

UCLA

UCLA Previously Published Works

Title

Beyond patient care: a qualitative study of rural hospitals role in improving community health.

Permalink

<https://escholarship.org/uc/item/1v345383>

Journal

BMJ Open, 12(3)

Authors

Nataliansyah, Mochamad

Zhu, Xi

Vaughn, Thomas

et al.

Publication Date

2022-03-16

DOI

10.1136/bmjopen-2021-057450

Peer reviewed

BMJ Open Beyond patient care: a qualitative study of rural hospitals' role in improving community health

Mochamad Muska Nataliansyah ¹, Xi Zhu,² Thomas Vaughn,³ Keith Mueller³

To cite: Nataliansyah MM, Zhu X, Vaughn T, *et al*. Beyond patient care: a qualitative study of rural hospitals' role in improving community health. *BMJ Open* 2022;**12**:e057450. doi:10.1136/bmjopen-2021-057450

► Prepublication history and additional supplemental material for this paper are available online. To view these files, please visit the journal online (<http://dx.doi.org/10.1136/bmjopen-2021-057450>).

Received 16 September 2021
Accepted 21 February 2022



© Author(s) (or their employer(s)) 2022. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

¹Department of Surgery, Division of Surgical Oncology, CHDS, Medical College of Wisconsin, Milwaukee, Wisconsin, USA

²Department of Health Policy and Management, Filing School of Public Health, UCLA, Los Angeles, California, USA

³Department of Health Management and Policy, College of Public Health, University of Iowa, Iowa City, Iowa, USA

Correspondence to
Dr Mochamad Muska Nataliansyah;
mnataliansyah@mcw.edu

ABSTRACT

Objectives Rural population face more health disadvantages than those living in urban and suburban areas. In rural communities, hospitals are frequently the primary organisation with the resources and capabilities to address health issues. This characteristic highlights their potential to be a partner and leader for community health initiatives. This study aims to understand rural hospitals' motivations to engage in community health improvement efforts and examine their strategies to address community health issues.

Design Eleven semistructured interviews were conducted with key leaders from four rural hospitals in a US Midwestern state. On-site and telephone interviews were audio-recorded and transcribed. The combination of inductive and deductive qualitative analysis was applied to identify common themes and categories.

Settings Participating hospitals are located in US rural counties that have demonstrated progress in creating healthier communities.

Results Three types of motivation drive rural hospitals' community health improvement efforts: internal values, economic conditions and social responsibilities. Three categories of strategies to address community health issues were identified: building capacity, building relationships and building programmes.

Conclusions Despite the challenges, rural hospitals can successfully conduct community-oriented programmes. The finds extend the literature on how rural hospitals may strategise to improve rural health by engaging their communities and conduct activities beyond patient care.

INTRODUCTION

Improving population health is essential to the mission of many healthcare organisations. The American Hospital Association identified managing population health as 'a strategic platform to improve the health outcomes of a defined group of people, concentrating on three correlated stages: the distribution of specific health statuses and outcomes within a population, factors that cause the distribution of the present outcomes and interventions that may modify the factors to improve health outcomes'.¹ From a policy perspective, the Patient Protection and Affordable Care Act included provisions that propelled hospitals

Strengths and limitations of this study

- Extended the existing literature by identifying rural hospitals' motivations and strategies to enhance community health by implementing activities beyond patient care.
- A qualitative approach was used to gain practical insights into the experience of rural hospital stakeholders that can be relevant learning points for policymakers and other hospital leaders.
- The interviews were limited to rural hospitals located in counties with good health rankings.
- Restricted generalisability due to limited sample size.

to engage in population health improvement activities.² Specifically, non-profit community hospitals are required to conduct community health need assessments every 3 years and develop health improvement plans to address the community's priority health needs to retain tax-exempt status. Moreover, there are various hospital metrics collected to measure quality. One set that the US National Quality Forum has endorsed is the Agency for Healthcare Research and Quality Quality Indicators, which includes Prevention Quality Indicators that are an essential tool for community health needs assessment.³

Rural hospitals have a significant role to play in community health improvement efforts. In the USA, the majority of rural hospitals are non-profit, have 50 or fewer staffed beds (47% of rural hospitals have 25 or fewer staffed beds), serve a median population of 27 980 and typically offer limited inpatient and outpatient care such as general surgery, obstetric care and cardiac rehabilitation services.^{4 5} Compared with their urban counterparts, rural populations have higher average poverty levels, are older and are more likely to have difficulties accessing healthcare services.^{6–8} Health risks are also highly prevalent in rural populations. For example, one study showed that only one in four rural

adults had adopted at least four of the five health-related behaviours, including getting sufficient sleep, drinking in moderation, maintaining healthy body weight, not smoking and meeting physical activity recommendations.⁹ In rural communities, hospitals are frequently the primary organisation with the resources and capabilities to address broad health issues. Not only they are the primary providers of healthcare services but they are also significant social influencers in their communities.^{10–12}

