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# Impacts of Critical Access Hospital Independence and System Ownership during the COVID-19 Pandemic

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## KEY FINDINGS

- In a survey of 155 Critical Access Hospitals (CAHs), system-owned and independent CAHs described similar challenges concerning staffing, bed availability and transfers, and obtaining physical resources and supplies.
- System-owned CAHs noted some advantages from their system ownership, including access and allocation of supplies, ease of patient transfers, consistent policies, and staffing support.
- For independent CAHs, the main advantage noted by participants was the ability to make local and timely decisions for their hospital and community without delays from a large system, including staffing decisions, adapting hospital processes and services, allocating supplies, and direct communication.

## PURPOSE

The COVID-19 pandemic has created and exacerbated many challenges for Critical Access Hospitals (CAHs) throughout the country, but there remain gaps in knowledge of how system-owned and independent hospitals may have responded differently. This brief summarizes findings from a survey of CAHs on their response to COVID-19, and specifically assesses similarities and differences between how system-owned and independent CAHs described the impact of their system affiliation on their hospital's response.

## BACKGROUND

Being part of a hospital system can provide many advantages for small hospitals, including CAHs. System-affiliated hospitals may have access to supplies at a lower cost, and more financial flexibility to invest in infrastructure, technology, and staff. Previous work by the Flex Monitoring Team (FMT) has found that system-affiliation among CAHs was associated with higher profitability and higher average salary per FTE.[1] Additionally, system-affiliated hospitals have been found to outperform non-system hospitals on many standard quality measures.[2] System affiliation among all types of U.S. hospitals has increased steadily from 2007 to 2016;3 however, the percentage of CAHs that are system-affiliated is lower than rural Prospective Payment System (PPS) hospitals, with 43% of non-metropolitan CAHs being affiliated with a system in 2016 compared to 56% of non-metropolitan PPS hospitals.[3]

The COVID-19 pandemic has exacerbated many challenges that CAHs face, such as access to supplies and financial vulnerability. In a survey of CAHs about their initial response in the first few months of the pandemic, the FMT asked a broad question about how their status as system-affiliated or independent impacted their initial response to COVID-19. System-affiliated CAHs reported assistance with resources was the biggest impact of being part of a system. However, independent CAHs gave more mixed responses, including some positive and some negative impacts. Additionally, another hospital survey from March 2020 (including CAHs and non-CAHs) from the U.S. Office of the Inspector General found that hospitals that were part of a larger health system reported they were at less financial risk compared to smaller independent hospitals, many of which reported they faced more financial uncertainty.4 The present study builds on those findings to further explore the different advantages and disadvantages faced by system-owned and independent CAHs during the COVID-19 pandemic as well as information beyond the first few months of the pandemic.

## APPROACH

Data for this brief come from an online survey of CAH CEOs across the U.S. from March to May 2022. The survey was distributed to a random sample of 404 CAHs total; roughly 30% of the CAHs in each of the four U.S. Census Regions. A total of 155 responses were collected, for a response rate of 38%. The survey was sent electronically to the hospital CEO or administrator, though they were able to have another member of their staff complete the survey or provide survey responses via phone.

At the beginning of the survey, respondents were asked "As of today, is your hospital owned by a central organization, such as another hospital or health system?" to define system ownership for our analysis. If respondents selected "yes", they were considered to be system-owned. If respondents selected "no", they were considered independent, but were also asked two follow up questions about hospital system resources that may have been available to them: if they were contract managed and if they participated in a group purchasing agreement. In this brief, we refer to facilities as either system-owned or independent based on this classification, but it is important to acknowledge that there are other definitions and relationships outside of complete ownership.

Survey questions consisted of multiple choice and open-ended questions. There were two versions of the survey: one for system-owned and one for independent hospitals. The two surveys asked similar but slightly different questions and participants were given one version based on their indication whether their hospital is owned by another hospital or health system. Quantitative data were analyzed using Stata 17. Qualitative data were coded and themed using inductive analysis by three members of the research team.

## RESULTS

The majority (n= 111, 72%) of respondents were CAH CEOs or administrators. Others included Directors of Nursing, Infection Control, Operations, and Quality staff. Twenty-five percent of surveyed CAHs (n=39) were owned by a hospital system, whereas 75% of surveyed CAHs (n=116) were operated independently. Of those independent hospitals, 21% (n=24) reported they were contract managed by a hospital system, and nearly all (95%, n=108) reported participating in a group purchasing agreement. Some survey questions were not answered by all participants; the tables below include denominator values (N) for the number of participants that gave an answer for each question.

