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Rural Nurses' Perspectives on Their Capacity to Care for Pediatric Patients in Northern and Eastern Maine

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RURAL NURSES' PERSPECTIVES ON THEIR CAPACITY TO CARE FOR
PEDIATRIC PATIENTS IN NORTHERN AND EASTERN MAINE

by

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A Thesis Submitted in Partial Fulfillment
of the Requirements for a Degree with Honors
(Nursing)

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Abstract

According to the 2010 U.S. census, approximately 59 million people (19%) in the United States reside in a rural area. More than fifteen percent of the nursing workforce is employed in a rural area. This creates a nurse to patient staffing ratio of 1 nurse for 117 people. This ratio demonstrates a large need of nursing personnel in the rural workforce. With a high patient to nurse ratio, rural nurses can be described to be valuable and in high demand. Rural nurses are valued for their ability to utilize different nursing specialties and care for patients all across the age spectrum. One nursing specialty that is seen often in rural settings is pediatrics. However, in the topic of rural pediatric nursing there is little literature available.

A pilot study was designed to gain an understanding of rural nurses' perspectives on their capacity to care for a pediatric patient within their work setting in either northern or eastern Maine. This study looked at the following issues: work experience, pediatric patient population, accessibility, most observed pediatric diagnosis, pediatric social issues, academic preparedness of rural nurses, and the strengths and weaknesses of rural pediatric nursing.

Nurses stated that a lack of exposure to pediatric patients and a lack of access to pediatric specialists were major weaknesses in their work settings. Overall, the nurses surveyed felt that additional trainings were required to continue competency of pediatric nursing in order to accommodate the low pediatric patient census. The purpose of this thesis was to examine rural pediatric health on a community level and ignite further research studies on improving nursing and patient care within this environment.

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The nursing specialty delivers care to a diverse population and age spectrum. Nursing care is delivered in two geographical areas: urban and rural. Nursing literature reflects on the differences between urban and rural health care. More specifically, rural nursing literature looks at the entire aspect of rural nursing with little information available on the subspecialties within this form of nursing. Pediatric rural nursing is one of these subspecialties. The care of pediatric patients in a rural community affects a large population, but there is little literature available on the topic.

Literature Review

A thorough literature review was conducted using Biomed Central, Medline, Pubmed, CINAHL, and Cochrane Library. Search terms included: peer-reviewed, written in English, written between 2008 and 2014, “Pediatric Nursing”, “Rural Nursing”, “Pediatric Rural Nursing”, “Rural Pediatric Care”, “Pediatric Patients on Adult Inpatient Units”. The literature was carefully examined and reviewed by the researcher.

Rural Nursing

In order to have an accurate understanding of rural nursing the term “rural” must first be defined. There are many definitions and opinions of the term “rural”. For purposes of this thesis, rural is defined as: “communities with fewer than 10,000 residents and a county population density of less than 1,000 persons per square mile” (Allender, Rector, & Warner, 2014). The three counties in Maine that were surveyed for this research all fall under this definition of rural according to the most recent census data (U.S. Census 2010). Rural health care is relevant to nursing research because half of the population on earth lives in a rural area (Brownlee, 2011).

However, only thirty eight percent of the nursing workforce is employed in these rural areas (World Health Organization, 2010).

Using the rural nursing theory framework, rural practice is described to be different from urban practice due to the following: health care provider use patterns, environmental issues, and how patients define their health (Lee & Winters, 2004). Within a rural environment, subcultural values, beliefs, and norms play a major role in how the people in this population view and define their health. Environmental factors, such as weather or distance, also play a large role in a rural population when they determine if they need to seek care (Long & Weinert, 1989).

According to Long and Weinert (1989), who worked to develop a theory base for rural nursing, rural nursing is defined as the provision of health care by professional nurses to persons living in sparsely populated areas. In rural settings, the attainment and retention of nurses can be quite difficult. Difficulties arise due to things such as: limited positions, facility remoteness, inadequate resources, lack of interpersonal ties to the area, and decreased professional development opportunities (Rohatinsky & Ferguson, n.d.). Barriers to patient care in rural hospitals have been found to be: inadequate staffing, skills, equipment, and consumables (Eygelhaar, & Stellenbery, 2012). Another study found that on average, in the United States, pediatric patients must travel more than 24 miles to receive care from a pediatric subspecialist (Mayer, 2007).

Rural nursing has been described to be a generalist practice. The nurse's role as a generalist requires the ability to perform crisis assessment and management in the following nursing disciplines: pediatrics, obstetrics, psychiatrics, geriatrics,

medical/surgical, and emergency nursing (Molinari, Jaiswal, & Hollinger-Forrest, 2011). Often rural nurses are referred to as the term a “jack of all trades”. These nurses, on any given day, can care for various illnesses whose scope encompasses the entire age spectrum. Primarily, however, these nurses care for adult patients with little research on the rural nursing care of pediatric patients.

Nursing in Pediatrics

Pediatrics is the care of children and the treatment of their diseases (Venes & Taber, 2009). In pediatric nursing the nurse utilizes a family centered approach. The nursing care in this specialty encompasses care of infants, children, and adolescents (Ball, Bindler, & Cowen 2014). A nurse in this field utilizes the following roles: provision of care, patient advocacy, patient education, and case management (Ball et al., 2014).

The American Nurses Association and The Society of Pediatric Nurses state that there are expected competencies of a generalist pediatric nurse.

- An understanding of the unique anatomical, physiological, and developmental differences in the varying ages involved in pediatrics.
- The ability to care for children, sensitivity to cultural issues, an ability to communicate effectively with the pediatric patient, family members, and other persons involved with the patient.
- The provision of safety assurance and education of injury prevention to the patient and family.
- The ability to promote the patient’s health, the ability to assess the growth and development needs of a child with a chronic condition.

- An understanding of the economic, political, and social influences that may impact the child's health, development, and overall functioning.
- An understanding of the moral, legal, and ethical dilemmas that are involved with the care of a pediatric patient.