Although essential to the mission, community health improvement activities often do not align with the hospitals' core business model.¹³ Community health improvement is defined as 'activities or programmes subsidised by the healthcare organisation, carried out or supported for the express purpose of improving community health.'¹⁴ Such activities or programmes often require substantial investment without offering a clear economic return. Indeed, community benefits spending can reach up to 20% of hospital operating expenses, with an average of 8% spending per hospital in the USA.^{15 16} It is not clear what motivates rural hospitals to engage in community health improvement activities besides policy compliance.

Organisation and management theories provide several explanations of why rural hospitals may be motivated to engage in community health improvement activities beyond policy compliance. Institutional theory suggests that organisations adopt specific structures, strategies and behaviours in response to external forces, such as normative pressures.¹⁷ From this perspective, rural hospitals may engage in community health improvement efforts to align with social expectations even though it may affect their operational efficiency.¹⁸ Moreover, resource dependency theory suggests that, because of resource scarcity, organisations will reduce uncertainty by conducting various strategies, such as improving infrastructure capability and developing interorganisational relationships.^{19 20} Rural hospitals treat older, sicker and poorer patients than the US national average with limited physicians and specialties.²¹ Consequently, as a strategy to address this potential challenge, rural hospitals might initiate activities that promote healthy living in their communities. This strategy can be rolled out in collaboration with local agencies and use external funding to address the scarcity of rural hospitals' resources.

This study explored rural hospitals' experiences to understand their motivations to engage in community health improvement efforts and their strategies in addressing community health issues. Key themes

identified in this study can serve as considerations for rural hospital leadership when creating strategic plans for implementing community health programmes.

METHODS

An explanatory sequential study was designed to select and study rural hospitals' engagement in community health programmes in a US Midwestern state, where 36% of the population live in a rural area and healthcare access continues to be an issue.^{22 23} The study design is suitable for exploring emergent research questions and identifying underlying reasons and motivations for a particular phenomenon.^{24 25} Two steps were taken to inform case selection. First, County Health Rankings were used to select potential cases.²⁶ Rural hospitals in counties that had consistently ranked among the top quartile in their County Health Rankings or had shown noticeable improvement in their rankings between 2010 and 2016 were identified. Second, from the shortlist of counties and hospitals, the hospitals' community health needs assessments and health improvement plans were reviewed to assess whether community health strategies or activities were evident in these documents.

The selected rural hospitals were non-profit critical access hospitals, which receive a mix of cost-based and prospective payment system reimbursement for their services, and the only hospitals in their respective communities with the next nearest hospital located at least 35 miles away.²⁷ Two of these hospitals are part of hospital networks, which are group of hospitals and other agencies that work together to coordinate and deliver a broad spectrum of services to their communities.²⁸ The capacity of these hospitals is described with the number of total beds (ie, the total number of beds authorised by the state licensing agency) and staffed beds (ie, the number of beds regularly available at the end of the reporting period).²⁹ The profile of these hospitals and their communities is presented in [table 1](#).

C-suite executives (eg, Chief Executive Officer (CEO), Chief Administrative Officer (CAO)), community outreach managers, medical staff and other key informants from the selected hospitals were interviewed between 2017 and 2018. Two hospitals in our sample have designated community outreach managers. The other two relied on their marketing or wellness coordinator to engage the community collaboration. Interviewees were identified through a snowball sampling process, in which the hospital leaders served as the initial subjects. For each interview, two

Table 1 Characteristics of the rural hospitals

Rural hospital	Affiliated to a network	Staffed beds	Total hospital beds	Community profile			
				Population	Age >65	In poverty	Health rankings
A	Yes	25	58	21 000	16.2%	9.5%	Improved rank
B	Yes	25	80	12 000	19.4%	6.2%	Improved rank
C	No	21	25	10 000	18.0%	8.3%	Maintained high rank
D	No	25	25	20 000	17.7%	8.1%	Maintained high rank

investigators conducted the interviews in a semistructured manner, following a prepared guideline that allowed for flexibility when there was a need to elicit more specific information and opinions (see online supplemental file). Informed consent was acquired from the interviewees before the interviews. These interviewees' roles and experience in planning and conducting community-oriented programmes provide the necessary background for this study. Two interviewees participated from hospitals A and C, respectively. Four participants were interviewed from hospital B and three interviewees participated from hospital D.