**TABLE 1: Themes and Quotes on the Advantages of being a System-Owned CAH during the Height of the COVID-19 Pandemic (N=39)**

| Theme (# of CAHs) | Theme Description | Examples of Quotes |
|---|---|---|
| Physical resources and supplies (25) | Access to and allocation of physical supplies such as COVID-19 tests, Personal Protective Equipment (PPE), and ventilators | "Being a part of the health system also assisted with purchasing and allocation of critical PPE and patient care supplies." |
| Transfers (18) | Specific patient transfer protocols and the ability of the system to manage patient census across all system hospitals (transferring patients in and out of CAHs as appropriate) | "We had access to a Division Transfer Center that assisted with transferring patients to a higher level of care." |
| Consistent policies (17) | Generally coordinated efforts across the system, alignment across policies and documentation, and incident command structure | "A lot of policies and recommendations were developed by the time [state] had its peaks so the system had processes in place to support safe, effective care and resource allocation. Strong networking among regional facilities within the system to share supplies and resources." |
| Staffing resources (8) | Receiving staffing support from the system as needed and having access to incentive pay for various staff | "Our system also helped in staffing through our various float pools." |

## System-owned CAHs

Representatives from system-owned CAHs were asked to describe the biggest advantages and disadvantages of being system-owned, specifically during the week when their hospital had the highest volume of COVID-19 patients. Table 1 displays examples of the four main themes of advantages that emerged: physical resources and supplies (25), transfers (18), consistent policies (17), and staffing resources (8). Many respondents mentioned more than one of these themes.

**TABLE 2: Themes and Quotes on the Disadvantages of being a System-Owned CAH during the Height of the COVID-19 Pandemic (N=37)**

| Theme (# of CAHs) | Theme Description | Examples of Quotes |
|---|---|---|
| Bed availability (9) | Limited availability of beds within the CAH and at other hospitals, lack of space to open a COVID-19 inpatient unit | "'Competing' with other hospitals in the system for a bed." |
| Staffing resources (9) | Staff shortages within the CAH and at other hospitals, staff being infected with COVID-19, ongoing recruiting challenges | "Dealing with staff shortages at our hospital and the main hospital." |
| Transfer challenges (7) | Receiving overflow patients from other facilities without enough resources, unable to transfer out to other hospitals during surges, holding patients in the ED while awaiting transfer | "Unable to transfer patients into the system and having to go through the centralized transport center to move patients."<br>"Many other facilities were at capacity so a lot of times we were holding patients in our ED who needed a higher level of care for several day[s] awaiting a transfer bed or transportation to get to another facility. EMS had to travel sometimes states away to transfer patients so they were not always readily available." |
| Limited autonomy (7) | Policies and decisions made at the system level were not always made with CAHs in mind, rapidly changing decisions, broader governmental regulations | "Surge volumes were not consistent as the virus spread – we were experiencing surge before our other hospitals and there was no sense of urgency of support." |
| Physical resources and supplies (7) | Prioritization of shared resources at the system level, limited access to COVID-19 testing and other equipment, inability to tailor EMR | "[in]ability to tailor the utilization of the EMR for our particular situation such as we had a number of ICU qualified patients but the EMR did not support adding ICU templates to extra patient beds." |

Table 2 provides examples of disadvantages as described by system-owned hospitals. These examples fit into five key themes: bed availability (9), staffing resources (9), transfer challenges (7), limited autonomy (7 mentions), and physical resources and supplies (7). Some responses included more than one theme.