Rural Pediatrics

In rural settings, nurses are required to care for patients across the age spectrum including pediatric patients. However, this nursing specialty is not required consistently. This can create many problems for the nurse and his/her pediatric patient. In Offord's (2010) article, "Caring for critically ill children within an adult environment- an educational strategy", she discusses how in her workplace, where they admit roughly fifteen children a year, nurses find themselves feeling anxious and lacking competence in pediatric knowledge/skills. Most rural hospitals will admit pediatric patients, but most of these hospitals do not have an inpatient unit specific to children (Freeman, Randolph, Poley, Friedman, & Slifkin, 2010). When a pediatric patient is admitted to the hospital, nursing staff struggle due to their limited exposure to this age group. In addition, these children admitted are usually extremely sick which can put both the nurse and the patient at a loss (Offord, 2010). Rural nursing research often analyzes nurses overall and their educational preparedness, with little to no literature focusing on the nurse's generalist role in pediatric health.

Often pediatric patients have to travel far to receive care. Mayer (2007) discusses how, with exceptions of neonatology and cardiology, a pediatric patient in the United States has to travel at least twenty four miles to receive subspecialty care. According to the Department of Health and Department for Children Schools and Families,

current policy states that care for a child, in regards to provision and management of illness, needs to be delivered as close to home as possible (Spiers, Parker, Gridley, & Atkin, 2011). If care for a child is best done close to home then there is significant need to “build up” the health care resources close to the child’s location. The purpose of this study is to begin looking at rural nurses’ perceptions of their ability to care for pediatric patients within their populations.

Methods

This research study was a pilot study and utilized a quantitative survey design. Two hospitals and two pediatric offices were surveyed in Aroostook County, Maine: The Aroostook Medical Center in Presque Isle, Aroostook Pediatrics in Presque Isle, Houlton Regional Hospital, and Houlton Pediatrics. One home health agency in Aroostook County was surveyed: the Visiting Nurses Association of Aroostook. One hospital was surveyed in Washington County, Maine: Down East Community Hospital in Machias. One hospital and one pediatrics office was surveyed in Hancock County, Maine: Maine Coast Memorial in Ellsworth, and Maine Coast Pediatrics in Ellsworth. One home health agency was surveyed in Hancock County: Hancock County Home Health.

The principal investigator selected these locations with her faculty advisor and members of her thesis committee. The criteria for these locations were the following: health care facility and/or specific unit that had nurses who care for pediatric patients; at least one hospital location, at least one outpatient location and a home health agency in each area of Maine; and at least two different surveyed locations in the specified area of Maine to give a more detailed view of nurses' capacity to care for pediatric patients in their community. At each of the four hospitals surveyed, nurses employed in the Emergency Department and Inpatient Care Unit were the population surveyed. These are the areas in rural hospitals that pediatric patients are seen most often. It is noted that Calais Regional Hospital was not surveyed because it did not meet survey criteria. This hospital does not accept pediatric patients for inpatient care nor does this town have a pediatric office.

Using the university program software, Qualtrics, the researcher constructed the survey for this study. Following approval by the University of Maine Institutional Review Board, this online survey was administered via each nurse's workplace email. The principal investigator contacted the nursing manager at each location about the research. The survey was sent out by the nurse manager to the nurses employed by him/her. A reminder email was then sent out three weeks after initiation of the research. The survey was available for four weeks. The survey consisted of demographics questions, multiple choice, several Likert scale questions, and free response questions addressing the nurses' viewpoints of their educational preparedness and their perspectives on pediatric health in their workplace.

A convenience sample of one hundred twenty nurses (n=120) was surveyed. Thirty two nurses completed the survey (n=32). The response rate was 26.67%. Various sources have stated that a 10-20% response rate is typical. This survey's response rate of 26.67% exceeds standard response rate.

Results

Six percent of the nurses who completed the survey were male (n=2) and ninety four percent were female (n=30). The age of surveyed nurses ranged from 24 to 61 years old with an average at 44 years old (Table 1). Data was entered into SPSS where statistical analysis and correlations were found. See Appendix B for the survey questions utilized for this study.

Table 1: Demographics (n=32)

Gender	Female: 94% (n=30) Male: 6% (n=2)
Age	Range: 24-61 years old Average: 44 years old

Figure 1: Where participants received their nursing degree (n=32)

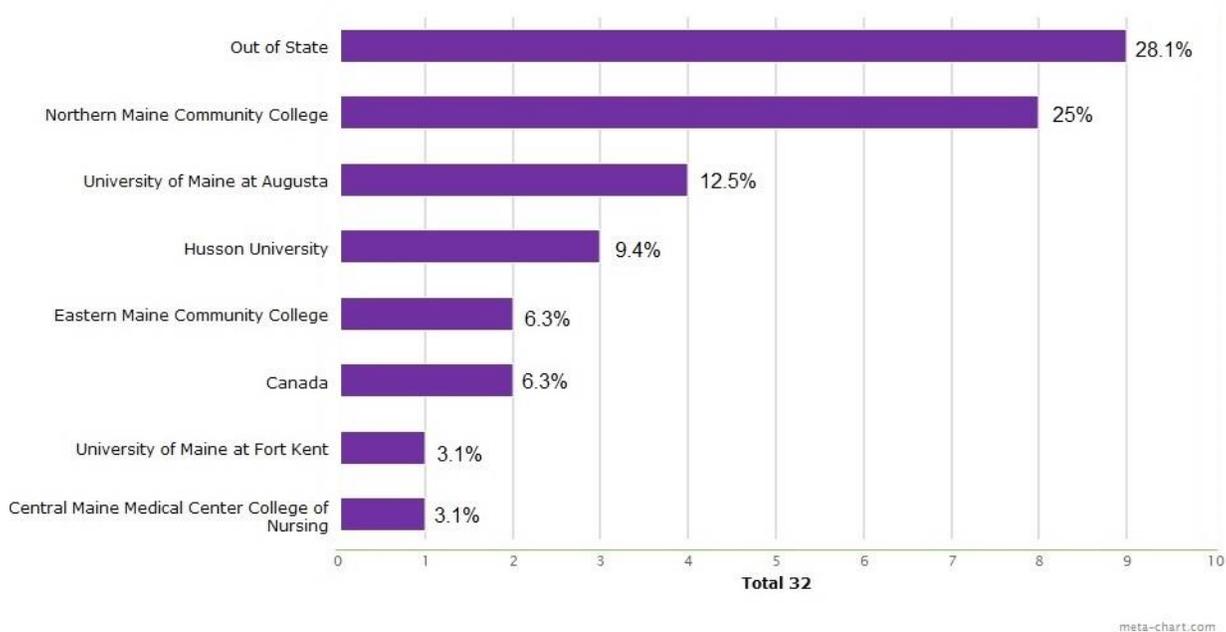


Figure 1 shows where surveyed nurses received their education. A majority of the nurses surveyed received their degrees from various universities out of the state of Maine. The most common college, in the state of Maine, in which the nurses surveyed received their degree at, was Northern Maine Community College (NMCC). From all of the areas