The interviews lasted between 45 min and 75 min and focused on rural hospitals' activities and experiences, including health providers' motivations and strategies to improve rural communities' health quality. Moreover, rural hospitals' insights into their collaborations to improve community health and promote health as a shared value were explored. Eleven interviews were conducted with key informants until theoretical saturation was reached, where no new emerging themes were identified. Indeed, the selection of exemplary rural hospitals and interviews with experienced and knowledgeable interviewees led to insightful and detailed information on their community orientation activities.

Onsite and telephone interviews were audio-recorded and transcribed. The interview transcripts were analysed using an approach that combined inductive and deductive analyses.³⁰ Two coders, including the first author and a research associate, independently conducted the inductive coding process during the first analysis phase. They coded rural

hospitals' motivation and strategies addressing the community health needs. Following this phase, the coders met with other investigators, including the three coauthors, to discuss the emerging codes. A coding template was created based on this review. There are six predeveloped code groups: leadership and organisation values, resource and market conditions, community health needs and existing policies, facilitators and barriers for activities, stakeholders involved and their roles and salient contextual factors. In the second analysis phase, the two coders reviewed the transcripts deductively and identified themes related to rural hospitals' motivations and strategies to improve community health. Furthermore, the coders met regularly with the investigators to discuss findings and the results' validity. This is an iterative process that involves continuous modification and organisation of the codes to identify the themes' relationships. We report this study in accordance with the Standards for Reporting Qualitative Research.³¹

Patient and public involvement

Patients or members of the public were not involved in the design or conduct of this study.

RESULTS

Motivations of rural hospitals to improve community health

Three motivations emerged from the interviews regarding why rural hospitals engaged in community health efforts: (1) internal values, (2) economic conditions and (3)

Table 2 Exemplary quotes on motivations of rural hospitals to improve community health

Themes	Quotes
1. Internal values	
Vision and mission	One of our missions is to support our community's health, so we need to ask ourselves what is right for the patients and the community. We only exist because we have a patient population to serve, and if we are failing to provide the support, then the community fails, and then we would ultimately fail (CEO, Hospital C).
Leadership commitment	Instead of acting reactively and fixing people, our CEO was into proactive health. He focused on preventative efforts, and he was an advocate for the wellness center to get the community active in the wellness center before they developed diabetes or high blood pressure (Wellness Coordinator, Hospital A).
2. Economic conditions	
Healthcare market	The fact that the other hospitals have mental health services, we say, 'If they can do it (meeting community need of psychiatry service), why can't we?' I think that is a good thing, rather than say, 'Oh, we cannot do it.' Your competitor is doing it, we should be able to do it, so I think that is an example of a good outcome of the competition (Nurse Coordinator, Hospital D).
Funding availability	You had the combination of grants and money and attention on students, which everyone loves to pay attention to those youngest members of your community, and I feel like it was just a very positive environment. The wellness committee and the school district brought together many different stakeholders to support the student program (Outreach Coordinator, Hospital B).
3. Social responsibilities	
Wellness and medical needs	We really focused our improvement efforts on those needs (chronic disease management, cancer prevention and treatment, access to wellness, and mental health services) and really trying to create more wellness focus through the community. Whether or not people are patients (Outreach Coordinator, Hospital C).
Community issues	A year and a half ago, when we had an adolescent suicide, that raised awareness of the issue. Since then, one of our psychologists has been active with the schools and helping with some education and awareness in that (Nurse Coordinator, Hospital D).

CEO, Chief Executive Officer.

social responsibilities. Themes and sample quotes are presented in [table 2](#).

Internal values

'Vision and Mission' and 'Leadership Commitment' subthemes represent the 'Internal Values' motivation category. Most interviewees highlighted the hospital's vision and mission as their primary motivation to improve population health, which reflected the theme of alignment with internal values as a key motivator. This organisational statement was frequently amplified with the drive for improvement from the hospital CEOs and board members.

Some hospital administrators indicated that societal values inspired their hospitals' involvement with community health improvement efforts and directions reinforced by their leaders. Interviewees mentioned that the hospital would most likely engage the community in improving the population's health if the hospital leadership is committed to this vision. A wellness coordinator reflected on her experience, 'I think with the CEO's passion for population health, and a board that stood behind the cause, there was not really any other option but to initiate proactive and preventive health activities in our community'. Indeed, some board members are local residents who have held their positions for years, contributing to their enhanced awareness of community health needs and strengthening the hospital bond to the local community. One manager said, 'Our board chair has been here 33 years, and then the second-longest tenure is 31 years, so we have a strong commitment to the community'. Evidently, this personal engagement directly influences the level of hospital engagement in the community.

