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Key Factors for Physician Recruitment and Retention in Rural Hospitals

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KEY FACTORS FOR PHYSICIAN RECRUITMENT AND RETENTION IN RURAL HOSPITALS

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We certify that we have read this dissertation and approved it as adequate in scope and quality. We have found that it is complete and satisfactory in all respects, and that any and all revisions required by the final examining committee have been made.

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Abstract

Physician recruitment and retention in rural hospitals had been a long-standing problem in the United States. Without adequate physician support in rural communities, healthcare for the people who live in the communities suffers; therefore, this researcher developed his theory and examined whether the key factors to recruit and retain physicians to critical access hospitals (CAHs) in rural Wisconsin would be supported through multiple case study. The researcher believed that the 10 key factors in physician recruitment and retention in CAHs are (a) having enough meaningful work for the physician, (b) having access to larger hospitals while practicing in rural health-care facilities, (c) having a reasonable call schedule, (d) competitive salary and benefit package, (e) positive impact from the recruitment process, (f) exposure to rural communities while growing up, (g) having opportunities for spousal employment and/or spousal satisfaction with the community, (h) community engagement and a sense of belonging, (i) having good schools and recreation opportunities, and (j) exposure to CAHs either during residency programs or medical school are key to the recruitment and retention process of physicians who work in CAHs. This study used the positivistic case study methodology to test his theory. The researcher interviewed 12 physicians from a variety of CAHs in Wisconsin. While the findings supported the researcher's theory that the key factors contribute to the recruitment and retention of physicians in CAHs in Wisconsin, additional replications of this study may be necessary to have a theoretical generalization.

Keywords: critical access hospitals, physicians' recruitment, physician retention in rural areas, positivistic case study

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Chapter 1

Problem Statement

Physician recruitment and retention is important for all hospitals; however, rural hospitals are especially vulnerable because of the limited amount of physicians who practice in rural areas. While 30% of the population in Wisconsin lives in rural areas, only 11% of the physicians practice in these areas (Kimball & Crouse, 2007). According to Rabinowitz, Diamond, Markham, and Santana (2011), the rural physician shortage had existed for the past century and is especially critical regarding primary care physicians. Current trends suggest that only 9% of current physicians practice in rural areas in the United States and fewer than 3% of recent medical students plan to practice in small towns (Rabinowitz et al., 2011). Chewning and Spade (2007) concluded, "Physician recruitment and retention are among the most, if not the most, important issues faced by hospitals today" (p. 193). As current physicians working in rural areas are retiring, it is more difficult to recruit and retain doctors to work in small towns.

Critical access hospitals (CAHs) are small rural hospitals that provide acute care and a broad spectrum of basic health services to local communities (Xierali, Sweeney, Phillips, Bazemore, & Petterson, 2012). Often times the CAHs are the only sources of healthcare for their communities. Furthermore, the number of rural hospitals designated as CAHs increased from 50 in 1998 to 1,310 in 2009, and there is a struggle to recruit and retain health-care providers to work in CAHs (Xierali et al., 2012). For rural hospitals, the success of the recruitment process is often termed as a "life and death objective" (Xierali et al., p. 193). The financial health of the CAH physician recruitment and retention are linked together. According to Galloro (2008), physician recruitment and

retention are the most important indicators for the financial health of the rural facilities. Moreover, to make the problem of physician recruitment worse, physicians recruited to rural facilities are not accustomed to working the long hours associated with rural hospitals. According to David Bachman, senior equity analysis for Longbow Research, a facility may have to hire three new physicians for every two who retire (as cited in Galloro, 2008).

The introduction of the diagnoses-related group by Medicare in 1983 affected the downward stream of revenue to rural healthcare. According to Crandall, Dwyer, and Duncan, (1990), the burden of the Medicaid program on state budgets had reduced the compensation for physicians; this statement still holds true today. Moreover, physician compensation under Medicaid is so low private practice doctors find it financially difficult to serve people with Medicaid benefits. The recruitment and retention problems in CAHs are exacerbated by the inadequate funding of federal and state Medicare and Medicaid programs (Crandall et al., 1990). The Medicare and Medicaid entitlement programs do not cover all the expenses associated with care delivery systems in rural health-care facilities. Therefore, commercial insurances are often subsidizing Medicare and Medicaid funding. Furthermore, a study by the American Hospital Association (2011) indicates that rural Americans are more likely to be uninsured and have lower income than Americans living in metropolitan areas. Also, rural hospitals tend to serve people who are more elderly, have higher incidents of chronic disease, have lower per capita income compared to urban communities, and have a higher rate of uninsured residents (Chewning & Spade, 2007). These issues of reimbursement, compensation, and

higher rates of chronic diseases in rural populations hinder the recruitment of rural providers by making rural practice unattractive (Crandall et al. 1990).

Researcher's Interest in the Topic

This researcher had over 20 years of experience as an administrator of rural health-care facilities. Throughout the 20 years, the researcher has had trouble retaining and recruiting physicians in rural health-care facilities. As a current administrator of a CAH, the researcher experienced firsthand the significant impact rural hospitals face when the hospital is unable to recruit and retain physicians. When a physician leaves a CAH, the facility immediately experiences loss of revenue and difficulty staffing areas such as hospital, clinic, and emergency department. The researcher is very interested in discovering key factors that will add value to successful recruitment and retention of physicians in CAHs.

Recruiting and retaining rural healthcare physicians is a complex issue with decreased reimbursement, a shortage of providers willing to work in rural areas, and the increased number of CAHs that are the primary health-care delivery model for rural populations. Identifying key factors that influence recruiting and retaining physicians in rural health-care facilities may alleviate the problem.

Purpose

The purpose of this study was to identify factors that are necessary for recruitment and retention of physicians in rural hospitals in Wisconsin through testing the researcher's theory about factors that lead to successful physician recruitment and retention.

Research Question

The intent of this study was to answer the question: What factors contribute to the recruitment and retention of physicians in CAHs in Wisconsin.

Significance

According to Health Research & Educational Trust (2013), the role of small and rural hospitals and care systems is critical to overall population health management of rural Americans. This population in the United States makes up 23% of people living in rural areas. Almost half of rural residents report at least one major chronic illness. To complicate the population health management further, 16.6% of the rural population lives in poverty (Health Research & Educational Trust, 2013). Therefore, rural hospitals are an important part of the health-care system. Without physicians directing care in rural health-care facilities, people living in these areas will have to leave their communities to find healthcare in urban areas or not receive healthcare at all. Therefore, the recruitment and retention of physicians in rural America is critical to sustain overall population health management. The purpose of this study was to shed light on how to recruit and retain physicians in rural areas effectively. This positivistic case study design allowed for receiving data that shaped the basis of the research theory, but also looked in depth at the factors that may not have been considered in earlier research.

Researcher's Interest and Background

The researcher had over 20 years as an administrator and director in the health-care field. The researcher's current administrative experience is most relevant to this study. Through the researcher's current position as an administrator of a small rural hospital, emergency department, clinic, skilled nursing home, resident-care apartment

complex, and ambulance 911 services, the researcher had experienced firsthand the importance of recruitment and retention of rural physicians. Moreover, the researcher understands, based on his experience, how fast a community can lose their health-care system if physician recruitment and retention efforts are not successful. In short, the researcher believes that without physicians to deliver care in rural communities, people will suffer with health-care conditions and lives will be lost in these small communities.

Because the researcher had experience in small, nonprofit facilities, the researcher posed the theory that quality physicians who want to work in rural America are very difficult to recruit and retain. Even the loss of one physician can be devastating to small community health-care services. Based on the researcher's awareness and training, the researcher understands that without dedicated physicians who are willing to work in small towns, it is very difficult to provide healthcare in rural communities.

The researcher also understands, based on many years of interacting with physicians, that there appears to be certain qualities that rural health-care providers covet as part of their health-care practice. The qualities include being part of a small community, having a variety of job responsibilities, such as working in the hospital, clinic, and emergency department. However, these physicians are rare, and an understanding of the doctors' values is required to recruit and retain providers. Therefore, the researcher wanted to create and test a theory to understand the factors to recruit and retain quality physicians in a rural setting.

Definition of Key Terms

Listed below are definitions of terms that are needed to understand the context of this research.

- *Critical access hospitals (CAHs).* According to Centers for Medicaid and Medicare (n.d.), a Medicare participating hospital must be located in a rural area or be treated as rural under a special provision that allows qualified hospital providers in urban areas to be treated as rural for purposes of becoming a CAH.
- *Family practice physician.* A physician practicing medicine in primary care who provides continuing and comprehensive healthcare for the individual and family across all ages, genders, diseases, and parts of the body. Rural healthcare is based on knowledge of the patient in the context of the family and the community, emphasizing disease prevention and health promotion.
- *Internal medicine physician.* A physician in the medical specialty dealing with the prevention, diagnosis, and treatment of adult diseases.
- *Provider.* A generic term for physicians, nurse practitioners, and physician assistants.
- *Rural healthcare service area.* The U. S. Department of Health and Human Services (n.d.) defines rural as located outside a metropolitan statistical area.

Chapter 2: Literature Review

This literature review is a summary of findings that are relevant to this research study. Some articles, reviewed by the researcher, mentioned the problem and then focus on solutions, e. g. Tele-Medicine in rural healthcare (Mueller, Andrew, Clinton, & Ward, 2015). Some research mentioned the difficulty of recruiting physicians into rural healthcare facilities and then offered a solution in a form of the pay-for performance program. According to Kischner, Braspenning, Jacobs, and Grol (2012), pay for performance motivates physicians to perform better so they are paid better.

The focus of this literature review, however, is not to delve into solutions to improve healthcare in rural hospitals or find ways to entice physician to work into rural healthcare, but rather to inform a theory development about the key factors that would attract individual physicians to work in rural healthcare facilities. This literature review is limited to the articles that discuss reasons of physicians' desires to practice medicine in small hospitals and communities.

This chapter provides an overview of key factors that play a role in successful recruitment and retention of physicians in rural hospitals. These key factors discovered in recruitment and retention of physicians in rural areas are (a) physician exposure to rural hospitals and rural communities, (b) physician need to have access to a larger hospital while practicing in rural facilities, and (c) community assets and community involvement. The purpose of this review is to provide the reader with an understanding of the key factors in successful recruitment and retention of physicians in rural hospitals.

Physician Exposure to Rural Hospitals and Rural Communities

Physician exposure to rural healthcare is a fundamental factor to physician recruitment and retention. According to Hancock, Steinbach, Nesbitt, Adler, and Auerswald (2009), "A rural upbringing is known to be the most important predictive factor of rural physician recruitment as well as a catalyst of retention" (p. 69). Moreover, Hancock et al. (2009) noted that physicians choose rural practice primarily because they want to live in a familiar setting that gives them a sense of trust, comfort, and ease versus attempting to integrate into a new community. This key factor is further supported by Chewning and Spade (2007), who indicated that key success factors in recruitment include physician interest in small-town settings. More recently, Rabinowitz et al. (2011) indicated that the key factors for physician success in rural hospitals are linked to physicians who grew up in rural areas and practice in rural hospitals. Moreover, physicians who grew up in small communities or practiced in small communities are more likely to continue their practice in CAHs.

Physicians gravitate to communities and hospitals that provide a desired balance between professional and personal activities. It is apparent that without exposure to rural communities and rural hospitals, the physician would not have chosen to practice in rural settings. Kimball and Crouse (2007) noted that predictors of rural practice include rural background and positive experience in residency within a rural hospital setting.

Physician exposure to rural communities and rural hospitals, as a key indicator of physician recruitment and retention, is not limited to the United States. As noted in a study conducted in Australia, the selection of rural practice is known to be influenced by community, family, and personal experiences (Laurence, Williamson, Sumner, &

Fleming, 2010). Furthermore, the Australian government had designed a plan for successful recruitment and retention around this key factor. According to Wolff (1997), the plan to increase the numbers of physicians in rural settings is to target people who have a strong affiliation with rural settings.

Rural background is only part of the equation to predict successful recruitment and retention in rural hospitals. As a physician go through residency program, an exposure to rural hospitals is important as well. Crandall et al. (1990) noted that a physician's decision to work in a rural setting is related to his or her rural origin; however, exposure to rural practice during training adds to the physician's decision to practice in rural settings. The research conducted here took place in the 1990s; however, the information is relevant today in CAHs. The Literature Review suggests that CAH training programs could improve physician recruitment and retention in rural facilities.

Physician Access to Larger Hospital While Practicing in Rural Settings

According to Health Research & Educational Trust (2013), rising health-care costs, increase in the aging population, greater demand for quality outcomes, and the recent passage of the Affordable Care Act have led to a focus of population health management. This shift toward population health management necessitates an evolving role for physicians to develop collaborative programs that will improve health-care outcomes. Furthermore, Health Research & Educational Trust (2013) noted that physicians are incentivized to provide a continuous care delivery system across larger populations.

Access to larger hospitals allows for mentorship of new physicians. According to Misra-Hebert, Kay, and Stoller (2004), mentorship of new physicians increases physician

retention and improves stability of the rural health-care facility. Goleman (2011) indicated that "it had been shown that coaching and mentoring pay off not just in better performance but also in increased job satisfaction and decreased turnover" (p. 18). Physicians need an individual to discuss practice changes, new regulations such as Affordable Care Act and patient concerns.

Physicians who do not have a larger practice may feel isolated (Hancock et al., 2009). Isolation of rural physicians had existed as far back to 1990 and beyond. According to Crandall et al. (1990), physicians trained in recent decades look for professional support systems from their peers, such as group practices, for more sophisticated testing equipment. Without the support from larger systems, the physicians feel isolated and struggle to keep up with the changes in healthcare. The need for system support continues to be relevant today as health-care reform is implemented. The health-care integration of rural facilities supports the need for CAHs to become full members with larger hospital systems (Hancock et al., 2009).

Technology plays a role in physician ability to connect with larger hospitals. According to Gagnon, Duplantie, Fortin, and Landry (2007), telehealth could improve physician work satisfaction by allowing a regional on-call duty system to better follow up on patients. Telemedicine can decrease some of the frustration of being "low tech," associated with rural/remote medical practice, by providing remote access to high-tech equipment. The need for physicians to feel connected to larger hospitals is further outlined in the Literature Review when identifying physician barriers to practice in rural facilities. Smith (2005) noted that some of the barriers to physicians practicing in a rural setting are the lack of supervision and on-site support. Furthermore, the study indicates

limited access to health-care education and the influence of isolation results in an overall lack of preparation for the physician, professionally and personally. To combat these physician obstacles, Wolff (1997) suggested the hospital should be able to demonstrate a vision of innovation, so physicians can see that new ideas and changes in practice are developed. The Literature Review suggests that the days of physicians practicing as an independent doctor are very rare and not desired. The need for support and back up is ideal for physicians in rural settings (Laurence et al., 2010).

Community Assets and Community Involvement

A physician's definition of community assets is determined, in part, by their personalities. According to Jones, Humphreys, and Nicholson (2012),

> doctors' decisions to work in rural and remote areas will be first driven by practical considerations, among those doctors who can potentially be influenced to work in rural areas, consideration of personalities might assist in selecting of individuals who better fit the professional and social environment of rural life. (p. 79)

Different personalities can determine important community assets and the need for community involvement.

The number of physicians, who desire to live in small communities, is relatively small. According to Frey (2007), many physicians and their families prefer a more metropolitan or suburban areas; therefore, recruitment to a rural hospital is difficult when neither physicians nor their families have experienced living outside an urban area. However, according to a study done by McGrail, Humphreys, Scott, Joyce, and Kalb (2010), "Evidence showed no observed difference in professional satisfaction between

physician respondents from large metropolitan centers through population spectrum to small rural communities" (p. 2). This further provides evidence that physicians, who value rural communities, have equal professional satisfaction in their practice.

Community involvement with rural physicians does play a role in recruitment and retention. The physicians want to know if the town is friendly. A friendly town is accepting of physician culture and background. This concept is supported by Wolff (1997), as he noted the importance of the social dynamics of the community. Wolff (1997) indicated there is no point in spending large amounts of money advertising for physicians if the community does not accept new providers by utilizing the physicians' services. Furthermore, Hancock et al. (2009) discussed that developing community engagement with physicians is a high predictor of rural recruitment. In these cases, the more physician participation in community the better the physician satisfaction. The more community involvement by the physician in rural settings the better physician satisfaction in his/her practices.

Summary

The purpose of the literature was to identify factors that influence successful recruitment and retention in rural hospitals. The factors include access to larger hospitals, reasonable call schedule, competitive salary and benefits, origin and upbringing, spousal employment, fit with community, and community assets. These factors informed the researcher's theory, explained in the following chapters. Table 1 shows literature sources and themes that informed some elements of the researcher's theory.

Table 1

Themes and Research Sources

Themes	Research source
Physician Needs	Chewning and Spade (2007); Crandall, Dwyer, and Duncan (1990); Hancock, Steinbach, Nesbit, Adler, and Auerswald (2009); Kimball and Crouse (2007); Laurence, Williamson, Sumner, and Fleming (2010); Rabinowitz, Diamond, Markham, and Paynter (2001); Wolff (1997).
Physician Residency Programs	Crandall, Dwyer, & Duncan (1990); Gagnon, Duplantie, Fortin, and Landry (2007); Goleman (2011); Health Research & Educational Trust (2013); Kay and Stoller (2004); Laurence, Williamson, Sumner, and Fleming (2010); Misra-Hebert, Kay, and Stoller (2004); Smith (2005); Wolff (1997).
Physician Community Interest	Chewning and Spade (2007); Hancock, Steinbach, Nesbitt, Adler, and Auerswald (2009) Jones, Humphreys, and Nicholson (2012); McGrail, Humphreys, Scott, Joyce, and Kalb (2010); Wolff (1997).

Chapter 3: Research Methodology

The Literature Review informed the researcher's understanding of the key factors for successful recruitment and retention of physicians in rural hospitals. The researcher developed a theory of the factors that influence recruitment and retention of physicians in rural health-care facilities. These factors need to be in place for successful recruitment and retention to occur. The factors include (a) physicians' desire for enough meaningful work, (b) physician integration with a larger hospital while practicing in rural facilities, (c) reasonable call schedule, (d) competitive salary and benefits, (e) a positive impact from recruiter and recruitment process, (f) growing up in a rural community, (g) spousal employment, (h) community engagement or sense of belonging to community, (i) community assets such as schools and recreation opportunities, and (j) physicians' exposure to rural hospitals during their residency programs.

