

ORIGINAL RESEARCH

Extreme nursing: a qualitative assessment of nurse retention in a remote setting

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ABSTRACT

Introduction: Nurses have practiced in Bristol Bay, Alaska, since 1896. Practice opportunities are defined by institutional structures and systems; and the geography, climate, and history of remote South-west 'bush' Alaska. The Native Alaskan culture as experienced through nurses' practice, community relations, and in several cases, marriages, shapes their lives as well. The purposes of this qualitative study are three-fold: (1) to ensure the unique stories of bush Alaska nurses are preserved and told; (2) to foster a strong bush nursing tradition; and (3) to inform recruitment, hiring, and retention practices in remote settings.

Methods: Ten of 14 long-term retained (>15 years) nurses still living in Bristol Bay were interviewed using a semi-structured format, based on three broad interview questions: (1) Why did you come to Bristol Bay?; (2) If you ever wanted to leave, what motivated you to stay?; and (3) What do you feel are your greatest accomplishments here? Extensive probing and dialogue was employed to develop participants' conversation. Interviews were recorded, transcribed and coded for qualitative content analysis of ideas and thematic analysis. To preserve authenticity and enhance fidelity, nurses' verbatim statements are reported at length, illustrating ideas and themes.

Results: Analysis of transcripts revealed seven ideas common to all 10 long-term retained nurse's experience in the bush: family, culture, hardship, nursing practice, fish, motivations and community. Religion or spirituality was also a common idea, but not universal. A racism code was derived to illuminate less articulated ideas from the nurses' conversation.

Conclusions: Long-term retained bush nurses share three characteristics useful to successful recruitment and retention efforts: they have (1) a strong sense of adventure, (2) an independent outlook regarding family growth and development, and (3) a deep appreciation of Native Alaskan culture and lifestyle. In summary they advise nurses who wish to practice and stay in the bush to come with 'ample resources, mental resources, emotional, spiritual, the whole nine yards, [they] need these resources in order to survive, in order to stay here. [Also] a love for the people, not being opposite to the culture but trying to learn [from it]'. Attributes



and qualities nurses bring to remote South-west bush Alaska produce a community dynamic affecting practice, health, and quality of life.

Key words: health disparities, indigenous populations, qualitative methods, recruitment and retention, rural and remote health care.

Introduction

Alaska was a territory of the USA and administered as a colony from the time of its purchase from Russia until it achieved statehood in 1959¹. Colonial institutional and Native settlement systems and structures continue to shape the lives and health of Native Alaskans living in Alaska. The US Indian Health Service – formed to fulfill the treaty right to health care for Native Alaskan and American Indian people – continues to shape the delivery of health care, although the Native Health Corporations are now responsible for the management of IHS facilities. Similarly, legislation growing out of the Alaska Native Claims Settlement Act affects land and property ownership, taxation structures, healthcare systems, and legal and informal relationships with the Native Alaskans. These same structures and their historic evolution shape the opportunities and lives of people who come to work in bush Alaska.

Registered nurses have lived and worked in Bristol Bay, Alaska, since 1896². Their practice opportunities are and have been defined by institutional structures, and the geography, climate and history of South-west ‘bush’ Alaska. The Native Alaskan culture in the region as experienced through the nurses’ practice, community relations and, in several cases, marriages, shapes their lives as well. Salmon fishing is the largest industry in Bristol Bay, and the fish canning industry long provided health care to both fishermen and residents. In a resource-scarce environment, cannery nurses worked for the federal government to staff the hospital and fill public health roles. US Coast Guard and Red Cross ship-bound nurses served the region during the 1919 influenza pandemic, and again during the tuberculosis epidemics of the 1940s. The

State Health Department established a public health center in the mid-1950s and the evolving role and structure of the Indian Health Service and Native health facilities resulted in intercultural exchange and mutual accommodation between Natives, nurses and the community. This qualitative study explores the attributes and qualities nurses bring to this extreme geography and the reciprocal community dynamic that affects nursing practice, health and quality of life in the region.