**TABLE 3: Themes and Quotes on the Advantages of being an Independent CAH during the Height of the COVID-19 Pandemic (N=109)**

| Theme (# of CAHs) | Theme Description | Examples of Quotes |
|---|---|---|
| Staffing (20) | Strong sense of teamwork and high morale among staff, ability to make local decisions to change assignments, allow for flexible scheduling, and offer incentive pay | "We didn't have to get corporate permission to approve extra money for staff working additional shifts or to purchase supplies/equipment/PPE needed for our people."<br>"Our hospital did not mandate vaccines (like larger managed hospitals did) until CMS mandated it or gave the option of exemptions and I feel that kept our front line staff knowing that administration trusted their ability to use their autonomy in [their] opinion of taking [the COVID-19 vaccine] AND in administration's trust in their infection control practices. I honestly think that is why we are the only hospital around our area that does not need agency yet. Our nurses feel trusted and that their opinion matters, so they stay at our facility." |
| Adapting hospital processes and services (18) | Making local and timely decisions about changes to hospital services (such as pausing elective procedures) and hospital processes (such as visitation restrictions, staffing, and patient care decisions) | "We could act quickly in making decisions and doing what was best for our patients."<br>"The ability to adjust our surgeries to allow for additional patients while still providing surgical services. The flexibility in being able to implement solutions quickly without a lot of layers of approval." |
| Supply allocation and purchasing (13) | Ability to find alternate vendors for supplies, not having restrictions about how and when to use supplies, and knowing exactly what resources were available on site | "I could negotiate and purchase alternative PPE and supplies without having to navigate the constraints of layers in a large system."<br>"Able to make our decisions about supply allocation." |
| Communication (7) | Clear communication across all levels of the hospital, talking to staff directly, adjusting communication strategy as needed, frequent communication with other local hospitals | "We met daily and adjusted as needed on a daily basis." |

## Independent CAHs

Representatives from independent CAHs were also asked to describe the biggest advantages and disadvantages of being an independent CAH, specifically during the week where their hospital had the highest volume of COVID-19 patients. Advantages were all broadly related to local and timely decision-making, but some respondents gave more specifics about staffing (20), adapting processes, procedures, and hospital services (18), supply allocation and purchasing (13), and communication (7). Examples of these advantages are listed in Table 3. Many responses mentioned more than one of these themes.

**TABLE 4: Themes and Quotes on the Disadvantages of being an Independent CAH during the Height of the COVID-19 Pandemic (N=109)**

| Theme (# of CAHs) | Theme Description | Examples of Quotes |
|---|---|---|
| Staffing challenges (48) | Staff burnout, scheduling issues, turnover and shortages, vaccine hesitancy among staff | "Many patients, including time critical patients, were unable to be transferred to a higher level of care. Not having an ICU our team was stressed to their limits as they did everything they could to keep our patients alive."<br>"Not as many resources as a large system would have. Lower number of employees means a larger percentage impact with any staff turnover." |
| Lack of physical resources (46) | Limited leverage or purchasing power for supplies, supply chain issues | "Perhaps we could have shared some resources - although we were all in a serious shortage of resources."<br>"Supplies- I feel if we were linked at that time to a [system], we would have had easier access to supplies that we needed and could not order." |
| Patient transfers (42) | Shortage of hospital beds, unable to find facilities to transfer higher acuity patients | "Transferring patients to a higher level of care proved to be difficult, exacerbated by the shortage of hospital beds across our entire region."<br>"Getting patients transferred out to other facilities. They saved beds for their sister hospitals." |
| Lack of support (10) | Not having support from a system, other hospitals, local public health, or the broader community | "Lack of support and willingness to collaborate from local County Health Department."<br>"Not having another entity to rely on for materials, staff, or instruction." |
| Response best practices (8) | Difficulty keeping up with changing recommendations and best practices, developing processes independently with limited resources | "Significant lack of resources, including… resources related to policies and evidence-based practices."<br>"There was a lot of work and very few people to do it. We had to develop the processes ourselves which took a lot of time." |

Table 4 provides examples of disadvantages of being an independent CAH as described by participants. Most responses fit into three main themes of staffing challenges (48), lack of physical resources (46) and patient volume/surges (42). Additional responses mentioned a general lack of support from local health departments, local hospital systems, and the broader community (10) and lack of access to best practices forcing them to develop processes independently (8). Many responses mentioned multiple disadvantages that fit into more than one theme.

## DISCUSSION

Results from this survey indicate that independent and system-owned CAHs have faced many of the same challenges during the COVID-19 pandemic but experienced them somewhat differently, in part due to their system affiliation. Some responses that were commonly listed as an advantage for system-owned hospitals were simultaneously acknowledged as a disadvantage for independent hospitals, which was consistent with previous literature and discourse on this topic. For example, many system-owned CAHs mentioned that their system was helpful in obtaining personal protective equipment (PPE) and patient care supplies, while many independent CAHs cited their difficulty obtaining these supplies as a disadvantage of being independent.