The researcher tested the theory using a positivistic multiple case study. The rationale for choosing a case study methodology was the desire to develop a theory of recruitment and retention of physicians in rural settings within a real-life context. The researcher was seeking to understand what factors contribute to successful recruitment and retention of physicians in rural healthcare facilities. The purpose of this study was to see if the theory was supported and to determine what factors are necessary and sufficient in the physician recruitment and retention process.

Research Design

Theory development prior to the collection of any data is a critical component of a positivistic case study design (Yin, 2009, p. 36). Yin (2009) indicated the need for a study question, propositions, units of analysis, logical linking of the data to propositions,

and the criteria for interpreting the data (p. 27) in order to create a solid theory. Positivistic multiple case study research design was ideally suited for this research since physician recruitment and retention is a real-life problem (Yin, 2009). The theory was tested in a multiple case study. The replication is an important step for the "development of a rich, theoretical framework" (Yin, 2009, p. 54). The data from the case studies was used to enhance the initial theory. Yin wrote that "a person should be unbiased by preconceived notions, including those derived from theory" (2009, p. 69). The researcher remained cognizant of the potential personal biases that may arise from the researcher's 20-plus years of experience in rural healthcare, to safeguard that the theory was tested as a positivistic multiply case study.

As stated in Chapter 1, the intent of this study was to answer the question: What are the factors needed to recruit and retain physicians in CAH in Wisconsin. The researcher developed a theory of factors needed to recruit and retain physicians in rural hospitals. The factors identified to recruit and retain physicians were based on a Literature Review, the researcher's experience in recruiting and retaining physicians, and informal discussions with physicians who are currently working in rural hospitals. The chart below outlines the factors that the researcher posited for successful recruitment and retention of physicians.

Theory Description

Based on this researcher's experience, physician recrtuitment and retention in rural health-care facilites are approached the same way one would recruit and retain a physician in a larger hospital. The recruitment and retention issues are considered to be the same for all large and small hospitals. The common approaches for recruitment and

retention are to increase salary/benefits, offer larger sign-on bonuses, pay a portion of student loans, and provide contracts that guarantee salary for the first 2 years.

The reseacher's theory suggests that other less traditional factors are needed to recruit and retain physicians in rural hospitals. The key factors identified in this study are the building blocks needed before the more traditional recruitment and retention factors have an impact. Without most of the key factors identified in this study, physician recruitment and retention in rural hospitals will remain very difficult. The researcher further posited that the key factors act as building blocks to other, more traditional methods of recruitment and retention. In short, the factors identified in this study are the foundation of successful recruitment and retention of physicians in rural hospitals.

The researcher identified controllable and noncontrollable factors in the study. Controllable factors are factors that can be influenced by the health-care organization; noncontrollable factors are factors that cannot be influenced by the healthcare organization. The researcher makes this distinction to gain a better understanding of what factors can be changed and what factors need to be monitored by the health-care organization to successfully recruit and retain physicians.

The Literature Review identified six key factors for recruitment and retention of physicians in rural facilites. These factors are physician exposure to rural hospitals, physician exposure to rural communities, physician access to larger hospitals, community assets that align with the physician's interests and values, and community involvement. The Liturature Review indicated that physicans' exposure to rural hospitals while growing up and during residency are key to recruit and retain physicians in rural facilties. Equally important, the Liturature Review suggested the physician and physician's family

need to feel that the communities offers recreation activites that align with their interests. Also, the community needs to have a good educational system for their children.

The other four factors were developed from the researcher's experience as an administrator in rural facilites. These factors include (a) having enough meaningful work, (b) utilizing a resonable call schedule, (c) receiving competivie salary and benefits, and (d) having a positive impact from the recruiter and enjoying the recruitment process. Based on his experience, the researcher noted that physicians need to be challenged in their work environment. Therefore, if physicians do not have enough meaningful work, or they feel they are not challenged in their work environment, they become dissasstified with their work. During the candidate interview process, the researcher noticed that one of the first questions a physician asked when applying for a job was about the call schedule. The amount of time the physician had to be on call is important to determine the work–life balance in the event the physician accepts the position. The amount of call time that is acceptable to the physician is based on individual preference. However, in general, the less call the better. Call is defined as time the physician had to respond to a page from a patient or a family within a specified period of time and be avialble within 30 minutes of the hospital at all times.

Furthermore, physicians will not consider a position if salary and benefits are not competitive. Competitive salary and benefits are defined by a comparison with other physicians in the market area the physican was applying. Based on the researcher's experience, physicians are very interested in salary and benefits when they apply for positions.

The researcher posited that the more key factors physicians have available to them, the better the chances of successful recruitment and retention of physicians in smaller healthcare CAH's. The researcher further posited that it was more about the combination of factors present than about a specific percentage. The researcher arrived at 80% to use as a measure of success in the Likert scale. The reason the researcher chose 80% was because results less than 80% percent would indicate weak results; also, this researcher believed that attaining results greater than 80% for each physician was unrealisitic. The 80% also was equivalent to scoring a 4 or 5 on the Likert scale. The visual description of the theory is presented in Figure 1.

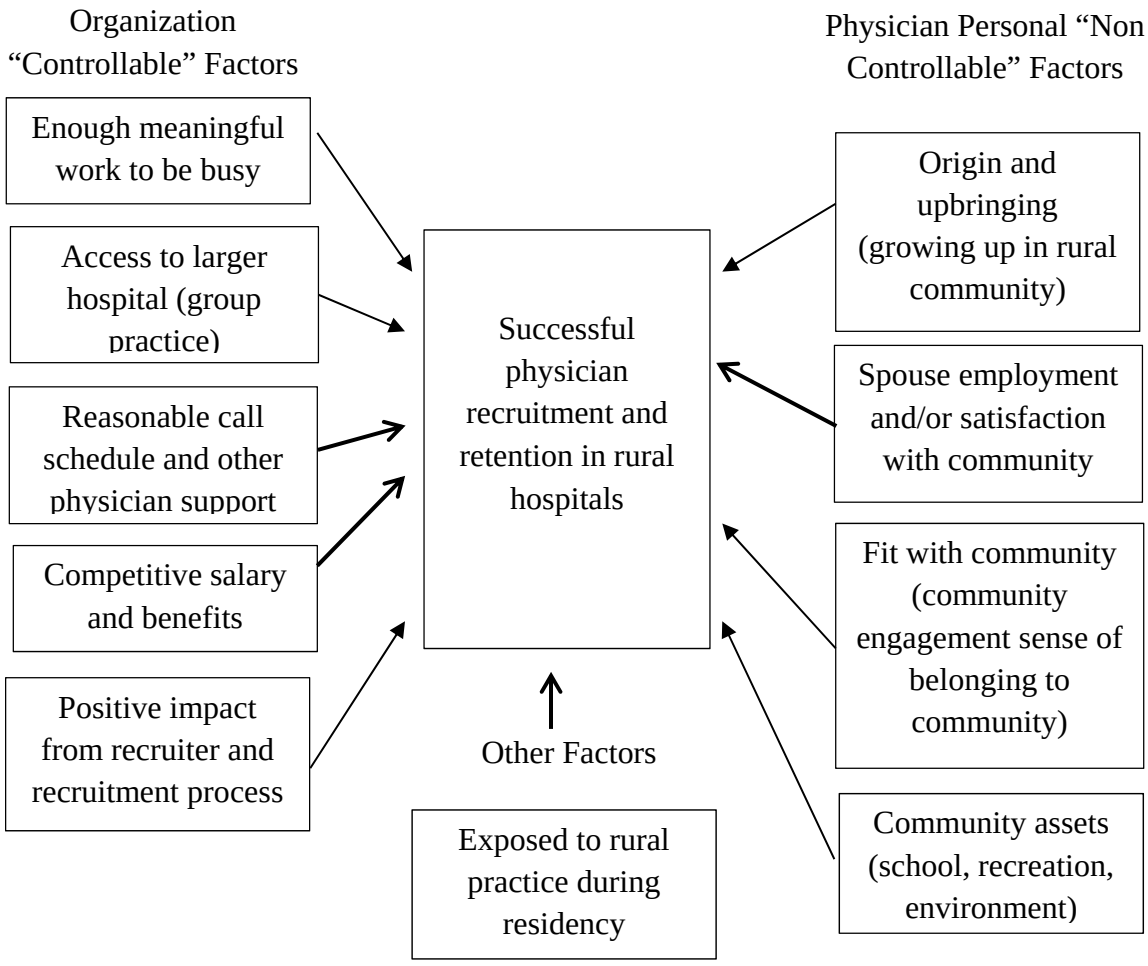

Figure 1. Factors for sucessful recruitment and retention model.

Case Selection

Medical doctors who work in rural areas and practice in CAHs were the focus in this research. Each medical doctor interviewed was considered a case. This allowed the researcher to understand each case holistically and perhaps uncover some new data.

Physician Criteria

The researcher studied 12 physicians who work in CAHs in Wisconsin. The physicians worked for Mayo Clinic Health System in the northwest Wisconsin region. The researcher understood that certain physicians might apply for positions based on unique geographic location, size of hospital, and different scope of practice at each CAH. Therefore, using case studies from different CAHs that are part of the Mayo system enhanced the study by focusing on the individual physicians, as CAHs vary in size and location.

The 12 physicians were selected from CAHs in northwest Wisconsin. The researcher received approval from Mayo Clinic to interview 12 physicians who worked in 1 of the 4 CAHs in northwest Wisconsin. The researcher worked with Mayo Clinic Human Resource Department to select a convenience sample of physicians to invite to interview. The researcher provided the Mayo Clinic Human Resource Department with a recruitment letter (Appendix A). The researcher forwarded the letter via e-mail to all physicians who work in the CAHs. The physicians volunteered to participate in the study per the recruitment letter (Appendix A) and contacted the researcher via e-mail to set up a time to for the interview. The researcher was the only person who knew who participated in the study.

Data Collection Process

The researcher interviewed 12 physicians. Eleven of the interviews were face-to-face and one interview was via phone. The interviews lasted 45 to 60 minutes, which allowed for prolonged responses from open-ended interview questions.

The researcher e-mailed the consent form (Appendix B) to the physicians to review and sign prior to the interview. Prior to the start of the interview, the researcher read a disclosure statement to the physicians to ensure the physicians were aware of any risk associated with the research. The researcher began the interview once the physicians verbally acknowledged they understood the disclosure statement.

Each unit of analysis of the researcher's theory called for one Likert-scale question and one open-ended question. To address all 10 units of analysis, the interview guide had 20 questions. The researcher additionally asked for more questions to collect some additional information, which provided some context for the researcher's theory (see the Table 2 and Appendix C). The researcher asked the Likert-scale question first and the open-ended question second. The reason the researcher asked the Likert-scale question first was to give the physician an opportunity to think about the scope and context of the discussion. The researcher followed the same process by asking the same set of questions with each physician (Appendix C).

Data Analysis

The researcher collected data from the individual interviews. Each unit was supported if the score was recorded as a 4 or 5 on the Likert-scale. The indicators and measurements used to test the theory are presented in Table 2.

Table 2

Units of Analysis, Empirical Indicators, Sources of Data, and Measurements to Support Theory

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
Unit 1. Physician meaningful work	Having enough meaningful work to support current medical skills and opportunities to expand medical practice	Questions #1 and #2.	Score of 4-5 on Likert-scale on Question #1. Question #2 the interviewees did have a statement supporting Question #1 and #2. Cross-case analysis, 80% support the theory.
Unit 2. Access to larger hospital	Physician access to larger hospital to make patient referrals for specialty care and support current practice. Physician integrated practice with larger hospital that can provide more resources and technology such as telemedicine.	Questions #3 and #4	Score of 4-5 on Likert-scale on Question #3. Question #4 the interviewees did have a statement supporting Question #3 and #4. Cross-case analysis, 80% support the theory.
Unit 3. Reasonable call schedule	The physician call schedule fits the physician's sense of work-life balance.	Questions #5 and #6.	Score of 4-5 on Likert-scale on Question #5. Question #6 the interviewees did have a statement supporting Question s#5 and #6. Cross-case analysis, 80% support the theory.
Unit 4. Competitive salary and benefits	Physician salary and benefits represent market rate for physician skill level and geographic region of practice.	Question #7 and #8.	Score of 4-5 on Likert-scale on Question #7. Question #8 the interviewees did have a statement supporting Question #7 and #8. Cross-case analysis, 80% support the theory.

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
Unit 5. Recruitment process	The recruitment process was a positive experience and the physician felt supported via ease of going through the requirements to apply for the position.	Questions #9 and #10.	Score of 4-5 on Likert-scale on Question #9. Question #10 the interviewees did have a statement supporting Question #9 and #10. Cross-case analysis, 80% support the theory.
Unit 6. Growing up rural community	The fact that the physician grew up in a rural community led the doctor to practice in a rural community.	Questions #11 and #12.	Score of 4-5 on Likert-scale on Question #11. Question #12 the interviewees did have a statement supporting Question #11 and #12. Cross-case analysis, 80% support the theory.
Unit 7. Spousal employment	Spouse could find a job based on the spouse's interest and educational background.	Questions #13 and #14.	Score of 4-5 on Likert-scale on Question #13. Question #14 the interviewees did have a statement supporting Question s#13 and #14. Cross-case analysis, 80% support the theory.
Unit 8. Community engagement	Physician had a sense of belonging to the community.	Questions #15 and #16.	Score of 4-5 on Likert-scale on Question #15. Question #16 the interviewees did have a statement supporting Question #15 and #16. Cross-case analysis, 80% support the theory.
Unit 9. Community assets	Community assets such as schools and recreational offerings fit with the physician's interests and values.	Questions #17 and #18.	Score of 4-5 on Likert-scale on Question #17. Question #18 the interviewees did have a statement supporting Question #17 and #18. Cross-case analysis, 80% support the theory.

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
Unit 10. Gained experience in rural practice during residency	The physician had gained experience in rural health-care facilities as part of their residency rotation.	Questions #19 and #20.	Score of 4-5 on Likert-scale on Question #19. Question #20 the interviewees did have a statement supporting Question #19 and #20. Cross-case analysis, 80% support the theory.
Contextual Information. Hiring physician	Physician was able to make a reasonable, fast decision to take to position in the rural health-care facility.	Questions # 21 and #22.	Score of 4-5 on Likert-scale on Question #21. Question #22 the interviewees did have a statement supporting Question #19 and #20. Cross-case analysis, 80% support the theory.
Contextual Information. Retention	Once the physician accepted the position in the rural facility, how long did he/she stay?	Question #23.	Question #23 the interviewees will have spent more than 2 years in position. Cross-case analysis, 80% support the theory.

Validity

The case study design met four conditions: construct validity, internal validity, external validity, and reliability (Gall, Gall, & Borg, 2007. This research design allowed the researcher to meet all these conditions.

Construct validity. Construct validity of a positivistic case study was strengthened by developing a clear chain of evidence between questions, data, and findings (Gall et al., 2005). The researcher utilized Likert-scaled survey questions and then followed up with standardized open-ended interviews in order to collect data from physicians and triangulate and clarify any information from the Likert question. The researcher utilized previous research from the Literature Review to set the units of his theory and developed interview questions to measure the units.

External validity. External validity defines the domain to which a study's findings were generalized (Yin, 2009). In positivistic case studies, the generalization may be to a broader theory, but not a larger population. Replication of the findings through different methodologies is necessary before one can generalize the findings to a broader population of physicians beyond the ones studied in this research. At the same time, each case in this study can be considered as replication. Thus, the researcher had 11 replications of the case study.

Reliability. Reliability means that the operations of a study were repeated with the same results (Yin, 2009). The researcher closely followed the established protocol for this methodology in the data-collection process and analysis. The researcher developed a structured interview guide and used it in all cases to maintain consistency of data collection.

Ethics and Protection of Research Physicians

This study complied with all requirements mandated by the Institutional Review Board (IRB) at the University of St. Thomas. The researcher adhered to the IRB's recommendation throughout the study. The researcher requested that all physicians agree to a consent and confidentiality agreement prior to the interviews and informed all physicians about the nature of the study as well as their right to stop their participation in the research at any time. All physicians' data and statements were protected by researcher, who also kept all documents and data secured on a password protected electronic file. The hardcopies were secured in a file cabinet located in the researcher's locked office, in which the file cabinet was also locked at all times. The researcher

assured the physicians that their names would not be disclosed in this study after it was published. The researcher also adhered to all Mayo Clinic IRB research policies as well.

Chapter 4: Findings

This researcher used the positivistic multiple case study methodology to test his theory of key factors for physician recruitment and retention in rural hospitals. The components of the researcher's theory included controllable and noncontrollable factors that influence recruitment and retention of physicians in rural hospitals.

The researcher interviewed 12 physicians from four CAHs in Wisconsin. Each eligible physician in the study served as an individual case study. The physicians did not know the questions prior to the interview and the researcher did not receive a request from any physician to review the questions prior to the interview. Additionally, the researcher requested work history data from the physician during each interview.

Physician Description

The physicians varied in age and in years of professional work experience. The range in age was 30 to over 65 years old. The physicians' professional work experience ranged from 3.5 years to 42 years of experience. The minimum number of years the physicians stayed in their current positions was 2.5 years, while the maximum numbers of years a physician stayed in his/her position was 39 years. The physician age was equally distributed, as one physician was between 30-35, two physicians were between 35-40, four physicians were between 50-55, one physician was between 55-60, three physicians were between 60-65, and one physician was over 65 years of age. Of the 12 physicians, 11 were male and one was female. Table 3 highlights the age, total work experience, and total years spent at the physicians' places of employment.