The ‘bush’ is defined by Alaskans to mean the extremely isolated regions unconnected to the state road or ferry systems. Bristol Bay, in South-west bush Alaska, is the largest sock-eye salmon fishery in the world. Average temperature is 10°C (50°F) in summer and –12°C (10°F) in winter. There are 40 km of road in an area the size of the state of Ohio, much of it potholes and gravel from the extremely harsh winters. Bristol Bay is 560 km by air from Anchorage. Travel within the region is by plane and by snow machine in the winter. Goods and supplies are barged in during the summer, or flown in during winter. Prices for food, fuel and supplies vary dramatically, but are generally 50–100% higher than in Anchorage. Dillingham, the main town in the region, has a winter-time population of 2200; Bristol Bay of population 7500 overall – 57% of which is Native Alaskan or American Indian – spread across 34 Native villages. During fishing season, several thousand commercial fishermen come into Dillingham to earn their living during the brief, cold summer, and several fish canneries open seasonally to process the harvested fish.

Three tribes populate Bristol Bay: Yup’ik, Aleut and Athabascan. Tribal identity, however, merged to some extent as a result of the 1919 influenza pandemic in which most



adult tribal members perished³. Children were relocated from tribal villages to a central orphanage in Dillingham. A noteworthy outcome of the tragedy was the founding of the multi-tribe Native Health Corporation, which took over management of the Indian Health Service Hospital and was the first Native Corporation to do so under the Federal Health Compact (Public Law 93-638)⁴. This 12-bed critical-access hospital was designated as a community hospital in 1986 and was, at that time, able to begin serving non-Native residents. (Prior to this time, there was very limited health care available for white people in the region.) In addition to the hospital and outpatient and emergency services, 32 Native villages house small clinics run by Native Health Corporation affiliated Community Health Aids.

Purpose

Nursing is grounded in principles of social justice and service to vulnerable populations⁵, yet there is a longstanding shortage of nurses in underserved, rural and remote settings. The shortage is extreme in bush Alaska. Disparities in health, mortality and quality of life are extreme in the region as well, but, paradoxically, offer opportunities to nurses willing to weather the climate, appreciate the culture, and work within the shifting healthcare organisations. Recruiting and retaining nurses is difficult: the 12-bed critical-access hospital reports up to 75% annual turnover (personal communication, Nurse Manager BBAHC, 2010). The Health Department and Native Association report similar retention figures and three years' tenure is considered long-term retention by The Area Health Education Center (personal communication, AHEC Director, 2012). Nurses' median tenure in bush settings is estimated at 408 days⁶.

Living conditions in bush Alaska are primitive, and social amenities few. Yet nurses have practiced in bush Alaska, and in Bristol Bay, in particular, since 1896, playing a substantial role in reducing health disparities and improving quality of life. There are currently 14 registered nurses still living in Bristol Bay for more than 15 years. In spite of tremendous hardship, these few nurses have stayed in the bush, becoming prominent community leaders and business owners. Given

their long tenure, they represent an untapped resource to better inform recruitment and retention in remote settings. This study explores the qualities, motivations, social contexts and difficulties experienced by nurses who settled and stayed in this very remote region of Alaska. The purposes of this study are to (1) ensure the unique stories of bush Alaska nurses are preserved, (2) foster a strong bush nursing tradition, and (3) inform recruitment and retention practices in bush Alaska.

Methods

Qualitative methods can be employed to good advantage to uncover motivational questions, offering a deeper understanding of why people do what they do⁷. Qualitative methods have also been underused in health services research, a field favoring quantitative methods, yet 'some of the most important questions in health services concern the organisation and culture of those who provide health care'⁸. A qualitative descriptive study design was employed to gain a depth of understanding into the motivations and experiences of long-term retained nurses in bush Alaska for the purpose of informing recruitment and retention in an extremely underserved area. At the same time, qualitative methods addressing bush nurses' narratives in their own voice provides a contribution to the legacy of nursing and service that is valuable to the profession^{9,10}.