Economic conditions

'Healthcare Market' and 'Funding Availability' subthemes represent the 'Economic Conditions' motivation category. Rural hospitals face more challenging market and economic environments than their urban counterparts. Our analysis suggested that rural hospitals used community health activities to improve brand awareness, preserve their markets and build community relationships. Interviewees mentioned the importance of maintaining their community's positive perception of the hospital. One CEO stated, 'The community activities also help to get our name and our face out there in positive attitudes rather than just every time they see our hospital it is because they are feeling sick or miserable'. For example, one hospital provided healthy snacks for students and parents who attended local sports games. Another hospital has initiated cooking classes for the locals to create more nutritious and balanced meals. Moreover, two hospitals regularly wrote articles in the local newspaper that 'were health-related and aimed to educate and reach a greater audience'. These activities allowed more recognition of hospital brands while engaging the community in health improvement beyond patient care.

The limited financial resources of many rural hospitals may limit their ability to invest in community health improvement activities. One reason interviewees mentioned that motivated the community health improvement efforts was funding or grant opportunities. Consequently, funding sources can influence hospitals' types of programmes or partnerships. For example, when a health initiative, the Blue Zone Project, was advocated in our study locations, the rural hospitals and local stakeholders promptly organised their efforts to acquire the funding. The Blue Zones Project is an example of a community improvement initiative focusing on improving well-being by prompting communities to make environmental, policy and social changes to enable healthy choices. This process creates a positive lasting effect in the community and promotes future partnerships among rural stakeholders, even after the initiative is over. Overall, our findings provide evidence that rural hospitals will be motivated to reduce uncertainty in treating severe patients and operating in a challenging market because of limited resources. This motivation can lead to various strategies, such as improving their capability, acquiring external funding and developing collaborations with local stakeholders.

Social responsibilities

'Wellness and Medical Needs' and 'Community Issues' subthemes represent the 'Social Responsibilities' motivation category. Interviewees acknowledged that the hospital is part of the community and should do its best to improve community health. Community health efforts motivated by hospital values may not be financially profitable because there is no direct revenue pathway. However, they are still conducted to meet the hospital's social responsibility. One of the CEOs illustrates this point concisely, 'In rural America, the hospital is not only the largest employer in the county and truly an economic engine but also it plays such a huge role in its impact on health and wellness. Every hospital has its direction, vision and plan. I am not knocking anyone for what they choose to focus on. It has just been a choice that we have made to invest in our community whether we are paid for it or not and allowing our associates to participate in wellness programmes'. As illustrated by our findings, rural hospitals in this study have initiated community health improvement efforts to fulfil their social responsibilities and gain legitimacy from the local community.

Frequently, interviewees mentioned the community's most prominent chronic medical condition, such as diabetes or cardiovascular diseases, as the main reason for developing a particular wellness programme. Results from the community health needs assessment also drove hospitals to initiate health programmes and partnerships to tackle relevant health issues. Inspired by these societal conditions, rural hospitals have started various wellness community programmes, such as weight management, fitness activities and nutrition consultation.

Table 3 Exemplary quotes on strategies of rural hospitals to improve community health

Themes	Quotes
1. Building capacity	
Healthcare professionals	We just brought on a new psychologist and two social workers. We are creating an integrated behavioral health model in our clinic to integrate mental wellness more closely with physical wellness and address those issues simultaneously (Marketing Coordinator, Hospital D).
Space	We have a gym, and we have an aerobics studio where we teach classes. We are actually expanding that service right now, so the gym will get a little bit larger. We will have a new aerobics studio that'll allow for more significant activities to take place there (CEO, Hospital A).
2. Building relationships	
Public agencies	We collaborate with the schools. Once a month, our psychologist will go to the school and work with their counselors and administration. They talk about what the school is facing regarding mental health issues. She does not see kids there, does not see patients, or does not treat anything but she is a consulting resource (CAO, Hospital D).
Community businesses	We helped two restaurants in the community change up their menus and did some nutritional analysis and things like that. We switched out many vending machines in the community (Wellness Coordinator, Hospital B).
Cross-sector partnership	The hospital organized the wellness committee a year ago. We probably met with the local stakeholders four or five times to understand and drill into everyone's top concern. Was it a lack of education in the community around health and prevention? Was it access? Was it the need for more services, et cetera? We just spent a lot of time brainstorming, drilling into the different categories (CEO, Hospital B).
3. Building programmes	
Raising health awareness	I do a health column for the newspaper every week that reaches out to all of our local newspapers. It is also in local newsletters and in the hospital one (Wellness Coordinator, Hospital A).
Fundraising, grants and sponsorship	We help sponsor and fund an annual suicide awareness walk to raise awareness of behavioral health issues. That comes through our community health relations department (CAO, Hospital D).
Disease management and health promotion	We have two individuals in our primary care clinics who are now really focused on chronic disease management. They will be working to ensure that patients are not missing their appointments and that we are doing good coordination of care between our specialists and our primary care providers and working through that. We also have a stroke support group to show that living better after stroke is possible (Outreach Coordinator, Hospital C).