Table 3

Physician Demographics

Physician	Age range/ Gender	Years of experience	Total years in current position
1	50-55/Male	24	24
2	60-65/Female	34	6
3	55-60/Male	28	28
4	50-55/Male	25	22
5	60-65/Male	38	34
6	30-35/Male	3.5	2.5
7	65+/Male	42	39
8	35-40/Male	10	10
9	35-40/Male	10	10
10	60-65/Male	28	8
11	50-55/Male	24	5
12	50-55/Male	20	18

Report of the Findings

The data were analyzed for each of the 12 individual cases. The researcher tested his theory with a quantitative and qualitative question in each of the 10 units. Each unit was supported if the physician scored a 4 or 5 score on the Likert scale and the physician provided supportive qualitative data for each key factor.

The physician supported the theory if the physician agreed with a minimum of 8 out of the 10 key factors, and provided qualitative data that supported each key factor. The researcher selected 80% as his passing criteria to simulate a typical grading scale.

The key factors for each unit are as follows: (a) physicians' meaningful work, (b) access to larger hospitals, (c) reasonable call schedule, (d) competitive salary and benefits, (e) recruitment process (f) growing up in rural community, (g) spousal employment, (h) community engagement, (i) community assets, and (j). experience in rural practice during residency.

The supportive information in the last two questions was not part of the key factors for recruitment and retention. The questions related to a physician making a fast decision to take the job once he or she was offered the position. The researcher also asked each physician how long he or she stayed in their current positions once they accepted the job. In the last two parts of the interview, the researcher used a Likert scale to determine if the physician made a relatively quick decision to take the position in the rural facility once he or she was offered the position. In addition, the researcher asked each physician how many years of experience he or she had practicing medicine.

For purposes of this study, the researcher did not use supportive data as key factors for recruitment and retention. However, future studies may use this information to understand the impact of the key factors regarding recruitment and retention of physicians in rural health-care facilities.

Individual Case Study Responses

Case 1. Physician 1's (P1) interview took place in his office. After a brief discussion about the research process and methodology, P1 indicated he had no further questions. After reviewing all the appropriate documents and signing the consent forms, the researcher started the interview. The interview lasted 1 hour.

P1 is a male between 50-55 years of age. P1's medical school and family medicine residency program was completed in a larger urban area; however, P1 spoke about the very positive experience he had working in a small hospital during his residency program. P1 had more than 25 years' experience practicing in a rural hospital and clinic practice. P1 was recruited to his position 25 years ago and had remained in the same facility for his entire career. Although P1 had been with the same organization for his career, he had had different levels of responsibilities while maintaining a practice in the community. P1 indicated his longevity to his practice was in part because of the meaningful work he does on a regular basis. According to P1, meaningful work was defined as "matching one's interest with his/her abilities."

P1 spent his entire career in the small community, in which he continues to have a medical practice. P1 raised his children in the community he practices in, and speaks very highly about the quality of life the small town offers for his kids and family members. P1 indicated that people who live in small communities take for granted the positive environment, like "clean air, clean water, lack of traffic, and the fact that I can walk the streets at night, and send my kids out to play without worrying about their safety." P1 also grew up in a small community in Wisconsin; his life experiences held many memories of what it means to be part of a small town.

P1 placed a lot of emphasis on his spouse's satisfaction with the community. In fact, P1 indicted his spouse's influence led him to providing medical services in a small town. P1 stated, "In my own case, I was very interested in a different community in Wisconsin. It was just not going to work for my wife, so we ended up not going there." His current location was a much better fit for his wife. P1 further discussed the

importance of connecting with the spouse to help envision what life would be like in the small community as a key factor in the recruitment process.

P1 was very thoughtful about his responses and provided rationale to each response, as indicated in Table 4. This researcher felt P1 took the survey very seriously and relied on his experiences throughout his career, as he reflected on each question. The summary of Case 1 is presented in Table 4.

Table 4

Physician 1 Interview Summary

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
Unit 1. Physician meaningful work	Having enough meaningful work to support current medical skills and opportunities to expand medical practice	Physician 1 (P1) scored a 4 on the Likert scale. He agreed with Question 1. P1 indicated that having enough meaningful work depends on having the right mix of patients based on their level of care and other responsibilities so physicians feel like their skills are being put to good use. Furthermore, P1 indicated the physician have to practice within their comfort zone. Comfort zone means the physician had to be confident in what he/she is practicing with medicine.	Supported
Unit 2. Access to larger hospital	Physician access to larger hospital to make patient referrals for specialty care and support current practice. Physician integrated practice with larger hospital that can provide more resources and technology, such as telemedicine.	P1 scored a 5 on the Likert scale. He strongly agreed with Question 3. P1 indicated an ideal integrated practice would have the right local physicians to provide excellent community care, and when/if patients need more advanced care, there is a seamless process to transition the patient to a higher level of care.	Supported
Unit 3. Reasonable call schedule	The physician call schedule fits the physician's sense of work–life balance.	P1 scored a 5 on the Likert scale for Unit 3. He strongly agreed with Question 5. P1 explained that when he started his	Supported

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
		practice, being on call every 3rd or 4th day was acceptable. Now he believes that the expectation is to be on call less frequently. Furthermore, P1 indicated that being on call too much is driving physicians to have a clinic practice only.	
Unit 4. Competitive salary and benefits	Physician salary and benefits represent market rate for physician skill level and geographic region of practice.	P1 scored a 5 on the Likert scale for Unit 4. He strongly agreed with Question 7. P1 indicated the salary and benefits should be market driven, with an opportunity to make more if you work harder.	Supported
Unit 5. Recruitment process	The recruitment process was a positive experience and the physician felt supported via ease of going through the requirements to apply for the position.	P1 scored a 5 on the Likert scale for Unit 5. He strongly agreed with Question 9. P1 indicated that the recruitment process was positive because he felt it was very personal experience for him. Another physician spent a lot of time with him talking about what the practice he was applying for was all about. It was important for P1 to hear about the community and tour the community as well.	Supported
Unit 6. Growing up rural community	The fact that the physician grew up in a rural community led the doctor to practice in a rural community.	P1 scored a 4 on the Likert scale for Unit 6. He agreed with Question 11. P1 grew up in a very small community in Wisconsin and	Supported

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
		indicted this helped with the decision to practice in a rural hospital. However, P1 further noted that, based on his experiences, he had seen physicians without a rural background successfully recruited to small hospitals. P1 stated, " I think it weighs in your favor to grow up in a small town, but it is not a direct 1:1 correlation."	
Unit 7. Spousal employment	Spouse could find a job based on the spouse's interest and educational background.	P1 scored a 5 on the Likert scale for Unit 7. He strongly agreed with Question 13. P1 spoke very passionately in support of questions 13 and 14. P1 indicated, "I think it is a deal breaker if a spouse is not feeling warmth toward the community and the opportunity to live in the small town."	Supported
Unit 8. Community engagement	Physician had a sense of belonging to the community.	P1 scored a 4 on the Likert scale for Unit 8. He agreed with Question 15. P1 defined community engagement as being involved in organizations like school boards, churches and sport leagues. P1 also indicated that other physicians prefer not to be engaged in the community because it leaves the physician vulnerable to health-related questions when they are not on	Supported

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
		call or working. For example, someone may see the physician in a store and asked him or her a health-related question. Therefore, not everyone is looking for the same type of community engagement.	
Unit 9. Community assets	Community assets such as schools and recreational offerings fit with the physician's interests and values.	P1 scored a 5 on the Likert scale for Unit 9. He strongly agreed with Question 17. According to P1, "Over and above everything else, it's good schools is what physicians are looking for in a rural community." P1 further explained that the second most important community asset is extracurricular opportunities for their kids. The extracurricular opportunities include activities such as football, baseball, piano, and dance lessons. P1 further identified the third most important factor is the distance to a larger metro area.	Supported
Unit 10. Gained experience in rural practice during residency	The physician had gained experience in rural health-care facilities as part of their residency rotation.	P1 scored a 4 on the Likert scale for Unit 10. He agreed with Question 19. P1 elected to rotation in family medicine where he immersed himself in rural practice. P1 explained he rated Question 19 a 4 on the Likert scale because he had	Supported

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
		experienced some physicians who are a good fit with rural medicine without having rural health-care practice during their residency program.	
Contextual information. Hiring physician	Physician was able to make a reasonable, fast decision to take to position in the rural health-care facility.	P1 scored a 5 on the Likert scale. He strongly agreed with Question 21. P1 did not take a job at another hospital when he was offered a position, because his spouse did not feel like she fit in the community. Another reason P1 did not take a job was the salary. The salary matrix did not reward people for working harder. All physicians received similar pay regardless of their productivity.	
Contextual information. Retention	Once the physician accepted the position in the rural facility, how long did he/she stay?	P1 spent 25 years in his current position at the critical access hospital.	

Overall, Case 1 supported the researcher's theory, as the physician answered positively to all questions. The physician Likert-scale scores were either a 4 or 5 in each key factor, therefore supporting the key indicators. The physician's qualitative data also supported all the key factors.

Case 2. Physician 2's (P2) interview took place in her office. P2 was very comfortable with the interview process and was interested in the research methodology

and purpose of the interview. After all questions were answered, the researcher started the interview. The interview lasted 1 hour.

P2 was a female between 60-65 years of age. She completed her education and residency in a large urban area, and she now had 34 years of experience practicing medicine in various locations. P2 indicated she had background in research, and seemed eager to participate in the interview. P2 appeared very comfortable with the interview process and seemed to appreciate the opportunity to participate.

P2 did not mention any children during the interview; however, P2 did reference the importance of her spouse in relation to the physician recruitment and retention process. P2 indicated, "You are not just recruiting an individual you are recruiting their life partner and children if they have any." P2 further indicated how important it was for her spouse to "have places to work or hang out." This researcher had a feeling during the interview that P2 placed a lot of importance on her spouse's opportunities within the community.

Additionally, P2 emphasized some small bits of information that resonated with this researcher. P2 indicated to the researcher that when she was being recruited to northern Wisconsin, she was being recruited by two large health-care organizations at the same time. One of the things P2 mentioned during the interview was that one organization provided a gift basket in her hotel room while the other organization did not provide any sort of welcome basket. The gift basket made a favorable impression to her. P2 indicated, "When I was recruited here, I received a welcome basket from one organization and not the other organization that was recruiting me." P2 further explained, "Even though the organization (that did not provide me a welcome basket) put

me up in a nicer hotel, I thought the welcome basket was a nicer touch." P2 spoke passionately about other recruitment processes that would help with recruitment in small hospitals. For example, P2 indicated, "When you are recruiting physicians to a small rural area, you should not take the physician to the larger hospital first and then to the smaller hospital." Based on the researcher's notes, these are examples that seemed to have had a big impact on P2 during her recruitment to northern Wisconsin. The summary of Case 2 is presented in Table 5.

Table 5

Physician 2 Interview Summary

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
Unit 1. Physician meaningful work	Having enough meaningful work to support current medical skills and opportunities to expand medical practice	Physician 2 (P2) scored a 4 on the Likert scale. She agreed with Question 1. P2 indicated that having enough meaningful work depends on "being able to use the skills I've learned, and being able to make a difference in the health of the community and the population." In addition, P2 indicated that developing a good relationship with her patients was important to a meaningful practice.	Supported
Unit 2. Access to larger hospital	Physician access to larger hospital to make patient referrals for specialty care and support current practice. Physician integrated practice with larger hospital that can provide more resources and technology such as telemedicine.	P2 scored a 5 on the Likert scale. She strongly agreed with Question 3. P2 indicated an ideal integrated practice would allow the rural hospital to take care of basic surgical services, like gall bladder and some orthopedics, so people do not have to travel a long way to meet the patient needs. The integration of services would allow patients to transfer to another hospital for the more complex needs of the patients.	Supported
Unit 3. Reasonable call schedule	The physician call schedule fits the physician's sense of work–life balance.	P2 scored a 4 on the Likert scale for Unit 3. She agreed with Question 5. P2 indicated being on call no more than every 4th day. Also, need support from colleagues for	Supported

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
		coverage on a holiday or sick day.	
Unit 4. Competitive salary and benefits	Physician salary and benefits represent market rate for physician skill level and geographic region of practice.	P2 scored a 4 on the Likert scale for Unit 4. She agreed to Question 7. P2 indicated that you could not hire a physician for $150,000. The wage needs to be competitive with a solid benefit package.	Supported
Unit 5. Recruitment process	The recruitment process was a positive experience and the physician felt supported via ease of going through the requirements to apply for the position.	P2 scored a 4 on the Likert scale for Unit 5. She agreed with Question 9. P2 indicated the building should not look "old and tired." P2 discussed the importance of sharing the health-care vision of the hospital. Also, P2 discussed how the attention to detail in lodging, like providing a welcome basket in the hotel room, was important.	Supported
Unit 6. Growing up rural community	The fact that the physician grew up in a rural community led the doctor to practice in a rural community.	P2 scored a 4 on the Likert scale for Unit 6. She agreed with Question 11. P2 grew up in a large urban area. However, P2 discussed the importance of her visits to a small community in Minnesota while she was growing up. P2 further explains that while she was visiting the small community, she learned more about rural life and this made an impression on her.	Supported
Unit 7. Spousal employment	Spouse could find a job based on the spouses interest and educational background.	P2 scored a 5 on the Likert scale for Unit 7. She strongly agreed with Question 13. P2 indicated that it was very important that the	Supported

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
		community met husband's expectations. For example, the current community offered a place for farm equipment like tractors. This service in the community was important to her husband because he was interested in working with or being a part of such a service in the community.	
Unit 8. Community engagement	Physician had a sense of belonging to the community.	P2 scored a 5 on the Likert scale for Unit 8. She strongly agreed with Question 15. P2 indicated good schools, churches, and finding a community that fits with personal needs play key roles in community engagement.	Supported
Unit 9. Community assets	Community assets such as schools and recreational offerings fit with the physician's interests and values.	P2 scored a 5 on the Likert scale for Unit 9. She strongly agreed with Question 17. According to P2, the community needs to have good veterinarian services for her animals. Along with assets that met her needs like a craft store, library, and local paper, P2 also spoke very passionately about having access to a grocery store with fresh produce. P2 indicated, "Sometimes small communities have terrible grocery stores, and for people who do not eat out a lot, this is very important to wanting to live in the community."	Supported
Unit 10.	The physician had	Physician 2 scored a 5	Supported

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
Gained experience in rural practice during residency	gained experience in rural healthcare facilities as part of their residency rotation.	on the Likert scale for Unit 10. She strongly agreed with question 19. Physician 2 residency program was in an urban area; however, she did rotations in a rural community.	
Contextual information. Hiring physician	Physician was able to make a reasonable, fast decision to take to position in the rural health-care facility.	P2 scored a 2 on the Likert scale. She disagreed with Question 21. P2 had two experiences when she did not take a job that was offered to her. The first position she did not accept was in Kentucky. P2 indicated, "Having grown up in the Midwest, I didn't feel that I fit in the culture because women wear pearls all the time, and I am not a pearl girl. People were nice and sweet and offered things for me to fit in, but I could not get past some of the social norms." The other position was in Wisconsin, but P2 did not feel other physicians were happy and that administration was not supportive.	
Contextual information. Retention	Once the physician accepted the position in the rural facility, how long did he/she stay?	P2 had spent 6 years and 3 months in her current position.	

Overall, Case 2 supported the researcher's theory, as the physician answered positively to all questions. The physician Likert-scale scores were either a 4 or 5 in each

of the 10 key factors, therefore supporting the key indicators. The physician's qualitative data also supported all the key factors.

Case 3. Physician 3 (P3) was enthused about being part of the interview, and the researcher started the process by getting to know P3 a little better. P3 did not have any questions regarding the interview methodology and research authorization forms. The researcher started the interview on time and it ended in 60 minutes.

P3 was a male between 55-60 years of age. P3 completed his education and residency in large urban area. P3 indicated, "I am very concerned about the future of critical access hospitals because of the difficulty to recruit and retain physicians."

P3 had more than 28 years of experience practicing in rural hospitals. He indicated that being able to provide a full spectrum of medical practice continues to be very rewarding as he spoke of the families he had cared for in the communities he served. Other factors that he spoke passionately about that made his medical practice more rewarding were direct patient care, close team members, and having a variety of patients to serve. P3's dedication to his medical practice, family, and community resonated throughout the interview.

P3 believed that "95% of the people who work in a larger hospital have often forgotten what happens in a small hospital." Therefore, decisions not made locally may have a negative impact on smaller hospitals. In addition, the balance between autonomy of practice and being fully integrated was very important: "The physicians are measured individually and not as a team." However, P3 spoke about the importance of teamwork and relationships to practice good medicine. P3 spoke passionately about the need to balance individual medical practice with an integrated system. According to P3,

“Physician satisfaction was a balance between having autonomy to practice and being supported by an integrated system.” This statement speaks to the delicate balance between making decisions as a physician while working as a team and getting support for patient care when needed.

P3 indicated that a reasonable call schedule was very important to recruitment and retention of doctors. He identified that being on call 1out of every 4th day was reasonable. According to this physician, the call schedules are manageable as long as the calls a physician receives are not too involved and too frequent. Therefore, having a hospital that can handle most medical issues while the physician was on call is important.

P3 was passionate about the importance of relationships between doctors during the residency program. For example, when he was recruited to the small hospital, P3 felt good about the opportunities. P3 shared the benefits of working in a small hospital with some of his colleagues in the residency program. These benefits included autonomy, support from larger hospitals, and focus on teamwork when practicing medicine. P3 indicated that this resulted in two more doctors joining the small hospital who were part of his residency program. The physicians, working together during residency, wanted to continue their working relationship after the residency program; therefore, the physician-to-physician relationship further helped to recruit two more doctors to join the team. P3 further indicated that a rural residency program was very important to help build relations between doctors and encourage doctors to continue to work together in a rural setting after the residency program was completed. According to P3, the recruitment process should start during the residency program when bonds between physicians form.

P3 placed a lot emphasis on the importance of his wife being able to find a job within the community he worked. P3 indicated, “The truth was, right now we would not leave my job, because my spouse would not leave her job.” In addition, P3 indicated that getting involved in community boards, churches, and schools are very important to him. Based on P3’s personal experiences, the retention of physicians had as much to do with aligning their interests off work as it does with aligning their professional practices. The summary of Case 3 is presented in Table 6.