Nurses were selected from a small population known to the author and currently living in Bristol Bay for more than 15 years (or born there). Fourteen were identified. Ten women consented to be interviewed. Two refused, and two failed to respond. Ages ranged from mid-40s to greater than 70 years of age. All participants were women, and either were born in Bristol Bay (three) or arrived there between 1955 and 1982 (seven). The author's role was that of participant/observer, as a practicing nurse and colleague or friend to each participant. Semistructured interviews were conducted based on three broad interview questions: (1) Why did you come to Bristol Bay?; (2) If you ever wanted to



leave, what motivated you to stay?; (3) What are your greatest accomplishments there?

One nurse was interviewed over the phone. Seven nurses were interviewed in person in Bristol Bay and two in Anchorage. Narratives were encouraged through extensive prompting and dialogue, including personal histories, contributing motivations, and difficult or unique experiences.

Interviews were taped, transcribed and coded by the author. Codes (with one exception, see 'Results' below) were derived from the nurses' own words ('de novo' coding⁷). These codes repeated across every interview and became the basis of thematic analysis. Broad interpretative themes were deduced from examining repeated similarities in the coded narratives to capture the nurses' common experience, and summary statements were then developed from the collective narrative¹⁰. Rigor of methods and findings was enhanced using three approaches: (1) the author spent a prolonged period in the field with participants ('prolonged engagement'¹¹), reducing opportunities for deception; (2) selected sample panel participants 'member checked' interpretations to ensure credibility of codes and themes¹¹; and (3) a small group of non-participating Native Alaskans and nurses with bush experience enhanced trustworthiness by confirming broad themes, and culture, community and practice codes in preliminary analysis of findings¹¹.

All interviews were performed between April and July 2012. To preserve the nurses' narratives, direct quotes are incorporated here, but are not attributed to any single nurse or date of interview.

Ethics approval

The University of Alaska provided Human Subjects Review for this study. Given the 'fish bowl' nature of this small, isolated community, participants agreed that their statements could lead to identification. The Institutional Review Board approved the confidential, but not anonymous, nature of the study (#384186-2 University of Alaska Anchorage) and informed consent was obtained from each participant.

Results

Content and thematic analysis of interviews revealed unique aspects of a bush nursing tradition, and readily informs recruitment and retention practices in bush Alaska. Analysis revealed eight codes common to every interview: motivations (to come or to return to the bush), nursing practice, culture, hardship, family, fish, community and racism. With the exception of the racism code, all codes were derived from the women's own words in conversation. The racism code was derived from ideas and experiences related to culture, but encompassing a discriminatory or restrictive idea. Religion or spirituality was a common, but not universal, sub-code in the motivations and the community categories (both a secondary reason to come to Bristol Bay in particular, and as contributions to the community). To maintain the fidelity of the nurses' thoughts and authenticity of findings, and to recreate sample narratives, results below are reported largely in their own words with illustrative quotes for each code or theme.

Motivations

The motivations code is unrefined and includes a number of sub-codes. Thematic analysis of the nurses' narrative and motivation sub-codes in particular revealed a richness of ideas and two important themes (family, adventure, see below). The primary motivations to come to Bristol Bay included marriage, culture, family, fishing and adventure. Nurses also expressed secondary motivations (Table 1). For those whose primary motivator was marriage, for example, a secondary motivating factor was religion or adventure. Religion was identified in seven interviews as a secondary but important factor. Adventure was a theme common to all, but was a primary motivation for two nurses. Only one of the nurses identified nursing practice in the bush (as distinguished from a more generic 'work' code) as a main motivator, saying: 'I knew this was an underserved area and that I could help'.