CAO, Chief Administrative Officer; CEO, Chief Executive Officer.

Moreover, some hospitals were also aware of existing societal issues that may not be mentioned in any formal reports. For example, a community was shocked by an adolescent suicide at one school. This event brought awareness of mental health issues among the school-age population. The hospital responded by collaborating with the school to initiate mental health awareness programmes. Indeed, the communities' mental health issues have played a part in shaping rural hospitals' health improvement plans. Other interviewees talked about establishing outreach programmes to address alcoholism and suicide issues. These programmes are not profit-generating, but hospitals sustain them to respond to societal conditions and ensure they participate in community wellness improvement efforts.

Strategies of rural hospitals to improve community health

The analysis suggested three types of strategies that rural hospitals used to improve community health: (1) building capacity, (2) building relationships and (3) building programmes. The first thematic area encompasses activities that hospitals are pursuing internally. The latter two thematic areas include activities with an external focus, either collaborating with other local organisations or through direct community engagement efforts. The themes and exemplary quotes are presented in [table 3](#).

Building capacity

'Healthcare Professionals' and 'Space' are subthemes that represent the 'Building Capacity' strategy category. Rural hospitals in the sample strived to build their operational capabilities despite the inherent limitations of rural areas, such as geographical barriers and provider shortages. One CEO mentioned, 'The number of primary care providers has been an issue for years'. While an administrator highlights that 'Psychiatrists are very difficult to recruit, especially to rural communities'. These issues illustrate rural hospitals' challenges in acquiring healthcare professionals for medical service and participating in community health efforts. A couple of participants shared strategies to address this capacity issue by extending their roles beyond the regular ones. For example, a physician is not only providing patient services but also participating in community outreach programmes.

Besides building operational capabilities, some hospitals in our study demonstrated their community commitment by adding and developing spaces for community programmes, such as wellness and fitness centres, gyms and swimming pools and nutrition clinics. One CEO described, 'We have a gym and an aerobics studio where we teach classes. We recently signed contracts with insurance companies to allow their participants to use our centre at a discounted rate. We try to stem the tide of obesity, at least

to slow the growth'. Some of these centres were established to address community health needs assessments, especially chronic disease management issues.

Building relationships

'Public Agencies,' 'Community Businesses' and 'Cross-sector Partnerships' are subthemes that represent the 'Building Relationships' strategy category. As part of engaging their communities, the rural hospitals in this study made an effort to create partnerships with local stakeholders. A shared understanding of community health needs drove most of these partnerships. For example, one administrator shared, 'We participated in a local committee, which focused on improving the health and well-being of our local community. We work with many different stakeholders and organisations that share a similar passion. Moreover, we do lots of different stuff, such as planning health fairs and participating in health education opportunities'. Rural hospitals frequently collaborated with public agencies, such as public health departments and public schools. Community health needs assessment was the product of a partnership between the hospital and public health in all four communities. During the assessment process, hospitals and the local public agencies analysed community data and information to identify health issues and created a list of priorities. Implementation plans were usually further discussed in a committee meeting that involved more local stakeholders. Hospitals also partnered with public schools to develop projects for improving students' wellness through health screening, nutrition and physical activities programmes.

Rural hospitals in our study also have initiated other cross-sector collaborations, such as working with local businesses, managed care companies, youth and faith-based organisations. These collaborations ranged from providing corporate wellness programmes, such as health screenings, to consulting restaurants on their menus to offer healthier options to customers. One hospital worked with car dealers to promote car seat safety check-ups and provided car seats to people who could not afford them. Together, they promoted health through collaborative programmes.

Building programmes

'Raising Health Awareness,' 'Fundraising, Grants and Sponsorship' and 'Disease Management and Health Promotion' are subthemes that represent the 'Building Programs' strategy category. In this study, rural hospitals strived to improve awareness of various health topics among their communities by building and developing community health programmes. To raise awareness on various health topics, participants talked about writing health-related articles for a local newspaper, participating in local fairs with health booths, sponsoring healthy concession stands during sports events and organising local running races. They developed strategies and methods to communicate health information in layman's

terms during community events to improve community members' reception. One physician reflected on one of the programmes, 'We have started a monthly health activity that partners with different community groups. The objective is to convey the benefit of exercise, discuss health topics and get people out moving. We work with the local club, a group of local moms and the high school'. Furthermore, for sensitive issues such as sexual assault and suicide awareness, the hospitals collaborate with relevant partners, such as schools and public health officials, to develop appropriate and targeted programmes.