Table 6

Physician 3 Interview Summary

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
Unit 1. Physician meaningful work	Having enough meaningful work to support current medical skills and opportunities to expand medical practice	Physician 3 (P3) scored a 5 on the Likert scale. He strongly agreed with Question 1. P3 indicated that having enough meaningful work depends on the physician having a variety of patients to serve, frequent interaction with team members, direct patient care, and being able to have a full spectrum practice.	Supported
Unit 2. Access to larger hospital	Physician access to larger hospital to make patient referrals for specialty care and support current practice. Physician integrated practice with larger hospital that can provide more resources and technology such as telemedicine.	P3 scored a 5 on the Likert scale. He strongly agreed with Question 3. P3 indicated an ideal integrated practice would include good communication, a common electronic medical record, access to specialty physicians, and use of technology to bring in experts from any hospital, while still having autonomy to make decisions.	Supported
Unit 3. Reasonable call schedule	The physician call schedule fits the physician's sense of work–life balance.	P3 scored a 5 on the Likert scale for Unit 3. He strongly agreed with Question 5. P3 indicated being on call every 4th day was reasonable if the number of calls the person receives was minimal. P3 indicated the calls are triaged as much as possible. This means simple procedures and symptoms should be taken care of without	Supported

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
		calling the physician on call. This provides support for the physician and leaves him/her with more energy to take on the more serious illnesses when the physician was called during off hours.	
Unit 4. Competitive salary and benefits	Physician salary and benefits represent market rate for physician skill level and geographic region of practice.	P3 scored a 3 on the Likert scale for Unit 4. He neither agrees nor disagrees with Question 7. P3 feels physicians should not be penalized with low wages for practicing in a rural facility. Furthermore, P3 indicated that physicians who practice in a rural facility need to be compensated "fairly" for the higher expectations of rural medical practice.	Not supported
Unit 5. Recruitment process	The recruitment process was a positive experience and the physician felt supported via ease of going through the requirements to apply for the position.	P3 scored a 5 on the Likert scale for Unit 5. He strongly agreed with Question 9. P3 indicated that the recruitment process was all about building relationships during the recruitment process. The recruiter needs to be concerned about the physician's spouse's needs, community offerings, and individual recreation interest.	Supported
Unit 6. Growing up rural community	The fact that the physician grew up in a rural community led the doctor to practice in a rural community.	P3 scored a 3 on the Likert scale for 6. He neither agrees nor disagrees with 11. P3 grew up in a large urban area.	Not supported

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
Unit 7. Spousal employment	Spouse could find a job based on the spouses interest and educational background.	P3 scored a 5 on the Likert scale for Unit 7. He strongly agreed with Question 13. P3 indicated that finding a job for his spouse was very important to him when taking the job.	Supported
Unit 8. Community engagement	Physician had a sense of belonging to the community.	P3 scored a 5 on the Likert scale for Unit 8. He strongly agreed with Question 15. P3 defines community engagement as serving the community outside the medical practice. The physician should participate in boards that support community activities. For example, the physician should belong to public health boards, nonprofit community boards, and churches.	Supported
Unit 9. Community assets	Community assets such as schools and recreational offerings fit with the physician's interests and values.	P3 scored a 5 on the Likert scale for Unit 9. He strongly agreed with Question 17. According to P3, good schools are critical in a community. In addition, good churches are very important. Natural resources, such as biking and access to outdoor activities are important as well.	Supported
Unit 10. Gained experience in rural practice during residency	The physician had gained experience in rural healthcare facilities as part of their residency rotation.	Physician 3 scored a 5 on the Likert scale for Unit 10. He strongly agreed with Question 19. Physician 3 answered no to question #20.	Supported
Contextual information. Hiring physician	Physician was able to make a reasonable, fast decision to take to position in the rural health-care facility.	P3 scored a 5 on the Likert scale. He strongly agreed with Question 21. P3 did not take a job at another	

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
		hospital where he was offered a position because his spouse did not feel welcomed with the people she met during the interview process.	
Contextual information. Retention	Once the physician accepted the position in the rural facility, how long did he/she stay?	P3 had spent 28 years in his current position at the critical access hospital.	

Overall, Case 3 supported the researcher's theory, as the physician supported 8 out of the 10 key factors. P3 did not support Unit 6 question number 3, as he grew up in a large urban community. However, his spouse did grow up in a small town in Wisconsin. Based on the interview responses as a whole, this researcher believes P3's spouse's experience in a small town influenced his decision. P3 scored a 3 on the Likert-scale question regarding competitive salary and benefits. However, based on the researcher's qualitative data, it was clear that P3 feels physicians should be compensated fairly for their work. If compensation fell below fair market value, P3 would not consider taking the position.

Case 4. Physician 4 (P4) was enthusiastic to participate in the interview. After a brief discussion about the research process and methodology, P4 indicated he had no further questions. After reviewing all the appropriate documents and signing the consent forms, the researcher started the interview. The interview lasted 1 hour.

P4 was a male between 50-55 years of age. P4 completed his education and residency in an urban area in Iowa. P4 had 25 years of experience practicing medicine in a rural facility in Wisconsin. P4 was direct and to the point when answering questions.

P4 seemed like a very private person focused on the success of his medical practice. P4 indicated that he likes his current practice because he had "people" who take care of the billing, the environment, and all the other "stuff" so he can focus on his patients. P4 indicated that he likes being part of a larger institution because "a larger institution takes care of a lot of the nonpatient care issues like insurances and facility maintenance so I can focus on patient care."

P4 enjoyed being part of the community; however, he indicated that he was not involved, as he likes to keep his privacy. P4 does enjoy the outdoor environment in the area he lives. He placed a lot of emphasis on boating and fishing. The two things this researcher determined from the interview were that P4 likes his privacy outside of work and really enjoys the recreation opportunities in the area he lives. The summary of Case 4 is presented in Table 7.

Table 7

Physician 4 Interview Summary

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
Unit 1. Physician meaningful work	Having enough meaningful work to support current medical skills and opportunities to expand medical practice	Physician 4 (P4) scored a 4 on the Likert scale. P4 agreed with Question 1. P4 indicated that having enough meaningful work meant being able to provide good patient care.	Supported
Unit 2. Access to larger hospital	Physician access to larger hospital to make patient referrals for specialty care and support current practice. Physician integrated practice with larger hospital that can provide more resources and technology such as telemedicine.	P4 scored a 3 on the Likert scale. P4 neither agreed nor disagreed with Question 3. P4 indicated an ideal integrated practice would simple allow him to only focus on patient care and not have to worry about the other aspects of the business.	Not supported
Unit 3. Reasonable call schedule	The physician call schedule fits the physician's sense of work–life balance.	P4 scored a 5 on the Likert scale for Unit 3. He strongly agreed with question 5. P4 indicated being on call no more than every 5th day and only work 1 out of 5 weekends. Also, need support from colleagues for coverage on a holiday or sick day.	Supported
Unit 4. Competitive salary and benefits	Physician salary and benefits represent market rate for physician skill level and geographic region of practice.	P4 scored a 3 on the Likert scale for Unit 4. P4 neither agreed nor disagreed with Question 7. P4 indicated that physicians who work in small facilities should be paid more than physicians who work in urban hospitals. P4 explained that rural physicians have to cover emergency	Not supported

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
		department, urgent care, hospital, and clinic in a rural facility.	
Unit 5. Recruitment process	The recruitment process was a positive experience and the physician felt supported via ease of going through the requirements to apply for the position.	P4 scored a 4 on the Likert scale for Unit 5. He agreed with Question 9. P4 indicated his recruitment process was low key because he worked in the hospital as a part time physician prior to getting a full time job.	Supported
Unit 6. Growing up rural community	The fact that the physician grew up in a rural community led the doctor to practice in a rural community.	P4 scored a 4 on the Likert scale for Unit 6. He agreed with Question 11. P4 grew up in a town the size of 7,000-8,000 people. P4 indicated that, growing up in a small town, he knew that he wanted to be a physician in a smaller community.	Supported
Unit 7. Spousal employment	Spouse could find a job based on the spouses interest and educational background.	P4 scored a 4 on the Likert scale for Unit 7. He agreed with Question 13. P4 indicated that his spouse was unsure about the community at first; however, she now loves the community.	Supported
Unit 8. Community engagement	Physician had a sense of belonging to the community.	P4 scored a 2 on the Likert scale for Unit 8. He disagreed with Question 15. P4 indicated his was not involved in the community.	Not supported
Unit 9. Community assets	Community assets such as schools and recreational offerings fit with the physician's interests and values.	P4 scored a 3 on the Likert scale for Unit 9. He neither agreed nor disagreed with Question 17. According to P4, boating and fishing are very important.	Supported

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
Unit 10. Gained experience in rural practice during residency	The physician had gained experience in rural healthcare facilities as part of their residency rotation.	P4 scored a 4 on the Likert scale for Unit 10. He agreed with Question 19. P4 indicated that he did his residency in a rural hospital, and after this experience, he knew rural practice was a good fit for him.	Supported
Contextual information. Hiring physician	Physician was able to make a reasonable, fast decision to take to position in the rural health-care facility.	P4 scored a 5 on the Likert scale. He strongly agreed with Question 21. P4 indicated he looked at other jobs in other communities; however, the current community he was in was the best fit for him and his wife.	
Contextual information. Retention	Once the physician accepted the position in the rural facility, how long did he/she stay?	P4 had spent 22 years in his current position.	

P4 did not support Questions Number 3, 7, 15 and 17. With the exception of Question Number 7, P4 did not support the questions because of his desire to keep his privacy within his community. Community offerings did not seem to be important to P4.

Of interest, P4 scored a 3 on the Likert scale for Question Number 7. However, he spoke passionately about the need for physicians to be paid more than physicians who work in a larger hospital because of the many skills required to be a rural physician.

Overall, this case supported the researcher's theory in 7 of the 10 key factors. The physician's Likert-scale scores were either a 4 or 5 in each key factor 1, 3, 5, 6, 7, 9, and 10. The physician's qualitative data also supported the 7 out of 10 key factors.

Therefore, this case was partially supported with 70%. P5 did not meet the 80% criteria to support the theory.

Case 5. Physician 5 (P5) came prepared for the interview with a list of ideas he wanted to share with this researcher. P5 reviewed all forms and P5 had no questions regarding the methodology or authorization forms. After reviewing all the appropriate documents and signing the consent forms, the researcher started the interview.

P5 a male between 60-65 years of age. P5 completed his education and residency in an urban area. P5 had more than 38 years of experience practicing in rural hospitals. P5 was very dedicated to his medical practice, community, and family. P5 had worked in his current position for a long time; however, he had taken on many administrative positions during his tenure at a CAH. P5 spoke very passionately about recruitment and retention of physicians in CAHs.

P5 grew up in a small town in Wisconsin. His career started in the military as a physician. After the military, P5 indicated he wanted to find a rural practice where he could raise his family. P5 was recruited by a small CAH in Wisconsin; after being interviewed for a position, he accepted it and stayed with this hospital for 38 years. During the 38 years, P5 indicated, many changes have occurred. For example, in his first 17 years of practice, he practiced as an independent physician in a small CAH, which was not part of a large integrated practice. P5 reflected on all the conflicts that independent practice created for him and his practice. According to P5, physicians did not work together, and individual practices did not make him feel like he was part of a team. After the first 17 years of practice, Mayo Clinic Health System (MCHS) took over the practice and started to integrate medical services with Mayo Clinic. P5 indicated this was a good

move as MCHS reduced physician conflict and moved the practice toward a single practice for all the physicians. According to P5, “Having all the physicians on the same page/same strategic goals was very beneficial.”

P5 spoke very highly about his current group practice. The group practice allowed him to stay very busy and challenge his abilities. According to P5, “I like the breadth and variety this practice allows me, and I like to be stimulated and not bored.” P5 told a story about when he was in medical school and he was making rounds in cardiac rehab. The cardiologist, with whom he was working, came out of a patient’s room and said, “I am sick of chest pain symptoms.” This comment was revealing to P5, and P5 indicated that was why a generalist practice appealed to him. In summary, P5 did not want to focus on only one area of medicine, such as chest pains; P5 would rather focus on the entire body of medicine. Therefore, rural practice was more attractive to him as a physician.

P5 chose the small town because he thought it was a good place to raise his children. In addition, P5 knew his wife could get a job. P5 emphasized that his wife’s ability to get a job was very important to him. He was looking for a small town that was close to a larger community that offered good restaurants and opportunities for his family. P5 wanted to be part of a community where he could get to know people and participate in community activities like church, school functions, business clubs, and scouting. He indicated, “Physicians who commute to their practice don’t generally participate in things outside of work.” P5 clearly had strong community and family values.

P5 indicated that a reasonable call schedule was very important to recruitment and retention of doctors. He identified being on call 1 of every 5th day was reasonable, as long as there are not too many calls when the physician was on call. According to P5, call schedules are manageable as long as the calls a physician receives are not too involved and too frequent. Therefore, having an integrated practice was very important to retaining physicians who work in a CAH. P5 indicated that it was all about the call schedule when recruiting and retaining physicians. Any call schedule beyond being on call every 5th day was too much, and physicians will not stay. The summary of Case 5 is presented in Table 8.

Table 8

Physician 5 Interview Summary

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
Unit 1. Physician meaningful work	Having enough meaningful work to support current medical skills and opportunities to expand medical practice	Physician 5 (P5) scored a 5 on the Likert scale. He strongly agreed with Question 1. P5 indicated that having enough meaningful work means physicians get to use all their skills and never get bored.	Supported
Unit 2. Access to larger hospital	Physician access to larger hospital to make patient referrals for specialty care and support current practice. Physician integrated practice with larger hospital that can provide more resources and technology such as telemedicine.	P5 scored a 4 on the Likert scale. He agreed with Question 3. P5 indicated an ideal integrated practice would include the hospital physicians and clinic physicians working together to provide a continuum of care for the patients.	Supported
Unit 3. Reasonable call schedule	The physician call schedule fits the physician's sense of work–life balance.	P5 scored a 5 on the Likert scale for Unit 3. He strongly agreed with Question 5. P5 indicated being on call every 5th day was reasonable if the number of calls the person receives is minimal.	Supported
Unit 4. Competitive salary and benefits	Physician salary and benefits represent market rate for physician skill level and geographic region of practice.	P5 scored a 5 on the Likert scale for Unit 4. He strongly agreed with Question 7. P5 indicated physicians who work in a rural area need to be paid above market rate because their medical practices include a variety of tasks.	Supported

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
Unit 5. Recruitment process	The recruitment process was a positive experience and the physician felt supported via ease of going through the requirements to apply for the position.	P5 scored a 5 on the Likert scale for Unit 5. He strongly agreed with Question 9. P5 indicated that the recruiter needs to show you "why" you would live in the small community. The recruiter should emphasize the values of living in a small town and provide you with information about the community.	Supported
Unit 6. Growing up rural community	The fact that the physician grew up in a rural community led the doctor to practice in a rural community.	P5 scored a 4 on the Likert scale for Unit 6. He agreed with Question 11. P5 grew up in a small community in Wisconsin.	Supported
Unit 7. Spousal employment	Spouse could find a job based on the spouses interest and educational background.	P5 scored a 5 on the Likert scale for Unit 7. He strongly agreed with Question 13. P5 indicated that finding a job for his spouse was very important to him when taking the job. P5 would not consider living in a community where his wife could not find a job.	Supported
Unit 8. Community engagement	Physician had a sense of belonging to the community.	P5 scored a 5 on the Likert scale for Unit 8. He strongly agreed with Question 15. P5 defined community engagement as serving the community outside his medical practice.	Supported
Unit 9. Community assets	Community assets such as schools and recreational offerings fit with the physician's interests and values.	P5 scored a 4 on the Likert scale for Unit 9. He agreed with Question 17. According to P5, good schools are critical in a community along with decent restaurants, with access	Supported

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
		to urban amenities.	
Unit 10. Gained experience in rural practice during residency	The physician had gained experience in rural healthcare facilities as part of their residency rotation.	P5 scored a 5 on the Likert scale for Unit 10. He strongly agreed with Question 19. P5 answered no to Question #20. However, P5 had an opportunity to spend time with a physician who practiced medicine in a small town during medical school. According to P5, this experience made a big impression on his desire to practice in a small community.	Supported
Contextual information. Hiring physician	Physician was able to make a reasonable, fast decision to take to position in the rural health-care facility.	P5 scored a 2 on the Likert scale. He disagreed with Question 21. P5 indicated he could have taken a position in a small CAH; however, he would have been the only physician. P5 indicated he did not want to practice alone.	
Contextual information. Retention	Once the physician accepted the position in the rural facility, how long did he/she stay?	P5 had spent 34 years in his current position at the CAH.	

P5 did not support Question 21 in the contextual information section. P5 indicated that he would not make a quick decision that would affect him for many years; therefore, he did not support Question 21. Overall, this case supported the researcher's theory, as the physician answered positively to all questions related to the 10 key factors. The physician's Likert-scale scores were either a 4 or 5 in each key factor, therefore

supporting the key indicators. The physician's qualitative data also supported all the 10 key factors.

Case 6. Physician 6 (P6) started the interview asking questions about the purpose of the study, and how the data were going to be used. The researcher answered all questions to P6's satisfaction, and the interview began after all documents were signed.

P6 was a male between 30-35 years of age. P6 completed his education and residency in an urban area in Minnesota. P6 had 4 years of experience practicing medicine in a rural facility in Wisconsin.

P6 described meaningful work as being able to see people go from a very harsh state to a very stable state, medically. For example, P6 indicated that moving from a patient's heart or kidney failure to the patient being discharged was very meaningful to him. P6 emphasized the need to focus on teamwork to make progress with patient care. According to P6, "Working with teams such as nurses was very important, as we all teach each other." Furthermore, the modern concept of having a team includes physicians, nurses, receptionist, social workers, and specialists.

P6 had a strong feeling that pay in a rural facility should be above market rate. According to P6, based on all the debt a physician accrues during residency, it was important that a physician be paid as much as 65% above market rate to work in a small facility. Furthermore, P6 indicated that pay, along with a stable work environment, was very important to recruitment and retention of physicians who work in small hospitals.