Participants also brought up flexibility (or a lack of flexibility) in many areas of their response connected to their status as an independent or system-owned CAH. The advantages noted by independent CAHs were all broadly related to their ability to adapt quickly to their local needs, including staffing decisions, adapting hospital procedures, and allocation of supplies. Meanwhile, system-owned CAHs mentioned some closely related disadvantages of being part of a system, such as communication lags due to their system's large size and geographic spread and a lack of urgency from their system when the CAH experienced surges in COVID-19 cases. One CAH gave a specific example of an inability to tailor their electronic medical record to their specific needs, noting that they were unable to add ICU templates to extra patient beds when they had several ICU qualified patients.

Responses from participating CAHs demonstrated the wide range of experiences throughout the COVID-19 pandemic, sometimes regardless of their system affiliation. Particularly among system-owned CAHs, there was some overlap of themes in advantages *and* disadvantages. This suggests that perhaps there is substantial variance *among* health systems that own CAHs. Additionally, some themes we identified could be considered an advantage or disadvantage. For example, many CAHs (both system-owned and independent) mentioned transfers and they felt that being part of a system was an advantage for transferring to other hospitals within the system. However, system-owned CAHs also mentioned that it was *still* challenging at times to find a hospital bed when they needed to transfer a patient to a higher level of care. It is also important to recognize that ease of transfers has likely varied widely between systems, regions, and at different times during the COVID-19 pandemic. State Flex Programs in particular should consider the specific characteristics of their CAHs and the resources that may already be available to them through health system ownership, as well as the gaps in resources for independent CAHs and system-owned CAHs alike.

Interestingly, many disadvantages described by the system-owned CAHs were not specific to being part of a system. For example, many system-owned CAHs cited staffing shortages as a major challenge, as did independent CAHs. Difficulty finding available beds to accept transfers was a major theme among all CAHs, even within a system, due to COVID-19 surges and widespread limited bed availability, particularly for critical care. However, we felt it was important to include these examples as they reflect that system-owned CAHs share many of the same challenges that independent CAHs have, despite having system support.

This study has some limitations. First, these findings are from a small sample of CAHs nationally and are not intended to be representative of all CAHs' experiences during the COVID-19 pandemic. Because our survey specifically asked about CAHs' response to COVID-19 during a peak time, these findings are also not reflective of their typical operations and may not be generalizable to other public health emergencies. Additionally, independent CAHs made up three-fourths of our respondents and are thus over-represented in our findings, as about 60% of CAHs are independent (not owned by another hospital or system).[1,3] While understanding the needs and challenges for system-owned CAHs is important given the overall upward trend in hospital system affiliation,[3] the over-representation of independent CAHs may be a strength of this study, as independent hospitals are often overlooked.

## CONCLUSION

While system-owned and independent CAHs alike noted many challenges in their response to COVID-19 including staffing challenges, limited bed availability at other hospitals to transfer acute patients, and difficulty obtaining supplies, participants also noted many strengths that they attributed to their status as a system-owned or independent CAH. State Flex Programs can use this information to further tailor support for all CAHs, while considering the other resources that may or may not be available to them through a health system.

## REFERENCES

1. Bozovich L, Knocke K, Pink G, Howard A, Reiter K. *The Association Between System Affiliation and Financial Performance in Critical Access Hospitals.*; 2021. Accessed September 22, 2022. https://www.flexmonitoring.org/publication/association-between-system-affiliation-and-financial-performance-critical-access
2. Henke RM, Karaca Z, Moore B, et al. Impact of Health System Affiliation on Hospital Resource Use Intensity and Quality of Care. *Health Serv Res*. 2018;53(1):63-86. doi:10.1111/1475-6773.12631
3. Oyeka O, Ullrich F, Mueller K. *Trends in Hospital System Affiliation*, 2007-2016.; 2018. Accessed June 24, 2021. www.public-health.uiowa.edu/rupri
4. Grimm CA. *Hospital Experiences Responding to the COVID-19 Pandemic: Results of a National Pulse Survey March 23-27, 2020.*; 2020. Accessed October 26, 2022. https://oig.hhs.gov/oei/reports/oei-06-20-00300.pdf

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