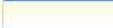
surveyed, NMCC is as close to a surveyed location as 2.5 miles and as far away from surveyed locations as 190 miles.

Figures 2, 3, and 4 show length of time as a nurse, current work setting, and length of time in current position. The majority of nurses surveyed have worked as a nurse for approximately 11 to 20 years, with the average length of time in their current position less than two years.

Figure 2: Length of time as a nurse (n=32)

#	Answer		Response	%
1	< 5 years		6	19%
2	5-10 years		6	19%
3	11-20 years		10	31%
4	21-30 years		8	25%
5	> 30 years		2	6%
	Total		32	100%

Figure 3: Current work setting (n=32)

#	Answer		Response	%
1	Aroostook County		16	50%
2	Washington County		12	38%
3	Hancock County		4	13%
	Total		32	100%

Twenty eight of the thirty two nurses surveyed worked in Aroostook County or Washington County. A majority of the survey results came from nurses employed in the following settings: a) The Aroostook Medical Center and Aroostook Pediatrics in Presque Isle, Maine, b) Houlton Regional Hospital and Houlton Pediatrics in Houlton, Maine, c) The Visiting Nurses Association of Aroostook County, and d) Down East Community Hospital in Machias, Maine.

Figure 4: Length of time in current position (n=32)

#	Answer	Response	%
1	< 2 years	12	38%
2	2-5 years	6	19%
3	6-10 years	5	16%
4	11-20 years	3	9%
5	> 20 years	6	19%
	Total	32	100%

A majority of the surveyed nurses do not have prior pediatric work experience (Table 2). Numbers of pediatric patients cared for in a month ranged from less than ten to greater than 100 (Figure 5). Twenty three nurses care for less than ten pediatric patients a month. Three nurses care for approximately ten to twenty five pediatric patients a month. One nurse cares for approximately twenty six to fifty pediatric patients a month. One nurse cares for approximately seventy six to one hundred pediatric patients a month. Two nurses care for greater than one hundred pediatric patients a month. Figure 6 shows the numbers of pediatric patients cared for in a year. Twenty four nurses care for less than fifty pediatric patients a year. One nurse cares for approximately fifty to one hundred pediatric patients a year. One nurse cares for approximately one hundred fifty one to two hundred pediatric patients a year. Four nurses care for greater than three hundred pediatric patients a year.

Table 2: Prior pediatric work experience (n=31)

No prior experience	74% (n= 23)
Prior experience	26% (n=8)
Length of prior experience	Minimum: 1 year Maximum: 29 years Average: 5.18 years

Figure 5: Pediatric patients cared for in a typical month (n=30)

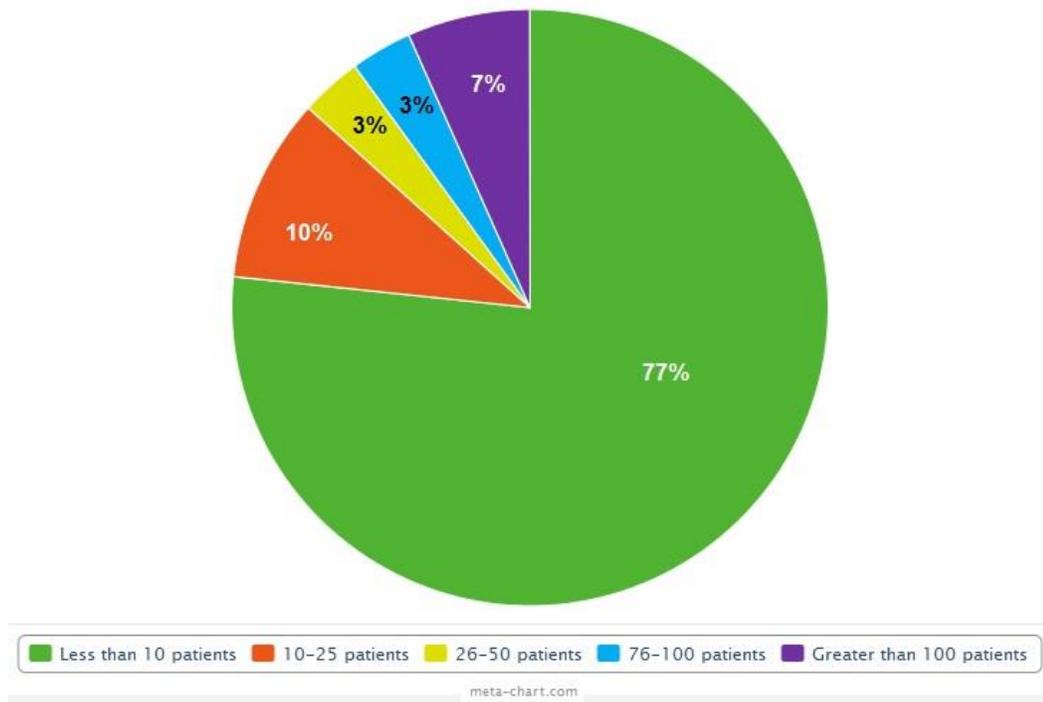


Figure 6: Pediatric patients cared for in a typical year (n=30)