P6 grew up in a very small town of 1500 people. He was familiar with small-town medical practices. P6 indicated those physicians who are recruited to a small facility need to feel like they are needed, and the recruitment process should be

customized to make it feel very personal. For example, P6 discussed the importance of a gift basket that includes items from the community where they are going to practice and live. In addition, the recruitment process should pay attention to the needs of the spouse. The more involvement the spouse had in the recruitment process, the better the chance the physician will want to be part of the organization. The physician needs to be able to envision his/her family being part of the community and contributing to the health-care needs of the community.

P6 emphasized that the small health-care facility needs to have a "decent clinic building, hospital, and emergency facilities in order to recruit and retain physicians." P6 indicated that without good facilities and state-of-the-art equipment, it would be very difficult to recruit and retain physicians in a rural area. P6 valued a strong team, good facilities, and making the physician feel comfortable with the work environment and community all play very important roles in the recruitment and retention of physicians in small hospitals. The summary of Case 1 is presented in Table 9.

Table 9

Physician 6 Interview Summary

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
Unit 1. Physician meaningful work	Having enough meaningful work to support current medical skills and opportunities to expand medical practice	Physician 6 (P6) scored a 5 on the Likert scale. P6 strongly agreed with Question 1. P6 indicated that having enough meaningful work was having the ability to care for serious illnesses and see the patient through to recovery.	Supported
Unit 2. Access to larger hospital	Physician access to larger hospital to make patient referrals for specialty care and support current practice. Physician integrated practice with larger hospital that can provide more resources and technology such as telemedicine.	P6 scored a 5 on the Likert scale. P6 strongly agreed with Question 3. P6 indicated that an ideal integrated practice means everyone was working together as a team. The team includes anyone who had contact with the patient.	Supported
Unit 3. Reasonable call schedule	The physician call schedule fits the physician's sense of work–life balance.	P6 scored a 5 on the Likert scale for Unit 3. He strongly agreed with Question 5. P6 indicated being on call no more than every 7th day. P6 indicated that call more than every 7th day would be difficult to recruit and retain physicians.	Supported
Unit 4. Competitive salary and benefits	Physician salary and benefits represent market rate for physician skill level and geographic region of practice.	P6 scored a 5 on the Likert scale for Unit 4. P6 strongly agreed with Question 7. P6 indicated that physicians who work in small facilities should be paid more than physicians who work in urban hospitals. P6 felt very strong that physicians in a rural	Supported

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
		setting need to be paid as much as 65% over market because of the complexity of the job and the difficulty to recruit and retain physicians to small communities.	
Unit 5. Recruitment process	The recruitment process was a positive experience and the physician felt supported via ease of going through the requirements to apply for the position.	P6 scored a 5 on the Likert scale for Unit 5. He strongly agreed with Question 9. P6 indicated the recruitment process should make the physician feel like it was customized to his or her needs. In addition, the recruitment process should help make the physician connect with the medical practice and with the community.	Supported
Unit 6. Growing up rural community	The fact that the physician grew up in a rural community led the doctor to practice in a rural community.	P6 scored a 5 on the Likert scale for Unit 6. He strongly agreed with Question 11. P6 grew up in a town the size of 1500 people. P6 indicated that growing up in a small town; he knew that he wanted to be a physician in a smaller community.	Supported
Unit 7. Spousal employment	Spouse could find a job based on the spouses interest and educational background.	P6 scored a 5 on the Likert scale for Unit 7. He strongly agreed with Question 13. P6 indicated that his spouse wanted to live in a small town. However, he and his wife both wanted good employment opportunity, access to a larger city, and good schools.	Supported

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
			(continued)
Unit 8. Community engagement	Physician had a sense of belonging to the community.	6 scored a 4 on the Likert scale for Unit 8. He agreed with Question 15. P6 indicated he wanted to be part of the small community; however, he likes having autonomy as well. According to P6, "We live here, but my family likes to do a lot in the larger city that was close to their home."	Supported
Unit 9. Community assets	Community assets such as schools and recreational offerings fit with the physician's interests and values.	P6 scored a 5 on the Likert scale for Unit 9. He strongly agreed with Question 17. According to P6, good schools are the most important community asset.	Supported
Unit 10. Gained experience in rural practice during residency	The physician had gained experience in rural healthcare facilities as part of their residency rotation.	P6 scored a 4 on the Likert scale for Unit 10. He agreed with Question 19. P6 indicated that he did his residency in a rural practice, and this experience supported his desire to practice in a small community.	Supported
Contextual information. Hiring physician	Physician was able to make a reasonable, fast decision to take to position in the rural health-care facility.	P6 scored a 5 on the Likert scale. He strongly agreed with Question 21. P6 indicated he looked at other jobs in other states; however, he wanted to be close to his family. Therefore, he chose a facility in Wisconsin.	
Contextual information. Retention	Once the physician accepted the position in the rural facility, how long did he/she stay?	P6 had spent 4 years in his current position.	Supported

P6 supported all key factors for recruitment and retention of physicians. P6 had strong feeling toward key factors such as teamwork, good facilities, reasonable call schedule, and being close to family. P6 seemed very committed to his current position in a CAH. This case supported the researcher's theory.

Case 7. Physician 7 (P7) was initially concerned about the location of the interview (in a room next to other physicians), so the researcher and physician moved to a conference room. P7 did not have any questions about the forms or purpose of the study. After a brief discussion about the research process and methodology, P7 indicated he had no further questions. Once the researcher reviewed all the appropriate documents and signed the consent forms, the researcher started the interview.

P7 was a male over the 65 years of age. He was a dedicated physician with 39 years of experience in the rural hospital. P7 worked his entire career in one rural hospital. He raised a family in the community where he worked, and dedicated his practice and life to the communities he served. The physician indicated that he "was initially impressed with the hospital because he looked in the parking lot and did not see any Cadillacs or Lincolns, people were driving ordinary cars and no one wore a tie." He further explained that his initial impression was positive and indicated a good fit with his personal values.

P7 appeared to be a very thoughtful person who was committed to medicine and the people he serves. He was very passionate about the medical practice in small communities. His responses to questions were short; however, he took the time to reflect on each question before he responded. P7 was a dedicated physician who was concerned about the future of healthcare.

As generations of doctors evolve and their medical practice expectations change, the researcher identifies with the difficulty of replacing a physician like P7 because of their dedication and longevity in the small towns they serve. As indicated throughout his interview, P7 resolved to make healthcare a better place to practice, underscored his strong values and determination to care for people in small communities. Table 10 captures the qualitative and quantitative data from the interview.

Table 10

Physician 7 Interview Summary

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
Unit 1. Physician meaningful work	Having enough meaningful work to support current medical skills and opportunities to expand medical practice	Physician 7 (P7) scored a 5 on the Likert scale for Unit 1. He strongly agreed with Question 1. He defined enough meaningful work in a rural hospital as taking care of the medical needs of the patient and families in the community you serve.	Supported
Unit 2. Access to larger hospital	Physician access to larger hospital to make patient referrals for specialty care and support current practice. Physician integrated practice with larger hospital that can provide more resources and technology such as telemedicine.	P7 scored a 4 on the Likert scale for Unit 2. He agreed with Question 3. P7 agreed with question 3. P7 indicated an ideal integrated physician practice occurs when the physician had support from nursing, pharmacy, radiology, and administration. The physician indicated that an ideal integrated practice would allow him to spend most of his time meeting the needs of the patients.	Supported
Unit 3. Reasonable call schedule	The physician call schedule fits the physician's sense of work–life balance.	P7 scored a 5 on the Likert scale for Unit 3. He strongly agreed with Question 5. He indicated the call schedule be at a maximum of 1 day of call every 4 day. Furthermore, the call schedule needs to allow time with family.	Supported
Unit 4. Competitive salary and benefits	Physician salary and benefits represent market rate for physician skill level and geographic region of practice.	P7 scored a 3 on the Likert scale for Unit 4. He neither agrees nor disagrees with Question 7. His expectations of wage and benefits	Not supported

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
		reflect the current market rate was for primary care physicians.	
Unit 5. Recruitment process	The recruitment process was a positive experience and the physician felt supported via ease of going through the requirements to apply for the position.	P7 scored a 5 on the Likert scale for Unit 5. He strongly agreed with Question 9. He was impressed because physicians seemed to have the same philosophy and positive culture he was looking for in a rural hospital.	Supported
Unit 6. Growing up rural community	The fact that the physician grew up in a rural community led the doctor to practice in a rural community.	P7 scored a 2 on the Likert scale for Unit 6. He disagreed with Question 11. As a child, he spent time in a rural community during the summer months.	Not supported
Unit 7. Spousal employment	Spouse could find a job based on the spouses interest and educational background.	P7 scored a 4 on the Likert scale for Unit 7. He agreed with Question 13. He indicated that it was very important for his wife to feel comfortable in the small community.	Supported
Unit 8. Community engagement	Physician had a sense of belonging to the community.	P7 scored a 4 on the Likert scale for Unit 8. He agreed with Question 15. P7 defines community engagement as being a member of community clubs and contributing to the community.	Supported
Unit 9. Community assets	Community assets such as schools and recreational offerings fit with the physician's interests and values.	P7 scored a 4 on the Likert scale for Unit 9. He agreed with Question 17. He indicated that he needed to be able to participate in activities he loves like biking and cross-country skiing in the small community.	Supported

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
Unit 10. Gained experience in rural practice during residency	The physician had gained experience in rural healthcare facilities as part of their residency rotation.	P7 scored a 4 on the Likert scale for Unit 10. He agreed with Question 19. He spent 1 month during residency in a small community and indicated the experience was very positive.	Supported
Contextual Information. Hiring physician	Physician was able to make a reasonable, fast decision to take to position in the rural health-care facility.	P7 scored a 5 on the Likert. He strongly agreed with Question 21. P7 answered no to Question 22.	
Contextual Information. Retention	Once the physician accepted the position in the rural facility, how long did he/she stay?	P7 had spent 42 years in his position at the CAH.	

P7 did not support Unit 6, which addressed the importance of growing up in a rural community related to recruitment and retention of physicians in a small hospital. However, he spoke passionately about his experiences during the summer months where he spent time with his cousin in rural community. P7 further indicated that his experiences in the small town "made him love small town life." Although P7 did not grow up in a small town, his familiarity with small towns influenced his decision to work in a rural hospital. Overall, this case supported the theory, as 80% of the key factors met the criteria.

Case 8. Physician 8's (P8) interview took place in his office. P8 had no questions regarding the purpose or methodology of the study. After reviewing all the appropriate documents and signing the consent forms, the researcher started the interview.

P8 was a male between 35-40 years of age. P8 had spent his health-care career in both rural communities and large communities. P8 had responsibility for health-care

practices in CAHs and larger urban hospitals. Based on the interview notes, P8 was very dedicated physician who had a broad view of physician needs within an integrated health-care system. P8 participated in the interview because he understands the difficulty to recruit in smaller facilities versus larger health-care facilities. P8 seemed very energetic during the interview and was enthusiastic about participating in the interview. P8's focus during the interview was primarily on the needs of the emergency departments of CAHs. P8's balance between physician practice and administrative responsibility provided a powerful perspective of recruitment and retention of physicians in rural health-care facilities.

P8 did not grow up in a rural community and did not have any rural experience in residency. However, P8 did rotate through a number of communities throughout the state of Wisconsin. According to P8, his experience in different communities "really shaped my views on healthcare." Moreover, P8 indicated, "Having this experience makes me a better physician." P8 was very thoughtful about his responses during the interview. P8 reflected on each question carefully and relied on his experiences throughout his career to formulate his response.

P8's focus during the interview was on the importance of his family and the opportunities for his kids. P8 was energetic during the interview; however, it was clear to the researcher that his time was valuable and his balance of covering a variety of shifts made work–life balance difficult. The summary of Case 8 is presented in Table 11.

Table 11

Physician 8 Interview Summary

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
Unit 1. Physician meaningful work	Having enough meaningful work to support current medical skills and opportunities to expand medical practice	Physician 8 (P8) scored a 5 on the Likert scale. He strongly agreed with Question 1. P8 indicated that having enough meaningful work depends on having patient volume. According to P8, in a rural practice you should have more time to spend with each patient. In addition, P8 indicated that doing more procedures when there are fewer physicians was meaningful to work balance. P8 indicated that meaningful work was about providing a variety of healthcare and requires a different skill set in rural practice.	Supported
Unit 2. Access to larger hospital	Physician access to larger hospital to make patient referrals for specialty care and support current practice. Physician integrated practice with larger hospital that can provide more resources and technology such as telemedicine.	P8 scored a 5 on the Likert scale. He strongly agreed with Question 3. P8 indicated an ideal integrated practice would recognize there are capability limitations in CAH; therefore, you need to have an easy transfer network to a higher level of care that may not be available in the CAH.	Supported
Unit 3. Reasonable call schedule	The physician call schedule fits the physician's sense of work–life balance.	P8 scored a 5 on the Likert scale for Unit 3. He strongly agreed with Question 5. P8 indicated that in a rural practice call schedule would be more frequent	Supported

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
		because you are not as busy as a larger hospital. P8 discussed the call schedule would require good physician support to be able to refer patients to a higher level of care, if needed.	
Unit 4. Competitive salary and benefits	Physician salary and benefits represent market rate for physician skill level and geographic region of practice.	P8 scored a 5 on the Likert scale for Unit 4. He strongly agreed with Question 7. P8 acknowledged some variability in CAHs. P8 indicated he did not know the "sweet spot" for salary and benefits in a CAH. P8 explained that he was not sure if you pay based on productivity or training. P8 further indicated that this was a key factor to recruitment and retention of physicians; however, he was not clear on what was fair.	Supported
Unit 5. Recruitment process	The recruitment process was a positive experience and the physician felt supported via ease of going through the requirements to apply for the position.	P8 scored a 4 on the Likert scale for Unit 5. He agreed with Question 9. P8 indicated that the recruitment process was less important for him. According to P8, "It was more to do with the job than the people doing the recruiting." P8 further indicated that the interaction with the medical staff and organization was more important than the recruitment process.	Supported
Unit 6. Growing up rural community	The fact that the physician grew up in a rural community led the doctor to practice in a rural community.	P8 scored a 4 on the Likert scale for Unit 6. He agreed with Question 11. P8 did not grow up in a small community; however,	Supported

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
		his wife wanted a rural practice.	
Unit 7. Spousal employment	Spouse could find a job based on the spouses interest and educational background.	P8 scored a 5 on the Likert scale for Unit 7. He strongly agreed with Question 13. P8 indicated it was very important for him to be comfortable raising a family in the community her worked.	Supported
Unit 8. Community engagement	Physician had a sense of belonging to the community.	P8 scored a 4 on the Likert scale for Unit 8. He agreed with Question 15. P8 defined community engagement as living in a place where his kids could be involved in school, church, community groups, and have a social support network.	Supported
Unit 9. Community assets	Community assets such as schools and recreational offerings fit with the physician's interests and values.	P8 scored a 5 on the Likert scale for Unit 9. He strongly agreed with Question 17. P8 restated that he wanted a community with a good school district and a good place to raise a family.	Supported
Unit 10. Gained experience in rural practice during residency	The physician had gained experience in rural healthcare facilities as part of their residency rotation.	P8 scored a 4 on the Likert scale for Unit 10. He agreed with Question 19. P8 did not have rural experience during his residency. However, other experiences after residency shaped his view of rural practice.	Supported
Contextual information. Hiring physician	Physician was able to make a reasonable, fast decision to take to position in the rural health-care facility.	P8 scored a 3 on the Likert scale. He neither agreed nor disagreed with Question 21. P8 indicated he was offered a position in another location. However, he felt he	

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
		"clicked" better with the people in this town .	
Contextual information. Retention	Once the physician accepted the position in the rural facility, how long did he/she stay?	P8 was still working in the position. P8 had been in the position approximately 8 years.	

P8 neither agreed nor disagreed with Question 21. This was not surprising to the researcher, as P8 seemed to answer questions with a lot of thought and conviction. Therefore, not making a quick decision to take a position was consistent with how he responded to the other questions provided by the researcher. Based on this researcher's observation of the interview, P8 carefully thinks through important decisions.

Overall, Case 8 supported the researcher's theory, as the physician answered supported all questions related to the 10 key factors. The physician's qualitative data also supported all the key factors.

Case 9. Physician 9 (P9) started the interview asking questions about how this study will help recruitment and retention of physicians in rural areas. The researcher answered all his questions and started the interview after all documents were reviewed. P9 appeared comfortable with the researcher responses and was eager to start the interview.

P9 was a male between 35-40 years of age. He had spent the last 10 years practicing medicine in a CAH in which he continues to have a medical practice. P9 did not grow up in a small town; however, he did have exposure to a CAH during his residency. P9 disagreed with the need to grow up in a small community as a key factor for recruitment and retention.

P9 strongly agreed with the need to get experience during residency in a rural practice. Without any exposure to rural practice, P9 indicated it would be very difficult for physician recruitment to a CAH. P9 indicated that his residency experience in a CAH was key for him in the decision process of choosing to work in a CAH.

During the interview, P9 spoke with a lot of emotion about his position. P9 emphasized the importance of trust, building relations, and feeling welcomed and supported by his colleagues. P9 stressed the importance of being treated well and feeling as if he was part of a team, and most importantly making sure his spouse was satisfied both professionally and personally in the community.

P9 spoke passionately about the need to have autonomy in his small practice while being integrated into a larger system. P9 described this balance as having clear expectations of what was expected of him and his colleagues from an integrated system, while allowing his small group of physicians, who work in the CAH, to decide how best to do that in their hospital. According to P9, this balancing act was difficult to maintain, but was critical to physician retention in CAH. Loss of physician autonomy for physicians in an integrated system was a concern expressed during the interview.

P9's medical school and family medicine residency program were completed in a larger urban area; however, P9 spoke about the very positive experience he had working in a small hospital during his residency program. P9 had more than 10 years' experience practicing in a rural hospital and clinic practice. P9 indicated that because he was completing his residency in the current CAH, where he now works, the recruitment process felt less formal and focused on how the organization could make him successful

in the CAH. This was a key distinction in the recruitment process, because P9 felt like the organization cared about him and wanted him to do well as a physician.