This study found that some hospitals offered grants for local health initiatives. They did so as part of their community outreach programmes. For example, a hospital might sponsor activities such as running events, suicide awareness programmes and dental examinations for students or provide funding for the healthy lunch programme. The hospital foundation often raised money for these grants through luncheons or other charity events.

As part of their efforts to improve population health, rural hospitals actively managed patients' diseases and promoted healthy living. One hospital developed a stroke support programme that catered to patient needs and provided information for families. The hospital also set up an appointment reminder for patients to not miss their consultations. Other hospitals facilitated different disease-specific support groups, such as diabetes, cancer and Parkinson's. These programmes promoted early screening services for the general population in their community. The hospitals were also active in promoting immunisations and vaccinations, such as influenza shots. Most of these efforts did not generate additional revenue for the hospitals, but the hospitals provided them as a community service.

DISCUSSION

Through interviews with rural hospitals' staff and leadership, we found three critical motivations for engaging in community health efforts: internal values, economic conditions and social responsibilities. This study also found three common strategies used by rural hospitals to improve community health: building capacity, building relationships and building programmes.

Organisational theories can provide some explanations regarding the findings in this study. Institutional theory and resource dependence theory highlight environmental factors' influence on organisations.^{18–20} Specifically, this study identified these motivating environmental factors as economic and societal conditions. US hospitals typically face a competitive environment in which they compete with each other and with other health organisations for resources and patients. Scarce resources in rural areas can create a more challenging and competitive environment. Rural hospitals try to sustain and maintain the legitimacy of their organisations by meeting the regulative and normative expectations. When aligned with rural hospitals' internal values, these environmental factors

created strong motivations to strategise and engage in community health improvement activities. Indeed, the strategies identified in this study can be reactions to the uncertainty caused by geographical settings and unique demographics. Specifically, rural hospitals that aspired to go beyond patient care and engage in community health programmes need to manage their scarce resources. Various actions can be taken to achieve this, such as expanding the role of rural hospitals' staff, establishing partnerships with local agencies and securing funding for community health initiatives.

Previous studies have shown how rural hospitals that engage their local communities in population health efforts can make measurable improvements in community health outcomes, such as reducing hospital utilisation, cardiovascular risk and improving community-level weight gain trends.^{32–34} Other studies showed that when healthcare leaders and community stakeholders work together, they can develop health literacy initiatives, improve the health workforce in their area and include healthier options in local restaurants.^{35–37} This study extended the existing literature by exploring motivations and strategies for hospitals to enhance rural communities' health by engaging in activities beyond patient care.

The themes identified in this study are not mutually exclusive. This study showed that rural hospitals could have multiple motivations for addressing their community health needs. Combining these motivations with supportive policy and incentive may provide a more potent driver to explore various strategies to improve community health. Indeed, experience from developed countries showed the value of having singular vision from the national to subnational level to support rural hospital activities.³⁸ It is reassuring that there is a continuous trend to focus on improving rural health around the world.³⁹ However, further improvement should be made to ensure optimum use of limited resource by modifying rural health service models according to the local community needs.⁴⁰

In the interviews, participants also mentioned the importance of relationship building. This finding is similar to results of international studies that highlight collaborative working arrangements to strengthen the hospital functions.^{41 42} Sometimes, collaborations are unsuccessful because the local leaders in the communities do not have enough interest to follow-up on the health improvement plan, or there might not be enough resources available to realise the plan. This challenge requires the hospital to be persistent in communicating and collaborating with the local stakeholders. These partnerships can be initiated through various pathways, including cross-sector partnership, cross-sector interaction and cross-sector exploration.⁴³ For example, some local collaborations in this study were possible because of the Blue Zone Project. This major community programme has enabled cross-sector partnerships of multiple entities in the rural communities. In some cases, rural hospitals were the facilitator of this collaboration. This inclination was

driven by the local communities' perception of hospitals as health providers and health experts. The importance of community trust is apparent in international literature as well. Studies shown that rural hospitals are important community assets that can provide roles beyond health services and represent local values.^{44 45} This study had several limitations. First, the interviews were limited to rural hospitals located in counties with good health rankings. This approach was made purposefully to leverage their successful experience. Future research can include interviews and assessments of rural counties that have not performed well to comprehensively understand the challenges. Second, there is a limitation to generalise the results to other rural hospitals based on only four case studies. The local context might influence the types of motivation and strategies contributing to their success. Other researchers are encouraged to expand this study by including rural hospitals in different regions to capture rural experiences diversity.

Conclusion

Interviewees in this study described the type of motivations that drove the hospitals to engage proactively with their communities. They illustrated the kind of activities that ultimately contributed to their counties' strong ranking in county health rankings. The interviewees acknowledged their environment's inherent difficulties, but they persisted in their effort to improve patient care and community health jointly.