Table 1: Motivations for moving or returning to Bristol Bay

Nurse	Arrival year	Motivation
1	1966	Marriage, culture, religion
2	1982	Nursing practice, culture
3	1979	Marriage, religion
4	1990	Family, work
5	Born	Fish
6	Born	Family, work
7	1963	Work, adventure
8	Born	Family
9	1955	Work, adventure, religion
10	1973	Family

Nursing practice

Nursing practice varied by place of employment, but the primitive character of health care in the region was apparent in the nurses' conversations:

We had lots of kids in the hospital, sometimes 30. And in '68 we had a measles epidemic and a bunch of kids died. Three or 4 kids died and that's what started the [community health] aid program in the villages . . . there wasn't anybody trained to take care of them.

Health disparities due to geographic isolation and the under-resourced healthcare delivery system were felt acutely by the nurses:

My one grief is for this one family [in a Native village] . . . a child who died from serious burns, and the child really needed to be sent to a burn center. We kept the child . . . and when the septic baby . . . they finally decided to send the baby [to Anchorage] . . . absolutely no life-saving equipment on the plane and we're getting ready to taxi and the mom is holding the baby and she's not breathing. And so . . . I'm supposed to save her! I grabbed her out of her mother's arms. I should have just left her in her arms. [T]hat's a pain I'll always carry . . . I tried to save her and I never would be able to do that.

Nurses practiced at the Public Health Center, or informally from their homes for the benefit of the community. One nurse, for example, 'used to buy bandaids by the case [for the school next door]'. All but one nurse practiced at some point at the hospital. They were instrumental in the transition of the Indian Health Service hospital to the Native-owned Health Corporation, not always without becoming casualties themselves:

[In] 1980, there was a big switch over at the hospital from government to corporation and it was rather dramatic. They suddenly fired all the docs and almost all the nurses and they were going to start over. With what? The patients? [Ironic] . . . That was a really, really rough time.

One of the more stoic nurses summarised practice in the bush this way: 'you took care of a lot of stuff . . . plane crashes . . . burn victims . . . cardiac . . . kids.'

Culture

The culture of the region was a major aspect of the nurses' practice and motivation to stay in the region. The culture influenced the nurses personally: 'I had met some Alaska Native people as patients and felt a love for them, appreciating their conduct, learning about their lives'. And made them enthusiastic to stay: 'They are so loving, the Yupik people. That's why I stayed because of these wonderful



people and that hospital.’ A deep appreciation of the Native Alaskan culture was a dominant theme: ‘It’s . . . very close to the Native way of life . . . this attitude, what we do with the environment, what we do with the animals, this is what carries you.’ Noteworthy was that three of the nurses married Native Alaskan men and successfully navigated cross-cultural marriages and child-rearing:

I don’t look at it as Native versus non-Native. . . . It’s just who WE are. I don’t look at it as ‘do we subscribe to the Native culture or don’t we, we have the best of both. Parts of white culture that we like. There are parts of both cultures that are not desirable.

Many adopted Native Alaskan cultural practices: ‘I wanted dogs. We had a dog team and it got bigger and bigger. My husband [a Native Alaskan] . . . had to go to school with a dog team [and he didn’t like it] . . . A lot of learning went with that.’ But adopting cultural practices was not always desired by the nurses:

She [Native mother-in-law] always steamed [instead of bathing]. I’d rather take a shower! [Laughs]. [My husband, a Native Alaskan] wanted a Jacuzzi in our house so we have a room with a Jacuzzi and we’ve never used it! [laughs again].

For the women who married Native Alaskan men, however, adjustment was not easy:

I wanted to know why we didn’t visit people on this side of the road, ‘We want to be Native people, you are married to me, you are now Native.’ So I said, ‘Let’s see how this will work.’