P9 was very direct with his responses and provided rationale to each response as indicated in Table 12. This researcher felt P9 emphasized his feelings during the survey, as he reflected on each question. The summary of Case 9 is presented in Table 12.

Table 12

Physician 9 Interview Summary

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
Unit 1. Physician meaningful work	Having enough meaningful work to support current medical skills and opportunities to expand medical practice	Physician 9 (P9) scored a 5 on the Likert scale. He strongly agreed with Question 1. P9 indicated that having enough meaningful work was best defined as "Bringing my expertise into every situation from ER [emergency room] to clinic practice." Moreover, P9 indicated that meaningful work was related to seeing the patient get better during the course of treatment. P9 noted that he was now responsible for more administrative work, which takes away from the more meaningful work like treating the patients.	Supported
Unit 2. Access to larger hospital	Physician access to larger hospital to make patient referrals for specialty care and support current practice. Physician integrated practice with larger hospital that can provide more resources and technology such as telemedicine.	P9 scored a 4 on the Likert scale. He agreed with Question 3. P9 indicated an ideal integrated practice would allow the physicians to have access to a large hospital with all their services, while allowing physicians who work in a CAH to decide what works best in their facility. For example, the organization would define the values and mission, and indicate where the organization was heading in the next 5 years. The implementation of the plan needs to be more	Supported

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
		customized at the local CAH.	(continued)
Unit 3. Reasonable call schedule	The physician call schedule fits the physician's sense of work–life balance.	P9 scored a 5 on the Likert scale for Unit 3. He strongly agreed with Question 5. P9 defined reasonable call as being on call 1 day a week. According to P9, physicians should not be scheduled more than 2 weekends per 3-month period.	Supported
Unit 4. Competitive salary and benefits	Physician salary and benefits represent market rate for physician skill level and geographic region of practice.	P9 scored a 5 on the Likert scale for Unit 4. He strongly agreed with Question 7. P9 indicated the salary and benefits should be more than what the market demands for a physician who works in a CAH. The increase in pay was based on the large variation of responsibilities the physician had in a CAH. In addition, the call schedule was more frequent in a small facility versus a larger hospital.	Supported
Unit 5. Recruitment process	The recruitment process was a positive experience and the physician felt supported via ease of going through the requirements to apply for the position.	P9 scored a 5 on the Likert scale for Unit 5. He strongly agreed with Question 9. P9 indicated that the recruitment process for him was positive because he felt it was very personal experience. According to P9, physicians from the practice spent a lot of time with him and it felt like all the physicians wanted him to succeed in the position. Another key factor in P9's recruitment process was that the recruitment	Supported

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
		process supported his spouse's needs. P9 felt like his spouse was part of the process, and this meant a great deal to P9.	(continued)
Unit 6. Growing up rural community	The fact that the physician grew up in a rural community led the doctor to practice in a rural community.	P9 scored a 2 on the Likert scale for Unit 6. He disagreed with Question 11. P9 grew up in an urban community.	Not supported
Unit 7. Spousal employment	Spouse could find a job based on the spouses interest and educational background.	P9 scored a 5 on the Likert scale for Unit 7. He strongly agreed with Question 13. P9 spoke very passionately in support of Questions 13 and 14. P9 indicated, "If I am here and my wife was miserable, I will not stay."	Supported
Unit 8. Community engagement	Physician had a sense of belonging to the community.	P9 scored a 3 on the Likert scale for Unit 8. He neither agreed nor disagreed with Question 15. P9 defined community engagement as "Being active enough that when you are out and about in the community you see people that you know on a fairly regular basis."	Not supported
Unit 9. Community assets	Community assets such as schools and recreational offerings fit with the physician's interests and values.	P9 scored a 5 on the Likert scale for Unit 9. He strongly agreed with Question 17. According to P9, schools, safe community, and having basic needs met in the community are key community assets. P9 indicated "I wanted to live in a community that wasn't so small that I could not get my basic needs met."	Supported

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
			(continued)
Unit 10. Gained experience in rural practice during residency	The physician had gained experience in rural healthcare facilities as part of their residency rotation.	P9 scored a 5 on the Likert scale for Unit 10. He strongly agreed with Question 19. P9 indicated that during the last 2 years of his residency program he spent time in a CAH. According to P9, this shaped what kind of medical practice he wanted to join.	Supported
Contextual information. Hiring physician	Physician was able to make a reasonable, fast decision to take to position in the rural health-care facility.	P9 scored a 4 on the Likert scale. He agreed with Question 21. P9 indicated he continued to work at the CAH where he completed his residency program. According to P9, he stayed at the CAH because he liked the people he worked with and trusted them. P9 indicated that positive relationships and being able to provide a full spectrum of medical practice are key factors to his quick decision to take the position.	
Contextual information. Retention	Once the physician accepted the position in the rural facility, how long did he/she stay?	P9 had spent 10 years in his current position at the CAH.	

P9 did not support Unit 6 and Unit 8. According to P9, a physician does not need to grow up in a small town to practice medicine in a small town. However, P9 indicated that no exposure to a CAH would make it very difficult to recruit a physician to CAH. P9 did not support Unit 8. P9's response to Question 15 was neutral. P9's lifestyle indicated he enjoyed time away from the community during nonwork hours. Therefore,

P9 chose not to be too involved in community events. P9 did not have strong feelings about the importance of community engagement. Overall, this case supported the researcher's theory, as the physician supported 8 out of 10 key factors.

Case 10. Physician 10 (P10) had no questions regarding the authorization form and interview process. P10 came to the interview with a few notes that the researcher included in the study. After reviewing all the appropriate documents and signing the consent forms, the researcher started the interview

P10 was a male between 60-65 years of age. P10 completed his education and residency in northern Minnesota. P10 was married with children. P10 started his career in a CAH. His second position in medicine was working for the government as a physician in the intelligence services. This position allowed him to travel overseas to practice medicine in many different locations. After he completed his work for the government, approximately 10 years, he returned to the CAH where he started his career. The physician spoke very highly about both experiences as a physician. However, he noted that once he was done traveling as a physician, it was easy for him to decide to return to the CAH.

P10 spoke softly during the interview and did not provide many details around the questions. This researcher tried various techniques to pull more information from the physician; however, the answers were short and to the point.

P10 clearly had strong family values and spoke with passion about his dedication to the community he serves. Moreover, the physician discussed his strong relationship with his partners in his current practice, which he cherished. P10 was a dedicated family

physician who seemed very humble and did not share a lot about himself. The summary of Case 10 is presented in Table 13.

Table 13

Physician 10 Interview Summary

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
Unit 1. Physician meaningful work	Having enough meaningful work to support current medical skills and opportunities to expand medical practice	Physician 10 (P10) scored a 5 on the Likert scale. He strongly agreed with Question 1. P10 indicated that having enough meaningful work was simple being able to meet the needs of the patients while practicing in a CAH. P10 indicated meaningful work was having the ability to provide clinical care across a wide spectrum of patients.	Supported
Unit 2. Access to larger hospital	Physician access to larger hospital to make patient referrals for specialty care and support current practice. Physician integrated practice with larger hospital that can provide more resources and technology such as telemedicine.	P10 scored a 5 on the Likert scale. He strongly agreed with Question 3. P10 indicated an ideal integrated practice allows physicians in CAHs to refer patients to other medical institutions within their system to meet all the patients' needs. P10 defined clinical integration as easy access to specialty consultation for the patients he serves.	Supported
Unit 3. Reasonable call schedule	The physician call schedule fits the physician's sense of work–life balance.	P10 scored a 4 on the Likert scale for Unit 3. He agreed with Question 5. P10 indicated being on call every 5th day was reasonable. P10 defined necessary support as having enough staff to allow him to focus on patient care versus administrative duties.	Supported
Unit 4.	Physician salary and	P10 scored a 5 on the	Supported

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
Competitive salary and benefits	benefits represent market rate for physician skill level and geographic region of practice.	Likert scale for Unit 4. He strongly agreed with Question 7. P10 indicated the salary and benefits should be competitive with other CAHs. P10 indicated the salary should not be lower or higher than his colleagues in other similar CAHs. P10 stressed the importance of having the wage and benefits be justified by how many responsibilities a physician had along with the number of patients the physician was responsible for within their practices.	
Unit 5. Recruitment process	The recruitment process was a positive experience and the physician felt supported via ease of going through the requirements to apply for the position.	P10 scored a 4 on the Likert scale for Unit 5. He agreed with Question 9. P10 indicated that the recruitment process should provide opportunities to talk with other physicians in the practice and provide a real experience of what was expected of the physician once he or she gets the position.	Supported
Unit 6. Growing up rural community	The fact that the physician grew up in a rural community led the doctor to practice in a rural community.	P10 scored a 5 on the Likert scale for Unit 6. He strongly agreed with Question 11. P10 grew up in a small rural town in Minnesota. P10 indicated the population of the town he grew up in was approximately 3,000 people. In addition, the physician's spouse grew up in a small rural town in Minnesota.	Supported
Unit 7.	Spouse could find a job	P10 scored a 5 on the	Supported

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
Spousal employment	based on the spouses interest and educational background.	Likert scale for Unit 7. He strongly agreed with Question 13. P10 indicated that the community he currently lives in needed to be a good fit for his spouse; otherwise, he would not have considered the position.	
Unit 8. Community engagement	Physician had a sense of belonging to the community.	P10 scored a 3 on the Likert scale for Unit 8. He neither agreed nor disagreed with Question 15. P10 defines community engagement as participating in his kids' events. P10 indicated that what his kids participated in dictated how involved he was in the community.	Not supported
Unit 9. Community assets	Community assets such as schools and recreational offerings fit with the physician's interests and values.	P10 scored a 4 on the Likert scale for Unit 9. He agreed with Question 17. According to P10, good schools are critical in a community. In addition, good churches are very important. P10 indicated that the community had to offer activities that allow his kids develop their interest.	Supported
Unit 10. Gained experience in rural practice during residency	The physician had gained experience in rural healthcare facilities as part of their residency rotation.	P10 scored a 3 on the Likert scale for Unit 10. He neither agreed nor disagreed with Question 19. P10 answered no to Question #20. However, P10 did have experience in a rural facility during his medical school experience. P10 indicated that	Not supported

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
		recruitment of physicians should focus on people in their medical schools because once people get in their residency program, they have already picked a path for their careers.	
Contextual information. Hiring physician	Physician was able to make a reasonable, fast decision to take to position in the rural health-care facility.	P10 scored a 2 on the Likert scale. He disagreed with Question 21.	
Contextual information. Retention	Once the physician accepted the position in the rural facility, how long did he/she stay?	P10 had spent 10 years in his current position at the CAH. During his career, P10 did take another job as a physician for about 10 years. This position allowed him and his family to travel all over the world. However, P10 returned to the CAH after he completed his job with the government.	

P10 did not support Units 8 and 10. P10 neither agreed nor disagreed with Unit 8. P10 did not have strong opinion either way regarding community engagement. P10 stated that medical students should get experience in a rural hospital during their medical school training versus their residency program. P10 stated, “It’s more important to get rural practice exposure during medical school, because if you do not have the exposure of rural practice during medical school, you cannot envision practicing in a rural hospital during residency program.” P10 would have supported Unit 10 if the question included the option for a physician to receive training during medical school.

Overall, this case supported the researcher's theory in 8 out of the 10 key factor. In 8 out of 10 key factors, the physician Likert-scale scores were either a 4 or 5 in each 8 of the key factors.

Case 11. Physician 11 (P11) came to the interview prepared, as he had his thoughts written down in a tablet. P11's notes related to key factors for recruitment and retention of physicians in CAHs. Of interest, P11 was the only physician who brought written thoughts of why it was so difficult to recruit physicians to CAHs. P11 had strong feelings, based on his experience, of what was important to recruitment and retention of physicians in a CAH. P11 spoke with passion and conviction during the interview. P11 stated several times how important this research was to help better understand recruitment and retention of physicians in CAHs. P11 mentioned he was passionate about the research topic, as he was very concerned for the viability of CAHs if they did not have successful recruitment and retention plan.

P11 was a male between 50-55 years of age. P11 spent the last 5 years practicing medicine in a CAH in which he continues to have a medical practice. P11 grew up in a small town in Wisconsin. P11 indicated that his experience, while growing up in a small town, underscored the importance of rural physicians. According to P11, his path to practice medicine in a small town was related to his growing up in a small community. P11 said, "The big reason I am here personally was I have a sense of calling to practice medicine in a small CAH."

During the interview, P11 emphasized the importance of belonging to the community and feeling like being part of the community. P11 indicated, "I like the smaller more personal practice, I know and trust my nurses, I trust them all."

Furthermore, P11 indicated that practicing in a small CAH requires support from a larger organization. According to P11, being part of a larger organization helps physicians with rules and regulations. P11 stated,

> Physicians just want to see patients, and for the most part, the physicians do not want to be part of the business world. The more support we get to help with the rules and regulations to practice medicine the better.

P11 supported all the key factors in the interview. P11 emphasized the need for CAHs to be self-sufficient while being supported, for example, by the availability of specialty physicians who are willing to work with the rural providers to meet the needs of the patients.

P11 spoke very passionately regarding the need to recruit and retain more physicians in rural facilities. P11's devotion to the CAH where he works was evident as the questions were discussed. P11 also was concerned about the ability to sustain his medical practice if more physicians do not join the CAH work force. The summary of Case 11 is presented in Table 14.

Table 14

Physician 11 Interview Summary

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
Unit 1. Physician meaningful work	Having enough meaningful work to support current medical skills and opportunities to expand medical practice	Physician 11 (P11) scored a 5 on the Likert scale. He strongly agreed with Question 1. P11 indicated that having enough meaningful work was best defined as "work that had a purpose to it, and can directly contribute to a patients' benefit or welfare."	Supported
Unit 2. Access to larger hospital	Physician access to larger hospital to make patient referrals for specialty care and support current practice. Physician integrated practice with larger hospital that can provide more resources and technology such as telemedicine.	P11 scored a 5 on the Likert scale. He strongly agreed with Question 3. P11 indicated an ideal integrated practice "would have the availability of willing and supportive specialist physician who do not need to be at the facility, but I need to have access to the specialist to fill the gaps in care I can provide."	Supported
Unit 3. Reasonable call schedule	The physician call schedule fits the physician's sense of work–life balance.	P11 scored a 5 on the Likert scale for Unit 3. He strongly agreed with Question 5. P11 defined reasonable call as being on call 1 to 2 days per week. P11 indicated that the call was dependent on how many calls one receives while on call. The busier the call schedule the less a physician would want to be on call. In addition, P11 noted that as physicians get older, the call frequency becomes a bigger issue. Whereas,	Supported

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
		P11 indicated, "When I was 30, I probably could have done every other night for a while, but at 50, one night a week was the most I can do."	
Unit 4. Competitive salary and benefits	Physician salary and benefits represent market rate for physician skill level and geographic region of practice.	P11 scored a 5 on the Likert scale for Unit 4. He strongly agreed with Question 7. P11 indicated the salary and benefits should be at market rate for a similar size facility. P11 further indicated, "I want to be paid what other physicians who do all medical care I do get paid."	Supported
Unit 5. Recruitment process	The recruitment process was a positive experience and the physician felt supported via ease of going through the requirements to apply for the position.	11 scored a 5 on the Likert scale for Unit 5. He strongly agreed with Question 9. P11 indicated that the recruitment process for him was generally positive. P11 indicated he actually did not take the first position offered to him because he felt the contract was not well explained and he did not trust the process. P11 emphasized that the second position offered made him feel wanted, and that difference made him want to accept the position.	Supported
Unit 6. Growing up rural community	The fact that the physician grew up in a rural community led the doctor to practice in a rural community.	P11 scored a 2 on the Likert scale for Unit 6. He disagreed with Question 11. P11 grew up in an urban community.	Supported
Unit 7.	Spouse could find a job	P11 scored a 5 on the	Supported

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
Spousal employment	based on the spouses interest and educational background.	Likert scale for Unit 7. He strongly agreed with Question 13. P11indicated, “I know of more than one situation where a physician left because their spouse was not happy.” P11 chose this location because his spouse had family that lives close to the facility.	
Unit 8. Community engagement	Physician had a sense of belonging to the community.	P11 scored a 4 on the Likert scale for Unit 8. He agreed with Question 15. P11 defined community engagement as living in the community and getting involved in churches, booster clubs, and other organizations within the community.	Supported
Unit 9. Community assets	Community assets such as schools and recreational offerings fit with the physician’s interests and values.	P11 scored a 5 on the Likert scale for Unit 9. He strongly agreed with Question 17. According to P11, safety and a sense of a well-knit community where people get along and enjoy each other are very important.	Supported
Unit 10. Gained experience in rural practice during residency	The physician had gained experience in rural healthcare facilities as part of their residency rotation.	P11 scored a 4 on the Likert scale for Unit 10. He agreed with Question 19. P11 indicated he gained experience in a CAH during medical school, and not during his residency program. His experience in a CAH during medical school was very important to help him shape where he wanted to practice medicine.	Supported
Contextual information.	Physician was able to	P11 scored a 4 on the	

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
Hiring physician	make a reasonable, fast decision to take to position in the rural health-care facility.	Likert scale. He agreed with Question 21. P11 did not accept one position because he did not feel he trusted the contract.	
Contextual information. Retention	Once the physician accepted the position in the rural facility, how long did he/she stay?	P11 had spent 5 years in his current position at the CAH.	

Overall, Case 11 supported the researcher's theory, as the physician answered positively to all questions. The physician Likert-scale scores were either a 4 or 5 in each key factor, therefore supporting the key indicators. The physician's qualitative data also supported all the key factors.

Case 12. Physician 12's (P12) interview took place in his office after clinic hours. P12 was very generous with his time, as he just completed a full day of seeing patients. P12 did not have any questions regarding the purpose of the study and authorizations forms. The interview started immediately after he signed the authorization form.

P12 was a male between 55-60 years of age. P12 completed his education and residency in an urban area in Wisconsin. P12 had 20 years of experience practicing medicine in a rural facility in Wisconsin. P12 grew up in a small town in Wisconsin, and now practiced medicine close to where he grew up. P12 indicated that he "never thought [he] would return to a small town," but it had worked out well for him. P12's medical practice was in a town with only one clinic, and he is well known in the community in which he practices.