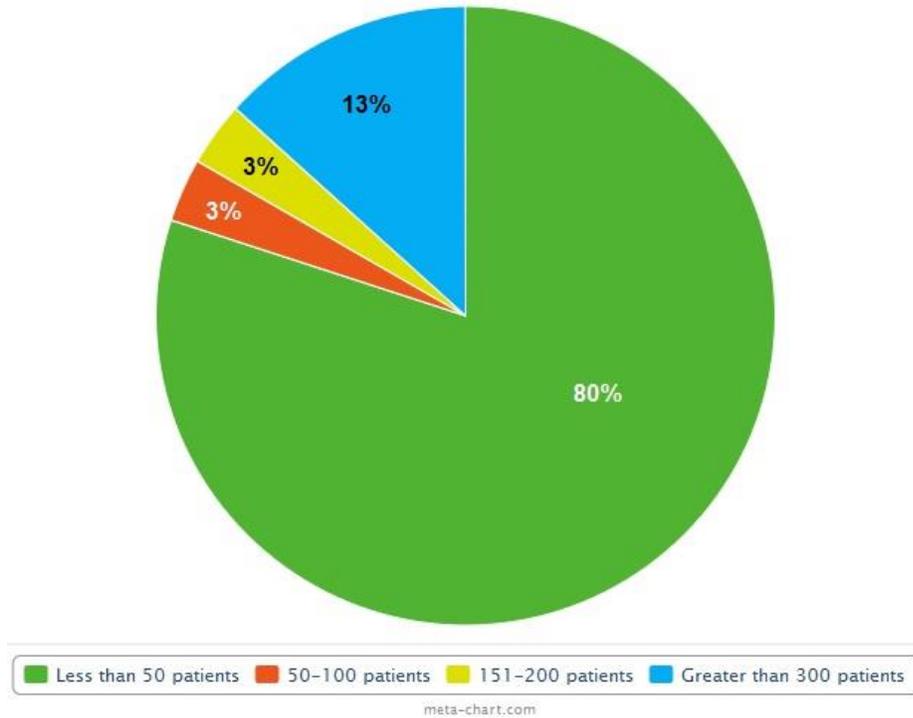


Figure 7: Average distance traveled by pediatric patients to receive health care (n=30)

Answer	Response	%
< 10 miles	3	10%
10-20 miles	15	50%
21-50 miles	10	33%
51-100 miles	0	0%
> 100 miles	2	7%
Total	30	100%

A majority of nurses reported that the average of pediatric patients that they care for travel between ten and fifty miles to receive health care. Three nurses reported distance to healthcare for their pediatric patients was less than ten miles. Two nurses reported that their pediatric patients travel more than one hundred miles to receive health care (Figure 7).

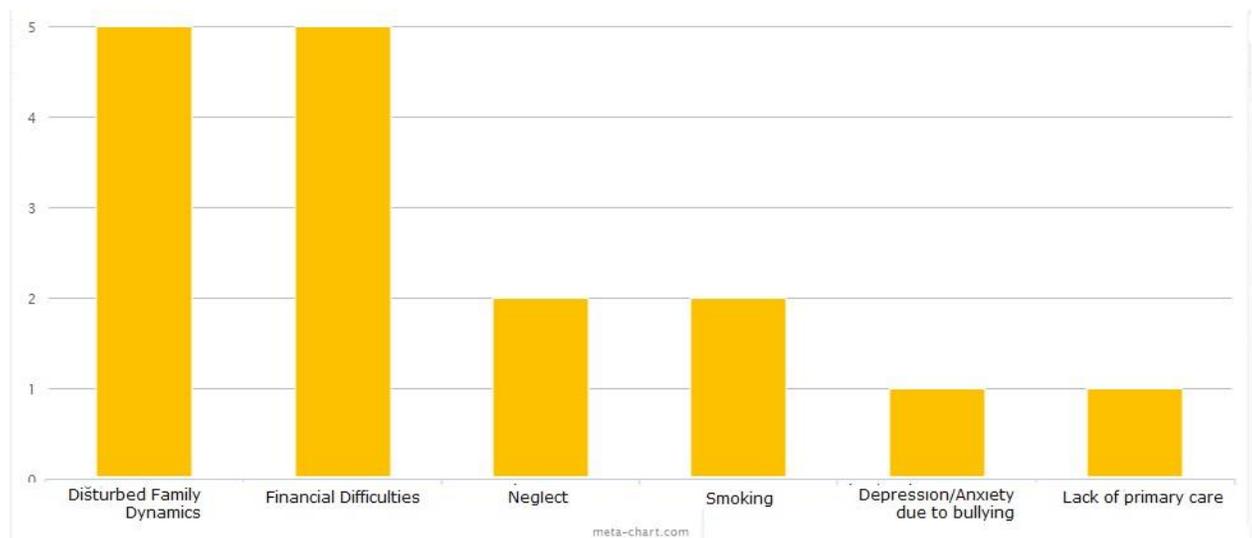
Table 3 shows the most commonly seen diagnoses in pediatric patients. The majority of nurses reported that respiratory related diagnosis was most commonly seen in their pediatric patients. A majority of nurses reported that disturbed family dynamics and financial difficulties were the most common social issues seen in pediatric patients (Figure 8).

Table 3: Most commonly seen diagnosis in pediatric patients (n=29)

Respiratory Related	79% (n=23)
Cardiac Related	0%
Musculoskeletal Related	0%
Neurological Related	0%
Endocrine Related	0%
Other (Please specify) *	17% (n=5)

*Infection and gastrointestinal related was otherwise specified.