Although more studies are needed to identify which motivations and activities frequently result in better community health improvement, these findings offer insights into rural hospital leadership when creating strategic plans and addressing community health priorities. For example, rural hospitals may consider their resource availability and community needs assessment before engaging in community efforts and building their services beyond patient care. The results also suggest the importance of hospital leadership and community networking in enabling community health efforts. Moreover, this study's findings can guide policymakers in developing policies that stimulate rural hospitals' efforts with unique funding opportunities, policies, and incentives.

Acknowledgements We thank the interviewees who participated in this research for sharing their knowledge and experiences. We thank Dr. Paula Weigel for contributing to this research and providing feedback on this manuscript's earlier version. The paper does not include copyrighted materials. The article's content is solely the authors' responsibility and does not necessarily represent the official views of RWJF.

Contributors MMN, XZ, TV and KM contributed to the study's conception and design. MMN, XZ and TV performed material preparation, data collection and analysis. The first draft of the manuscript was written by MMN, and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript. MMN as the guarantor accepts full responsibility for the work and/or the conduct of the study, had access to the data, and controlled the decision to publish.

Funding This research was supported by the Culture of Health grant from the Robert Wood Johnson Foundation (RWJF) grant number 73062.

Competing interests None declared.

Patient consent for publication Not applicable.

Ethics approval This study involves human participants and was approved by the Institutional Review Board (reference number 201510781) of the University of Iowa. Participants gave informed consent to participate in the study before taking part.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available upon reasonable request. All data relevant to the study are included in the article or uploaded as supplementary information.

Supplemental material This content has been supplied by the author(s). It has not been vetted by BMJ Publishing Group Limited (BMJ) and may not have been peer-reviewed. Any opinions or recommendations discussed are solely those of the author(s) and are not endorsed by BMJ. BMJ disclaims all liability and responsibility arising from any reliance placed on the content. Where the content includes any translated material, BMJ does not warrant the accuracy and reliability of the translations (including but not limited to local regulations, clinical guidelines, terminology, drug names and drug dosages), and is not responsible for any error and/or omissions arising from translation and adaptation or otherwise.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>.