During the interview, P12's responses were thoughtful and concise. P12 emphasized several key areas that help maintain satisfaction of physicians who work in

rural facilities. For example, P12 highlighted the importance of access to specialist physicians for his medical practice. P12 also stated that specialist physicians needed to be available to consult with him in a reasonable amount of time (P12 defined reasonable as within 1 day). Another key factor P12 stressed to retain physicians in a CAH was to have physician representation in decisions that guide the organization. Furthermore, P12 indicated that physicians and administration should have good communication to strive for equity between physicians who work in rural facilities versus physicians who work in urban hospitals. These areas seemed very important to P12. The summary of Case 12 was presented in Table 15.

Table 15

Physician 12 Interview Summary

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
Unit 1. Physician meaningful work	Having enough meaningful work to support current medical skills and opportunities to expand medical practice	Physician 12 (P12) scored a 5 on the Likert scale. P12 strongly agreed with Question 1. P12 indicated that having enough meaningful work was having a full patient schedule and a limit to the amount of work that was nonpatient contact.	Supported
Unit 2. Access to larger hospital	Physician access to larger hospital to make patient referrals for specialty care and support current practice. Physician integrated practice with larger hospital that can provide more resources and technology such as telemedicine.	P12 scored a 5 on the Likert scale. P12 strongly agreed with Question 3. P12 indicated that an ideal integrated practice was having access to specialist physicians both via phone and through electronic medical records.	Supported
Unit 3. Reasonable call schedule	The physician call schedule fits the physician's sense of work–life balance.	P12 scored a 4 on the Likert scale for Unit 3. He agreed with Question 5. P12 indicated being on call 1 night a week was reasonable, as long as you do not have to go into the hospital. Also, one weekend a month would be reasonable as long as you have good support from the other physicians and nonphysicians.	Supported
Unit 4. Competitive salary and benefits	Physician salary and benefits represent market rate for physician skill level and geographic region of practice.	P12 scored a 5 on the Likert scale for Unit 4. P12 strongly agreed with Question 7. P12 indicated, "Physicians who work in small facilities need to be	Supported

(continued)

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
		paid the same as physicians who work in urban hospitals."	
Unit 5. Recruitment process	The recruitment process was a positive experience and the physician felt supported via ease of going through the requirements to apply for the position.	P12 scored a 5 on the Likert scale for Unit 5. He strongly agreed with Question 9. P12 indicated the recruitment process should emphasize the important of the physicians work in the small facility. According to P12, it was important to feel needed in the small facility. In addition, it was important that senior leadership within the organization emphasized the critical need the physician who was being recruited will play in the overall success of the organization.	Supported
Unit 6. Growing up rural community	The fact that the physician grew up in a rural community led the doctor to practice in a rural community.	P12 scored a 4 on the Likert scale for Unit 6. He agreed with Question 11. P12 grew up in a small town in Wisconsin. The town's population was fewer than 3,000 people.	Supported
Unit 7. Spousal employment	Spouse could find a job based on the spouses interest and educational background.	P12 scored a 5 on the Likert scale for Unit 7. He strongly agreed with Question 13. P12 indicated, "I have friends who left their medical practice because their spouse didn't like where they were living." P12 suggested that the recruitment process should find opportunities for the spouse, as the spouse influences the decision of where the physician was going to work.	Supported

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
			(continued)
Unit 8. Community engagement	Physician had a sense of belonging to the community.	P12 scored a 3 on the Likert scale for Unit 8. He neither agreed nor disagreed with Question 15. P12 defined community engagement as your willingness to participate in local businesses and organizations that help support the community. P12 stated, "Community engagement was important to me because that's where a lot of my social life comes from."	Not supported
Unit 9. Community assets	Community assets such as schools and recreational offerings fit with the physician's interests and values.	P12 scored a 4 on the Likert scale for Unit 9. He agreed with Question 17. According to P12, the main draws for him was reasonable housing, nice golf course, and outstanding public schools.	Supported
Unit 10. Gained experience in rural practice during residency	The physician had gained experience in rural healthcare facilities as part of their residency rotation.	P12 scored a 5 on the Likert scale for Unit 10. He strongly agreed with Question 19. P12 indicated that he did his residency in a rural practice and this experience supported his desire to practice in a small community.	Supported
Contextual information. Hiring physician	Physician was able to make a reasonable, fast decision to take to position in the rural health-care facility.	P12 scored a 4 on the Likert scale. He agreed with Question 21. P12 indicated he turned down other positions because the recruitment process was not well organized and the critical access hospital did not have a good explanation of what was expected of him.	

Unit of analysis	Empirical indicators	Source of data	Measurement to support theory
			(continued)
Contextual information. Retention	Once the physician accepted the position in the rural facility, how long did he/she stay?	P12 had spent 18 years in his current position.	

Overall, P12 supported all key factors for recruitment and retention of physicians, with the exception of Unit 8 related to community engagement. P12 commented that he does not think you have to live in the same community you work. According to P12, "I do not think community engagement was a critical because there are physicians who love to live in a bigger community and work in a small town." Furthermore, P12 explained that some physicians do not want to see people around town who are their patients.

Cross-Case Analysis

The cross-case analysis was done as follows. First, the researcher looked at the theory support across all 12 cases. Then, the researcher looked across the units of the researcher theory to identify which of them were strong or weak. Finally, the researcher reviewed qualitative data to find common themes that might contribute to the theory changes.

Cross-case analysis. The researcher's assumption was that theory would be supported by a single case if the physician supported at least 8 of the 10 key factors, which would be 80%. Given that the researcher's theory was supported in 11 out of 12 cases, and partially supported in one case, the researcher considers his theory supported. See Table 16 for the theory support across the cases.

Table 16

Aggregate Cross-Case Analysis Across Units of Analysis: Interview Support per Case

Case	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Percent of units supported	Theory supported
1	4	5	5	5	5	4	5	4	5	4	100%	Yes
2	4	5	4	4	4	4	5	5	5	5	100%	Yes
3	5	5	5	3	5	3	5	5	5	5	90%	Yes
4	5	3	5	3	4	4	4	2	3	4	70%	No
5	5	4	5	5	5	4	5	5	4	5	100%	Yes
6	5	5	5	5	5	5	5	4	5	4	100%	Yes
7	5	4	5	3	5	2	4	4	4	4	80%	Yes
8	5	5	5	5	4	4	5	4	5	4	100%	Yes
9	5	4	5	5	5	2	5	3	5	5	80%	Yes
10	5	5	4	5	4	5	5	3	4	3	80%	Yes
11	5	5	5	5	5	5	5	4	5	4	100%	Yes
12	5	5	4	5	5	4	5	3	4	5	100%	Yes

Cross-unit analysis. The second step involved the physicians' responses to each unit. If each unit scored an average of 4 or above on the Likert-scale question, then the unit was considered to be supported by all 12 participants, and thus very strong. If the overall unit score across the cases was less than 4, then the researcher considered the unit weak. See Table 17, which presents the units scores, mean, median, and standard deviation.

Table 17

Aggregate Cross-Case Analysis Across Units of Analysis: Interview Answers to Each Unit on Likert Scale

Case	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10
1	4	5	5	5	5	4	5	4	5	4
2	4	5	4	4	4	4	5	5	5	5
3	5	5	5	3	5	3	5	5	5	5
4	5	3	5	3	4	4	4	2	3	4
5	5	4	5	5	5	4	5	5	4	5
6	5	5	5	5	5	5	5	4	5	4
7	5	4	5	3	5	2	4	4	4	4
8	5	5	5	5	4	4	5	4	5	4
9	5	4	5	5	5	2	5	3	5	5
10	5	5	4	5	4	5	5	3	4	3
11	5	5	5	5	5	5	5	4	5	4
12	5	5	4	5	5	4	5	3	4	5
Mean	4.8	4.6	4.8	4.4	4.6	3.8	4.8	3.8	4.5	4.3
Median	5	5	5	5	5	4	5	4	5	4
Stan-dard devi-ation	.39	.67	.45	.90	.51	1.03	.39	.94	.67	.65
Unit sup-ported	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	yes

As one can see from the Table 17, Units 6 and 8 scored just below and average Likert-scale score of 4. In both units, the aggregate Likert-scale average was 3.8. While this score was very close to the 4.0 required by the study, Units 6 and 8 still did not meet the set criteria for the theory support.

Unit 6 was about the importance of physicians to have exposure to rural communities by growing up in rural communities; however the qualitative data showed that this key factor would have been supported if the definition had been broadened to include being familiar with rural communities versus growing up in rural communities. Therefore, if the questions were broadened to include any ways of being exposed to rural communities, or being familiar with life in rural communities, then the unit may have been supported.

Unit 8 related to physician engagement in the community. The physicians who did not support this key factor chose a lifestyle that was more private. The physicians' interests were the opposite: to be less involved with the community. The other physicians noted that their lifestyles were inclusive of community activities.

Analysis of Qualitative Data

Having enough meaningful work to support current medical skills and opportunities to expand medical practice. Physicians were asked (Appendix C, Question #1) to rate if having enough meaningful work for them to do, as providers in rural hospitals, was important to the recruitment and retention of physicians. The empirical indicator was that physicians need enough meaningful work to support current medical skills and opportunities to expand practices. The majority of responses (83%) were *strongly agree* and the remaining (17%) were *agree*. The common themes from the

qualitative data indicated that meaningful work include providing medical care that directly contributes to the patients getting better, the ability of physicians to utilize all their skills and provide a broad scope of medical practice, having a full schedule, and being able to meet the needs of the patients who live in their community.

Physician integration/access with larger hospital. During the interview, the physicians were asked (Appendix C, Questions #3) to rate if access to a larger hospital to support the practice was important to the recruitment and retention of physicians. The empirical indicator showed that physician access to larger hospital to make patient referrals for specialty care and support current practice was important to physician recruitment and retention was supported. The majority of the physicians (92%) either agreed or strongly agreed with the question. The physicians supported Unit 2 as a key factor for recruitment and retention of physicians in a rural hospital. Common themes included having access to specialist physicians, easy transfer of a patient to a higher level of care, larger hospitals and smaller hospitals working together as a team, and good communication with physicians at a larger hospital.

The physician call schedule fits the physician's sense of work–life balance. During the interview, the physicians were asked (Appendix C, Question #5) to rate if reasonable call schedule and physician support in a rural facility was important to the recruitment and retention of physicians. The empirical indicator showed that physician call schedule fits physician's sense of work–life balance and was supported if the Likert-scale responses agreed or strongly agreed to the statement asked by the researcher. All physicians either agreed or strongly agreed with this statement. This study supported Unit 3 question that reasonable call schedule and physician support are important to the

recruitment and retention of physician who work in a rural hospital. Reasonable call schedule was defined on average as every 5th weekday and one weekend every 2 months. Physicians qualified that every 5th day was reasonable as long as they did not receive too many calls during their time on call. Common themes for physician support included having enough physicians to cover for each other while the physician was off work, being able to refer patients to a higher level of care, and having enough physicians to provide the full continuum of patient care.

Physician salary and benefits represent market rate for physician skill level and geographic region of practice. During the interview, the physicians were asked (Appendix C, Question #7) to rate if competitive salary and benefits are important to recruitment and retention of physicians. The empirical indicator that competitive salary and benefits need to represent market rate for physician skill level and geographic region of practice was supported if the Likert-scale responses agree or strongly agrees to the statement asked by the researcher. The majority of the responses (75%) either agreed or strongly agreed with the statement. Conversely, only 25% of the responses neither disagreed nor agreed with the statement. The salary and benefit question indicated mixed results. The key factor was not met based on three of the physicians indicating they neither agreed nor disagreed with Unit 4. However, seven of the physicians who supported Unit 4 scored a strongly agree on the Likert scale. The average Likert-scale score was 4.4 out of 5. The common theme in Unit 4 was that physicians expect their compensation and benefit package to be at market rate or above. The physicians defined market rate as equal pay based on their various responsibilities in a rural hospital. The physicians indicated their skill set was broader than that of their colleagues who work in

an urban setting. Therefore, the salary should reflect their wide range of medical practice. This researcher kept salary and benefits in as a key factor, based on the Likert-scale average score.

The recruitment process was a positive experience and the physician felt supported via ease of going through the requirements to apply for the position. During the interview, the physicians were asked (Appendix C, Question #9) to rate if a positive impact from the recruitment process was important to the recruitment and retention of physicians. The empirical indicator was that the recruitment process was important to the recruitment and retention of physician; this was supported if the Likert-scale responses agreed or strongly agreed to the statement asked by the researcher. All 12 physicians in this study supported Unit 5 question that a positive impact from the recruitment process was important to the recruitment and retention of physicians. Common themes to identify a positive recruitment process include building relationships with the other physicians and recruiters, understanding the physician's spouse's needs, emphasizing the community assets, and make the process feel personal to the physician.

The fact that the physician grew up in a rural community led the doctor to practice in a rural community. During the interview, the physicians were asked (Appendix C, Question #11) to rate if growing up in a rural community was important to the recruitment and retention of physicians. The empirical indicator specified that growing up in a rural community led the doctor to practice in a rural community and was supported if the Likert-scale responses agreed or strongly agreed to the statement asked by the researcher. The majority of the responses (75%) either agreed or strongly agreed

with the statement. Conversely, only 25% of the responses neither disagreed nor agreed with the statement.

The physicians did not support the Unit 6 question that growing up in rural community was important to the recruitment and retention of physicians. The average Likert-scale score was 3.8 out of 5. Half of the physicians indicated they grew up in a small town in either Wisconsin or Minnesota. The other half of the physicians grew up in an urban setting. The physicians who grew up in a small town indicated that their experiences while growing up influenced their decision to practice medicine in a small community. Most of the physicians who grew up in an urban setting indicated they did have exposure to small communities while growing up. According to these physicians, the exposure to small communities influenced them to practice in a rural hospital.

Spouse could find a job based on the spouse's interest and educational background. During the interview, the physicians were asked (Appendix C, Question #13) to rate if spousal employment and/or satisfaction with the rural community are important to the recruitment and retention of physicians. The empirical indicator that spousal employment and/or satisfaction with the rural community was important to the recruitment and retention of physician was supported if the Likert-scale responses agreed or strongly agreed to the statement asked by the researcher. All physicians either agreed or strongly agreed with this statement. Ten of the physicians scored a 5 on the Likert scale, indicating they strongly agreed with Unit 7. The remaining two physicians scored a 4 on the Likert scale. These two physicians agreed with Unit 7. The physicians emphasized during the interviews the critical need for spousal employment and/or satisfaction with the community. The physicians indicated that spousal employment, and

satisfaction with the community was critical to accepting a job and staying in the position in the rural facility they currently worked.

Physician had a sense of belonging to the community. During the interview, the physicians were asked (Appendix C, Question #15) to rate if community engagement and a sense of belonging to the community are important to recruitment and retention of physicians. The empirical indicator was supported if the Likert-scale responses agreed or strongly agreed to the statement asked by the researcher. The majority of the responses (67%) either agreed or strongly agreed with the statement. Conversely, 33% of the responses neither disagreed nor agreed with the statement. Unit 8 was not supported as a key factor for recruitment and retention of physicians in a rural hospital. The average Likert-scale score was 3.8 out of 5. The physicians had mixed results with Unit 8 questions. Some of the physicians were very involved in the community, while other physicians chose not to get as involved in the community. The physicians did agree that their involvement in the community largely revolved around their kids' activities.

Community assets such as schools and recreational offerings fits with the physician's interest and values. During the interview, the physicians were asked (Appendix C, Question #17) to rate if community assets such as schools, recreation, and environment are important to recruitment and retention of physicians. The empirical indicator that the community assets fit with the physician's interest and values was supported if the Likert-scale responses agreed or strongly agreed to the statement asked by the researcher. The majority of the responses (91%) either agreed or strongly agreed with the statement. Conversely, only 8% of the responses neither disagreed nor agreed with the statement.

The physicians supported Unit 9 as a key factor to recruitment and retention of physicians in rural hospitals. The physicians agreed with the question that community assets are important to the recruitment and retention of physicians. The top two community assets that the physicians valued were schools and recreation opportunities. Other community assets frequently mentioned were churches and grocery stores.

The physician had gained experience in rural health-care facilities as part of their residency rotation. During the interview, the physicians were asked (Appendix C, Question #19) to rate if getting experience in rural practice during residency was important to recruitment and retention of physicians. The empirical indicator that physicians who gained experience in rural healthcare facilities, as part of their residency program, was supported if the Likert-scale responses agreed or strongly agreed to the statement asked by the researcher. The majority of the responses (92%) either agreed or strongly agreed with the statement. Therefore, the physicians supported that getting experience in rural practice during residency was important to the recruitment and retention of physicians. All the physicians gained experience in rural medical practice either during the residency program or during medical school. The theme from the physicians' interviews was that their exposure to rural medical practice influenced their decision to practice medicine in a CAH.

The physician was able to make a reasonable, fast decision to take the position in rural health-care facility. During the interview, the physicians were asked (Appendix C, Question #21) to rate if he/she made a fast decision to take the position once they had gone through the recruitment process. The empirical indicator was about the physician's ability to make a reasonably quick decision to take the position after the

position was offered to him or her. The indicator was supported if the Likert-scale responses agreed or strongly agreed to the statement asked by the researcher. The majority of the responses (67%) either agreed or strongly agreed with the statement. Conversely, only 33% of the responses neither disagreed nor agreed with the statement. These data were contextual for the researcher's theory and not part of the key 10 factors within the theory.

Summary

Of the 12 physicians who participated in this research, only one physician did not agree with at least 80% of the 10 key factors. Furthermore, only two key factors did not score an average of 4 or more on the Likert scale questions.

As an aggregate, only two key factors did not meet the criteria to score between a 4 to 5 on the Likert scale. These two key factors were Unit 6, growing up in a rural community, and Unit 8, a sense of belonging to the community. The following eight factors did meet the criteria: (a) meaningful work, (b) access to larger hospital, (c) reasonable call schedule, (d) competitive salary and benefits, (e) positive impact from recruitment process, (f) spousal employment and/or satisfaction with community, (g) community assets, and (h) experience in rural practice during residency.