Hardship

Hardship in all varieties was common:

One pregnancy happened here during the winter . . . it was rough. We built a log cabin. He wanted to build the logs up and down and of course they shrank. We hauled our own logs down the river, and we started building with the help of the

family, and they shrank and the wind belled through there . . . we had more than one cold winter here.

Even nurses who had experienced bush Alaska prior to coming to Bristol Bay required adjustment to the extreme conditions:

When I came to [Bristol Bay] I cried because [the previous setting] was . . . more civilised . . . it was sort of like a little town. But when I came to [Bristol Bay] it was just like ‘oh my goodness!’ . . . I cried.

Getting in and out of the area is difficult. There is ‘No road system . . . you can’t get out of here . . .’ And feelings of isolation were common: ‘Life is fragile out here, the isolation’. Finances were and are a continuing hardship:

Money is another thing out here. You know your stove oil, your electricity . . . and right now, they increased all the prices because the fishermen are here.

Sacrifices were openly acknowledged:

there are some things you have to sacrifice living out there. You don’t get fresh things. You don’t have a lot of options for shopping or entertainment. And the housing market sucks.

In the face of such hardship, however, all of the nurses remain sanguine: ‘Isn’t it funny I’m still here?’

Family

Family was a main motivator either to come or to stay in Bristol Bay, and was an independent code in itself. The three nurses who were born there had family ties, but neither described their natal family as a lure to return to the Bay. One returned because she wanted to raise her children there:

I didn’t just have these kids, I chose to have them. And I want this career and really this is the best of all worlds for me. Other people might look at [Bristol Bay] and say what a dirty awful place. But it is what you make it. We’re not going



anywhere, we have our own little sanctuary. We have our house and our airplanes and we like it.

Family experiences were not all positive and the nurses recognised the social sacrifice for white kids growing up in the predominantly Native environment:

There were difficulties . . . my kids were persecuted and I know that it totally did shape them but I wanted to stick it out and show my dedication . . . that I wasn't just [a nurse] who was flying in and out . . . [You made a commitment . . .] at the expense of my children. Yeah. I thought I could overcome that. I thought whatever difficulties and problems, I thought my husband and I could overcome them.

Similarly, the women with mixed race children also recognised the sacrifice:

I don't feel comfortable taking my three little kids to [the Native village] and just letting them run amok. Because they are white and people don't know them that well . . . I don't want them to experience any kind of prejudice. I don't want them to be called 'gussuks' [derogatory Native slang for white people]. They'd be the only little white kids in [the village].

Yet extended family ties were important for all the nurses, and they created them if they didn't exist already:

Up near Aleknagik we have a fancy cabin. Remember J? . . . and B [daughter] has a cabin. And R, he's my nephew, we gave him an acre and he built a lovely cabin. I like to keep my family around me.

Fish

The salmon fishery is the historic reason for Native settlement in the area and is the economic base of the region. The fishery shaped the lives of the nurses and their families as well: '[My husband] got a flying job because he didn't like fishing. He fished for 2 years and he didn't like it.' Fishing served as the main motivation for at least one nurse to return to the area, she:

came home and fished . . . I applied for a job at [the] hospital . . . and so I worked at [the hospital] and then . . . I would go fishing and then I would go back to work and then I would go fishing. I got the perfect job [for fishing]!

Community

The nurses were humble regarding their community contributions: 'Oh, goodness, I see myself getting old there . . . I don't need to go and do anything else.' Two felt that their nursing practice was the greatest contribution. Four contributed substantially to religious institutions in Bristol Bay:

They wanted me to convert [to Russian Orthodox, the main religion of Native Alaskans in the area], I used to go there and . . . write their music down . . . It was . . . not written. So I said well sing it for me and I put in writing for them and they still have it. Sometimes there is this little handwriting 'adapted by . . . Nushagak traditional song'. They have beautiful music and I sang with them and taught them how to read music.