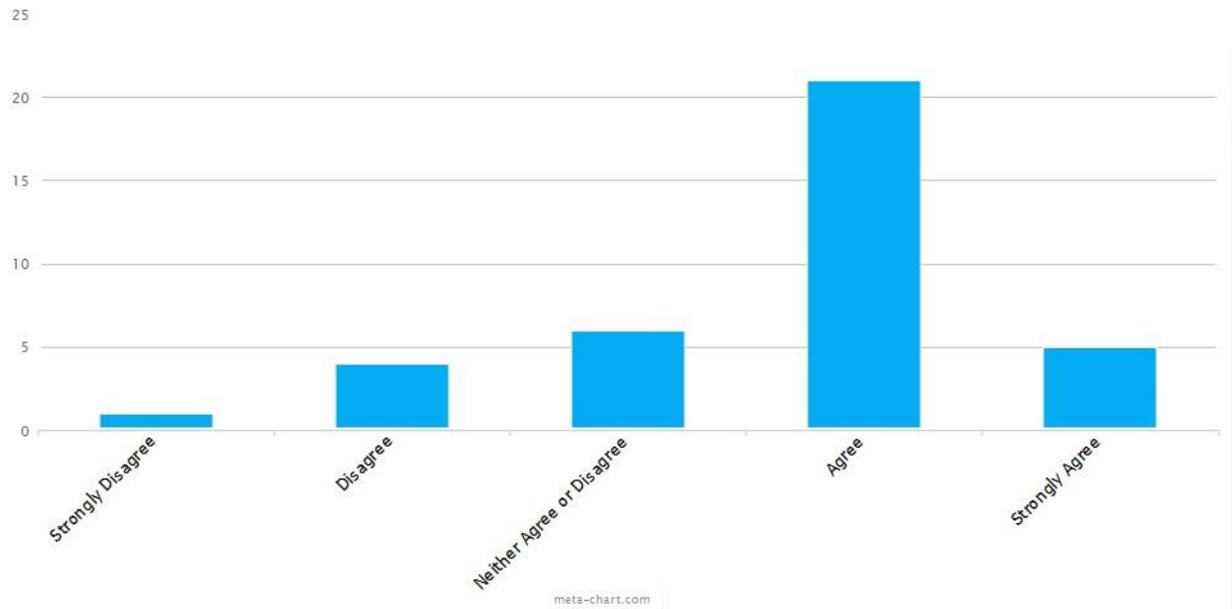
Figure 8: Most common social issues seen in pediatric patients (n=18)



Figures 9 and 10 show how nurses' perceived their educational preparation. A majority of the nurses surveyed agreed that they felt their nursing education had prepared

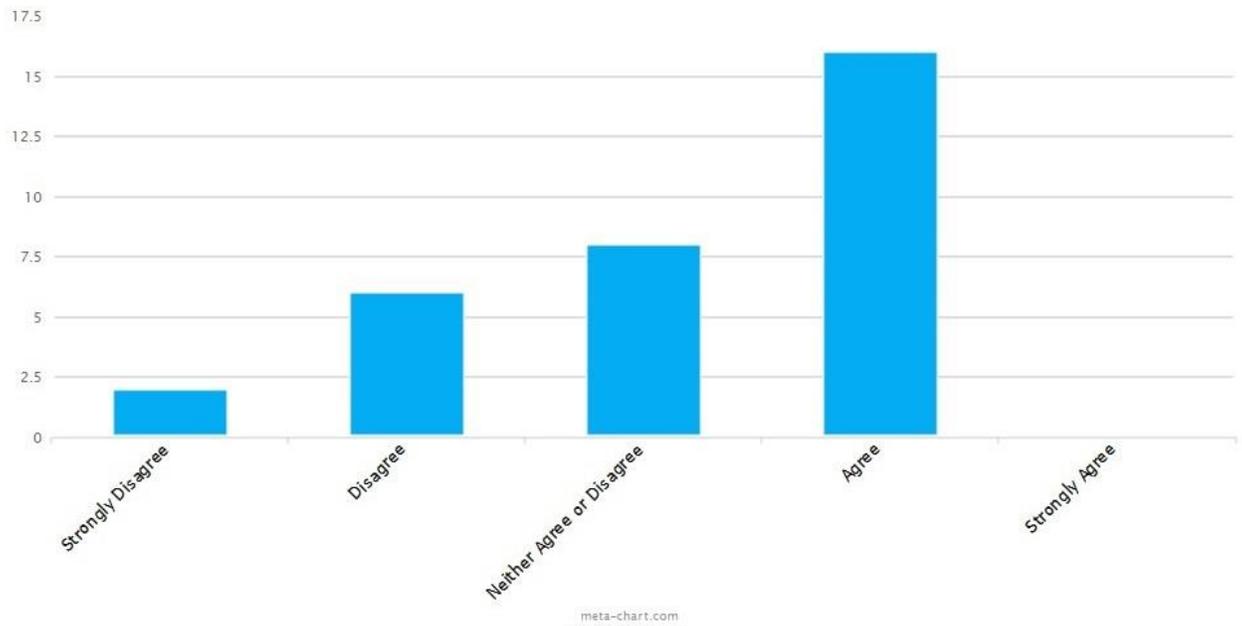
them to be a rural nurse. Half of the surveyed nurses felt their education had prepared them to care for pediatric patients in a rural setting.

Figure 9: “I feel my nursing education prepared me to be a rural nurse.” (n=37)



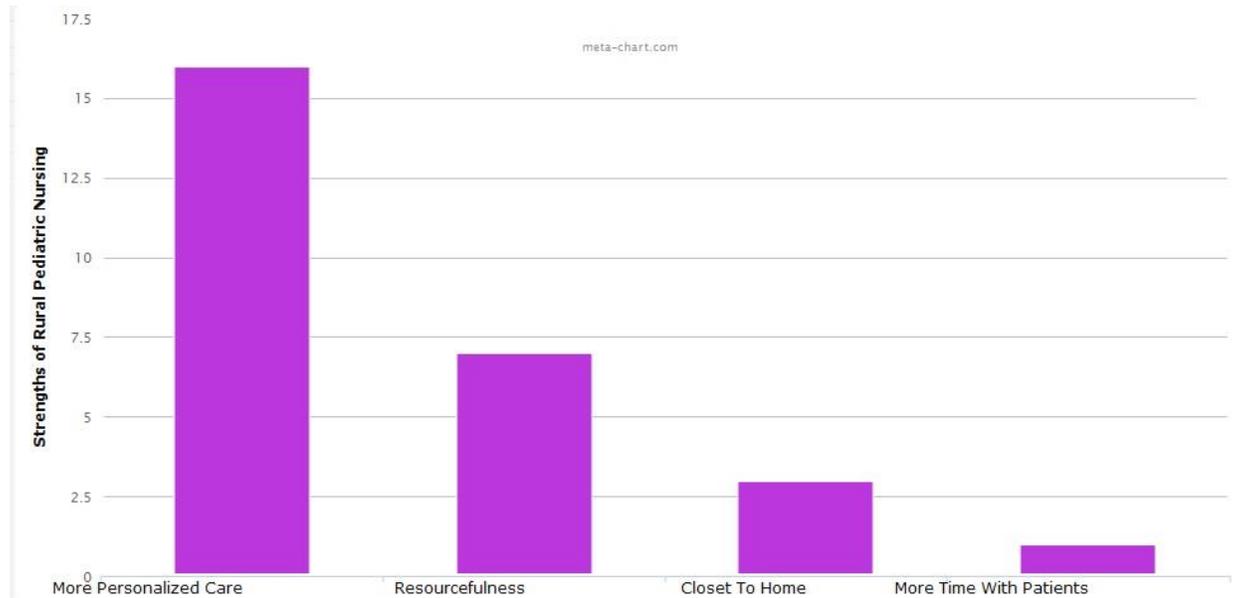
* The n=37 represents multiple answers from some participants.