Chapter 5: Discussion

This chapter provides an overview of the main findings of the study. In addition, this chapter provides discussion of the findings, significance of the research, implications of the study, and implications for organization development, limitations, suggestions for future research, and final thoughts of the researcher.

Main Findings

The intent of this study was to answer the question: What factors contribute to the recruitment and retention of physicians in CAHs in Wisconsin. The study supported the researcher's theory in 9 out of 10 physicians' factors about the recruitment and retention of physicians in rural hospitals.

Discussion

In preparation, the researcher reflected on his findings, reviewed additional literature, and used his knowledge and experience to discuss his findings through the lens of what was happening in the health industry. The focus is on three sections: (a) the industry and literature spends too much time focusing on the problems and not the solutions, (b) doing nothing is not an option, and (c) organizations need to implement solutions and use research data to change how organizations recruit and retain physicians.

Organizations spend too much time on the problem and not the solutions. As far back as 40 years ago, Madison (1973) wrote an article in the *Health Services Reports* that outlines similar recruitment and retention issues the health-care industry continues having today. According to Madison,

> The pool of new physicians possibly interested in small-community practice seems largely restricted to physicians coming from small communities who like

> small-community living, and wish to establish a busy practice early. With our present education and population trends, this will be a small pool. (p. 1)

In addition, the researcher further concluded that there might be certain predispositions on the part of the physicians toward certain lifestyles, locales, and practice patterns to be recruited and retained in small hospitals (Madison, 1973).

The Literature Review identified that the recruitment and retention problem continues for rural health-care organizations since 1973. According to Cutchin (1997), organizations must first recognize that complex and dynamic social relations affect rural physicians and their decision-making process to practice in a rural setting. Therefore, the problems of today are not new, as the thread of literature continues throughout the years with the same theme. The theme is that rural physicians are unique in their desire to practice in small hospitals, and the numbers of physicians who want to practice in small hospitals are small. Understanding the research and the problem is not going to solve the recruitment and retention of physicians in rural hospitals. Organizations should develop solutions to the issues of recruitment and retention. Consequently, doing nothing about this issue is not an option. As the findings of this study indicated, there is no one single factor that would be a magical incentive for a physician to be hired and then stay in a rural hospital. Health-care organizations need to consider a variety of factors and implement new methods for recruitment and retention of physicians in rural hospitals to create a stable physician workforce. A stable physician workforce will meet the community's health-care needs and provide financial stability to the organization.

Doing nothing is not an option. Health-care organizations that recruit physicians need to understand the key factors that influence the physicians they are recruiting.

Organizations should not use the same recruitment and retention methodology for physicians who work in the different settings such as urban settings, rural settings, and specialty practices. Each physician was looking for something different in his or her medical practice. Therefore, a one-size approach to recruitment and retention does not meet the individual physician needs.

This study focused on the key factors for recruitment and retention of physicians in rural facilities. The conclusion of the researcher was that these key factors are important to physicians who want to practice in rural settings. However, based on the researcher's experience, organizations do very little to address these basic factors when recruiting and retaining physicians. Furthermore, an organization should not just focus on one or two key factors; instead, the organization should focus on most of the key factors identified by the researcher's theory in order to be successful.

Many current research articles articulate the need for organizations to identify a more comprehensive list of factors to make real change in the recruitment and retention process. According to Biola and Pathman (2009), education-loan repayment programs and bonus payments to recruit and retain physicians in rural practices are key factors for recruitment and retention. In addition, Thrall (2008) discussed medical residency training in rural facilities as a key factor for recruitment and retention of physicians. Daniels, VanLeit, Skipper, Sander, and Rhyne's (2007) study concluded that a not just one factor is key for recruitment and retention, but a number of factors are associated with recruitment and retention of physicians in rural areas. Their findings are aligned with the findings of this research. The latest attempt to increase recruitment and retention

was from Kirschner, Braspenning, Jacobs, and Grol (2012), who completed an action research study that targeted a pay-for-performance program for physicians.

In summary, the current research indicates that loan forgiveness programs, rural training programs, competitive salaries, professional opportunities, professional development, and community appeal all play key roles in recruitment and retention of physicians in rural areas. While this information is valuable, organization need to take action and put together a comprehensive recruitment and retention program to recruit and retain physicians in rural health-care organizations. Organizations that do nothing will only produce the same results they see today.

How to do it. If organizations understand the problem, and are not satisfied with their current results, a change needs to occur to affect positive results for recruitment and retention of physicians in rural facilities. This study identified key factors for organizations to recruit and retain physicians in rural facilities. While these key factors may look like a common sense things, they reflect a very complex problem. If these factors are a common sense, then why do health-care organizations fail to address a problem with the recruitment of physicians into rural areas? Perhaps it is time to shift from knowing to doing. Organizations need to build recruitment and retention programs that factor in most of the key factors identified by this study, if not all of them.

The following are examples of how organizations can reevaluate their recruitment process. First, each healthcare organization needs to assess a physician position in terms of meaningful work, as defined by each physician.This meaningful work needs to be connected to a larger healthcare facility. If the rural healthcare facility is not already integrated with a bigger system, the organization needs to start this process as soon as

possible. Second, there needs to be a minimum of five physicians to take call. Based on this study, physicians are not interested in a call schedule that is less than 1 in every 5 days. Third, salary and benefits needs to be competitive or above market rate. The study found that physicians, who are just starting their practice, are more interested in how much money they will make; this is likely due to the large amount of student loans. As physicians become more mature in their practice, salary is less of an issue. Lastly, the recruitment method is a critical part of the process. The recruitment method needs to be custom built for each physician who wants an interview. The recruitment method needs to take into consideration the physician's needs, based on what they value in the community and their recreational interest. Furthermore, the spouse of the physician needs to be part of the recruitment process as well. It is very important that the spouse's needs and desires are factored into the recruitment schedule.

In summary, each physician interview needs to take into consideration the 10 key factors outlined in this paper and build a customize approach to the interview schedule. All the factors identified in this paper are important and have to be addressed during the interview.

Significance of the Study and Implications for Practice

This study contributed to better understanding of the key factors needed for recruitment and retention of physician in rural hospitals. The study's findings were about the important key factors that influence the recruitment and retention of physicians in rural hospitals. Additionally, the study provided information that helps healthcare organizations gain understanding about what physicians need to be satisfied with their jobs. The research further tested key factors in recruitment and retention of physicians

that may not be obvious to people who are trying to recruit and retain physicians in rural hospitals.

Based on the physicians' interviews, the research findings indicated that each physician values their work–life balance. Additionally, the study emphasized the need for organizations to pay attention to what physicians want and expect outside of their work. Healthcare organizations should pay attention to the full scope of physicians' needs outlined in this research. Perhaps this research can shed light on what physicians want and need in order for them to be recruited and retained in the organization. The organizations need to recognize the needs of a physician, as a whole person, and not focus only on the requirements of the job.

The significance of this research is its methodology. While the study had a positivistic rigor, it also collected qualitative data to try to understand physicians' needs and desires to join a rural hospital. Furthermore, this study addressed an acute problem rural hospitals face today. The researcher could not find any studies that incorporated both quantitative and qualitative data to understand physicians' needs in recruitment and retention.

This study provided a number of key factors for recruiting physicians to rural areas. These key factors showed areas to focus on during the physician selection phase, interview phase, and retention phase of the recruitment and retention process. If the CAHs can produce a stable physician workforce, rural communities' healthcare would benefit by meeting the communities' preventive and acute health-care needs. Therefore, implementing these key factors would benefit the community as a whole.

Organization development practitioners would also benefit from the findings in this study. Practitioners can build on the results of this study to gain entry into an organization and contract to provide action research within the organization. This study provides the foundation for a successful organization development consultation because the key factors will lead the practitioner into discovering ways to improve the health-care organization's physician workforce. A stable physician workforce will create a stable CAH now and in the future.

Limitations

The researcher used the positivistic multiple-case study method. While this methodology was sufficient for discovering firsthand accounts of the physicians' opinions of key factors for recruitment and retention in rural health-care organizations, the generalization of the findings cannot be assumed for all physicians who work in a CAH. However, generalization can be applied to the theory. Moreover, with more replications of this study the theory can become more robust.

Another limitation is the fact that this study relied on self-reporting information from the physicians. The physicians might not have remembered their experiences accurately or may have even exaggerated their experiences in recruitment and retention to make their experiences seem worse or better. The physicians may not have been able to recall their feelings and details of their experiences due to the lapse in time between their experiences and the time they participated in the study.

An additional limitation of this study was that the researcher interviewed 12 physicians. The researcher had hoped to interview 20 physicians for this study. The researcher wanted to interview 13 physicians who worked in CAHs owned and operated

by MCHS, and 7 physicians who worked in CAHs not owned and operated by MCHS. However due to different reasons, the researcher was able to study only 12 cases.

The researcher discovered several difficulties with soliciting physicians to be included in this study. The main issue was dealing with work and family schedules of the physicians. In addition, the researcher encountered a lack of interested physicians to participate in the study. Based on the researcher research experience, the physicians were very busy and this made it very difficult to find extra time to participate in the study. In fact, the researcher made many attempts to contact physicians who work outside MCHS CAHs and received zero responses to participate. The researcher tried to contact the physicians who worked outside of MCHS directly via e-mail and through other trusted sources. For example, the researcher contacted the administrator of a CAH, and gained support before soliciting the physicians who work in the CAH. In addition, the researcher worked with a consulting to better gain access and trust with physicians outside of Mayo. Unfortunately, the researcher received no responses from the physicians who worked outside the MCHS. This limitation is significant, because the MCHS culture may be different from another CAH culture. Therefore, the physicians who work in MCHS CAHs only represent the result of the study. Although the study found support for the overall theory, additional replications of this study would be necessary to validate the researcher's theory.

Suggestions for Future Research

Further research is needed to substantiate the theory. The research should be expanded to include rural health-care hospitals in states other than Wisconsin. This study focused on the northwest region of Wisconsin; however, other states and regions within

each state need to be studied. The research should also focus on different rural health-care organizations. For example, rural hospitals can range from independent organization to completely integrated organization like MCHS. The replication would strengthen the validity of the researcher's theory.

In an effort to expand the sample size, consideration needs to be made to have the physicians' interviews be part of their daily work schedules. This would require a commitment from the organization, because the interview would influence daily operations. Another consideration would be to decrease the time for each interview from 60 minutes to 30 minutes. The 60-minute face-to-face interview, which occurred during nonwork time, was very difficult to set up. The physicians who did participate in the interviews had to take time to respond to e-mails and carve out a 1-hour block of time. The process to set up the interviews took valuable time away from the physicians who had many demands in their daily schedules. Alternative ways to set up interviews may be of help to get more physicians to participate.

Final Thoughts

Based on this researcher's reflection after completing this study, the most valuable take away for organizations is to focus on all the key factors. The researcher discovered throughout the interviews that not one single key factor made the difference for a physician to work in a rural area. All the factors created a desire for the physician to work and live in a rural community. Addressing the key factors as a whole is very important for each organization to be successful in recruiting and retaining physicians in rural communities. In addition, based on the longevity of the physicians who were

interviewed, once the physicians are recruited to rural health-care organizations, they stay in their position for a long time.

Conclusion

Rural health-care organizations spend a lot of time and effort to recruit and retain physicians in their facilities. Without physicians working in rural health-care facilities, CAHs cannot continue to operate. Therefore, physicians who work and live in rural health-care facilities are critical to meeting the needs of rural communities. Traditional methods of recruitment and retention of physicians to work in the CAHs do not always work. The purpose of this study was to identify the key factors of recruitment and retention of physicians, and the importance of these factors in physicians' decision-making about working in rural areas. While the findings did not discover new factors, the researcher found that the availability of the majority of factors might be the key to effective physician recruitment and retention in CAHs.

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Appendices

Appendix A

Recruitment Letter

Greetings! I am a doctoral candidate completing my dissertation at the University of St. Thomas, Minneapolis, MN. You have been selected as a candidate to participate in a study regarding key factors for recruiting and retaining physicians in rural hospitals. If you are interested in participating in the study please contact me at eide.dean@mayo.edu. Also, you may call me at 715.597.8593 or you may use my cell number 715.533.3926. Please do not hesitate to call me with any questions.

I wish you to know I appreciate your consideration of this request. I will be very respectful of your time and will be able to meet with you at your convenience. The time commitment will be between 45 and 60 minutes for a short interview. The questions asked will be related to factors that may help contribute to successful recruitment and retention of physicians in Critical Access Hospitals. Please know that voluntary participation in this study is confidential and you can withdraw at any time.

Respectfully,

Dean Eide

Appendix B

Consent Form

Study to Understand Factors in Success Recruitment and Retention of Physicians in Rural Hospitals

I am conducting a study to better understand the factors needed to recruit and retain physicians in rural hospitals. The purpose of this study was to determine key factors that contribute to successful recruitment and retention of physicians in rural healthcare settings. You were selected as a possible physician in this study because you currently work as a provider in a rural healthcare facility.

This study is being conducted by Dean Eide, a doctoral candidate in Organization Development at the University of St. Thomas in Minneapolis, Minnesota.

Background Information

Recruitment and retention of physicians in rural healthcare facilities continues to be very difficult. Furthermore, the pool of physicians who want to practice in rural settings is low and continues to be a concern for rural hospitals. Research indicates that this problem will only get worse as the demand for rural healthcare increases. Therefore, this researcher would like to better understand key factors that may contribute to successful recruitment and retention of physicians in rural hospitals.

Procedures

If you agree to be in this study, I will ask you to do the following:

1. Acknowledge your interest in participating in the study by signing the consent form.

2. Participate in a structured interview with the researcher for approximately one hour.
3. Answer 23 questions regarding factors in recruitment and retention of physicians in rural hospitals.
4. Allow the researcher to complete hand written notes of the interview. Allow the researcher to ask follow up and clarifying questions during the interview to ensure accuracy. Allow researcher to record the conversation.

Risk and Benefits of Being in the Study

The study includes minimal risks related to confidentiality of the information. No names or personal identifiers will be displayed in this report. In addition, data will be aggregated, so it would be very difficult to trace any responses back to a physician.

Confidentiality

All records of this study will be kept confidential. The interview will be recorded. All documents, written and typed, pertaining to this study will be destroyed by the researcher at the conclusion of this study.

Voluntary Nature of the Study

Your participation in this study is voluntary. If you decide to participate, you are free to withdraw at any time. Should you decide to withdraw from the study, I will destroy any data collected from you and your information will not be used in the study.

Contact Information and Questions

If you have any questions, please contact me at eide.dean@mayo.edu. You may also contact the University of St. Thomas Review Board at 651.962.5341 or my dissertation advisor Dr. Alla Heorhiadi at 651.962.4457.

You will be given a copy of this form to keep for your records.

Statement of Consent

I have read and understood the above information. I consent to participate in this study. I am at least 18 years of age.

_____ _____

Signature of Study Physician Date

_____

Printed Name of Study Physician

_____ _____

Signature of Researcher Date

Appendix C

Interview Guide

Gender_____

Age range (20-25) (25-30) (30-35) (35-40) (40-45) (45-50) (50-55) (55-60) (60-65) 65 plus

Years of experience_____

Education background_____

Factors

1. Rate the following statement using the scale below. Having enough meaningful work for you to do, as a provider in a rural hospital, is important to the recruitment and retention of physicians.

    1. Strongly disagree
    2. Disagree
    3. Neither agree nor disagree
    4. Agree
    5. Strongly agree

2. I define enough meaningful work in a rural hospital as:

3. Rate the following statement using the scale below. Access to a larger hospital to support my practice in a rural facility is important to the recruitment and retention of physicians.

    1. Strongly disagree
    2. Disagree
    3. Neither agree nor disagree

4. Agree
5. Strongly agree

4. Please explain what an ideal integrated practice would be for you working in a rural hospital.

5. Rate the following statement using the scale below. Reasonable call schedule and physician support in a rural facility is important to the recruitment and retention of physicians.

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

6. How would you define a reasonable call schedule and adequate physician support in a rural healthcare facility?

7. Rate the following statement using the scale below. Competitive salary and benefits are important to the recruitment and retention of physicians.

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

8. What are your expectations regarding salary and benefits to work in rural facilities?

9. Rate the following statement using the scale below. A positive impact from the recruitment process is important to the recruitment and retention of physicians.

1. Strongly disagree
2. Disagree
3. Neither agrees nor disagrees
4. Agree
5. Strongly agree

10. Please tell me about the recruitment process you participated in to get your current position? What did you like and dislike about the process? What would you do differently in the recruitment process?

11. Rate the following statement using the scale below. Growing up in rural community is important to the recruitment and retention of physicians.

1. Strongly disagree
2. Disagree
3. Neither agrees nor disagrees
4. Agree
5. Strongly agree

12. Please tell me about your exposure to rural communities while growing up.

13. Rate the following statement using the scale below. Spousal employment and/or satisfaction with the rural community are important to the recruitment and retention of physicians.

1. Strongly disagree
2. Disagree

3. Neither agree nor disagree
4. Agree
5. Strongly agree

14. Please tell me how your spouse's employment and/or satisfaction with the community played a role in your recruitment and retention process.

15. Rate the following statement using the scale below. Community engagement and a sense of belonging to the community are important to the recruitment and retention of physicians.

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

16. How would you define community engagement?

17. Rate the following statement using the scale below. Community assets such as school, recreation and environment are important to the recruitment and retention of physicians.

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

18. What resources are you looking for in a rural community in order for you to live in the town you work?

19. Rate the following statement using the scale below. Getting experience in rural practice during residency is important to the recruitment and retention of physicians.

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

20. Did you have an opportunity to get experience in a rural healthcare practice during your residency program? If yes, please explain.

21. Rate the following statement using the scale below. Once I had gone through the recruitment process for the rural position I applied for, I made a relatively quick decision to take the position.

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

22. Do you have a story that describes a time when you did not take a position you were offed as a physician? Why did you not take the position?

23. How long did you stay after you accepted the position in the rural healthcare facility?