All the nurses had substantial business interests of some variety, including part or full ownership of flight services, lodging facilities, guide services, restaurants and grocery and hardware stores. Four of the 10 went on to civic leadership roles, often as an extension of community health nursing roles:

I had just cleaned him [her son] up . . . he was just polished up and shiny, he went outside . . . and he fell into that ditch over there [an open sewer]. He was just black, horrible mud. Ugh . . . and I made up my mind, that's the last time that's going to happen . . . so I started campaigning for a water and sewer system . . . And some said 'well run for the [public utilities district] board,' . . . and surprisingly got elected.

One nurse is 'the mayor of Aleknagik!' Another ran for City Council, which 'met once a week, on the day I did my laundry'. A third 'ran the bank'. And a fourth summarised the nurses' role in civic leadership: 'the prosecutor was a



nurse, the head of [the economic development corporation] was a nurse, the airline manager is a nurse . . .' But each nurse noted that these opportunities were not available 'outside' (what Alaskans call the rest of the US):

You had a lot of opportunity that you wouldn't have had in the big city. I'm smart and ambitious and I have a good work ethic, that's the main thing, I want to do best!

And they were all grateful for the advantage: '[I had] no training for any of these jobs. Women rule the world [laughs]. There's incredible opportunity!'

Racism

A difficult concept to code was racism. One nurse, married to a Native Alaskan, describing an experience in which her children were publicly discriminated against apologised saying, 'I don't want to sound racist'. More commonly, the idea was represented in the nurses' language as culture or politics. Yet racism, both institutional and individual, was a common idea. Most of the nurses were reluctant to elaborate on the idea or use the term without prompting:

My children are very Native, they're half, and my partner is full. And people here . . . will say, in front of my children, 'are those your children?' Why would it matter? It's disturbing to me. My two little ones don't look like me . . . They have white siblings and Native siblings

The nurses were often most comfortable talking about racism experienced by their fellow nurses:

The [Yupik] men are very in command. Even when the women steam, the men go in first . . . The men sit down first and eat . . . They [the women] just do . . . women's work. [She] just fell into this and she's been married [to a Native man] for almost 40 years.

Institutional racism affected all of the nurses in the provision of health care. They could not use the Indian Health Service Hospital themselves except in extreme emergencies: 'In those

days you couldn't take your kids out there [to the hospital] because they're not the right color.' They delivered their babies at a day facility run by a visiting doctor (until the Indian Health Service hospital was designated a community hospital and could serve white families): 'The last two were born here, up in Dr L's clinic. I loved Dr L . . .' But their health care was limited and often not delivered under modern practice conditions: 'he even did C-sections out there [at his clinic] when his ladies got in trouble.'

The nurses recognised that the institutional racism they experienced was an outcome of Native Alaskan settlement, sovereignty and land claims rights: 'It's the way the government divided it up, and this is your entitlement and you're entitled to this, and not entitled to that. I don't know [exasperated]'. They were also subject to 'Indian preference' hiring practices at the Native facilities, missing out on the very few work opportunities available. The political and the personal, however, overlapped, and the lived experience of racism was and is a part of life in the bush:

The family I married is not a 100% Native family. That put me on one side, then there's the other side, and there is the mixed side. I didn't realise till years later what had happened politically influenced what people did to each other.

Three broad themes

Thematic analysis was accomplished by looking across the nurses' compiled narratives and common coded statements, establishing relationships between them, and interpreting patterns of experience¹⁰. By analysing the women's narratives in their entirety, three themes reveal themselves and are suitably illustrated by the women's own statements:

1. An independent sense of family and childrearing: 'We live far away from town so that was positive, no negative influence. There was influence from home and family and it was good influence.'
2. A strong sense of adventure: 'We were there when the whales got stuck in the ice. We were right from



here to the whales at the edge of the ice flow. I didn't realise they have so many barnacles on them!

