equity increased to 16.3% from 5.1%, p-value<0.001; and cash flow margin increased to 12.2% from 6.5%, p-value<0.001.

The median amount of equity financing as compared to debt financing decreased slightly during COVID-19; however, hospitals' ability to cover their debt service requirements (debt service coverage) increased to 5.8 from just under 3.0, p-value<0.001. Most measures of liquidity improved during COVID-19 including days cash on hand (188 days versus 80 days) and days in gross and net accounts receivable, although current ratio declined.

TABLE 3: Financial Indicator Medians Before and During the COVID-19 Pandemic

CAH Financial Performance Pre and During COVID-19		Pre-COVID-19 (April 1, 2015-March 31, 2020)	COVID-19 (April 1, 2020-March 31, 2022	p-Value[a]
Category	**CAHMPAS Financial Indicators[b] (Median)**	**N = 5,100 Hospital Years**	**N = 2,078 Hospital Years**	
Profitability	Total margin	2.36%	9.37%	**<0.001**
	Operating margin	0.63%	7.32%	**<0.001**
	Return on equity	5.07%	16.28%	**<0.001**
	Cash flow margin	6.53%	12.17%	**<0.001**
Capital Structure	Equity financing	58.17%	53.28%	**<0.001**
	Long term debt to capitalization	28.09%	27.54%	0.750
	Debt service coverage	2.96	5.83	**<0.001**
Liquidity	Days in gross accounts receivable	48.30	47.01	**0.014**
	Days in net accounts receivable	51.50	48.59	**<0.001**
	Current ratio	2.55	2.07	**<0.001**
	Days cash on hand	80.49	188.09	**<0.001**
Outpatient	Outpatient payer mix	37.79%	34.31%	**<0.001**
	Medicare outpatient cost to charge	44.11	44.34	0.659
	Outpatient revenue to total revenue	78.13%	80.63%	**<0.001**
Inpatient	Swing average daily census	1.62	1.60	0.745
	Acute average daily census	2.70	2.35	**<0.001**
	Inpatient payer mix	73.10%	65.44%	**<0.001**
	Medicare inpatient cost per day	$2,715.73	$3,196.09	**<0.001**
Labor	Average salary to FTE	$57,673.61	$65,740.72	**<0.001**
	FTEs per bed	5.67	5.62	0.472
Other	Patient deductions	43.95%	45.32%	**0.010**
	Uncompensated care	0.04	0.03	**<0.001**
	Medicaid payer mix	0.13	0.13	0.391
	Plant age	10.90	12.64	**<0.001**

Note(s): [a] A Kruskal-Wallis Test was performed to determine if median financial indicators differed between pre-COVID-19 period and COVID-19 period. Significant p-values, <0.05, are bolded.

[b] Definitions of financial indicators can be found on the Critical Access Hospital Measurement and Performance Assessment System (CAHMPAS) or in the State Medians Report.

DISCUSSION

As shown in Table 3, the joint impacts of the pandemic and PHE funding are clearly apparent among many indicators of CAH financial performance. Performance during April 1, 2020 to March 31, 2022 was statistically significantly different from performance during April 1, 2015-March 31, 2020 for 18 of the financial indicators included in the study. Most notably, CAHs saw significant improvements in profitability and liquidity during the COVID-19 period most likely due to the PHE funds that they received from the CARES Act.[1] As expected, labor expenses also increased significantly as measured by average salary per full-time equivalent employee. Increased expenses may have been funded in part with short-term debt that resulted in a decline in current ratios. Utilization shifted somewhat from inpatient care (which declined) to outpatient care (which increased), and the percentage of both inpatient and outpatient services covered by Medicare declined, perhaps due to older patients delaying or foregoing care during the pandemic. Uncompensated care as a percentage of total expenses also declined, which could reflect changes in care seeking behavior during the pandemic, changes in hospitals' reporting and collection of financial assistance eligibility, increases in overall expenses, or some combination of these and other factors.

As CAHs exhaust PHE funding, financial performance is again likely to show significant changes. Stakeholders should be cautious in interpreting financial performance during 2020, 2021, and likely beyond as trends in common financial performance measures were disrupted.[1] As COVID-19 moves from pandemic to endemic, there will likely be a new normal for CAH financial performance. Careful monitoring will be needed to understand the trajectories of CAHs' financial measures.

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