Figure 10: “I feel my nursing education prepared me to take care of pediatric patients in a rural setting.” (n=32)



Nurses also were asked about their perceptions of strengths and weaknesses of rural nursing. Figures 11 and 12 show their responses.

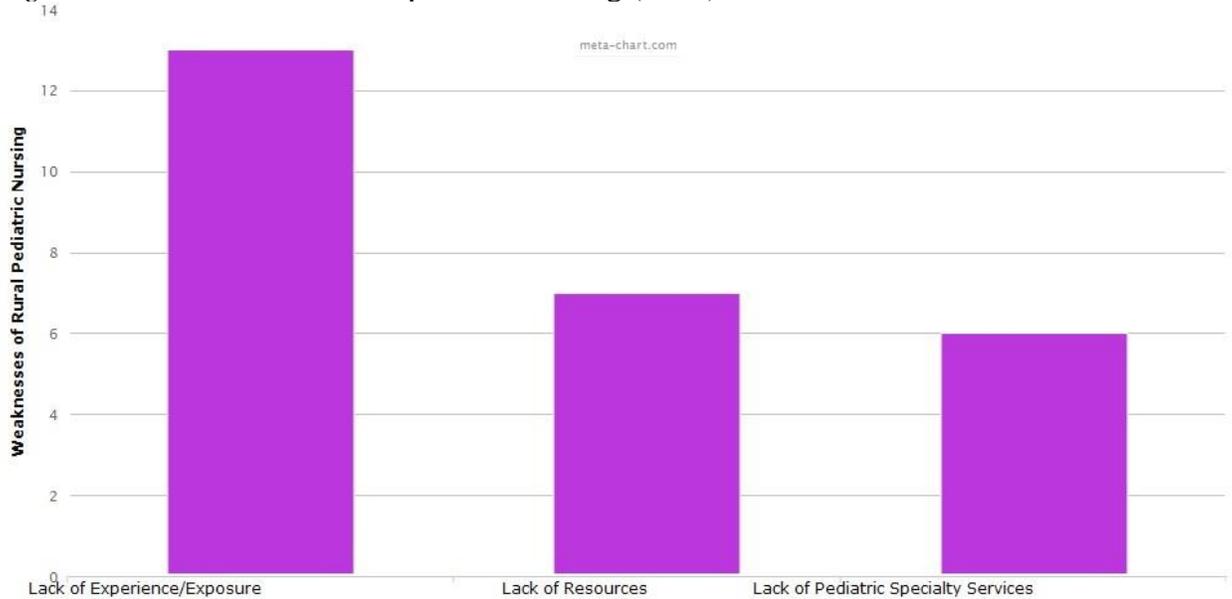
Figure 11: Strengths of rural pediatric nursing (n=27)



* This survey question was a free text option allowing each of the nurses to write whatever response they wanted.

Seventeen nurses stated the strength of rural pediatric nursing was the ability to deliver more personalized care to their patients due to their close relationships with the patients and their family within their small communities. Seven nurses stated that rural pediatric nursing challenged them and required them to be very resourceful and exercise critical thinking. Three nurses stated that having the ability to treat these patients close to their home was the strength of this form of nursing. One nurse stated the ability to spend more time with these patients was a strength in the rural setting.

Figure 12: Weaknesses of rural pediatric nursing (n=26)



* This survey question was a free text option allowing each of the nurses to write whatever response they wanted.

Thirteen nurses stated a lack of experience with and exposure to pediatric patients was the weakness to providing pediatric nursing care in a rural setting. Seven nurses stated a lack of resources such as equipment or in-services created was a weakness. Six nurses stated that a lack of pediatric specialty services was a weakness in their community which caused patients to travel great distance for specialized care.

Discussion

Upon analysis of this study, some findings are consistent with prior literature on generalized rural nursing and others suggest implications for further research. A majority of the nurses surveyed have been a nurse for greater than ten years, but had not been in their current position for an extended period of time, less than two years. A majority of these nurses also noted that they have had no prior pediatric nursing experience apart from academia. Most nurses stated they cared for less than ten pediatric patients in a month, and less than fifty in a year. These results suggest that a lack of pediatric exposure and experience play a large factor in rural pediatric nursing.

Results from this study suggested there are several factors that impact the pediatric population in northern and eastern Maine. These factors include: a) an average distance of ten to fifty miles traveled for a pediatric patient to receive non-specialized health care, b) a seventy nine percent response that respiratory related diagnoses are most commonly seen in this population, c) and common social issues seen with pediatric patients are disturbed family dynamics and financial issues. Emphasis should be placed on meeting the needs of distance, respiratory illness, and financial assistance for the pediatric population. With the reported lack of pediatric specialty services, a service assisting in low cost respiratory care would be beneficial to this area of Maine.