3. An intense appreciation of Native Alaskan culture and environment: 'I love the Native population here. I like this community. It's beautiful, it's abundant with salmon . . . a moose rack . . . a haunch of caribou . . .'

In addition, the nurses speculated on the reasons they were still there in spite of the hardships: 'If Native people are willing to accept you, you're willing to be involved. If you weren't feeling accepted I think it would be hard to stay.'

Discussion

The Bristol Bay region, its institutions, geography and culture presented the nurses with an opportunity to practice nursing in an extreme setting. The unique characteristics of the region allowed them to fulfill their adventurous natures, raise their families in the environment of their choosing, and develop an appreciation for Native culture and community. The women in turn brought compatible qualities and formed strong reciprocal ties in the community, both politically and through marriage and business commitments. In addition to staffing the hospital, clinics and health department, the women managed and still manage much of the local economy and governing structure. They built the sewer system, sponsored a local sales tax, opened the first bank and grocery store, and manage several local businesses, all of which, in addition to their nursing practices, improve health and quality of life in the region substantially.

Practically speaking, they each express three personal qualities that both brought them to the area and enable them to thrive there: an independent sense of family and child-rearing predominated the women's interviews; they each exhibited a strong sense of adventure; and they all expressed a deep appreciation of the Native Alaskan culture and natural environment found uniquely in the bush. Their lives, however, are not luxurious: they all recognise the hardship of living in the extreme environment, as well as the inherent

institutional and personal racism brought about through political and legal structures there. In summary, they advise nurses who wish to practice and stay in the bush that they should come with:

ample resources, mental resources, emotional, spiritual, the whole nine yards, [they] need these resources in order to survive, in order to stay here. [Also] a love for the people, not being opposite to the culture but trying to learn [from it].

Limitations

One of the difficulties of doing research in isolated areas is the closeness of relationships. People see easily into each others' lives in this 'literal fishbowl!' Because the author was also a practicing nurse in Bristol Bay, she could and did prompt the women to speak of stories of which an 'outside' researcher would have no knowledge and thereby possibly introduce a biased representation of events. Another challenge in managing the data objectively was that the women talked about each other in their interviews. They told stories and represented each other from their own viewpoint. The author attempted to substantiate events with the nurse to whom they occurred, but in the case of racism, for example, not all the nurses were willing to articulate their own experience fully. Finally, one intention of this study was to understand how nurses were able to withstand conditions to practice at length in the bush. Bristol Bay may not, however, be representative of other bush communities, limiting the generalisability, if any, of these findings.

Conclusions

In the book *From the voices of nurses: an oral history of Newfoundland nurses who graduated prior to 1950*, Beaton and Walsh¹² describe fascinating stories and themes among these hardy nurses that are not dissimilar to those found in the present study. Newfoundland nurses' themes included resiliency, adaptability, creativity, even a mischievousness that may describe the spirit of adventure and appreciation for culture found in the bush Alaska nurses. Similarly, one



Newfoundland nursing student arrived at school a month early, needing to travel by boat before the ice set in¹². This type of adaptability to hardship appears to be common to retention in remote settings and was evidenced in this study as well. Bush Alaska narratives of 'extreme' nursing, explication of these women's motivations for settling or resettling in the region, and of their substantial accomplishments over their long careers suggest qualities conducive to long-term nursing practice in bush Alaska and other remote settings. Thematic analysis reveals the Alaska bush nurses to have a strong sense of adventure, an independent outlook regarding family development, and a deep appreciation of Native Alaskan culture and the bush lifestyle. These qualities enabled the nurses to stay in this remote area for an extremely long period of time, engaging in intercultural exchange in their personal and professional lives, thereby enhancing health and quality of life over time. Mutual accommodation between the nurses, and the political and healthcare delivery systems is a feature of survival in the bush and advantageous to all parties as well. Nurses unable to accommodate, appreciate and daily navigate the Native systems, structures and culture, as well as the climactic hardships are unlikely to stay in the bush.

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