ORCID iD

Mochamad Muska Nataliansyah <http://orcid.org/0000-0003-0197-5734>

REFERENCES

- American Hospital Association. *Managing population health: the role of the hospital*, 2012.
- James J. Nonprofit hospitals' community benefit requirements. Under the Affordable Care Act, many nonprofit hospitals must meet new requirements to retain their tax-exempt status. *Health Affairs Health Policy Brief* 2016.
- Agency for Healthcare Research and Quality. Major hospital quality measurement sets, 2019. Available: <https://www.ahrq.gov/talkingquality/measures/setting/hospitals/measurement-sets.html>
- Freeman V, Thompson K, Howard H, et al. *The 21st century rural hospital*. North Carolina Rural Health Research Program, 2015.
- American Hospital Association. US rural hospitals, 2021. Available: <https://www.aha.org/infographics/2021-05-24-fast-facts-us-rural-hospitals-infographic>
- Douthit N, Kiv S, Dwolatzky T, et al. Exposing some important barriers to health care access in the rural USA. *Public Health* 2015;129:611–20.
- Parker K, Horowitz J, Brown A. What unites and divides urban, suburban and rural communities. *Pew Research Center* 2018.
- Proctor BD, Semega JL, Kollar MA. Income and poverty in the United States: 2015. US census bureau, current population reports 2016:1993–2003.
- Matthews KA, Croft JB, Liu Y, et al. Health-related behaviors by urban-rural county classification—United States, 2013. *MMWR Surveill Summ* 2017;66:1–8.
- Hart LG, Amundson BA, Rosenblatt RA. Is there a role for the small rural hospital? *J Rural Health* 1990;6:101–18.
- Moscovice I, Rosenblatt RA. A prognosis for the rural hospital Part I: what is the role of the rural hospital? *J Rural Health* 1985;1:29–40.
- Moscovice I, Stensland J. Rural hospitals: trends, challenges, and a future research and policy analysis agenda. *J Rural Health* 2002;18:197–210.
- Wright J, Franks A, Ayres P, et al. Public health in hospitals: the missing link in health improvement. *J Public Health Med* 2002;24:152–5.
- Internal Revenue Service. *Instructions for schedule H (form 990)*, 2019.
- Young GJ, Flaherty S, Zepeda ED, et al. Community benefit spending by tax-exempt hospitals changed little after ACA. *Health Aff* 2018;37:121–4.
- Young GJ, Chou C-H, Alexander J, et al. Provision of community benefits by tax-exempt US hospitals. *N Engl J Med Overseas Ed* 2013;368:1519–27.
- Scott WR. *Institutions and organizations. Foundations for organizational science*. London: A Sage Publication Series, 1995.
- Zucker LG. Institutional theories of organization. *Annu Rev Sociol* 1987;13:443–64.
- Hillman AJ, Withers MC, Collins BJ. Resource dependence theory: a review. *J Manage* 2009;35:1404–27.
- Pfeffer J, Salancik GR. *The external control of organizations: a resource dependence perspective*. Stanford University Press, 2003.
- American Hospital Association. Rural report: challenges facing rural communities and the roadmap to ensure local access to high-quality, affordable care 2019.
- Fields A, Holder K, Burd C. Life off the highway: a snapshot of rural America, 2016. Available: https://www.census.gov/newsroom/blogs/random-samplings/2016/12/life_off_the_highway.html
- Iowa Department of Public Health. Health and safety resource plan, 2011. Available: <http://publications.iowa.gov/id/eprint/22055>
- Fetters MD, Curry LA, Creswell JW. Achieving integration in mixed methods designs—principles and practices. *Health Serv Res* 2013;48:2134–56.
- Crabtree BF, Miller WL. *Doing qualitative research*. sage publications, 1999.
- Remington PL, Catlin BB, Gennuso KP. The county health rankings: rationale and methods. *Popul Health Metr* 2015;13:11.
- Rural Health Information Hub. Critical access hospitals, 2021. Available: <https://www.ruralhealthinfo.org/topics/critical-access-hospitals>
- American Hospital Association. Fast facts on US hospitals, 2021. Available: <http://www.aha.org/research/rc/statstudies/101207fastfacts.pdf>
- American Hospital Association. AHA annual survey, 2019. Available: <https://www.ahadata.com/system/files/media/file/2020/10/2019AHAAnnual.pdf>
- Bradley EH, Curry LA, Devers KJ. Qualitative data analysis for health services research: developing taxonomy, themes, and theory. *Health Serv Res* 2007;42:1758–72.
- O'Brien BC, Harris IB, Beckman TJ, et al. Standards for reporting qualitative research: a synthesis of recommendations. *Acad Med* 2014;89:1245–51.
- Sidebottom AC, Sillah A, Vock DM, et al. Assessing the impact of the heart of New Ulm project on cardiovascular disease risk factors: a population-based program to reduce cardiovascular disease. *Prev Med* 2018;112:216–21.
- VanWormer JJ, Pereira RF, Sillah A, et al. Adult weight management across the community: population-level impact of the lose it to WIN it challenge. *Obes Sci Pract* 2018;4:119–28.
- Hardin L, Trumbo S, Wiest D. Cross-sector collaboration for vulnerable populations reduces utilization and strengthens community partnerships. *J Interprof Educ Pract* 2020;18:100291.
- Lindberg R, Sidebottom AC, McCool B, et al. Changing the restaurant food environment to improve cardiovascular health in a rural community: implementation and evaluation of the Heart of New Ulm restaurant programme. *Public Health Nutr* 2018;21:992–1001.
- Taylor J, Goletz S, Ballard J. Assessing a rural academic-community partnership using ripple effect mapping. *J Community Pract* 2020;28:36–45.
- Friedman DB, Arent MA, Yelton B, et al. Development of a clinical-academic-community collaboration to improve health literacy. *J Prim Care Community Health* 2020;11:215013272095744.
- Rechel B, Džakula A, Duran A, et al. Hospitals in rural or remote areas: an exploratory review of policies in 8 high-income countries. *Health Policy* 2016;120:758–69.
- Polin K, Hjortland M, Maresso A, et al. “Top-Three” health reforms in 31 high-income countries in 2018 and 2019: an expert informed overview. *Health Policy* 2021;125:815–32.
- Vaughan L, Edwards N. The problems of smaller, rural and remote hospitals: separating facts from fiction. *Future Health J* 2020;7:38–45.
- Winpenny EM, Corbett J, Miani C, et al. Community hospitals in selected high income countries: a scoping review of approaches and models. *Int J Integr Care* 2016;16:13.
- Tucker H. Discovering integrated care in community hospitals. *J Integr Care* 2013;21:336–46.
- Zhu X, Weigel P, Baloh J, et al. Mobilising cross-sector collaborations to improve population health in US rural communities: a qualitative study. *BMJ Open* 2019;9:e030983.
- Blattner K, Stokes T, Rogers-Koroheke M, et al. Good care close to home: local health professional perspectives on how a rural hospital can contribute to the healthcare of its community. *NZ Med J* 2020;133:39–46.
- Davidson D, Ellis Paine A, Glasby J, et al. Analysis of the profile, characteristics, patient experience and community value of community hospitals: a multimethod study. *Health Services and Delivery Research* 2019;7:1–152.