There was little consistency of location of nursing degree achievement. However, regardless of the place of education, nursing consensus agreed that their nursing education had prepared them to be a rural nurse. Consensus was less strong on preparation in rural pediatrics, but the majority of nurses still agreed their academia had prepared them for this role. With strong academic preparation, but still statements of

anxiety for the care of children in their communities, further education in this field is required within the workplace. Prior literature had similar findings of anxiety towards pediatric patients in rural settings due to their lack of exposure and lack of ongoing education.

Strengths of Nursing Care for Pediatric Patients in Rural Communities

The nurses that completed the survey had many statements about the strengths of rural pediatric nursing. During this portion of the survey, nurses had the ability to give a qualitative response. These nurses shared several strengths of nursing care for pediatric patients in rural communities. These strengths were: a) more personalized care, b) resourcefulness and strong critical thinking/assessment skills, c) the ability for pediatric patients to be treated closer to home, and d) the ability to spend more time with patients due to the lower acuity in smaller hospitals. All four of these strengths play a large impact on a child's ability to heal.

Nurses, children, and their families need a strong relationship in order for this child to receive the best care possible. This allows for consistency of treatment and knowledge to be shared amongst all healthcare personnel, the pediatric patient, and their family. Children are a vulnerable population and their development can be affected positively or negatively based upon nursing care. Parents or caregivers of a sick child want to know that their child is receiving care from competent nurses. Rural nurses stated this was a skill that they possessed due to their vast age spectrum of patients and their various illnesses. The other strengths of care closer to home and more time spent with the patient, are consistent with prior research suggesting that this is ideal for facilitating improvement in the child's health status. Great effort must be placed on supporting these

strengths and further building them up to continue providing best patient care for this population. In order to accomplish this, weaknesses in this care need to be identified and improved upon.

Weaknesses of Nursing Care for Pediatric Patients in Rural Communities

The development of this research study was ignited from the vocalizing of weaknesses in rural communities voiced by various local nurses over a period of several years. Similar to the strengths portion of the survey, the nurses had the ability to share their thoughts in a free text manner on the weaknesses of nursing care in rural communities for pediatric patients. Out of the twenty six responses given, three correlations were found: a) a lack of specialty services in their rural community, b) a lack of experience with and exposure to pediatric patients, and c) a lack of resources (such as equipment and education) in their rural communities. These three weaknesses play a significant impact on the pediatric patient, their family, and even their communities.

A lack of specialty services creates a burden on the patient, family, and nurses. Nurses in this study expressed feelings of frustration when having to send pediatric patients to other hospitals because they did not have the specialty services (like cardiology, respiratory, or endocrine specialists) in their communities. The surveyed locations that were the farthest away from specialty services were the Aroostook Medical Center (TAMC) in northern Maine and Down East Community Hospital (DECH) in eastern Maine. The closest pediatric specialty service location to these two hospitals is in Bangor, Maine and affiliated with Eastern Maine Medical Center. TAMC is approximately 158 miles away from this location and DECH is approximately 87 miles away. This data suggests that if a pediatric patient requires any sort of specialty service,

they could have to travel upwards of three hundred miles for one trip. This does not include whether or not the child may need to stay in Bangor or have numerous follow up visits thereafter. This research suggested that financial burden and disturbed family dynamics were one the primary social issues that are involved with the care of a pediatric patient. Travel costs, such as gas, hotels, and food, can leave a large financial strain on a family. Financial strain accompanied with separation of the child from the family, can lead to a disturbed family dynamics, even in the best of family situations. Emotions are high, distance traveled is great, and finances are low. Strain is placed on the family and can affect the child's recovery and overall development.

A lack of prior experience with and overall exposure to pediatric patients creates anxiety for the patient, their family, and the nurses caring for them. In the few prior research studies on this topic, nurses expressed feelings of anxiety when pediatric patients were admitted to their workplace settings, which had little pediatric patient exposure. With this lack of exposure, nurses' skills may not be up to par and place both nurse and patient in less than ideal situations. In this research study, findings were consistent with this topic. Eighty percent of the surveyed nurses reported they cared for less than fifty patients a year. This would measure out to be approximately 4.16 pediatric patients being cared for in these rural settings a month. Not only is there are lack of exposure, but there is a lack of experience. Seventy four percent of the nurses stated they had no prior pediatric experience. Analysis of the survey results, reveal that greater than seventy percent of these nurses have both a lack of prior pediatric patients, but also have limited exposure to these patients. They do not have a prior foundation to "pull from" when they care for these patients. Even when they do have these patients, it is not

frequent enough to ease their anxieties. The low volume and lack of experience makes it difficult for these nurses to maintain competency.

The lack of exposure develops a great need to have many educational resources available for these nurses to promote best patient care for pediatric patients. However, nurses reported that a lack of resources was a major weakness in their work settings. Without the consistent exposure, nurses need many supports in place to accommodate for this weakness. Educational materials, in-services, protocols, and trainings are necessary to maintain competency. Collaboration between the rural communities and larger hospitals can be helpful in fixing this problem using practice simulations. From this collaboration, policies can be developed or changed to provide the best care possible for pediatric patients in these settings. Unfortunately, such an effort can be very costly and involves many individuals coming together pursuing the same goal.

Project Limitations

Although this research project reveals a lot about nursing care of pediatric patients in rural communities in northern and eastern Maine, there is still much to learn. This research was a pilot study which just began looking at this topic. All of northern and eastern Maine was not included in this research which could lead to limited results. A convenience sample of nurses were surveyed which caused data acquisition to rely on nurse managers administering the survey to the nurse via their work email. The survey was also a self-reporting design which could create various results based upon each of the nurse's responses. Two emails were sent out, one with the survey and one two weeks later as a reminder. Response rate may have been improved with additional reminder email and other reminders.

Implications for Further Research

This research has the potential to be expanded into many future research projects. Nursing perspectives from every health care setting in northern and eastern Maine that receives pediatric patients would be the next step. From there the study could be expanded to encompass the entire state. A comparison of the state of Maine with the country could then be conducted and lead to policy changes in the United States government. Another study could be conducted viewing parents' perceptions of rural pediatric health care and its implications. Combining nursing and parental perceptions could create a bigger picture of the care of a child in a rural setting. Any of these future research projects can lead to policy development and overall the improvement of rural pediatric care.

Conclusion

Half of the world's population lives in a rural community. More specifically to the area involved in this study, over thirty six thousand children under the age of eighteen live in the Aroostook, Washington, and Hancock counties in Maine. With each of these counties classified as a rural community, thirty six thousand children and their families are affected by this form of nursing. Due to a significant amount of Maine's population being affected, this project and future research on this topic is important. From this research, a basic understanding of pediatric nursing care in these communities is understood. Further research is necessary to gain a stronger understanding. With many weaknesses identified, nursing interventions can be made to improve upon rural pediatric care. Interventions can be developed that improve upon the needs for this area of nursing such as collaboration, education, and policy development. Support can be placed upon

building upon current rural nurses' education and reinforcing the strengths of this form of nursing.

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Appendix A: IRB Informed Consent

You are invited to participate in a research project being conducted by Kimberly Harvell a fourth year nursing student at the University of Maine. This research will be used to formulate an honors thesis. This research project will be overseen by Patricia Poirier, Ph.D., R.N., A.O.C.N., an Associate Professor in the School of Nursing at the University of Maine. The purpose of the research is gather and understanding of rural nurse's perspectives on their capacity to care for pediatric patients in their community.

What Will You Be Asked to Do?

If you decide to participate, you will be asked to complete an online survey. It may take approximately fifteen minutes to participate.

Risks

- There is the possibility that you may become uncomfortable answering the questions. (You are allowed to stop the survey at any time and/or skip questions.)
- Except for your time and inconvenience, there are no risks to you from participating in this study.

Benefits

- While this study will have no direct benefit to you, this research may help us learn more about rural pediatric health, overall nursing educational

preparedness, and may initiate further research studies to improve nursing practice.

Compensation:

- You will be entered into a raffle for a \$15 Dunkin' Donut's gift card.

Confidentiality

This study is anonymous. Please do not write your name on the questionnaire. There will be no records linking you to the data. The investigator will keep the data indefinitely.

Voluntary

Participation is voluntary. If you choose to take part in this study, you may stop at any time. You may skip any questions you do not wish to answer.

Contact Information

If you have any questions about this study, please contact me by phone: 207-949-9105 or by email: kimberly.harvell@umit.maine.edu. You may also reach the faculty advisor on this study by phone: 207-581-3009 or by email: patricia.poirier@umit.maine.edu). If you have any questions about your rights as a research participant, please contact Gayle Jones, Assistant to the University of Maine's Protection of Human Subjects Review Board, at 581-1498 (or e-mail gayle.jones@umit.maine.edu).

Appendix B: Survey Used for Research

1 What is your sex?

- Male
- Female

2 In what year were you born?

3 Where did you receive your nursing degree?

4 How long have you been a nurse?

- < 5 years
- 5-10 years
- 11-20 years
- 21-30 years
- > 30 years

5 What is your current work setting?

- Hospital- Emergency Department
- Hospital- Inpatient Unit
- Pediatric Outpatient Office
- Home Health

6 Where is your current work setting?

- Aroostook County
- Washington County
- Hancock County

7 How long have you worked in your current position?

- < 2 years
- 2-5 years
- 6-10 year
- 11-20 years
- > 20 years

8 Have you ever worked on a specific pediatrics unit?

- Yes
- No

9 If you answered yes to the question above:

Where did you work?

How long did you work there?

10 How many pediatric patients do you care for in a typical month?

- < 10
- 10-25
- 26-50
- 51-75
- 76-100
- > 100

11 Approximately, how many pediatric patients did you care for in the last year?

- < 50
- 50-100
- 101-150
- 151-200
- 201-250
- 251-300
- > 300

12 On average, how far do your pediatric patients have to travel to receive health care?

- <10 miles
- 10-20 miles
- 21-50 miles
- 51-100 miles
- > 100 miles

13 What diagnosis do you see most commonly in pediatric patients?

- Respiratory Related
- Cardiac Related

- Musculoskeletal Related
- Neurological Related
- Endocrine Related
- Other (Please Specify)

14 What is the most common social issue you see with pediatric patients?

15 I feel my nursing education prepared me to be a rural nurse

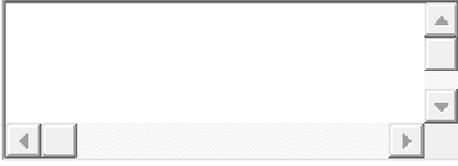


16 I feel my nursing education prepared me to take care of pediatric patients in a rural setting.



17 What do you believe are the strengths of rural pediatric nursing?

18 What do you believe are the weaknesses of rural pediatric nursing?



Author's Biography

Kimberly Harvell grew up in New Limerick, Maine in Aroostook County. As a small town country girl, she always knew a rural community was the only place she could call home. At a young age she became fascinated with health care and the vast complexities of God's greatest creation, the human body. Kimberly became a certified nursing student at sixteen which ignited further her passion for medicine. After several years working as a nurse's aide, Kimberly found that her true calling was nursing. Kimberly majored in nursing at the University of Maine and took supplemental classes in child development and family relations to aide in her desire to be a pediatric nurse. In her time at the University of Maine, Kimberly has: been an attendant on the University of Maine Ambulance, worked at the School of Nursing, worked as certified nursing assistant for geriatric and adult/pediatric intensive care patients, served as an officer in the Orono Student Nurses' Association, and gone on three spring break service trips: two to New Orleans to assist with rebuilding after Hurricane Katrina and one to Belize, Central America to provide health care to the underprivileged population there. In the nursing program, she has spent hundreds of clinical hours at Eastern Maine Medical Center and St. Joseph's Hospital. During her senior year she completed her nursing partnership at Calais Regional Hospital on the Inpatient Care Unit and worked as a student school nurse at Calais Elementary School. Each of her experiences at the University has furthered her love for people and her desire to be a safe and caring nurse. Her goals for the future are to be a pediatric nurse and then become a family nurse practitioner caring for children and families in the best kind of community she knows, a rural one.